Research Design and Methodology Part 1

Week 4 – 2012

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Last Week

• Introduction-Basics of a Literature Review
• Purpose of Reviewing Literature
• What is a Conceptual Framework?
• Structuring your review
• Common Faults and Major Pitfall
• Steps in conducting a Literature Review
• Sources

• What is expected at this level?
• Literature Review- Video-
  http://www.youtube.com/watch?v=t2d7y_r65HU
What have we done so far?

- What is Research?
- Clarifying your research
- Literature Review

what’s the next step in the research process?
The Research Process

Management Dilemma

Formulate and Clarify the Research Topic/Question

Critically Review the Literature

Formulate your Research Design

Data Collection and Preparation

Data Analysis and Interpretation

Conclusion and Recommendation

Management Decision/Action

Address Ethical Issues

Research Proposal

Research Report
This Week

• What is meant by Research Design?

• Assumptions of Main Paradigms
  – Epistemology
  – Axiology
  – Ontological

• Research Paradigms or Philosophies
  – Positivism
  – Phenomenology
  – Pragmatism

• Types of Research Methodology/Strategy
What is Research Design?

• Research design is the **plan** and the **procedure** for research that span decisions from:
  – Broad assumptions
  – to detailed methods of data collection and analysis

• These decisions must be deliberated by the researcher and based on:
  – the nature of the research problem or issue and
  – The researchers’ personal experiences
Influences on Research Design

Bryman (2008, p.24)

Theory

Axiological-Values

Research Design

Practical Consideration

Epistemology

Ontology
• **Essentially,** the research design answers three key questions:
  
  1. **What**- are the underlying assumptions,
  2. **How**- you are going to conduct the research, specifically the data collection and analysis and
  3. **Why**- this chosen plan would be best suited for the study. A justification of your choices.
Framework for Design adapted from Creswell (2009)

Philosophical Worldviews
• Epistemology
• Ontology

Selected Research Strategies
• Positivistic Strategies
• Phenomenological Strategies
• Mixed Methods

Research Paradigm/Philosophies
• Positivistic
• Phenomenological
• Mixed Methods

Research Techniques/Procedure
• Data Collection
• Data Analysis
• Interpretation
The Research ‘Onion’
Some clarifications on terms

• Some say Research **Paradigm** (Lincoln & Guba 2000) **Philosophy** (Saunder et al 2007) or even **Worldview** (Creswell 2009)

• Some use the term Research **Methodology** or Research **Strategy**

• Some say Research **Methods** or **Technique** or **Procedure**
Key terms-definition

• **Research Paradigm**- describes a cluster of beliefs and dictates what should be studied, how research should be done and how the results should be interpreted. Bryman (2008, p.696)

• **Research Methodology**- to emphasize an overall approach to the research process e.g. Survey or Action Research

• **Research Method**- used to outline a specific research technique or procedure for collecting and analyzing data e.g. Questionnaire or Focus Group
Worldviews or Assumptions

• These are general orientation about the world the researcher holds. Creswell (2009, pg.6)

• The types of beliefs held by researchers will often lead to embracing a particular paradigm.

• Paradigm are opposing worldviews either:
  – Scientific (objective) i.e. **Positivist** or
  – Constructivist (subjective) i.e. **Phenomenologist**

• There are many worldviews based on:
  – Epistemology
  – Ontology
Epistemology

• Research is about the search for knowledge, but the question is, what is knowledge and can that knowledge be in any sense true or false?

• It is a branch of philosophy that deals with knowledge and tries to answer the question as to whether a given body of knowledge is adequate or inadequate

• It is best understood as the science of obtaining knowledge and justification (evidence for the knowledge if you like)
Essentially..

• “Epistemology is concerned with the study of knowledge and what we accept as being valid knowledge “Collis and Hussey (2003, pg.48)

• “An Epistemological issue concerns the question of what is (or should be) regarded as acceptable knowledge in a discipline” Bryman (2008, pg. 13)
A Simple Example

• Suppose I ask the question: are your friends trustworthy?
• Most of us would answer Yes
• But how did we arrive at this knowledge, knowledge here being YES and
• What evidence do we have for it?
• Is it that the knowledge ‘YES’ is true or false, accepted or unaccepted, or even valid?
The Objectivism vs Subjectivism Epistemological Stance

Objectivism
• Positivist’s believe that only phenomena which are observable and measurable can be regarded as valid knowledge
• They try to maintain an objective and independent stance
• This leads a Positivism or Realism Paradigm

Subjectivism
• Phenomenologist ‘s believes that knowledge is based on the perception of the individuals
• They attempt to minimize the distance between the researcher and that which is being researched
• This leads to Phenomenological or Interpretivism Paradigm
Axiological Assumption

• **Positivist’s**- believe that science and the process is **value free** i.e. the **researcher is detached** from what they are researching and regard the phenomena as an object

• **Phenomenologist's**- considers that researchers **have values**. These values help to determine what are recognized as facts and the interpretation. The **researcher is involved** with that which is being researched
Ontology

- What is the nature REALITY?

  - “ONTOLOGY is concerned with the nature of reality...... and assumptions researchers have about the way the world operates and the commitment held to a particular view”

    Saunders et al (2009, pg. 110)

- ‘Reality can be thought of as Knowledge of a phenomena’
• In this context we are thinking of ‘knowledge’ or perhaps more correctly the particular body of knowledge that is embedded in your research project

• Such as Leadership Styles, imagine it, just the way you would look at a say a car, and try to get to its substance and essence

• **Ontology** is a description, like a **formal specification of REALITY**, the concepts and relationships that can exist

• Is that description external to or within the mind of the individual?
• What Do you think?

1. The body of knowledge on the phenomena (reality) is external to social actors. **Objectivism** or

2. whether the phenomena can and should be considered social constructions built up from perceptions and actions of social actors. **Constructivism**
So what about the car?

• How would describe it?
  – **Objectively** i.e. as you see it for what it is, independent! E.g. red, small, sedan, slow engine, etc
  – **Constructively** i.e. built up from your perception! E.g. cheap, poor quality, prone to theft, owned by low income earners, driven by thieves, etc
Objectivism vs Constructivism

Bryman (2008, p.18)

Objectivism

• This is an ontological position that asserts that phenomena and their meanings have an existence that is independent of social actors i.e. beyond their influence.
• E.g. an organization has a reality that is external to the individuals who inhabit it. The organization exerts pressure on individuals to conform.

Constructivism

• This is an ontological position that asserts that phenomena and their meanings are continually being accomplished by social actors.
• Reality is produced through social interaction and in constant revision.
• E.g. the organization structure can be ‘worked at’
Two Extremes or Aspects

• You must decide whether you consider that REALITY is **Objective** and external to you the researcher, independent of your view
  – i.e. researchers assume the social world is the same as the physical world. Can attempt to measure, analyse and test

OR

• Socially constructed and only understood by examining the perceptions of the human actors. **Subjective**
  – i.e. researchers assume that there is no social world apart from that which is inside the individual’s mind
Continuum of core ontological assumptions

**POSITIVISM**
- Reality as a concrete structure
- Reality as a concrete process
- Reality as a contextual field of information
- Reality as a realm of symbolic discourse
- Reality as a social construction

**PHENOMENOLOGY**
- Reality as a projection of human imagination

**OBJECTIVIST**

**SUBJECTIVIST/CONSTRUCTIVISM**

Source: Collis and Hussey (2003, pg.51)
Research Paradigms

• Positivism

• Phenomenology
Positivism

• This approach seeks facts or causes of social or business phenomena, with little regard to the subjective state of the individual.

• Logical reasoning is applied so that precision, objectivity and rigour replace hunches, experience and intuition as the means of investigation.

• It is based on the assumption that reality is independent of the researcher and exists regardless of whether we are aware of it.
• Laws or theory provide the basis of explanation, permit the anticipation of a phenomena or predict their occurrence
• Thus, the social or business worlds and the natural or physical world are both regarded as being bounded by certain fixed laws or theories
• For this type of research you are likely to use an existing theory to develop a hypotheses
• These hypotheses will be tested and confirmed or refuted, leading to further development of theory or Reality
• You are likely to use a highly structured research design
Phenomenology

• Many have argued against Positivism
• Pointing out that the social science **deals with action and behaviour** which are generated from within the human mind
• “The **phenomenologist** views human behaviour as a product of how people interpret the world. In order to grasp the meanings of a person’s behaviour, the **phenomenologist attempts to things from that person’s point of view**” Bogdan and Taylor (1975)
• They argued that the interrelationship of researcher and object or reality was impossible to separate and
• What existed in the social and human world was what we as researchers thought existed
• Therefore, the Phenomenological paradigm is concerned with understanding human behaviour from the participant’s own frame of reference
• It is assumed that **Reality is within us**
• Therefore, the act of investigating Reality has an effect on that Reality
• Considerable regard is given to the **subjective** state of the individual
• Because it **focuses on meaning** rather than measurement
• Phenomenologist’s believes that social Reality is dependent on the mind
• There is no reality independent of the mind
• Therefore what is researched cannot be unaffected by the process of the research
Features of the two main Paradigms
Source: Collis and Hussey (2003, pg 55)

**Positivistic**
- Tends to produce quantitative data
- Uses large samples
- Concerned with hypothesis testing
- Data is highly specific and precise
- The location is artificial
- Reliability is high
- Validity is low
- Generalizes from sample population

**Phenomenological**
- Tends to be qualitative data
- Uses small samples
- Concerned with generating theories
- Data is rich and subjective
- The location is natural
- Reliability is low
- Validity is high
- Generalizes from one setting to another
Another Perspective by Creswell (2009)

• Quantitative Research

• Qualitative Research
Quantitative Research

• Is a means for **testing objective theories** by examining relationship among variables
• These variables can be measured, so that numbered data can be analyzed using statistical procedures
• Those who engage in this form of research have assumptions about testing theories **deductively**
• Researchers build in protections against bias
Qualitative Research

• Is a means for exploring and understanding the meaning individual assign to a social problem
• It involves emerging questions and procedures
• Data typically collected in the participant’s setting
• Data analysis *inductively* builds from particulars to general themes, where the researcher interprets the meaning of the data
Quantitative

• Useful when looking for facts or causes
• Controlled measurements
• Objective (predictive)
• Outside perspective
• Deductive and verification oriented
• Outcome oriented – does your variable really control something
• Particular and closed
• Assume a stable reality otherwise results are worthless

Qualitative

• Useful when trying to understand behaviours
• Uncontrolled observation – that is just observation without you controlling
• Subjective
• Insider perspective on the data
• Discovery-orientated, explanatory and descriptive
• Process orientated – that is you drive the research
• Holistic and open
• Assume a very dynamic reality
# Fundamental difference

<table>
<thead>
<tr>
<th>Principal Orientation to the role of theory to the research</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deductive-testing of theory</td>
<td>Inductive-generation of theory</td>
<td></td>
</tr>
<tr>
<td>Epistemological Orientation</td>
<td>Natural Science, Positivism</td>
<td>Interpretivism, Phenomenological</td>
</tr>
<tr>
<td>Ontological Orientation</td>
<td>Objectivism</td>
<td>Constructivism</td>
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For simplicity: the bottom Line

• Positivism = Deductive = Quantitative

• Phenomenology = Inductive = Qualitative

• Be careful this not a strict rule
• Only meant to help you understand!!!
Key Questions?

• Is it possible to hold a objectivist epistemology view and at the same time assume that reality is constructed?

• Or vice versa?

• Further, Would it be accepted to use both a Qualitative and Quantitative approaches for your research?
The Pragmatic Worldview

• **Pragmatism** arises out of actions, situations and consequences rather than classical considerations.

• Pragmatist focus on the research problem and use all available approaches to understand the problem

• Pragmatism is therefore not committed to one philosophy and reality
• Individual researchers have a freedom of choice
• Pragmatist believe in an external world independent of the mind as well as that lodged in the mind
• Hence the birth of Mixed Methods Approach
Mixed Methods

• Is an approach to research that combines or associates both quantitative and qualitative forms
• It involve philosophical assumptions and mixing of both approaches in a study
• Thus, it is more simply collecting and analyzing both kinds of data
• It also involves the use of both approaches in tandem
• This should increase overall strength of a study, so that it is greater than either quantitative or qualitative research
Remember

- The research philosophy you adopt contains important assumptions about the way in which you view the world
- These assumptions will underpin your research paradigm, methodology and methods that you choose to conduct your research
Research Methodology

• The Epistemological and Ontological view that research hold determine the Research Paradigm chosen

• Should it also determine the Research Strategy or Methodology?
Types of Research Methodology/Strategy

**POSITIVISTIC**
- CROSS SECTIONAL STUDIES
- EXPERIMENTAL STUDIES
- LONGITUDINAL STUDIES
- SURVEYS

**PHENOMENOLOGICAL**
- ACTION RESEARCH
- CASE STUDIES
- ETHNOGRAPHY
- GROUNDED THEORY
- HERMENEUTICS
- PARTICIPATIVE ENQUIRY

Source: Collis and Hussey (2003, pg.60)
Bibliography