

**RESEARCH PAPER****A Comparative Study of Effects of Advanced Teaching Method and Traditional Teaching Method on the Reasoning and Problem Solving Ability of Secondary School Students****Vandana Sharma**

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Email: aravalipali@gmail.comReceived: 9th July 2019, Revised: 30th July 2019, Accepted: 16th August 2019**ABSTRACT**

Teaching methods are an important aspect of teaching and learning: determine the activities of teachers and students, the quality of the teaching process, implicitly sending a message about what teaching is, how children learn, what is knowledge. In accordance with contemporary conceptions of teaching methods made the thesis of the plurality teaching methods and the need for more balanced use of different teaching methods. In addition to the thesis of the plurality of teaching methods, current evidence suggests that teaching methods, their function is achieved only in the specific context. These findings open up a different insight into the understanding of teaching methods and their impact on the quality of teaching. Analysis method of application of teaching methods in the context of the teaching process can lead to a deeper understanding of the quality of students' knowledge, the work of teachers, etc. and understanding of the educational function of the method in the present context.

Key word: Traditional teaching method, Advanced teaching method, Problem solving ability, Reasoning ability, Secondary school student

INTRODUCTION

Man is a complex, multi-dimensional being including within him different elements of matter, life consciousness, intelligence and divine sparkle. There are several disciplines which present conscious efforts to understand man. Such disciplines are biology, psychology, sociology and anthropology etc. There is no other field of human life, in which need of a valid and clear cut conception of man is so acutely and profoundly felt as in the field of education.

Education is never ending process of inner growth and development. It is through education that thinking, problem solving, creativity, reasoning, skills, etc. of a man develops. Education in the real sense is to humanize humanity and to make life progressive, cultured and civilized. It is through education that man develops his thinking and reasoning, problem solving and creativity, intelligence and aptitude, positive sentiments and skills, good values and attitudes. Man learns something every day and every moment and education is concerned with ever growing man in an every growing society.

Etymologically, the term 'educated' is derived from the Latin word 'educere' which means to lead out or to draw out of the best in child. In view of Aurobindo Ghosh, Education is 'helping' the growing soul to draw out that is in itself. Pestalozzi considered education is to develop natural, harmonious and progressive innate powers of man.

Reasoning and problem solving abilities play a significant role in one's adjustment to one's environment. In reasoning and problem solving, one try to explore mentally the reason or the cause of an event or happening the attempt to find out the solution of the question like 'why it is so?' Reasoning ability helps us to find out the relation between the cause and effect. Not only one is engaged in finding the causes but he is also interested to know the possible effects of actions and stimuli. Then he tries to find solution of the problem, applies his knowledge to overcome the hurdle and that is called as problem solving ability.

OBJECTIVES OF THE STUDY

1. To study the reasoning ability of secondary students through traditional method.
2. To study the reasoning ability of secondary students through advanced teaching methods.

3. To study the problem solving ability of secondary students through traditional method.
4. To study the problem solving ability of secondary students through advanced teaching methods.
5. To compare the reasoning ability among secondary school students in teaching through traditional and advanced teaching methods.
6. To compare the problem solving ability among secondary school students in teaching through traditional and advanced teaching methods.

HYPOTHESIS

1. There is no significant difference in reasoning ability of secondary students through traditional and advanced teaching methods.
2. There is no significant difference in problem solving ability of secondary students through traditional and advanced teaching methods.

RESEARCH DESIGN

METHODOLOGY:

Here are many methods of collecting, analyzing, reporting research data. There are basically three different types of methods.

- a. **DESCRIPTIVE METHOD:** It provides a method for investigation to study describe and interpret what exist at present.
- b. **HISTORICAL METHOD:** It provides a method for investigation to discover, describe and interpret existed in the past.
- c. **EXPERIMENTAL METHOD:** It provides a method for investigation to describe basis for relationship among phenomenon under controlled conditions.

Researcher used descriptive cum survey method for proposed study.

- a. **POPULATION:** Population refers to any collection of specified group of human being or of non-human entities such as object, educational institutions, time unit and geographical area etc. Population has been taken from Xth Class of Co-Ed Private School of Faridabad District of Haryana. It is not feasible to collect data of the whole population in any investigation. The population will be of 100 students.
- b. **SAMPLE:** A sample of 50 students of class X from co-ed school of Faridabad city was randomly selected for collection of data.
- c. **VARIABLE:** A hypothesis is made testable by providing variables of the hypothesis. For a testable hypothesis, variables are important thing. There are five types of variables. Broadly we divide it into two categories: Dependable Variables and Independable Variables. Here in our study, the Independable Variable is Advanced and Traditional Teaching Methods and Dependable Variables are Reasoning and Problem Solving Ability.
- d. **TOOLS:** Following tools will be used by researcher for proposed study :
 - Tools of reasoning ability by L.N Dubey
 - Tools of problem solving ability by L.N Dubey
 - Self made test
- e. **PROCEDURE OF DATA COLLECTION:** Random sampling technique will be used for collection of data.
- f. **STATISTICAL TECHNIQUES USED:**
 - **MEAN:**

The mean of distribution of scores is the value on the scores scale corresponding to the sum of the scores divided by their number or size of sample.

$$\text{Formula} = \sum x / N$$

- **STANDARD DEVIATION:**

Standard deviation measures the absolute dispersion of a distribution, the greater the amount of dispersion or variability, the greater the standard deviation the greater will be the magnitude of the values from their mean.

Formula of standard deviation:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \bar{x})^2}$$

➤ T-TEST:

A t-test is most commonly applied when the test statistic would follow a normal distribution if the value of a scaling term in the test statistic were known. When the scaling term is unknown and is replaced by an estimate based on the data, the test statistics (under certain conditions) follow a Student's t distribution. The t-test can be used, for example, to determine if two sets of data are significantly different from each other.

$$t\text{-Test} = \frac{M_1 - M_2}{\sigma_d}$$

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