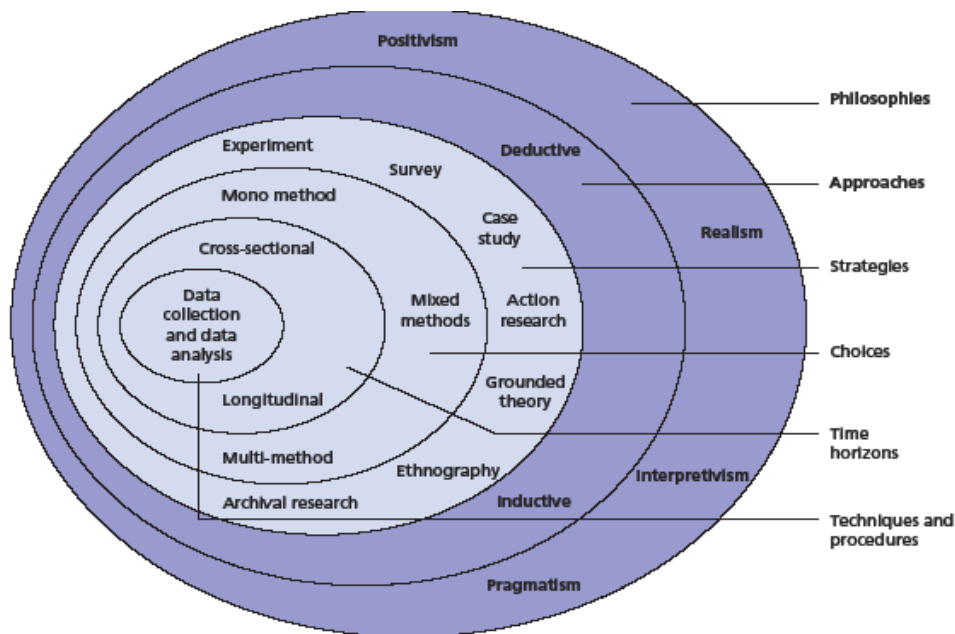


RESEARCH DESIGN AND APPROACHES

Research ‘Onion’



Research philosophy

- The research philosophy you adopt contains important assumptions about the way in which you view the world.
- These assumptions will underpin your research strategy and the methods you choose as part of that strategy.
- Reflects a researchers' particular view of the relationship between knowledge and the process by which it is developed.
- How well we are able to reflect upon our philosophical choices and defend them in relation to the alternatives we could have adopted.
- **Ontological**
 - Assumptions about the world or beliefs regarding reality
 - What is the researcher's underlying ontology (fundamental worldview)
- **Epistemological**

- Assumptions about knowledge or assumptions regarding how we come to know about the world
- What is the researcher's underlying epistemology (theory of knowledge)?

Research design is the **arrangement of conditions for collection and analysis** of data in a manner that aims to combine relevance to research purpose with economy in procedure. It is conceptual structure within which research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data. The research problem having been formulated in clear cut terms, the researcher will be required to prepare a research design, i.e., he will have to state the conceptual structure within which research would be conducted.

- **Notes:**

- Aim of research design is to answer research question(s)
- Research methods are the means by which a discipline acquires and constructs knowledge
- Different philosophical assumptions about what constitutes relevant knowledge
- results in different strategies of inquiry and methods
- qualitative research, quantitative research and combinations (mixed methods research)

The **preparation of the research design**, appropriate for a particular research problem, involves usually the consideration of the following:

- (i) the means of obtaining the information;
- (ii) the availability and skills of the researcher and his staff (if any);
- (iii) explanation of the way in which selected means of obtaining information will be organized. and the reasoning leading to the selection;
- (iv) the time available for research; and
- (v) the cost factor relating to research, i.e., the finance available for the purpose.

Research Design must contain:

A clear statement of the research problem including a plan that specifies the sources and types of

information relevant to the research problem. Procedures and techniques/ or strategy specifying the approach to be used for gathering data. The population to be studied. Methods to be used in processing and analyzing data. In choosing a research design, time and costs budgets, should be considered.

- **Features of a good design**

A good design is related to the purpose or objective of the research problem and the nature of the problem to be studied.

- A good design should be appropriate, flexible, efficient and economical.
- A good design is that which minimizes bias and maximize the reliability of the data collected and analyzed.
- A good design is that which yields relevant and maximal information and at the same time provides an opportunity for considering many aspects of a problem.

Research design and Methodology (Chapter 3)

3.0 Introduction

3.1 Research design

3.2 Target population

3.3 Sample and sampling techniques

3.4 Data collection instruments

3.5 Pilot study

3.6 Data analysis method

3.7 Validity of the Instrument

3.8 Reliability of the Instrument

Research design and Methodology

This chapter deals with the research methods to be adopted in conducting the study. They are organized under the following sub-headings:

3.0 Introduction

3.1 Research Design

There are 4 classes of research designs

1. Historical research
2. Descriptive design e.g. types Survey
3. Developmental e.g. cross sectional, longitudinal.
4. Naturalistic design these are biography and based on grounded theory.

3.2 Target population

Population is referred to as the totality of items or object which the researcher is interested in. It can also be total number of people of an area of study.

3.2 Sample and Sampling Techniques

A sample is a smaller unit taken from a population that is utilized to ascertain facts about that group. These are **stratified, systematic, Cluster, simple, Quota**

3.4 Instruments for Data Collection

Questionnaires, Interviews, Document review etc.

Data gathering Tips

- Three main data gathering methods: **interviews, questionnaires, observation**

- **Interviews may be structured, semi-structured or unstructured**
- Questionnaires may be on paper, online or telephone
- Observation may be direct or indirect, in the field or in controlled setting
- Techniques can be combined depending on study focus, participants, nature of technique and available resources
- Ensure you design your data gathering tools to collect the correct data for your questions

Research techniques refer to the behavior and instruments we use in performing research operations such as making observations, recording data, techniques of processing data and the like. Research methods refer to the behaviour and instruments used in selecting and constructing research technique. E.g Mail questionnaire, Personal interview, Telephone survey, Case study and life history etc.

Data gathering

5 key issues of data gathering

1. Setting goals

- Decide how to analyze data once collected

2. Identifying participants

- Decide who to gather data from or generally your sources of data

3. Relationship with participants

- Clear and professional
- Informed consent when appropriate

4. Triangulation

- Look at data from more than one perspective

5. Pilot studies

- Small trial of main study
- Lessons learnt are used to review the data gathering instrument

3.5 Pilot study

3.6 Data analysis method

Methodology chapter of your dissertation should include discussions about the methods of data analysis. You have to explain in a brief manner how you are going to analyze the primary data you will collect employing the methods explained in this chapter.

There are differences between qualitative data analysis and quantitative data analysis. In qualitative researches using interviews, focus groups, experiments etc. data analysis is going to involve identifying common patterns within the responses and critically analyzing them in order to achieve research aims and objectives.

Qualitative data analysis

Qualitative data analysis can be divided into the following five categories:

1. Content analysis. This refers to the process of categorizing verbal or behavioural data to classify, summarize and tabulate the data.

2. Narrative analysis. This method involves the reformulation of stories presented by respondents taking into account context of each case and different experiences of each respondent. In other words, narrative analysis is the revision of primary qualitative data by researcher.

3. Discourse analysis. A method of analysis of naturally occurring talk and all types of written text.

4. Framework analysis. This is more advanced method that consists of several stages such as familiarization, identifying a thematic framework, coding, charting, mapping and interpretation.

5. Grounded theory. This method of qualitative data analysis starts with an analysis of a single case to formulate a theory. Then, additional cases are examined to see if they contribute to the theory.

In quantitative data analysis

you are expected to turn raw numbers into meaningful data through the application of rational and critical thinking. Quantitative data analysis may include the calculation of frequencies of variables and differences between variables. A quantitative approach is usually associated with finding evidence to either support or reject hypotheses you have formulated at the earlier stages of your research process. three popular quantitative data analysis software: Microsoft Excel, Microsoft Access and SPSS.

3.7 Validity of the Instrument

Validity focuses on whether an instrument will measure what it was designed to measure

3.8 Reliability of the Instrument

Reliability is the consistency degree between two things measuring the same thing