



MOHAMED KHEIDER
University of Biskra

Master One

Research Methodology

Syllabus

Section of English, Faculty of Letters and Foreign Languages

Dr. HOADJLI Ahmed Chaouki

2020/2021

Lecture Eight:

Theme 4, Sections: 7 to 12

I. Content

1. Characteristics of a Good Hypothesis
2. Variables in a Hypothesis
3. Formulating a Hypothesis
4. Testing the Hypothesis
5. Let's Wrap-up!
 - a. Questions and Answers
 - b. Discussion/ Debate
6. Let's Practice!
 - a. Written Feedback
 - b. Assessment

1. Characteristics of a Good Hypothesis

A good hypothesis must possess the following characteristics:

1. A good hypothesis is in agreement with the observed facts.
2. A good hypothesis does not conflict with any law of nature which is known to be true.
3. A good hypothesis is stated in the simplest possible terms.
4. A good hypothesis permits the application of deductive reasoning.
5. A good hypothesis ensures that the methods of verification are under control of the researcher.
6. A good hypothesis guarantees that the available tools and techniques will be effectively used for the purpose of verification.
7. A good hypothesis ensures that the sample is readily approachable.
8. A good hypothesis indicates clearly the role of different variables involved in the study.
9. A good hypothesis maintains a very apparent distinction with what is called theory, law, facts, assumptions, and postulate.

2. Variables in a Hypothesis

There are five types of variables. These are: (1) Independent Variables, (2) Dependent Variables, (3) Moderator Variables, (4) Control Variables, (5) Intervening Variables.

1. The Independent Variable: It is a stimulus variable. It is an input which operates either within a person or within environment to affect his/her behaviour. It is that factor which is measured, manipulated, or selected by the researcher to determine its relationship to an observed phenomenon.
2. The Dependent variable: it is a response variable or output. It is an observed aspect of the behaviour of an organism that has been stimulated. The dependent variable is that factor which is observed and measured to determine the effect of the independent variable. It is the variable that will change as a result of variation in the independent variable. It is considered dependent because its value depends upon the value of the independent variable. It represents the consequence of change in the person or situation studied.
3. The Moderator Variable: It is defined as that factor which is measured, manipulated, or selected by the researcher to discover whether it modifies the relationship of independent variable to an observed phenomenon. The sex generally functions as a moderator variable.
4. The Control variable: It is defined as that variable whose effect must be mentalised or cancelled by the researcher. In general, while the effects of the control variables are neutralized, the effects of the moderator variables are studied. Examples of control variables are: sex, intelligence, and socio-economic status.
5. The Intervening Variable: Each independent variable, moderator and control variables can be manipulated by the researcher and each variation can be observed by him/her as it affects the dependent variable. Often these variables are not concrete but hypothetical, the relationship between a hypothetical underlying or intervening variable and dependent variable.

An intervening variable is that factor which affects the observed phenomenon, but cannot be seen and measured or manipulated. Its effects must be inferred from the effects of the independent and moderator variables on the observed phenomena. Examples of intervening variables are: the attitude, learning process, habit, and interest.

3. Formulating a Hypothesis

To formulate a hypothesis, researchers use induction and deduction. Hypothesis construction enables researchers to generalise their findings beyond the specific conditions which they have obtained.

Since a hypothesis is a formulation of anticipated findings, researchers are advised to develop a hypothesis as a means of demonstrating the basis for their study to themselves and their audience. The task of introducing a study and discussing the findings are facilitated by the existence of a hypothesis.

4. Testing the Hypothesis

The evidence of the work of hypothesis lies in its abilities to meet test of its validity. The purpose of testing a hypothesis is to determine the probability that it is supported by fact. Because a hypothesis is a general expectation about the relationship between variables, there is an extremely large number of instances under which it can be tested, and it would be impractical to attempt to gain support in all of these instances.

A hypothesis is never proved. It is merely sustained or rejected. If it fails to meet the test of its validity, it must be modified or rejected. The confirmation of a hypothesis, on the other hand, is always, a tentative and relative, subject to later revision and even rejection as further evidence appears or more adequate hypotheses are introduced.