

# A COMPARATIVE STUDY OF INQUIRY TRAINING MODEL & INDUCTIVE THINKING MODEL WITH REFERENCE TO SOME UNIT OF STANDARD-8 OF SCIENCE AND TECHNOLOGY SUBJECT

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## Abstract

Present Study has been done Comparative study of Inquiry training model and inductive thinking model with reference to some unit of standar-8 of science and technology subject. For the present study teaching method consider as variables. Total 200 students were selected from all over the schools. To check effect of model on students self made experiement and test based on blue print was used as tool. On the basis of the score obtain by the students mean, standard deviation, standard error of mean and t-values were calculated for data analysis. Effect of teaching were found significantly.

**Key Word:** Inquiry Training Mode, Inductive Training Model

## INTRODUCTION

Teaching is not everybody's tea cup to sip. It is an art and skill to be learnt. It requires the knowledge of subject content, method, techniques and teaching aids to be used for making teaching interesting and effective. The selection of these methods and techniques depend on nature of task, learning, objectives, learner abilities and students entering behaviour.

What do you mean by teaching strategies ? Teaching strategy is a generalized plan for a lesson, which includes structure, desire learners behaviour in terms of goal of instruction and outline of planned tactics, necessary to implement the strategy. We all know autocratic style and permissive styles teaching strategy. From last two decades concept of model of teaching development in western countries. The Greek philosopher used his own model question-answer. India ancient teachers developed the desirable change in the behaviours of the learner. These models prescribe different approaches to instructional process to bring changes in the behaviour learning.

Following important teaching models have been experimental upon in some of the colleges of Indian Universities under the guidelines of NCERT.

- Advance Organiser Model of Ausubale
- Inquiry Training Model of Suchmen
- Inductive Thinking Model of Hilda Timba
- Mastery learning Model of Bloom.
- Basic teaching model of Glasser
- Opportunity of learn model time count model of control
- Master of method model by Jesut.
- Concept Attainment Model by Bruner
- Jurisprudential model by Donald Oliver
- Syntax Model by Gordon

Now a days , numbers of efforts are made to indentify teaching skill for teachers to teach different subjects. Cognitive, effective and psychomotor behaviour must be developed in a balanced and integrated fashion and for that models of teaching have great potentiality for achieving this goal of education.

Richard Suchmen (1977) believed that individual have a natural motivation to inquiry the inquiry training model is built arround intellectual conformation. The student is presented with a puzzling situation and inquires into it. The general goal of inquiry training is t help students for developing the intellectual discipline and skill nessessary to raisequestions and search out answers streaming from their curiosity. In inquiry process teaching act as catelysts, rather than as dispensaries of information. They offer students problems issues and then provide encouragement for inquiry into the nature of the problem and guidance for seeking students. They help students to find or pose problems investigate and clarify positions and conclusions. Hilda Taba created the Inductive Model of Teaching to provide the students with opportunities to develop concepts, to increase their depth of understanding of those concepts, and to begin building bigger ideas as they

see relationships among concepts. While the stages of the model are described in a sequential way, there is flexibility in how you orchestrate them in your lessons. (Jeanine M. Dell'Olio, Tony Donk, 2007) The focus of the Inductive Model is to assist students to build deep understanding of specific topics or ideas.

Life in today's social situations is a very complex endeavor. To meet such a complex situation, education is necessary. Education is the invention of mankind. It begins at birth and ends at his / her death. The aims of education are multiple, but the primary aim of education is to make an individual. It is a process of growth in which the individual is helped to develop his talents, powers, interests and ambitions. This growth is an integrated and harmonious process. Education is a process of socialization. It provides the necessary skills to meet the demands of modern life. The development of democratic country depends upon teachers. The teacher is of paramount importance in every system of education. The whole system of education revolves around the teacher.

In ancient India, the teacher was rated equal to God. The teacher is also called, 'the architect of nation', 'the maker of man', 'the maker of history', 'pillar of the nation' etc. It is a widely recognized fact that the teacher is the ultimate key to educational change and school improvement. The quality of any educational system depends upon the quality of a teacher. The teacher is the key to any educational reconstruction. Effective teachers are lifelong learners. Teaching is such a social process which aims at maximizing learning. Some individuals are born teachers and do not need much training for learning skills of teaching. It is said that 'where there is teaching, there is learning, but where there is learning, it isn't the result of any teaching'. This learning may be due to any other factor. These are days of self-directed learning, active learning and lifelong learning. Active and constructivist modalities of learning are evolving around in the field of education. 'Learning to learn' is one of the main purposes of teaching and learning. Efficient learning process does not depend on teaching alone, it depends on learning procedures and learning techniques as well. This is the reason that learning theories have been proved to be unsuccessful in solving teaching problems. As a result, teaching theories are all the time needed to solve teaching problems.

The students of education have given the knowledge of learning principles in the process of education. It is the experience that no teaching problem can be solved by acquiring the knowledge of learning principles. The focus of educational psychology has been on 'learning', but now there is a shift from learning to teaching. It is because learning theories cannot solve the problems of teaching. The efforts are being made to develop theories of teaching. As a result of which some teaching models have been developed. A teaching model is a model which provides suitable guidelines to the teachers for creating a proper interactive environment for teaching-learning. The process of teaching-learning has great importance in the educational field. It is assumed that good teaching results in good learning. This is the central theme of much of the thinking about education. The only progress in this regard is that many teaching models have been developed so far. These models have been propounded by keeping learning theories as base. Hence, they can't be substitute of teaching theory. Models of teaching may be described as some sort of guidelines, plans, techniques or strategies designed to achieve specific educational objectives. They differ from general teaching techniques and strategies in the sense that they are designed to meet specific objectives. They help a teacher in his task in the same way as a constructed model or blueprint helps an engineer in his project. Model of teaching is just a blueprint designed in advance for providing necessary structure and direction to the teacher for realizing the stipulated objectives. Models of teaching act as hypotheses for teaching theories. Models of teaching help a teacher to develop his capacity to teach more students and create conducive environment for the students in various subjects. Thus, investigator decided to take comparative study of inquiry training model and inductive thinking model with reference to some unit of standard-8<sup>th</sup> of science and technology subject.

## TITLE OF THE STUDY

**"A Comparative Study of Inquiry Training Model & Inductive Thinking Model with Reference to some unit of Standard-8 of Science and Technology Subject"**

## OBJECTIVES OF THE STUDY

The researcher has decided the following objectives.

1. To construct Inquiry Training Model on Selected Unit of Science and Technology Subject of Standard-8<sup>th</sup>.
2. To construct Inductive Thinking Model on Selected Unit of Science and Technology Subject of Standard-8<sup>th</sup>.
3. To Compare Inquiry Training Model and Traditional Method for Selected Unit of Science and Technology Subject of Standard-8<sup>th</sup>.

4. To Compare Inductive Thinking Model and Traditional Method for Selected Unit of Science and Technology Subject of Standard-8<sup>th</sup>.
5. To Compare Inductive Thinking Model and Inquiry Training Model for Selected Unit of Science and Technology Subject of Standard-8<sup>th</sup>.

#### VARIABLES OF THE STUDY

Table-1  
Variables of the study

Sr. No	Type of Variable	Variable	Level	Category
1	Independent	Teaching Methods	3	❖ Inquiry Training Model ❖ Inductive Thinking Model ❖ Traditional Method
2	Dependent	Score on Post Test	-	

#### HYPOTHESIS OF THE STUDY

**Hypothesis of the present study were as follows:**

- Ho<sub>1</sub> There will be no significant difference between the mean scores of Post Test of Inquiry Training Model and Traditional Method of Standard-8<sup>th</sup> Students.
- Ho<sub>2</sub> There will be no significant difference between the mean scores of Post Test of Inductive Thinking Model and Traditional Method of Standard-8<sup>th</sup> Students.
- Ho<sub>3</sub> There will be no significant difference between the mean scores of Post Test of Experimental groups of Inquiry Training and Inductive Thinking Model of Standard-8<sup>th</sup> Students.

#### LIMITATIONS OF THE STUDY

1. This study is limited to the Selected Topics of Science and Technology Subject of Standard-8<sup>th</sup>.
2. Present study is limited to Gujarati Medium Students.

#### POPULATION OF THE STUDY

In any research, the investigator has to think of the population to which the results are to be applied. The population is a universal set of subjects to which the results are to be applied. The researcher had decided to A Comparative Study of Inquiry Training Model & Inductive Thinking Model with Reference to some unit of Standard-8 of Science and Technology Subject of Gujarati medium of Gujarat State. Therefore, all the students of standard-8<sup>th</sup> studying in Gujarati Medium considered as population of the present study.

#### SAMPLE OF THE STUDY

For the present Study, Suman Vidyalaya and Vidyanagar High School of were selected by using purposive sampling method. Total 02 (Two) schools of Ahmedabad City were for the present study. Suman Vidyalaya, Naranpura selected for Inquiry Training Model and Traditional Method and Vidyanagar High School, Satellite was selected for Inductive Thinking Model and Traditional Method. Total 200 students were selected for the Present Study. Details of the sample was given below :

● **Suman Vidyalaya, Naranpura, Ahmedabad**

- Inquiry Training Model – 50 Students
- Traditional Method – 50 Students

● **Vidyanagar High School, Satellite, Ahmedabad**

- Inductive Thinking Model – 50 Students
- Traditional Method – 50 Students.

#### METHOD OF THE STUDY

In the present research the researcher used Experimental Method. Out of different Experimental Design Researcher had used Post Test Experimental Design for the Present study.

#### TOOL OF THE STUDY

The following tools were used for collecting the data of the present study.

1. Self Prepared Inquiry Training Model and Inductive Thinking Model for Experiement.
2. Self Prepared Post Test Based on blue print.

### METHOD OF DATA ANALYSIS

Following Methods were used for data analysis for the present study :

1. Mean, and Standard Deviation
2. T- values

### FINDINGS OF THE STUDY

1. Students of traditional method. So, Effect of Teaching Method found on Standard-8<sup>th</sup> Students.
2. Students of Inductive Thinking Model achieveing more achievement then Students of traditional method. So, Effect of Teaching Method found on Standard-8<sup>th</sup> Students.
3. Experimental Group Students of Inquiry Training Model and inductive thinking model having equal achievement.

### CONCLUSION

Researcher has presented statement of problem, objective of the study, hypothesis, variable of the study, limitation, tools used for the present study, population, sampling method, data analysis methods and findings of the study.

There is a possibility of some sort of limitations taking into consideration the limitations of the researcher which can be considered forgivable, besides the present research work was proof-read after being typed but still if there is any typing mistake or other mistake of reporting, it is a humble request to consider them forgivable.

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