

EFFECT OF CONCEPT ATTAINMENT MODEL ON HIGH SCHOOL STUDENT'S ACHIEVEMENT IN SCIENCE SUBJECT

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ABSTRACT

The present study aims at finding out the effect of concept attainment model on achievement in science subject of high school students over the conventional lecture method. The pre-test, post-test experimental group design was adopted. In this study the purposive sampling technique was adopted. The sampling consisted of 50 high school students of different government and private schools Porsa, at Morena district formed the experimental group and 50 high school students of different government and private schools Porsa at Morena district formed control group. The achievement test was used to collect data from the science subjects. The t-test and gain score analysis was used to analyze the data. The results shows that the concept attainment model is effective than the conventional lecture method in teaching science.

Key words: Concept attainment, Students, High school

INTRODUCTION

Education has been considered in all times to be an instrument of social change. This objective cannot be attained without having improved the classrooms practices. Teaching is an activity designed and performed for the attainment of a larger number of objectives in terms of changes in

student behavior. Education plays an important role in the progress or an individual's mind and country.

At present explosion of knowledge is being achieved through the development of science and technology. Instructional technology has come out with bubbling ideas. Students have varied personalities, which need different styles of learning. The common implication of both facts is that teacher should use such strategies of teaching which would match the instructional objectives of learning styles.

There are many powerful models of teaching designed to bring about particular kinds of learning and to help

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students become more effective learners. As educators, we need ability to identify these models and to select the one's we will master in order to develop and increase our own effectiveness.

STATEMENT OF THE PROBLEM

The title of the present study is the "The effect of concept attainment model on high school students achievement in science subject".

OBJECTIVES

(1) To find out the significant difference in achievement in science between the control and experimental group of high school student's.

(2) To find out effectiveness of the concept attainment model over the conventional lecture method in teaching science.

HYPOTHESIS

(1) There is a significant difference between the control group and experimental group of students in their achievement in science subject.

(2) There is a significant difference between the control group and experimental group of boys and girls students in their achievement in science subject.

(3) The concept attainment model is effective in teaching of science than the conventional lecture method.

METHODOLOGY

In the present study the two group pre-test, post-test experimental design was adopted. The two groups were formed as per the requirement of the concept attainment teaching model.

The sample consisted of 50 high school students of different government and private schools Porsa at Morena district formed the experimental group and 50 high school students of different government and private high schools Porsa at Morena district formed control group.

TOOLS- The achievement test in science developed and validated by researcher.

STATISTICAL TECHNIQUES USED-

Mean, Standard deviation, t-test and gain scores analysis were used in the study. The analysis of data using the t-test is shown in FINDINGS OF STUDY- The t-test analysis showed that-

(1) The control group and experimental group students differ in their achievement in science. The experimental group students are at a higher level than the control group of high school students.

(2) The gain of the experimental group is more than the gain of the control group students in their achievement. So the concept attainment teaching model is appreciably effective in teaching of science than the conventional lecture method.

EDUCATIONAL IMPLECATIONS

(1) The study reveals that the concept attainment teaching model is appreciably effective in teaching of science education than the conventional teaching model. So the concept attainment teaching model can be adopted by the teacher to teach science for the high school students.

(2) The teaching model will motivate the students to concept formation. It will develop the critical thinking among the students.

(3) Concept building is the heart of this program so children can learn easily and deeply through concept attainment model.

(4) This model can satisfy basic necessities of slow learners as well as slow learners and for diagnostic and

(5) It is also develop the problem solving skill among the students. So the concept attainment teaching model will enhance the achievement of the students in science.

TABLE-1: Gender, groups and levels of achievement.

S.No.	Achievement's level	Experimental group		Control group		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
1	Low	7	8	9	8	16	16
2	Average	10	10	7	8	17	18
3	High	8	7	9	9	17	16
Total	-	25	25	25	25	50	50

The above mentioned Table -1 represents 2x2x3 Qusi- experimental design with gender, groups and levels of achievement.

TABLE-2: Mean and Standard deviation of pre-test and post-test achievement in science and their gain scores in control and experimental group.

S.No.	Variable	Groups	Mean	Standard Deviation
1	Pre test	Control	40.58	16.77
		Experimental	40.08	18.71
2	Post test	Control	41.06	17.11
		Experimental	53.78	17.02
3	Gain scores	Control	0.48	1.80
		Experimental	13.17	5.10

TABLE-3: Mean and standard deviation of pre-test and post-test scores of achievement in science and their gain scores of boys and girl students of control and experimental group.

S. No.	Groups	Pre test		Post test		Gain Scores	
		Mean	SD	Mean	SD	Mean	SD
1	Boys of control	42.04	17.44	42.68	17.61	0.64	1.08
2	Boys of experimental	32.72	14.92	46.84	15.09	14.12	4.43
3	Girls of control	43.12	16.41	43.44	16.96	0.32	2.32
4	Girls of experimental	51.44	17.59	64.72	14.04	13.28	5.75

TABLE-4: Results of paired t-test between pre and post test scores of achievement in science of high school students in experimental and control group.

Group	Test	Mean	Standard Deviation	Mean Diff.	SD	Paired- t	P-Value
Control	Pre test	42.58	16.77	0.48	1.80	1.8873	N.S.
	Post test	43.06	17.11				
Experimental	Pre test	42.08	18.71	13.70	5.10	19.0097	*
	Post test	55.78	17.02				

*Significant at 0.05 level of probability

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