



**ORIGINAL ARTICLE**

## **Comparison of Advance Organizer Model and Concept Attainment Model for Teaching Concepts of Science to Standard IX**

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<b>ARTICLE HISTORY</b> Received: 11.12.2015 Revised 16.01.2016 Accepted 25.01.2016	<b>ABSTRACT</b> <i>In present Era, Teaching should be effective only when exact teaching aids, strategies and teaching methods were used in classroom teaching when appropriate teaching strategy or method was adopted and applied in classroom teaching by a teacher then more outcomes were found them teaching through conventional method. In this study we want to see the effect up advance organizer model and concept attainment model on 9th class students in science. Both the models of teaching under the behavioral systems family of models. Behaviour theory based on Skinner's operant conditioning and wolpe's counter - conducting as well as training Psychology from some of the important emphasis is one reinforcement, stimulus control and immediate feedback.</i> <i>Keywords: Skinner's operant, IX, Science</i>
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### **INTRODUCTION**

Teaching - learning situation is the main component in the field of education. This component is not up to the mark while considering the wide spread knowledge. It is necessary for an individual to keep pace with and compete with world. The methods which are used are not appropriate. They do not consider individual differences, link, self concept, personality and cognitive development. One of the major problem in the field of education is low level of cognition. Educational Technology has been proved to be a boon and given a specific place in the national policy of education 1986. Instructional strategies corresponding to psychology of human learning is one of the major considerations of educational technology.

The models selected for the present study i.e. Concept Attainment Model and Advance Model comes under Information processing Models. The central assumption in the information processing paradigm is that a sequence of processing stages occurs between stimulus and response. The one sets of these processing stages are successive and each stage on the information available to it.

Although the stages are successive, yet they can be overlapping in time. Information processing Models focus intellectual capacity. The analysis of related literature indicates effectiveness of models in India.

Different research studies in India are classified under different categories which have been conducted Concept Attainment Model and Advance Organizer Model in teaching learning processes. The researcher arrived at the following conclusions:

Before adopting any model of teaching one should first know the understanding level and reaction towards the model. Passi (1985), Passi, Singh and & Sansanwal (1986), Bihari (1987), Buddhisagar (1986) and Sampath (1987) in their research studies found the significant favorable change among teacher educators as well as student teacher towards the understanding of reaction towards the theoretical aspect of Concept Attainment Model and Advance Organizer Model.

Personality factors did not influence the model competency of Concept Attainment Model as well as the

achievement of students in Advance Organizer Model which were supported by the Anthimadas (1986) and Sampati (1986) respectively, 'However the research study of passi. (1985) found very little effect of personality factors on achievement of students in Concept Attainment Model. On the basis of above given few research studies we cannot generalize the results. In other words it cannot be said that which model should be selected for teaching of science to high school students. To fill in this gap the present study has been selected.

### **STATEMENT OF THE PROBLEM**

The Statement of the study was worked as:-

"COMPARISON OF ADVANCE ORGANIZER MODEL AND CONCEPT ATTAINMENT MODEL FOR TEACHING CONCEPTS OF SCIENCE TO STANDARD IX"

### **OBJECTIVES**

The specific objective of the study was as follows:

1. To study the effectiveness of advance Organizer Model and concept attainment model in terms of student's achievement:-
2. To compare the mean achievement of students studying through advance organizer model and concept attainment model by taking higher mental ability as a covariate.
3. To study the effect of treatment, higher mental ability and their interaction on achievement of students.
4. To study the effect of treatment, scientific attitude and their interaction on achievement of students.

### **HYPOTHESES**

The following hypothesis were formulated for the present study.

There will be no significant difference between the adjusted mean achievement of students on criterion test who have studied through concept Attainment Model and Advance Organizer model with higher mental Ability as a covariate.

There will be no significant effect of treatment higher mental ability and their interaction on achievement of students.

There will be no significant effect of treatment scientific attitude and their interaction on achievement of students.

There will be no significant effect of treatment on achievement of students.

There will be no significant effect of higher mental ability on achievement of students.

There will be no significant effect or interaction between treatment and higher mental ability on achievement of students.

There will be no significant effect of scientific attitude on achievement of students.

There will be no significant effect of interaction between treatment and scientific attitude on achievement of students.

### **DELIMITATIONS OF THE STUDY**

While conductive the study three types of specific restrictions with respect to sample content and language were made. These restrictions are

1. The Study was confined to the IX class students studying science as compulsory subject.
2. The study was further restricted to five selected concepts of science.
3. The language of instruction was Hindi therefore the lessons were restricted to Hindi knowing students.

### **SAMPLE**

The sample consisted of 60 students purposive sampling techniques was used. There are two groups. Group I was through advance organizer and Group II was taught through concept attainment model. There were 30 students in each groups.

### **TOOLS**

Following tools were used for the study Higher mental ability in Science Higher mental ability in science was developed by Joshi and Sansanwal (1986). It measures the power of analysis synthesis. Application and evaluation in science. The test retest reliability coefficient was found 0.816 the validity coefficient are 0.24 and 0.26 which are significant at 0.05 level and 0.10 level.

### **DESIGN**

The present study was experimental type. The study was designed on the lines of post test only control group design. As described before there were two groups considered for the experiment the two treatments were advance organizer model and concept attainment model. Five concepts were taken for

the purpose of experimentation these concepts were element, compound, light, electricity and surface tension. Group I was thought these concepts with advance organizer model while group II with concept attainment model each concept was taught in one period of 45 minutes. After the administration of criterion test the scientific attitude and higher mental ability of both the groups was measured.

#### PROCEDURE OF DATA COLLECTION:

Activities followed in collecting the data from both the groups are given in table 6.2. Both the group were taught same 5 concept through CAM and AOM.

**TABLE1: STEP WISE ACTIVITIES IN THE TREATMENT FOR BOTH GROUPS.**

STEPS	ACTIVITIES	OBJECTIVES	DURATION
I(a)	Demonstration lesson of concept attainment model	To explain the procedure of concept attainment model	30 Minutes
I(b)	Discussion about concept attainment model	---do---	30 Minutes
I(c)	Demonstration lesson of advance organizer model	To explain the procedure of AOM	30 Minutes
I(d)	Discussion about concept attainment model	---do---	30 Minutes
II(a)	Teaching Through concept organizer model to 1st group	To attain the predetermined objectives related to concepts	3 hours and 45 Minutes at the rate of 45 Minute for 5 days
III(b)	Teaching through advance Organizer model to IInd group	To "attain the predetermined objectives related to	3 hours 45 Minute at the rate of 45 Minute for 5 days.
IV(a)	Administration of criterion test	To asses the attainment of predetermined objectives related concepts	
(b)	Administration of science attitude scale	To measure the attitude towards science	20 Minutes
(c)	Administration of higher mental in science	To measure the higher mental ability in science	20 Minutes

#### STATICAL TECHNIQUES

For analysing the data mean standard deviation, percentile, ANCOYA, ANOVA, stational techniques were computes.

#### CONCLUSIONS

Following conclusions can be drawn from the present study:

- ✓ Advance organizer model and concept attainment model found equally effective for teaching concepts in chemistry at IXth standard.
- ✓ Higher mental ability contributed in achieving more at par model.
- ✓ Science attitude did not produced differential effect on achievement.
- ✓ Interaction between higher mental ability and treatment was not significant.
- ✓ Interaction between science attitude and treatment was not significant.

#### IMPLICATIONS

- ✓ The study reveals the following implications:
- ✓ It can be said on the basis of the study that concepts in science can be taught effectively with Advance Organizer model and Concept Attainment model.
- ✓ Science subjects can be taught effectively with Advance Organizer model and Concept Attainment model.
- ✓ Teacher trainees can use these models for teaching.
- ✓ Models can be used at secondary school level for teaching effectively from IXth Class chem.
- ✓ Only five concepts were chosen for the study. Other concepts like, Acid, Base, surface tension etc. can be taught thought these models.

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