



RESEARCH METHODS AND METHODOLOGY – AN INTRODUCTION

MODULE I:

- ❖ RESEARCH METHODS AND METHODOLOGY
- ❖ INDUCTIVE AND DEDUCTIVE RESEARCH
- ❖ SCIENTIFIC RESEARCH : OBJECTIVES AND LIMITATIONS
- ❖ SOCIAL SCIENCE RESEARCH
- ❖ CONCEPT AND VARIABLES : A BRIEF ANALYSIS
- ❖ HYPOTHESIS: TYPES, FUNCTIONS AND IMPORTANCE; CHARACTERISTICS OF A GOOD HYPOTHESIS

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METHODOLOGY AND METHODS

- Both are closely linked and interdependent.
- Methodology is broader and includes methods.
- Methodology means understanding the entire research process – Including its social – organizational context, philosophical assumptions, ethical principles and political impact of the new knowledge gained from the research.
- Methods refer to the collection of specific techniques we use in a study to select cases, measure and observe social life, gather and refine data, analyze data and report on results.

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DEDUCTIVE AND INDUCTIVE RESEARCH

Deductive

- Aristotle's theory of syllogism
- Conclusion derived logically from few true statements
- Logic is the main operating tool

Inductive

- New Scientific Inquiry
- Conclusion reached through observations about nature
- Observation of nature is the main operating tool

SOCIAL SCIENCES RESEARCH

- Research is a method of enquiry that uses systematic scientific techniques
- Social Sciences Research – relies on people carefully studying experiences, events and facts in social reality
- Social Sciences Research deals with human beings – human nature and environment are complex – difficult to understand and predict human behaviour
- No two persons are emotionally, physically and psychologically alike and even an individual behaves differently in similar situations on different days. Many factors affect human behaviour.
- Social Research helps us to answer questions about the social world, raises new questions and may change our perspective about the world.
- It relies on the process and evidence (or scientific approach)

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SCIENTIFIC RESEARCH

- Reliance on evidences – systematic process, validity and reliability of data
- Use of concepts
- Commitment to objectivity
- Ethical neutrality
- Generalization
- Verifiability
- Logical reasoning process

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OBJECTIVITY

- It means the willingness and ability to examine evidences dispassionately
- It means basing conclusion on facts without any bias and value judgement.
- Factors affecting objectivity include influence of (1) personal prejudice, (2) value judgements, (3) ethical dilemma and (4) complexity of social phenomena
- Objectivity can be ensured through (1) patience and self control, (2) open-mindedness, (3) use of standardized concepts, (4) use of quantitative method, (5) Co-operative research, (6) use of random sampling

LIMITATIONS OF SOCIAL SCIENCE RESEARCH

- The researcher is also part of the human society that is the subject being studied
- Human society and human behaviour is complex
- Human problems like refusal to participate in the research, loss of memory, inability to understand the questions asked and reluctance to give honest answers (hiding the truth)
- Personal values affecting objectivity
- Anthromorphization – conceptualizing based on intuition or empathy
- Wrong decisions

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ETHICS IN SOCIAL SCIENCE RESEARCH

Research in social science often involves use of unethical practices. Issues of ethics arise out of researcher's relations with

- a) Sponsors of research
- b) Those who permit access to sources of data
- c) Research participants/respondents

CONCEPT

- A concept is an abstract symbol representing an object, property of an object or a certain phenomenon, e.g., a book, person, intelligence and meeting.
- The title of the research problem, the objectives of the study, the research questions or hypothesis consist of concepts which need to be accurately defined.
- Conceptualizing means classifying and categorizing events or objects that has common characteristics associated with certain events, objects, conditions, situations & behavior.
- A concept is thus a short hand of a class or group of facts. Eg. 'Utility' in Economics, 'responsibility' in management studies, 'political participation' in political science, 'satisfaction', 'aggression', 'frustration', 'depression' and the like in Psychology and in study of human behavior.

SIGNIFICANCE OF CONCEPT

Success of research depends on

- How clearly one conceptualize (specifying what you mean by the term)
- How well others understand the concepts used in the research

TYPES OF CONCEPTS

- Concrete concepts – those which can be seen, touched, felt such as book, pen.
- Abstract concepts / Construct – those which are at higher level of abstraction.
 - Not directly observable
 - Difficult to explain/ visualize
 - Inferences deduced from observable, measurable events (or variables)

VARIABLES

- Concrete observable events which represent the abstract concepts or constructs are called variables.
- Variables are created by developing constructs into measurable form.
- Variables are thus a measurable characteristic that varies.

TYPES OF VARIABLES

- Dependent Variable
- Independent Variable
- Intervening Variable
- Moderator Variable
- Control Variable
- Extraneous Variable

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HYPOTHESIS

- It is the preliminary assumption adopted for the explanation of phenomenon
- It is formulated before empirical evidences or facts are gathered
- Definition : Hypothesis is a tentative proposition formulated for empirical testing. (Krishnaswami, Ranganatham, & Harikumar, 2016) It is a declarative statement combining concepts. It is a tentative answer to a research question.
- It guides the research process in the proper direction.

SOURCES OF HYPOTHESES

- Theory
- Observation
- Analogies (observation of similar situations)
- Intuition and personal experience
- Findings of studies
- Continuity of research (rejection of hypothesis leads to formation of new hypothesis)

FUNCTIONS AND IMPORTANCE OF HYPOTHESIS

- Guides the direction of the study
- Specifies the sources of data
- Determines the relevant data instead of indiscriminate gathering of data
- Suggests which type of research is most appropriate
- Determines the most appropriate technique of analysis
- Contributes to the development of theory

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CHARACTERISTICS OF A GOOD HYPOTHESIS

- Conceptual clarity
- Specificity
- Testability
- Availability of techniques
- Theoretical relevance
- Consistency
- Objectivity
- Simplicity

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