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MLIS Semester II  
(Paper – 1)  
Research Methods and Statistical Techniques  
Topic – Scientific Method Of Research  
e-content



Scientific methods are defined as controlled, systematic investigations that are rooted in objective reality and that aim to develop general knowledge about natural phenomena.

The process of the *scientific method* involves making hypotheses, deriving predictions from them as logical consequences, and then carrying out experiments or empirical observations based on those predictions. It is a process for experimentation that is used to explore observations and answer questions.

# Characteristics


- They are orderly and systematic processes.
- Scientists attempt to control external factors that are not under direct investigation.
- Their findings are based on the empirical evidences.
- Findings of scientific methods can be generalized, which means that they can be used in situations other than the one under study.
- scientific methods are based on assumptions or hypothesis.
- They are basically conduced to develop or test hypothesis.

# Purpose

- The basic purposes of scientific methods are description, exploration, explanation, prediction, control, prescription and identification of relationship of the facts.

# Steps

- Selecting the topic and identifying the research problem.
- Defining the objectives of the study.
- Reviewing the literature from theory and other related studies.
- Defining concepts and variables to be studied.
- Stating hypothesis about expected observations or phenomenon to be studied.

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- Describing the research design and methods for data collection.
  - Defining study population and sample.
  - Planning the data analysis and discussion.
  - Collecting data from subjects.
  - Analyzing and interpreting data.
  - Communicating finding of the study.



# Advantage

- It is based on empirical evidence.
- It is proof and verification.
- Found by reasoning and observation.
- Reliable at finding the truth.
- Scientists are impartial.



Thank You