

**Criterion for a good hypothesis**

**Vinisha B V**

**Notes prepared for the ICT workshop as a part of M.Ed. curriculum**

**NSS training college, Ottapalam**

**Research Centre in Education**

**Affiliated with NAAC. Grade A**

**2023**

<b>Sl.no</b>	<b>Content</b>	<b>Page. No</b>
<b>1</b>	<b>Hypothesis</b>	
<b>2</b>	<b>Criterion for a Hypothesis</b>	
<b>3</b>	<b>Questions should ask to yourself</b>	
<b>4</b>	<b>Functions of Hypothesis</b>	
<b>5</b>	<b>Features of Hypothesis</b>	
<b>6</b>	<b>Concept Map</b>	

## **Criterion for a Good Hypothesis**

### **Hypothesis**

A supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation or a proposition made as a basis for reasoning, without any assumption of its truth.

There are many definitions for hypothesis in research because of its key role in a research. A hypothesis states your predictions about what your research will find. It is a tentative answer to your research question that has not yet been tested. For some research projects, you might have to write several hypotheses that address different aspects of your research question. A hypothesis is not just a guess – it should be based on existing theories and knowledge. It also has to be testable, which means you can support or refute it through scientific research methods (such as experiments, observations and statistical analysis of data). A hypothesis is a clear, specific and testable statement that proposes a relationship between variables. A hypothesis is a tentative statement about the relationship between two or more variables. A hypothesis is a specific, testable prediction about what you expect to happen in your study. The Hypothesis consists of two words hypo and thesis. Hypo means tentative or subject to the verification and Thesis means statement about solution of a problem. In short, the word meaning of the term hypothesis is a tentative statement about the solution of the problem. George J Mouly opines Hypothesis as an assumption or proposition whose testability is to be tested on the basis of the compatibility of its implication with empirical evidence with previous knowledge.

### **Criterion for a Good Hypothesis**

The hypothesis should be capable of being proven false based on empirical evidence. It uproots the idea that no theory is completely correct, but if it can be shown both to be falsifiable and supported with evidence that shows it's true, it can be accepted as truth.

There are many key criteria to be followed while formulating a hypothesis than the two basic criteria that it should deal with a statement about the relations between variables and its carrying ability of clear implications for testing the stated relations (Thus, these couple of criteria imply that hypotheses comprise two or more variables which are measurable and that they specify the way in which they are related. A statement which fails to meet these criteria is no scientific hypothesis in the true sense of the term.) And they are:

#### ***Clarity***

Clearly states the relationship or prediction being tested. A hypothesis is a clear, specific, and testable statement that proposes a relationship between variables.

#### ***Specificity***

As the word's meaning suggests it should possess the capacity to clearly define the variables involved and the expected outcomes because having a concise hypothesis makes it obvious to the reader when your transition from background information to a research question without having to state.

***Testability***

Testability: It should be possible to test the hypothesis through experimentation or observation.

***Relevance***

The hypothesis should be relevant to the research question or problem being addressed. Relevance can be taken as a measure to determine the value of hypothesis.

***Based on existing knowledge***

It should be grounded in existing theories or observations also should be grounded in past knowledge gained from the literature review or from theory.

***Measurable***

Variables should be quantifiable, allowing for the collection of data. Variables should be measurable so that its characteristics or properties of people or things can take up different values. To get the acknowledgement it is very important to possess the measuring capacity.

***Guiding research***

Provides direction for the research and suggests an experiment or study design or a hypothesis should contain a pathway to travel through the research.

***Single concept***

A hypothesis is supposed to be a succinct prediction of an effect in response to a cause. If X occurs, then Y will happen.

***Predictive***

A hypothesis needs to be a statement of what will happen, given a stimulus: that is a statement of effect, given a cause. A hypothesis helps define an experiment to test an idea and answer a research question.

The above quoted key criteria are certain general principles to be followed while preparing hypotheses, among which identifying the independent variables to be studied. Specifying the nature of relationship that exists between these variables is the other mandatory step to be taken. It is better to be concise than to be long-winded. It is also better to have several simple hypotheses than one complicated hypothesis. It does not refer to specific statistical procedures that will be used in analysis. To imply the population that you are going to study is also necessary along with ensuring its falsifiable capacity and testability.

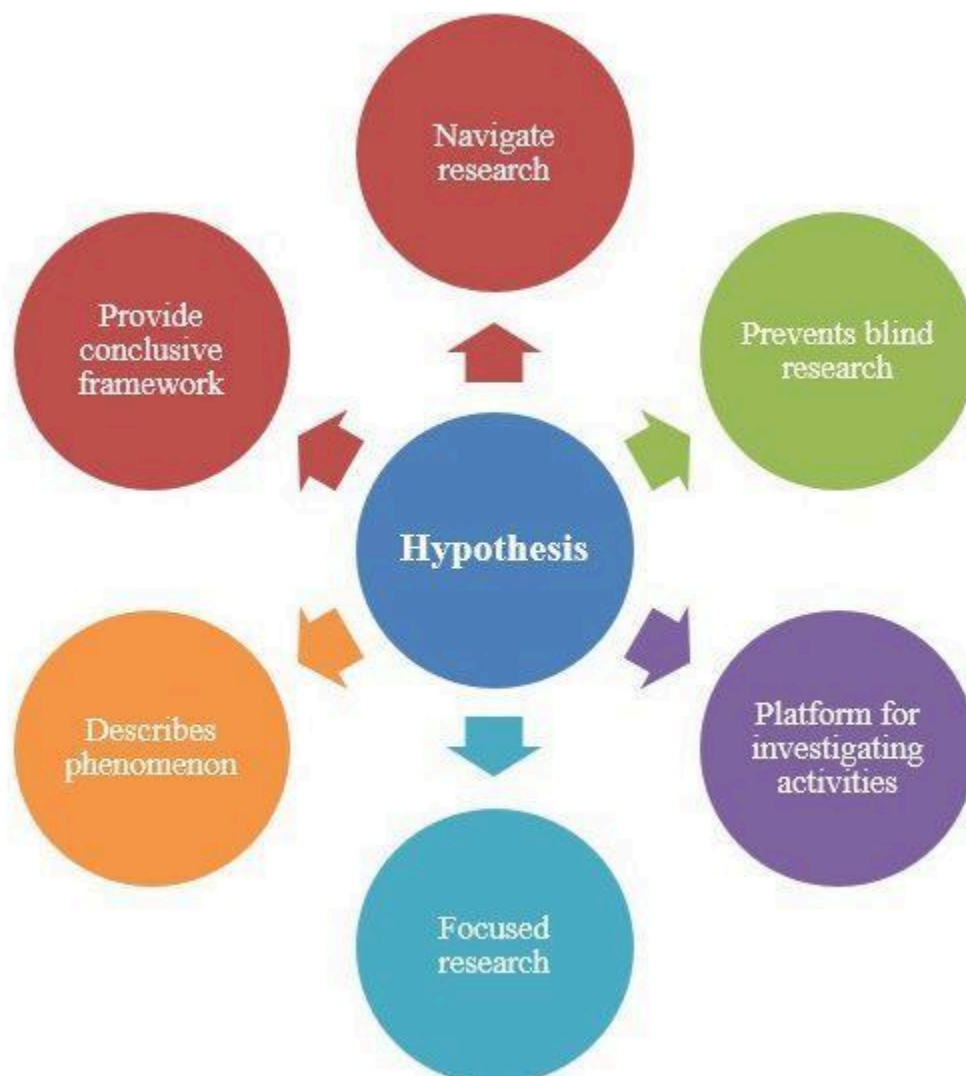
So, formulation of hypotheses is not a mere task instead it is a time taking and structured process through which the researcher has to carefully travel.

The table no 1 shows some important questions you should ask yourself to formulate a promising hypothesis and the reason behind such a self-checking process.

Questions	Why
Is the language clear and focused?	To ensure understanding
What is the relationship between your hypothesis and your research topic?	To provide clear idea
Is your hypothesis testable?	To prove accuracy
What are the possible explanations that you might want to explore	To explain its scope
Does your hypothesis include both an independent and dependent variable?	To create an acquaintance
Can you manipulate your variables without hampering the ethical standards?	To showcase the ethical standards
Is it relevant and specific to the research question or problem?	To acknowledge its contemporary relevance

## Functions of Hypothesis

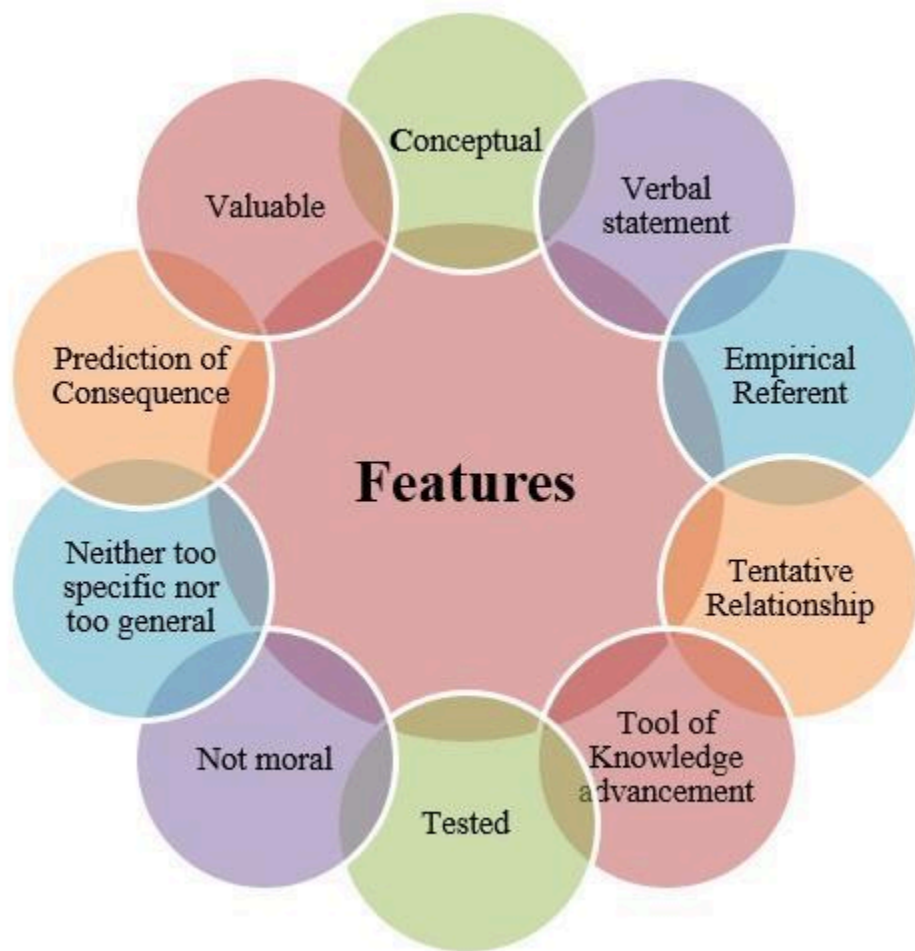
Image no 1 shows the functions of hypothesis.





## Features of Hypothesis

Image no.2 shows features of hypothesis



## Concept Map

Image 3 shows the concept map of criterion for a good hypothesis





