

The layers of research design



It is the core of whole research design. In the article, we use the “ Research Onion” as symbolic word to describe relation between the core of research onion and outer layers on research onion. The situation (context) and limits within which data collection techniques and analysis procedures are selected depends on researcher’s understandings and decisions about these outer layers. This article is concerned with outer layers of research onion and Implication of these elements (outer layers) on the overall research design Including core of design.

However, In order to develop an appropriate and meaningful research design, the consideration of these outer layers is very much important. We cannot consider them unnecessary like the case of an onion. In this article, we begin with the outer most layer which gives an overview of different research philosophies and their implications for the research design. We then come backward to each of the next layer which are about methodological choice, strategy(sees) and the time horizon respectively and consider their implication for the research design.

We will conclude by emphasizing the importance of meaningful research design. Research philosophy: A researcher’s way of viewing the world and his or her set of assumptions about human knowledge and nature of realities define how a research question is understood and associated research design. The main influence on this research philosophy is of the knowledge that the researcher considers acceptable and the process of developing it.

The way of conducting research would be very different for the a researcher who is concerned with observable phenomena like “ resources needed in

manufacturing process” and the one who is concerned with understanding the subjective meanings of feelings and attitudes of the workers in that manufacturing process. ” Their methodological choice and strategies as well as view about what data is required will be so much different. A researcher who is concerned about observing and predicting outcomes is like a laboratory scientist who is concerned with law-like generalizations such as cause and effect; that show philosophy of positivism.

He or she adopt a ‘ scientific method’ to propose and test theories with a highly structured and measurable data. TLS usually involve large amount of quantitative data and statistical hypothesis testing. When theory is not realism is a philosophical position associated with scientific inquiry. Realism says that reality exists independent of the mind and what a researcher’s senses show him is the truth. Philosophers differentiate between two types of realism: direct realism and critical realism. Direct realism says that what is experienced through our senses give true representation.

Whereas critical realism says that what is experienced through our senses is further processed by the mind. For critical realist researcher this means that there is a need to find out both what is immediately experienced and the structures and relationships that lie beneath this. So use of collection techniques and analysis procedures vary either we use quantitative data or qualitative data or both. Where the researcher is more concerned about subjective meanings than the observable phenomena, he is considered to be reflecting philosophy of interpretative.

This philosophy focuses on conducting research among people rather than objects to understand their social world and the meaning they give to it from their view point. Data collection and analysis are likely to involve qualitative data from the deep investigations with small samples. In another philosophy, called pragmatism, the importance of research is in finding practical consequences. In this philosophy researcher consider that a single view point cannot provide complete picture and there may be multiple view points that can do so.

It does not mean that pragmatic researcher would apply a variety of data collection techniques and procedures. Instead research design should enable reliable data that support further action. Methodological choice: This layer highlights the decision about whether to choose a quantitative method(s) or qualitative method(s) or a mixture of both. Researcher can select single data collection technique and analysis procedure either a mono method quantitative design (e. G. Data collection using questionnaire and analysis statistically) or a mono method qualitative design (e. . Data collection through deep interviews and analysis as narratives). Alternatively they can use multiple methods. In multi method quantitative design, researcher use multiple data collection techniques (e. G. Questionnaire and structured observations and statistically analyzed). For multi method qualitative design, he uses multiple qualitative data collection techniques (e. G. In depth interviews and diary accounts with associated analysis procedures). A mixed method design includes both quantitative and qualitative data collection techniques and analysis procedures.

Strategy(sees): The next layer of research onion is strategy(sees). This layer emphasizes that researcher can use multiple strategies in their research design in planning how to answer a research question or addressing a research problem. A researcher may adopt an action research strategy by working with practitioners to bring about organizational change within which he also adopts a survey strategy to collect data in researchers associate particular research strategies with particular research philosophies, the boundaries between them are often permeable.

Ethnography, for example, is associated with both realism and interpretative. Conversely, whilst the both the experiment and the survey research strategies are normally associated with positivism, they are also used by realist and pragmatist researchers. Similarly, whilst a case study, perhaps of an individual organization, is often associated with interpretative, case studies are also used in positivistic research. Time horizon: The final layer of the research onion, before the core of onion is, time horizon over which the researcher undertakes the research.

Where research is undertaken to answer a question or address a problem at a ' particular time', this snapshot is cross- sectional and may make use of survey or case study strategy. On the other hand, where answering the question or addressing the problem necessitates data being elected for an ' extended period of time', the research is longitudinal and may make use of experiment, action research, grounded theory and archival research.

Concluding Remarks: Designing research to answer a question or address a problem is always limited both by what is practicable and of equal

importance and what is ethical. In this article, we have highlighted the importance of understanding and relation between different outer layers of research onion. It helps to ensure that data collection techniques and procedures are both appropriate and meaningful.