

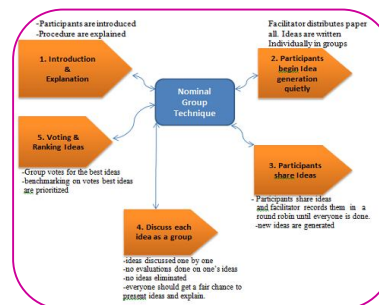


EFFECT OF ADVANCE ORGANIZER MODEL ON ACHIEVEMENT IN BIOLOGY AMONG INTERMEDIATE STUDENTS

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ABSTRACT

The present paper is an attempt to study the effect of Advance organizer Model on achievement of students in Biology among intermediate students. The main objective of this study was to find out the effectiveness of Advance organizers and to compare the performance of experimental group with control group. The research design was true experimental pre-test, post-test design. Here the investigator has tried on the sample of 60 students of class XI by teaching them using advance organizer model and conventional method of teaching. The findings of the study shows that the students who belonged to the experimental group, which is taught by Advance organizer model significantly have better academic achievement in Biology than those students who belonged to the control group. Consequently, advance organizer model proved to be an effective intervention to enhance academic achievement of the students.

KEY WORDS: Advance organizer Model (AOM), conventional method of teaching, Academic Achievement.

INTRODUCTION

'Education' is generally conceived as a process of learning and training that moulds the whole of human personality in different dimension. It modifies the behaviour of an individual further transforms instinctive urges and impulses and determines the attitudes and beliefs. Education enables to draw out the hidden talents. It trains an individual to increase his productivity and thus it helps him to render more effective service to society. The Education is evidently a process through which desirable changes in the behavior of a child in terms, value, skills, attitudes etc. are expected to be brought about. In school desirable attitude, knowledge and beliefs are inculcated in him through the teaching of different subjects and a regular course of training. Teaching is a set of activities which is designed and performed to achieve certain objectives in terms of changes in pupil behavior. It is the process by which a person helps others to achieve knowledge, understanding, skills and attitudes.

Models of teaching are prescriptive teaching strategies. They differ from general approaches of teaching in that they are designed to realize specific instructional objectives. General approaches of teaching are considered to be applicable to all teaching situations. However models of teaching are not applicable to all situations. Joyce and Weil (1980) have identified models of teaching which are classified into four families: Information processing models, personal models, social Interaction models and behavioral modification models. Information processing may be defined as the ways people handle stimuli from the environment, organize data, sense problems etc.

Advance Organizer Model is a deductive, expository, sequential and interactive teaching strategy propounded by David P. Ausubel (1968). It is designed to teach hierarchically organized content by strengthening cognitive structure of learners. Broad concepts or more inclusive ideas are placed at the top and narrow or less inclusive ideas are arranged at lower levels of the hierarchy.

NEED AND SIGNIFICANCE OF THE STUDY

In the present scenario, lecture method is commonly used as the method of teaching in the classroom. Most teachers give lectures without understanding the cognitive structure of students which results in poor learning. To solve this problem of teachers, Advance Organizer Model is a novel teaching strategy through which organized form of content can be taught in a meaningful way keeping in mind, the cognitive map of learner. Simple ideas are presented first to the students followed by complex ideas so that learning can take place in sequential and integrated manner. In this habit of precise thinking and interest in Enquiry can be developed among the learners. The researcher has, therefore, selected Advance Organizer Model to test its effectiveness in attaining cognitive ability and enhance achievement in biology, and helps to construct the knowledge with the help of advanced organizer model.

REVIEW OF RELATED LITERATURE

Bransford (2004) reported that as long as Advance Organizers do their job of introducing new learning concepts and linking or developing new schema to relate the material to, they can take many shapes including a simple oral introduction by the teacher, student discussion. Outlines, timelines, charts, diagrams and concept maps.

Bundy (2005) reported that Advance Organizers that build schema by providing new information are called Expository Organizers. When the Advance Organizers help students to recall prior knowledge by activating existing schema, they are called comparative Organizers.

Statement of the problem: Effect of Advanced Organizer Model on achievement in Biology of secondary school students.

OBJECTIVES OF THE STUDY:

The main objectives of the Study are

1. To prepare lessons transcripts based on advanced organizer model on selected topics of Biology of standard XI state board syllabus.
2. To find out the effectiveness of lessons transcripts based on advanced organizer model with respect to achievement in Biology of XI standard students.
3. To study the difference between pre-test scores of achievement in Biology of control and experimental group.
4. To study the difference between post-test scores of achievement in biology of control and experimental group

HYPOTHESES:

The following null hypotheses have been formulated.

1. There is no significant difference in the pretest scores of achievement in biology of control and experimental group.
2. There is no significant difference in the post test scores of achievement in Biology of control and experimental group.

METHODOLOGY OF THE STUDY:

Procedure of the Study: Experimental design was adopted. Before starting experimentation, the investigator conducted achievement test to the both the experiment group and control group and found that there is no significant difference in their mean scores. The students of the experimental group were taught using lesson transcripts based of advance organizer model; and the other group using traditional method of teaching. After the treatment the post test was administered to both the groups. The collected data was subjected to the statistical analysis and the results obtained were interpreted.

Sample:

The sample of the study consisted of 60 students studying in XI standard under the State board syllabus in Bangalore city. The sample included both boys and girls.

Tool used:

The following tools have been used in the present study:

The tool on achievement test in Biology was developed, validated and reliability is established by the researcher.

ANALYSIS AND INTERPRETATION:

Hypothesis-1: There is no significant difference in the pretest scores of achievement in biology of control and experimental group.

Table-1 Comparative mean scores of Pretest scores of experimental group and control group

GROUP	N	Mean	S.D	't' Value	Significance
Experimental Group	30	12.14	9.34	0.320	NS
Control group	30	11.46	6.96		

From table-1, It is found that obtained 't' value of experimental group and control group with respect to their academic achievement in Biology is less than the table value. Hence the hypothesis -1 is accepted and therefore there is no significant difference between the experimental group and the control group with respect to their academic achievement in Biology in the pre- test. Therefore it may be concluded that, the experimental and control group were alike and equal with reference to their academic achievement in Biology before subjected to experimentation.

Hypothesis-2: There is no significant difference in the post test scores of achievement in Biology of control and experimental group.

Table-2 Comparative mean scores of post test scores of experimental group and control group

GROUP	N	Mean	S.D	't' Value	Level of Significance
Experimental Group	30	19.68	10.68	3.286*	0.01
Control group	30	12.13	7.36		

From table-2, It is found that obtained 't' value of experimental group and control group with respect to their achievement in Biology is greater than the table value. Hence the hypothesis -2 is rejected and alternative hypothesis is accepted that there is significant difference between the experimental group and the control group in their achievement in Biology in the post- test. Therefore it may be concluded that, the experimental group shows better achievement in biology than the control group after subjected to experimentation.

SUMMARY OF THE FINDINGS:

The students who belonged to the experimental group which is taught by using advance organizer model significantly have better achievement in biology than those students who belonged to the control

group. Consequently, the teaching based on advance organizer model proved to be an effective intervention to help the students become active learners and enhance their academic achievement.

CONCLUSION:

Based on the findings of the research, the following conclusions were reached:

- Advance organizer model proved an effective teaching strategy which had better impact on the academic achievement in Biology than the group taught using the conventional method of teaching
- The use of advance organizer model significantly and positively enhances the academic achievement of the students in Biology.

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