

Research Methods

Lecture 3

Methods of Investigation

1. Ontology

2. Epistemology

3. Methodology

4. Paradigm

1. Ontology

- the nature of reality
 - what is the nature of the reality of the subject you are researching?
 - what does your research focus on?
- this ‘reality’ can be ‘constructed’ by you
 - the ‘construction of the subject of your research by you as the investigator
(constructivist ontology)

2. *Epistemology*

- the nature of ‘knowledge’
- how do we know what we know?
- how do we ‘gain’/obtain knowledge? – by what processes and aims?
- in what way is the ‘reality’ of your research (what you know about the subject of your research) known to you? – what and how did you learn/have you learnt about it before starting your investigation? – **AND** what ‘knowledge’ is your research looking for (what is the *AIM* of your research)

3. Methodology

- how is your research to be conducted? – using what overall principles and approach?
- the methodology you use is a philosophical approach governing your research practices
- your methodology leads to, and informs (shapes), the methods you use in your research (methods '*action*' your methodology)

- *Methods* are the vehicles/instruments and processes used to gather the data (within your methodology or methodological framework)
- Two main methodologies employed in social science research are:
 - a) Quantitative*
 - b) Qualitative*

a) Quantitative

- focuses on obtaining information that can be counted, measured and statistically analysed (usually collection of numerical data – ‘*number crunching*’)
- ***Problem:*** doesn’t often provide understandings/analysis of ‘meanings’, ‘beliefs’, and ‘experience’ (= identifies ‘outcomes’ not ‘causes’)

b) Qualitative

- perceptions and interpretations (by the subject or subjects of the research – the people or organisation(s) being researched and studied)
- carried out when we seek to understand ‘meanings’, ‘interpretations’, and/or to look at, describe and understand ‘experience(s)’, ideas, beliefs, values
- *Problem*: open to challenges in terms of subjectivity/objectivity of framing of questions and of focus (i.e. subject parameters)

- Your *methodology* (the overall principles and approach of your research) affects:
 1. The research questions you ask;
 2. The kind(s) of research you carry out;
 3. The methods you use (to collect the data and/or information);
 4. The mode(s) or type(s) of analysis you use on your data (how you analyse it),;
 5. What you can argue are the findings from your data and/or information, and of your research

So, your *methodology* can usually be quantitative or qualitative (or a mixture of the two)

- **AND** you then employ certain *methods* within that approach to collect your data and/or information
 - i.e. - questionnaires
 - surveys
 - face to face interviews
 - analysis of key historical texts
 - analysis of historical data (e.g. government defence/armament procurement budgetary data)
 - analysis of processes (documented or informal) in organisations

- Your *methodology* is your *research strategy* that translates your
 - *ontological principles*
(the focus/subject/'reality' of your research)

AND

- your *epistemological principles*
(the aim of your research – the 'knowledge' it aims to produce)

INTO

- guidelines (*methods*) on how your research is to be conducted

4. *Paradigm*

- ontological, epistemological and methodological principles are organised/shaped by *Paradigms* (the theoretical category or approach within which your research is conducted)
- so, your own research – the focus (*ontology*), the aim (*epistemology*), and the approach (*methodology*) will be shaped by the *paradigm* you employ (the underlying belief or theory of your research)

- So you may employ one of the following paradigms:
 - a) Positivism
 - b) Interpretivism
 - c) Constructivism
 - d) Structuralism
 - e) Poststructuralism
 - f) Postmodernism

- a) what *paradigm* do you begin your research study with? (what assumptions and beliefs in approach is your research based upon?)
- b) what *ontology* will you employ? (what does your research focus on/ what ‘reality’?)
- c) what is your epistemology (what is the aim of your research – what ‘knowledge’ are you seeking?)
- d) what *methodology* will you employ to gain that knowledge?
- e) what *method/methods* will you use to collect your data and/or information?