RESEARCH DESIGN

With the completion of the initial phase of the research process, the researcher turns to designing a research design to formally identify the appropriate sources of data. This is done in order that any researcher who embarks on a research project should have a blueprint of how he is going to undertake scientifically the data collection process. **The framework developed to control the collection of data is called research design.** It gives details, of the procedures necessary for obtaining the information needed to structure or solve research problems.

Research design is an absolute essentiality in research irrespective of the type of research (e.g., exploratory or descriptive), as it ensures that the data collected is appropriate, economical and accurate. This also ensures that the research project conducted is effectively and efficiently done. A sufficiently formulated research design would ensure that the information gathered is consistent with the study objectives and that the data are collected by accurate procedures. Since, research designs germinate from the objectives, the accuracy and adequacy of a research design depends on the unambiguous framing of the objectives

Once the research problem is formulated, a specific topic is assigned and the hypothesis is formulated, the next stage is to work out a research design. Preparing research design is an important stage in the process of conducting a research.

A research design involves the following components:

1. Statement of research objectives, i.e., why the research project is to be conducted
2. Type of data needed
3. Definition of population and sampling procedures to be followed
4. Time, costs, and responsibility specification
5. Methods, ways, and procedures used for collection of data
6. Data analysis – tools or methods used to analyze data
7. Probable output or research outcomes and possible actions to be taken based on those outcomes

Kerlinger defines a research design as "the plan, structure and strategy of investigation purporting to answer research questions and control variance."

According to **Bernard S. Phillips,** "Research design constitutes the blue print for collection, measurement and analysis of data."

Functions of Research Design

Regardless of the type of research design selected by the investigator, all plans perform one or more functions outlined below:

- It provides the researcher with a blue print for studying research questions.
- It dictates boundaries of research activity and enables the investigator to channel his energies in a specific direction.
- It enables the investigator to anticipate potential problems in the implementation of the study.
- The common function of designs is to assist the investigator in providing answers to various kinds of research questions.

Advantages of Research Design

- Consumes less time.
- Ensures project time schedule.
- Helps researcher to prepare himself to carry out research in a proper and a systematic way.
- Better documentation of the various activities while the project work is going on.
- Helps in proper planning of the resources and their procurement in right time.
- Provides satisfaction and confidence, accompanied with a sense of success from the beginning of the work of the research project.

FEATURES OF A RESEARCH DESIGN

1. It is **a plan** that specifies the objectives of the study and the hypotheses to be tested.
2. It is an **outline** that specifies the sources and types of information relevant to the research questions.
3. It is a **blueprint** specifying the methods to be adopted for gathering and analyzing the data.
4. It is a **catalogue** of the various phases and facts relating to the formulation of a research effort.
5. It is a **strategy** of investigation conceives so as to obtain answers to research questions and to control variance.
6. It is a **scheme** defining "the domain of generalizability, i.e. whether the obtained information can be generalized (applied) to a larger population or to different situations",
7. It **prescribes the boundaries** of research activities and enables the researcher to channel his energies in the right work.