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# Master One

## Research Methodology

### Syllabus

Section of English, Faculty of Letters and Foreign Languages

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## **I. Objectives**

**At the end of the theme, you should be able to:**

- explain what a hypothesis is;
- identify the nature of hypothesis and describe its functions;
- display why a hypothesis is important in research;
- describe the different kinds of hypothesis and what are good characteristics of hypothesis;
- discuss the variables in hypothesis; and
- show how to formulate and test the hypothesis.

## **II. Content**

1. Meaning of Hypothesis
2. Definition of Hypothesis
3. Nature of Hypothesis
4. Functions of hypothesis
5. Importance of Hypothesis
6. Kinds of Hypothesis

### **1. Meaning of Hypothesis**

The word hypothesis consists of two words:

*Hypo+ thesis = hypothesis*

- ‘Hypo’ means tentative or subject to the verification
- ‘Thesis’ means statement about the solution of a problem.

As such, a hypothesis is a tentative statement about the solution of the problem. It offers a solution of the problem that is to be verified.

Another meaning of the word hypothesis which is composed of two words:

- ‘Hypo’ means composition of two or more variables which is to be verified.
- ‘Thesis’ means position of these variables in the specific frame of reference.

This is the operational meaning of the term hypothesis. Hypothesis is the composition of some variables which have some specific position or role of the variables i.e., to be verified. It is a proposition about the factual and conceptual elements. Hypothesis is called a leap into a dark. It is a brilliant guess about the solution of a problem (Singh, 2006, p.54).

## 2. Definitions of Hypothesis

The term hypothesis has been defined in several ways. Some important definitions have been given in the following:

- **According to J. E. Greigton**

“A hypothesis is a tentative supposition or provisional guess which seems to explain the situation under observation”.

- **According to J. W. Best**

“A hypothesis a shrewd guess or reference that is formulated and provisionally adopted to explain observed facts or conditions and to guide in further investigation”.

- **According to B. W. Tuckman**

“A hypothesis is defined as an expectation about events based on generalisation of the assumed relationship between variables”.

- **According to M. Verna**

“A hypothesis is a theory when stated as a testable proposition formally and clearly and subjected to empirical or experimental verification”

- **According to Barr and Scates**

“A hypothesis is a statement temporarily accepted as true in the light of what is, at the time, known about a phenomenon, and it is employed as a basis for action in the search for new truth, when the hypothesis is fully established, it may take the form of facts, principles and theories”.

- **According to G. J. Mouly**

“A hypothesis is an assumption or proposition whose testability is to be tested on the basis of the computability of its implications with empirical evidence with previous knowledge”.

It is important to distinguish between the three terms assumption, postulate, and hypothesis. In brief, the distinction is as follows:

- **Assumption:** It means taking things for granted so that the situation is simplified for logical procedure.
- **Postulate:** It is the working belief of most scientific activity. Postulates are not proven; they are simply accepted as they are and at their face value so that their basic work for the discovery of the other facts of nature can begin”.
- **Hypothesis:** A hypothesis is different from both of these. It is the presumptive statement of a proposition which the researcher seeks to prove (ibid).

### 3. Nature of Hypothesis

The following are the main features of a hypothesis:

- It is conceptual in nature.
- It is a verbal statement in declarative form.
- It indicates the tentative relationship between two or more variables.
- It has a future or forward reference. It relates to the future verification not to the past facts and information.
- It is the pivot of a scientific research. All the research activities are design for its verification.
- The nature of hypothesis can be well understood by differentiating it with other terms like assumption and postulate.

### 4. Functions of Hypothesis

The following are the main functions of hypothesis:

- It is a temporary solution of a problem concerning with some truth which enables a researcher to start his/her research work.
- It may provide possible solutions to the problem.
- Each hypothesis may lead to formulate another hypothesis.

- Each hypothesis provides the researcher with definite statement which may be objectively tested and accepted or rejected and leads for interpreting results and drawing conclusions that is related to the original purpose.

In sum, the functions of a hypothesis may be condensed into the following:

- To delimit the field of research;
- To sensitise the research to have a realistic approach to the problem; and
- To offer the simple means for collecting evidences to the verification

## 5. Importance of Hypothesis

Research methodologists advocate the importance of hypothesis in the following ways:

- Hypotheses are indispensable in research because they build a bridge between the problem and evidence that may solve the problem.
- A hypothesis provides the map that guides and expedites the investigation of the phenomena under consideration.
- The hypothesis directs the researcher's efforts into productive channels.
- The hypothesis may suggest what subjects, tools, and instruments are needed.
- A hypothesis provides the framework for drawing conclusions.

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## 6. Kinds of Hypothesis

There are four kinds of hypotheses. These are: (1) Question (2) Declaration statement, (3) Directional statement, (4) Null form or Non-directional.

1. Question form Hypotheses: Some writers assert that the hypothesis may be stated as a question. However, there is no consensus on this view.
2. Declarative Statement: A hypothesis may be developed as a declarative which can provide an anticipated relationship between variables or differences between variables.
3. Directional Hypothesis: A hypothesis may be directional which connotes an expected direction in the relationship or difference between variables.
4. Non-directional hypothesis: A hypothesis may be stated in the null form which is an assertion that no difference exists between or among the variables.