



## STUDY OF EFFECTIVENESS OF ADVANCE ORGANIZER MODEL ON ACHIEVEMENT OF 7<sup>TH</sup> STANDARD STUDENTS IN MATHEMATICS SUBJECT

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### Abstract

*Models of Teaching are the effective way of Teaching. In many researches it is proved that it is more effective than regular traditional teaching methods. In present research Advance Organizer model is used to teach one of the Unit of Mathematics subject for 7<sup>th</sup> standard. Single group pre-test post-test designed was used. The result of achievement test showed that the Advance Organizer Model is more effective than traditional teaching method.*

**Keywords:** - Models of Teaching Advance Organizer Model, Types of Quadrilaterals



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### Introduction:-

The higher order thinking skills the very ones our students in this computer society are often left out. Therefore the new millennium teachers need to have exact and sound teaching strategies that will help to brain out learning outcomes in all levels of cognitive, affective and psychomotor domain. Bruce Joyce and Marsha Weil (1996:11) in their book 'Models of Teaching' explained about various models that can help the teacher to bring out the best learning outcomes in the students. These needs to be used by every teacher specially Science teachers, since "Science" is ruling the present world and has established its supremacy in every field (Bhatia and Bhatia 2000:390)

In recent years Science educators have been working on reforming Science teaching. This reformation has been based on a vision of teaching and learning. Science in which all students have a greater opportunity to be scientifically literate (Ebenzer and Connor 1998:28) . In India there has been a movement in the past decade to upgrade and restructure the teaching of Science in public schools. Restructuring of Science teaching is very important for the students to learn Science better in this scientific world.

**Need of the study:** - many times it happens that if the new knowledge is not plugged properly with previous knowledge, it remains scattered and understood. In most of the

Universities Models of teaching are included in the curriculum of the degree of B. Ed. Many teachers after they complete their B.Ed. course they forgot to use Models of Teaching for teaching different topics. Models of Teaching help students for deep understanding. Advance Organizer Model gives the central idea of the unit in the beginning, so that it will get linked properly with previous knowledge. In this Model there is systematic arrangement of knowledge, so it becomes easy to understand and remember for students.

For the present research, the researcher has selected the unit ‘Types of Quadrilaterals’ from 7<sup>th</sup> standard Mathematics book of S.S.C Board. For teaching this unit the researcher used Advance Organizer Model. The researcher used chart in the beginning to show all types of Quadrilateral with their diagrams and characteristics. Because of graphical representation student understood the content easily and they can also compare between the types of quadrilaterals. They found the similarities and differences also.

**Title of Research:** - To Study the Effectiveness of Advance Organizer Model on Achievement of 7<sup>th</sup> standard students in Mathematics subject for the unit ‘Types of Quadrilaterals’ of Shanu Patel High School, Warje, Pune.

**Operational Definition:** -

- Effectiveness: -The Effectiveness of Advance Organizer Model was determined on the basis of significant difference between marks obtained by 7<sup>th</sup> standard student in post-test and pre-test for the unit ‘ Types of Quadrilaterals’.
- Advance Organizer Model: - Advance Organizer Model is one of the Teaching Model developed by Devid Ausubel . It is one the Model from Information Processing Model family.
- Achievement: - An Achievement test was developed which was based on the unit ‘Types of Quadrilaterals’.
- 7<sup>th</sup> Standard: - The students who were studying in 7<sup>th</sup> standard of S.S.C. Board School.
- Mathematics: - It is one of the subject of 7<sup>th</sup> standard curriculum, prepared by Maharashtra state.

**Objectives:** -

1. To find out the mean scores of pre-test and post-test of 7<sup>th</sup> standard students in achievement test.
2. To find out the effectiveness of Advance Organizer Model on achievement of 7<sup>th</sup> standard students in Mathematics subject.

**Scope: -**

- Any content of Mathematics can be taught by using Advance Organizer Models at any standard.
- Use of Advance Organizer Model is also suitable to teach other subjects of any Board.

**Limitations: -**

There was no control of researcher on interest and attention of students in Mathematics subject.

**Delimitations: -**

1. The present research was limited only for Mathematics subject and only one unit ie. 'Types of Quadrilaterals'.
2. The teaching programme was done only for 7<sup>th</sup> standard students of Shanu Patel High school, Warje, Pune. The S.S.C. Board , English medium School.

**Hypothesis: -**

Research Hypothesis: - There will be significant difference in achievement test scores of post-test and pre-test of 7<sup>th</sup> standard students in Mathematics subject.

Null Hypothesis: - There will be no significant difference in achievement test scores of post-test and pre-test of 7<sup>th</sup> standard students in Mathematics subject.

**Population:** - All English medium school students studying in 7<sup>th</sup> standard of S.S.C. board schools.

**Sample and Sampling:** -Non Probability- Purposive Sampling.

For this research the 7<sup>th</sup> standard 'A' division students of Shanu Patel School, Warje, Pune were selected as sample. Total 49 students were there in the class.

**Assumptions:-**

- Models of Teaching are more effective than Traditional Methods of teaching.

**Tools for data collection: -**

- An achievement test- An achievement test was framed based on the unit 'Types of Quadrilaterals'. It was used as pre-test and post-test.
- Statistical tool:- Mean and t- test were used.

**Research Method-** experimental method- Single group- pre-test –post-test design.

**Type of Research:** - Quantitative research-

Applied research.

**Variables-**

Independent variable: - Use of Advance Organizer Model.

Dependant variable - Achievement of Students.

Controlled variable - Subject and Unit, Time duration of Teaching.

**Data Analysis and Findings:-** The summary of data analysis is given in tabular form as follows..

Pre-test mean = 3.26667
Post- test mean = 20.93333
Difference between Mean= 17.66663

The value of 't' = 1.64666

The value of 't' is less than the scale value at 0.01 level . So the null hypothesis is rejected and the research hypothesis is accepted.

**Conclusion:** - The Advance Organizer Model was more effective than the Traditional method of Teaching.

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