SWRK5001
Unit-III : Basic Elements and Types of Research Design

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SWRK5001
Unit-III, Research Design & Sampling

Topic- Research Design-Concept & Types

What is Design?

- A Design, at a basic level, means planning.
- A Design is a plan to ensure that action achieves its objectives.
- It is the way to avoid wasteful expenditure of money, time and energy.

What is Research Design?

- Research design is the blueprint for research.
- Researcher records his decisions by using relevant symbols or concepts. These symbolic constructions are called research design.
- The process of data collection, sampling and analysis of the collected facts are to be organized as per the basis of the design.

Definition of Research Design

- It is the skeleton for the research project.
- Decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design.
- It is a process of deliberate anticipation directed towards bringing an expected situation under control.

Research Design is Defined as

- According to **William Zikmund**, “Research Design is defined as a Master plan specifying the methods and procedures for collection and analyzing the needed information.”

- According to **Kerlinger,** “Research design is the plan, Structure, and Strategy of investigation conceived so as to obtain answer to research questions and to control variance.”

Characteristics of Research Design

- Objectivity.
- Neutrality
- Reliability.
- Validity.
- Generalisability.
- Selection of Units of Analysis.
- Choice of Variable.
- Identification of Relationship.

Need of Research design

- Smooth sailing of research operations.
- Helps to give directions.
- Helps in decision making.
- Stands for advance planning of the methods.
- Prevents blind searching.

Importance of Research Design

- It reduces Inaccuracy.
- Helps to get maximum efficiency and reliability.
- Eliminates bias and marginal errors.
- Minimizes wastage of time.
- Guides the research in right direction.

Functions of Research Design

- Identification and development of procedures and logical arrangements required to undertake a study.
- To emphasize the importance of quality in these procedures to ensure their validity.
- Clearly specifies what procedure to follow and how to follow them.

Essential elements of the research design

- Accurate purpose statement.
- Techniques to be implemented for collecting and analyzing research.
- The method applied for analyzing collected details.
- Type of research methodology.
- Probable objections for research

Research Design gives answers for this Questions.

- 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?

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- What periods of time will the study include?
- What will be the sample design?
- What techniques of data collection will be used?
- How will be the data analyzed?
- In what style will the report be prepared?

RESEARCH METHODS

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RESEARCH DESIGN

RESEARCH METHODS	RESEARCH DESIGN
Research methods are the procedures that will be used to collect and analyze data	Research design is the overall structure of the research
Focus on what type of methods are more suitable to collect and analyze the evidence needed	Focuses on what type of study is planned and what kind of results are expected from the research
Depend on the research design	Based on the research question or problem

How to develop a research design

- Classify the intended outcome of what needs to be understood
- Developing the research question
- What needs to be measured
- Select the population for the experiment
- Identify the ideal data collection method
- Construct Interrelated characteristics
- Use correct analysis tools
- Choose a channel for disseminating your findings

Types of Research Design

- **1. Fundamental or basic research:** Basic research is an investigation on basic principles and reasons for occurrence of a particular event or process or phenomenon. It is also called theoretical research.
- Basic researches sometimes may not lead to immediate use or application. It is not concerned with solving any practical problems of immediate interest.

Applied Research

- In an applied research one solves certain problems employing well known and accepted theories and principles. Most of the experimental research, case studies and inter-disciplinary research are essentially applied research.
- Applied research is helpful for basic research. A research, the outcome of which has immediate application is also termed as applied research

Quantitative Research

- It is numerical, non-descriptive, applies statistics or mathematics and uses numbers.
- It is an iterative process whereby evidence is evaluated.
- The results are often presented in tables and graphs.
- It is conclusive.
- It investigates the what, where and when of decision making.

Qualitative Research

- It is non-numerical, descriptive, applies reasoning and uses words.
- Its aim is to get the meaning, feeling and describe the situation.
- Qualitative data cannot be graphed.
- It is exploratory.
- It investigates the why and how of decision making.

Mixed Research

- Mixed research- research that involves the mixing of quantitative and qualitative methods or paradigm characteristics.
- Nature of data is mixture of variables, words and images.

Exploratory Research

- Exploratory research might involve a literature search or conducting focus group interviews. The exploration of new phenomena in this way may help the researcher's need for better understanding, may test the feasibility of a more extensive study, or determine the best methods to be used in a subsequent study. The objective of exploratory research is to identify key issues and key variables.

Descriptive research

- The descriptive research is directed toward studying “what” and how many off this “what”.
- Thus, it is directed toward answering questions such as, “What is this?”.

Explanatory Research

- Its primary goal is to understand or to explain relationships.
- It uses correlations to study relationships between dimensions or characteristics off individuals, groups, situations, or events.
- Explanatory research explains .
- Explanatory research asks the “Why” question.

Longitudinal Research

- Research carried out longitudinally involves data collection at multiple points in time. Longitudinal studies may take the form of:
- *Trend study-*
- *Cohort study-*
- *Panel study-*

Cross-sectional Research

- One-shot or cross-sectional studies are those in which data is gathered once, during a period of days, weeks or months.
- Many cross-sectional studies are exploratory or descriptive in purpose.
- They are designed to look at how things are now, without any sense of whether there is a history or trend at work.

Action research

Fact findings to improve the quality of action in the social world.

Policy-Oriented Research

Reports employing this type of research focus on the question ‘How can problem ‘X’ be solved or prevented ?’.

Classification research

It aims at categorization of units in to groups

To demonstrate differences

To explain relationships

Comparative research

To identify similarities and differences between units at all levels.

Causal research

It aims at establishing cause and effect relationship among variable.

Theory-testing research

It aims at testing validity of a unit.

Theory-building research

To establish and formulate the theory

Preparing the Research Design

- Objectives of the research study.
- Method of data collection to be adopted.
- Source of information : Sample Design.
- Tool for data Collection.
- Data analysis : Qualitative or Quantitative.

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Thank You