RESEARCH METHODOLOGY

UNIT I

Meaning of Business Research – Types of Research – Descriptive, Exploratory, Empirical, Historical and Case Study – Research Design - Components of the Research Design

UNIT –II

Census – Sample – Sampling Techniques – Random and Non Random sampling – Size of the sample - Sampling Error.

UNIT –III

Collection of Data - Primary and Secondary Data – Tools of collection of Data – Questionnaire – Scaling Techniques - Personal Interview – Interview schedule – Observation, Pilot study and pre-testing.

UNIT –IV

Analysis and Interpretation of Data – Hypothesis – Characteristics of A Good Hypothesis – Formulation and testing of Hypothesis – Methods of testing Hypothesis – T -Test – F- Test, CHI square Test.

UNIT –V

Research Report – types of Reports - Steps in Drafting a Research Report- Quality of Research Report.

Note: Question paper shall cover 100% theory

REFER

RESEARCH METHODOLOGY

Meaning

- Research is an endeavour to discover answers to intellectual and practical problems through the application of scientific method.

- "Research is a systematized effort to gain new knowledge".
  -Redman and Mory.

- Research is the systematic process of collecting and analyzing information (data) in order to increase our understanding of the phenomenon about which we are concerned or interested.

Objectives of Research

- The purpose of research is to discover answers through the application of scientific procedures.

- The objectives are:

  - To gain familiarity with a phenomenon or to achieve new insights into it – **Exploratory or Formulative Research.**
  - To portray accurately the characteristics of a particular individual, situation or a group – **Descriptive Research.**
  - To determine the frequency with which something occurs or with which it is associated with something else – **Diagnostic Research.**
  - To test a hypothesis of a causal relationship between variables – **Hypothesis-Testing Research.**

Characteristics of Research

- Research is directed towards the solution of a problem.
- Research is based upon observable experience or empirical evidence.
- Research demands accurate observation and description.
- Research involves gathering new data from primary sources or using existing data for a new purpose.
- Research activities are characterized by carefully designed procedures.
- Research requires expertise i.e., skill necessary to carryout investigation, search the related literature and to understand and analyze the data gathered.
- Research is objective and logical – applying every possible test to validate the data collected and conclusions reached.
- Research involves the quest for answers to unsolved problems.
- Research requires courage.
- Research is characterized by patient and unhurried activity.
- Research is carefully recorded and reported.

SCIENTIFIC METHOD

- 'Science' refers to the body of systematic and organised knowledge which makes use of scientific method to acquire knowledge in a particular field of enquiry.
- Scientific method is the systematic collection of data (facts) and their theoretical treatment through proper observation, experimentation and interpretation.
- Scientific method attempts to achieve a systematic interrelation of facts by experimentation, observation, and logical arguments from accepted postulates and a combination of these three in varying proportions.

BASIC POSTULATES IN SCIENTIFIC METHOD

- It relies on empirical evidence.
- It utilizes relevant concepts.
- It is committed to only objective considerations.
- It presupposes ethical neutrality.
- It results into probabilistic predictions.
- The methodology is made known.
- Aims at formulating scientific theories.

CRITERIA OF A GOOD RESEARCH

- Purpose clearly defined.
- Research process detailed.
- Research design thoroughly planned.
- High ethical standards applied.
- Limitations frankly revealed.
- Adequate analysis for decision maker's needs.
- Findings presented unambiguously.
- Conclusions justified.
- Researcher's experience reflected.

QUALITIES OF A GOOD RESEARCH

- Systematic
- Logical
- Empirical
- Replicable
- Creative
- Use of multiple methods

NEED FOR RESEARCH

- EXPLORATION
- DESCRIBE
- DIAGNOSE
- HYPOTHESIS
- INDUCTIONS AND DEDUCTIONS

SCOPE / SIGNIFICANCE OF RESEARCH

- **RESEARCH FOR DECISION MAKING**

- Throws light on risks and uncertainty
- Identify alternative courses of action
- Helps in economic use of resources
- Helps in project identification

- Solves investment problems
- Solves pricing problems
- Solves allocation problems
- Solves decision making issues in HR
- Solves various operational and planning problems of business and industry

- Provides the basis for all government policies in our economic system.
- Helps social scientists in studying social relationships and in seeking answers to various social problems.
- For students, research means a careerism or a way to attain a high position in the social structure.
- For professionals in research, it may mean a source of livelihood.

- For philosophers and thinkers, research means the outlet for new ideas and insights.
- For literary men and women, research means development of new styles and creative work.
- For analysts and intellectuals, research means generalizations of new theories.

PROBLEMS IN RESEARCH

- Not similar to science
- Uncontrollable variables
- Human tendencies
- Time and money
- Lack of computerization
- Lack of scientific training in the methodology of research

- **Insufficient interaction between university research departments and business establishments**
- **Lack of confidence on the part of business units to give information**
- **Lack of code of conduct**
- **Difficulty of adequate and timely secretarial assistance**

- Poor library management and functioning
- Difficulty of timely availability of published data.
- Ignorance
- Research for the sake of research-limited practical utility though they may use high sounding business jargon.

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ROLE OF RESEARCH IN DECISION-MAKING

- Decision-making is the process of selecting the best alternative from the available set of alternatives.
- Management is chiefly concerned with decision-making and its implementation.
- These decisions should be based on appropriate studies, evaluations and observations.
- Research provides us with knowledge and skills needed to solve the problems and to meet the challenges of a fast paced decision-making environment.

According to Herbert A Simon, decision-making involves three activities:

- ***Intelligence Activity*** - scanning the environment for identifying conditions necessary for the decision.
- ***Designing Activity*** - identifying, developing and analyzing the alternative courses of action.
- ***Choice Activity*** - choosing the best course of action from among the alternatives.

FACTORS THAT AFFECT MANAGERIAL DECISIONS

- **INTERNAL FACTORS – factors present inside an organisation such as resources, technology, trade unions, cash flow, manpower etc.**

- **EXTERNAL FACTORS – factors present outside the organisation such as government policies, political factors, socio-economic factors, legal framework, geographic and cultural factors etc.**

- **QUANTITATIVE FACTORS – factors that can be measured in quantities such as time, resources, cost factors etc.**

- **QUALITATIVE FACTORS – factors that cannot be measured in quantities such as organizational cohesiveness, sense of belonging of employees, risk of technological change etc.**

- **UNCERTAINITY FACTORS – factors which cannot be predicted.**

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TYPES OF RESEARCH

- **Descriptive vs Analytical Research**

Descriptive Research is a fact finding investigation which is aimed at describing the characteristics of individual, situation or a group (or) describing the state of affairs as it exists at present.

Analytical Research is primarily concerned with testing hypothesis and specifying and interpreting relationships, by analyzing the facts or information already available.

Applied vs Fundamental Research

Applied Research or Action Research is carried out to find solution to a real life problem requiring an action or policy decision.

Fundamental Research which is also known as basic or pure research is undertaken for the sake of knowledge without any intention to apply it in practice.

It is undertaken out of intellectual curiosity and is not necessarily problem-oriented.

- **Experimental Research** – It is designed to assess the effect of one particular variable on a phenomenon by keeping the other variables constant or controlled.

- **Historical Research** – It is the study of past records and other information sources, with a view to find the origin and development of a phenomenon and to discover the trends in the past, inorder to understand the present and to anticipate the future.

Some other types of research..

- **One-time Research** – Research confined to a single time period.
- **Longitudinal Research** – Research carried on over several time periods.
- **Diagnostic Research** – It is also called clinical research which aims at identifying the causes of a problem, frequency with which it occurs and the possible solutions for it.
- **Exploratory Research** – It is the preliminary study of an unfamiliar problem, about which the researcher has little or no knowledge. It is aimed **to gain familiarity with the problem, to generate new ideas or to make a precise formulation of the problem.** Hence it is also known as formulative research.

Conceptual vs Empirical Research

Conceptual Research is generally used by philosophers and thinkers to develop new concepts or to reinterpret existing ones.

Empirical Research is a data based research which depends on experience or observation alone. It is aimed at coming up with conclusions without due regard for system and theory.

Quantitative vs Qualitative Research

Quantitative Research is employed for measuring the quantity or amount of a particular phenomena by the use of statistical analysis.

Qualitative Research is a non-quantitative type of analysis which is aimed at finding out the quality of a particular phenomenon.

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