

Experimentation Method

The most dependable way of obtaining facts is the experimental method. It is used to investigate behaviour which can be brought into the laboratory and studied under controlled conditions.

Experimental method is considered to be the most scientific and objective method for studying behaviour. It is observation under controlled conditions. In this method the investigator tries to study the cause and effect relationships regarding human behaviour by performing experiments.

In **1879 Wundt** established the first psychological laboratory at Leipzig. Since then experimental method in psychology has become popular.

Cattell (1965) defined experimental method as a serial process in which experimenter sets the condition of observation isolates the facts to be observed, manipulates and control the relevant variables in set and controlled conditions.

According to **Crow and Crow**, "The experiment is used especially by research workers to determine changes in a child's development in terms of his behaviour in a series of situations controlled by the experimenter."

J.W. Best describes it as, "Experimental research is the description and analysis of what will be, or what will occur, under carefully controlled conditions."

Steps of Experimental Method

- (a) **Statement of the problem:** This is the first step and basis of an experiment. Problem should be formulated in such a way that it can qualify as the object of scientific inquiry and it must be clear, specific and straight to the point.
- (b) **Formulation of hypothesis:** It is established after the problem has been described. Hypothesis explains the phenomena with which the problem is concerned. It gives direction to the study and saves efforts.
- (c) **Designing the variables used:** The study of the structure and planning experiments is a field of investigation is called the design of the experiment. It is a plan or structure through which we can answer research question and control variance. Design means a beforehand planning of an experiment so that information can be collected for the problem under investigations.
- (d) **Controlled conditions:** The attempt to produce a phenomenon in a pure condition by regulating its environment is called controlling an experiment. The main aim of control of an experiment is to ensure that the influence of all relevant variables is same for all subjects and does not change during the experiment.

(e) Analysis of the result: After the conduct of an experiment data are presented in tables or figures.

Advantages of Experimental Method

1. Experiments can be repeated and results can be generalised and verified by the same procedure. This is one of the most significant advantages of experimental techniques.
2. This method is undoubtedly is very systematic, objective, extremely accurate and most reliable of all the methods.
3. It can eliminate irrelevant, confusing factors from the experimental situation by only taking the variables which are necessary for the study and isolate the unnecessary ones.
4. Psychologist Stanger has rightly remarked that experimental method marks the summit of scientific achievement through its precision, accuracy and economy.
5. Experimental method enables accurate observations due to controlled conditions.
6. The results obtained are valid and reliable.

Disadvantages of Experimental method

1. It is difficult to study all child behaviour and related events experimentally.
2. Experimental methods has needed a well-equipped laboratory, tools and equipment. But these may not be possible under all circumstances.
3. The results provide by experimental method may not same result obtained under natural conditions. The subjects also may not behave in the same way in an experimental situation as they behave normally.
4. It is extremely difficult to study infants experimentally because the affective factors dominate during the period of infancy and it is almost impossible to control such affective factors.
5. The scope is limited. All problems of psychology cannot be studied by this method as we cannot perform experiments for all the problems that may come up in the diverse subject matter of psychology.
6. This method is not economical in use.
7. Accurate measurements, in case of human beings, are never possible.
8. It needs specialized knowledge and therefore every teacher cannot be expected to conduct the experiment.

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