RESEARCH METHODOLOGY

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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.

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

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.**

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.**

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.

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.

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.

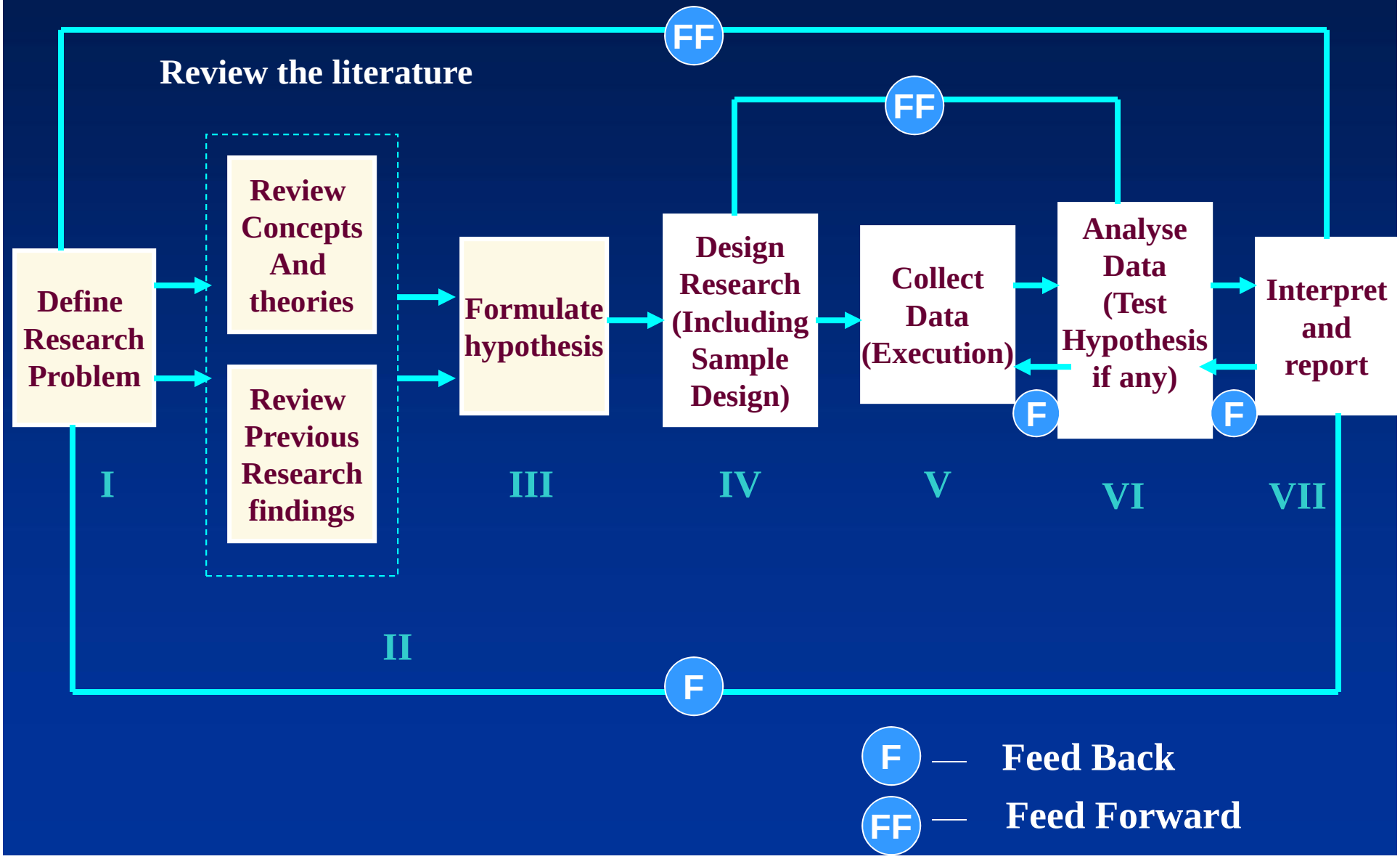
Some other types of research..

- **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.**

- **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.**

RESEARCH PROCESS



STEP-1

DEFINITION OF THE RESEARCH PROBLEM

RESEARCH PROBLEM

What is a research problem?

- The term ‘problem’ means a question or issue to be examined.

- Research Problem refers to some difficulty /need which a researcher experiences in the context of either theoretical or practical situation and wants to obtain a solution for the same.

The first step in the research process – definition of the problem involves two activities:

☆Identification / Selection of the Problem

☆Formulation of the Problem

IDENTIFICATION / SELECTION OF THE RESEARCH PROBLEM

☆ This step involves identification of a few problems and selection of one out of them, after evaluating the alternatives against certain selection criteria.

SOURCES OF PROBLEMS

- Reading
- Academic Experience
- Daily Experience
- Exposure to Field Situations
- Consultations
- Brainstorming
- Research
- Intuition

CRITERIA OF SELECTION

The selection of one appropriate researchable problem out of the identified problems requires evaluation of those alternatives against certain criteria. They are:

- Internal / Personal criteria – Researcher's Interest, Researcher's Competence, Researcher's own Resource: finance and time.
- External Criteria or Factors – Researchability of the problem, Importance and Urgency, Novelty of the Problem, Feasibility, Facilities, Usefulness and Social Relevance, Research Personnel.

DEFINITION / FORMULATION OF THE RESEARCH PROBLEM

- Formulation is the process of refining the research ideas into research questions and objectives.
- Formulation means translating and transforming the selected research problem/topic/idea into a scientifically researchable question. It is concerned with specifying exactly what the research problem is.

- Problem definition or Problem statement is a clear, precise and succinct statement of the question or issue that is to be investigated with the goal of finding an answer or solution.

- There are two ways of stating a problem:

    1) Posting question / questions
    2) Making declarative statement / statements

PROCESS INVOLVED IN DEFINING THE PROBLEM

- **STATEMENT OF THE PROBLEM IN A GENERAL WAY.**

- **UNDERSTANDING THE NATURE Of PROBLEM**

- **SURVEYING THE AVAILABLE LITERATURE**

- **DEVELOPING IDEAS THROUGH DISCUSSIONS**
- **REPHRASING THE RESEARCH PROBLEM**

CRITERIA OF A GOOD RESEARCH PROBLEM

- Clear and Unambiguous
- Empirical
- Verifiable
- Interesting
- Novel and Original
- Availability of Guidance