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Key Components:

Concept of Research Design

Types of research design

- Exploratory research design
- Descriptive research design
- Experimental research design

Concept of Research Design

The task of defining the research problem is followed by a difficult problem that is the preparation of a design of the research project, popularly known as 'research design'. A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy procedure (Kothari and Garg, 2019). It is the set of methods and procedures used in collecting and analyzing measures of the variables specified in the problem research.

It is the conceptual structure within which research is conducted. It is an overall formulation of a research problem. In other words, it is the blueprint of collection, measurement and analysis of data. For example, when examinations approach, the students look at the syllabus. In simpler words, the syllabus can be considered as an example for research design among the students.

Research design provides the binding element that holds the research project together. The function of a research design is to ensure that the requisite information in accordance with the problem is collected accurately and economically. The design may be a very detailed statement or only deliver the minimum information required for planning the research project.

A research design considers the following factors:

- the means of obtaining information
- the availability and skills of the researcher and his team if any;
- the objective of the problem to be studied
- the nature of the problem to be studied
- the availability of time and money for the research work.

Types of research designs

Before beginning any kind of research, the researcher needs to decide how he/she plans to design the study. The design provides direction and makes the research systematic. Different types of research designs offer different advantages as well as disadvantages. Therefore a person undergoing research must possess a clear awareness of the various types of research design to select which type of research design to put into practice for study. A research design can be broadly classified into three categories:

1. Exploratory Research Design

The objective of such a research design is to collect initial information that will help define problems and suggest hypothesis. The researcher explores a given problem and develops hypothesis accordingly. He/she investigates a problem that has not been studied or thoroughly investigated in the past. A better understanding of the existing problem is drawn but usually does not lead to a conclusive result. Researchers use this design to gain familiarity with an existing phenomenon and acquire new insight into it. Exploratory research studies are also termed as formulative research studies. Such studies will enable researchers answer questions like what is the problem, the purpose of the study and what topics could be studied. The important emphasis in such studies is on the discovery of ideas and insights.

Features:

- Continuous
- Inexpensive
- Open-ended in nature
- Usually no prior relevant information available from the past researcher.
- No predefined structure
- Time consumption is more

2. Descriptive Research Design

A descriptive research study is concerned with describing the characteristics of a particular individual, or of a group. Such a research design describes the characteristics of the population or phenomenon that is being studied. There is more focus on the 'what' of the research subject rather than the 'why' of the research subject. It describes the subject of the research, without covering 'why' it happens. It is known as 'observational research method'. Typical examples are studies concerned with specific predictions, with narration of facts and characteristics concerning individual, group or situation. A major portion of the social research falls under this category.

Features:

- Quantitative research method that tries to collect quantifiable information to be used for statistical analysis of the population sample.
- Uncontrolled variables which remain uninfluenced.
- Cross-sectional studies where different sections belonging to the same group are studied.
- Foundation for further research in future.

3. Experimental Research Design

Experimental research design is used to establish a relationship between the cause and effect of a situation. The researchers must be sure that if something is happening, there is a cause for it. It refers to the framework or structure of an experiment and as such there are two broad

categories of experimental designs, such as informal and formal experimental designs. Informal experimental designs are those designs that normally use a less complicated form of analysis based on differences whereas formal experimental designs offer exact statistical procedures for analysis. Such a research design is conducted with a scientific approach, where a set of variables are kept constant while the other set of variables are being measured as subject of experiment. The experiments are conducted to discover the facts. The design establishes a cause and effect of a phenomenon that is effects are observed from an experiment due to the cause. This design is most appropriate in controlled settings such as laboratories.

Features:

- Manipulation of independent variable by the researcher
- Presence of control group (a group in a scientific experiment that is separated from the rest of the experiment)
- Random Assignment means that every member of a population has an equal chance of being assigned to any of the experimental groups.
- Random Selection means that every member of a population has an equal chance of being selected to be a member of the sample.

References:

Print Source

Ackoff, Russell L. *Scientific Method*: John Wiley and Sons, 1962. Print.

Griffin, G. *Research Methods For English Studies*: Edinburg University, 2005. Print.

Kothari and G. Garg. *Research Methodology Methods and Techniques*: New Age International Publishers, 2019. Print.

Web Source

Kabir, S.M.S. *Research Design*. July 2016. Retrieved on April 14, 2020, from <https://www.researchgate.net/publication/325847047>

