UNIT4: RESEARCH DESIGN

UNIT STRUCTURE

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4.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- understand the meaning of Research design
- discuss the need and importance of Research design
- identify the features of a good Research design

4.2 INTRODUCTION

Research, as we all know, is the search for knowledge. It is the process through which one acquires knowledge about any natural or social phenomena. Sociologists too are continuously engaged in research relating to social phenomena. But for any kind of research to proceed in the right direction, there has to be a particular design or plan. Though the term design conveys several meanings, but in the context of research, it points to a plan, blueprint or outline of the research which specifies the objectives, methods of data collection and analysis, probable outcomes so on and so forth. The research design articulates what data is required, what methods are going to be used to collect and analyse this data, and how all of this is going to answer the research questions of a particular research. It is therefore the statement of essential and fundamental elements of a study that provides

basic guidelines of conducting the research. In the previous units we have learned about Qualitative and Quantitative Research. To conduct any of this type of research we need to have a research design. In this unit we will try to understand the meaning of research design, its need and importance in research, features of a good research design and the various types of research design.

4.3 MEANING OF RESEARCH DESIGN

Research Design is a very vital step in the research process. In simple words, the research design is an elaborated plan or model which throws light into how the entire research would be conducted. The Oxford Dictionary of Sociology defines 'Research Design as a strategic plan for a research programme, setting out the broad outline and key features of the work to be undertaken, including the methods of data collection and analysis to be employed and showing how the research strategy addresses the specific aims and objectives of the study, whether the research issues are theoretical or policy oriented'. Research design therefore stands for advance planning of the methods to be adopted for collecting the relevant data and techniques to be used in their analysis, keeping in view the objective of the research. Research design, infact, has a great bearing on the reliability of the results arrived at and as such constitutes the firm foundation of the entire edifice of the research work . Just as we need a ready architectural design or blueprint before the construction of a building so that we can have it as per our aspiration, similarly in case of research too, we need a research design to guide and direct us to achieve our results. The Research design will give a detail outline regarding the various aspects of the research from its objectives to the ways or methods in which data shall be collected and analysed. It would not only state the objectives of any particular research but also describe the way in which the research shall process to realize those objectives. It is therefore often acknowledged as the master plan for executing a research project Thus before the actual process of research or data collection begins, one must have the research design in hand to guide him/her in collecting and analysing data.... In sociological research

as well, framing a research design is the first and a very vital step. The research design is mostly about the following——

- What is the study about?
- Why is the study being made?
- Where will the study be carried out?
- What type of data is required?
- Where can the required data be found?
- What periods of time will the study include?
- What will be the sample design?
- What techniques of data collection will be used?
- How will the data be analyzed?
- In what style will the report be prepared?

From the above discussion we can conclude that the Research design comprises of mainly the following:

- **Statement of the Problem:** In the statement of the problem, the researcher has to explain in details the problem/topic to be studied and also justify the reasons behind selection of that problem which he/she intends to study.
- **Literature Review:** Here the researcher is supposed to review the existing literatures related to his/her problem of study.
- **Research Questions:** After reviewing the relevant literatures, the Researcher would frame the Research Questions, the answers of which would be sought in the research. The Researcher should clearly specify the research questions in the Research design.
- **Objectives of the Study:** Following from the research questions, the Researcher needs to state the objectives of his/her study.
- **Procedures and Techniques of Data Collection:** The researcher has to explain the type of data that would be required for the research and the techniques he/she would apply in the collection of that data.
- **Population to be studied:** The Researcher must describe the population among/on whom the research is to be conducted.
- **Methods of Processing and Analysing Data:** Describe the methods to be used in analysing the data

4.4 NEED AND IMPORTANCE OF RESEARCH DESIGN

From the above discussion we have already learned that Research design is the guide to research. It is, as we know by now, a broad plan of action which encompasses almost everything related to the way in which a particular research is to be carried out. Since the research is carried out as per the research design laid down in advance, hence it is very crucial in research. Let us now discuss in details the need for a research design:

We all know that if we travel to places which we have not visited earlier or which we are not familiar with, we will need a map or a tour guide. Without a map or a tour guide, there is every possibility that we might get lost. The similar is the case with Research design. The significance of Research design lies in the fact that that it facilitates the conduct of the research by guiding the researcher on how he/she should proceed, how the researcher should collect data, which data are relevant, what should he/she do with the data so on and so forth. It gives direction to the research and helps the researcher to conduct an efficient research and gather as much data as required without wastage of time and money.. If a researcher conducts research without formulating a research design in advance, there is every possibility that he/she may go hay way. In this case, because the researcher won't have a clear plan regarding the way to proceed systematically, he/she might get confused regarding data collection and also might end up wasting time in collecting data not essential for that particular research. Thus he/she might have to spend a lot of time and money in the process which might just turn out to be a futile exercise. So it is very important to formulate a research design prior to conducting the research. As we all know that a building cannot be constructed without a blueprint or an architectural design, similarly there is also a need for a research design prior to the conducting of the research if it is to be an efficient research. Hence in absence of the research design there is every possibility that the researcher will face a lot of confusions and uncertainties and finally land up in a total mess.

Further, in absence of a research design, many researches may fail to serve the purpose for which they have been taken up. Research conducted without a research design may even lead to misleading conclusions. The Researcher should therefore very carefully prepare the Research Design in order to avoid futility of the research. He/she should prepare the Research design in such a way that the process of conducting research and collecting data becomes easier and at the same time scientific. Thoughtful designing of the research design would enable the researcher to avoid ambiguity.

The Research design helps the researcher to organise his ideas in a form whereby it will be possible for him to look for flaws and inadequacies. Since in the research design the researcher would systematically organise his/her ideas and outline the entire strategy regarding how he/she is going to conduct the research, this would help him/her to identify and also rectify any errors that he/she might commit while conducting the research.. Thus the research design would not only facilitate the researcher to stick to the right path/direction of conducting research but also to correct the accidental mistakes that he/she might commit and which might mess up the entire research project. It is therefore utmost necessary to prepare an efficient and appropriate design before starting the process of data collection.

Another very important aspect of the research design is that it also helps others to get an idea about what that particular research is all about and how is it conducted. Going through the research design, one can give his/her reviews, comments and suggestions about the research and this is very beneficial for the researcher. The researcher can get comments and suggestions from his/her teachers, experts and also peers and incorporate them to enrich the study. He/she can also get to know about flaws and mistakes, if any, in his/her research and can correct it. In the absence the research design, it will be difficult for the critic to provide a comprehensive review of the proposed study.

From the above discussion it is understood that Research design is utmost necessary for conducting the research in an efficient, scientific and methodical way. Its importance is summarised in the following points:

- Research Design is like a map. It provides direction to the study. It helps the Researcher to proceed in the right direction and prevents the research from being merely a directionless and aimless empirical wandering.
- Formulation of Research design helps in minimising uncertainty, ambiguity, confusion and practical haphazard related to any research problem.
- It helps the researcher to collect and analyse data scientifically and systematically.
- It enables the researcher in identify and segregate relevant data's and facts from the irrelevant ones.
- In certain cases, the design acts as a tool to control the level of accuracy desired.
- It reduces inaccuracy increases the reliability of the research
- It prevents wastage of time and money.
- It provides a clear overview about the Research to others
- Gets rid of bias and marginal errors.



CHECK YOUR PROGRESS

Q1: True or False :

a) Research design is formulated after conducting the research.

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b) Research design minimises uncertainties and confusions

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Q2: Why is Research design similar to a map?

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4.5 FEATURES OF A GOOD RESEARCH DESIGN

We know that the research design which provides direction to the researcher to carry out his/her research scientifically is very important for the research. Let us now try to understand the features of a good research design:

- Systematic, Scientific, Efficient, Economical and Flexible are all characteristics of a good research design.
- The design which gives clarity regarding what's and how's of research, which maximises reliability of data collected and analysed and minimises errors and biases is considered to be an appropriate and scientific research design.
- For a **good research design**, all the components of research should go together with each other in a coherent way. The theoretical and conceptual framework must match with the research goals and purposes. In the same way, the data gathering method must fit with the research purposes, conceptual and theoretical framework and method of data analysis.
- Further, the design which gives the smallest experimental error is supposed to be the best design in many investigations.
- Similarly, the design which helps the researcher to gather maximum information or data and also provides an opportunity for considering many different aspects of a problem is considered most appropriate and efficient design in respect of many research problems.

Thus, the question of a good design is related to the purpose or objective of the research problem and also with the nature of the problem to be studied. A design which may be quite appropriate for a particular study may not be the same for another study. One single design cannot serve the purpose of all types of research problems. But there are certain aspects that a good research design for a particular research should focus on and they are:

- The means of obtaining information
- The nature and skills of the researcher and his staff, if any

- The objective the problem to be studied
- The nature of the problem to be studied, and
- The availability of time and money for the research work



CHECK YOUR PROGRESS

Q3: True or False

a) The research design which maximises bias is a good research design.

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b) One single design cannot serve the purpose of all types of research problems.

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4.6 LET US SUM UP

- The research design articulates what data is required, what methods are going to be used to collect and analyse this data, and how all of this is going to answer the research questions of a particular research.
- Research design therefore stands for advance planning of the methods to be adopted for collecting the relevant data and techniques to be used in their analysis, keeping in view the objective of the research.
- Just as we need a ready architectural design or blueprint before the construction of a building so that we can have it as per our aspiration, similarly in case of research too, we need a research design to guide and direct us to achieve our results.
- Research design enables the researcher to conduct the researcher systematically and scientifically.
- Research design facilitates efficient research and prevents wastage of time and money.

- Research design provides direction to the study. It helps in minimising uncertainty, ambiguity, confusion and practical haphazard related to any research problem.
- Absence of a research design, many researches may fail to serve the purpose for which they have been taken up. In fact lack of research design may even lead to misleading conclusions.
- A design is considered to be good if it can minimise bias and maximise the reliability of data collected and analysed.



4.7 FURTHER READING

1) Guthrie, Gerard, 2010, *Basic Research Methods: An Entry to Social Science Research*. New Delhi: Sage publication. India.
2) Kothari, C.R., 2004, *Research Methods and Techniques.* New Delhi: New Age International Publisher.
3) Young, P.V., 2009, *Scientific Social Surveys and Research*. New Delhi: Prentice Hall.

Websites:

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http://libguides.sun.ac.za/content.php?pid=426346&sid=3486790



4.8 ANSWERS TO CHECK YOUR PROGRESS

Answer to Q No 1: (a) False (b) True

Answer to Q No 2: Just as a map guides our way, and gives us direction similarly research design guides us regarding the way we should proceed in our research work

Answer to Q No 3: (a) False (b) True