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TEACHING STRATEGY: MODELS OF TEACHING

(Comparative Study of Inductive Thinking Model and Conventional Method)

Education

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Abstract

The aim of teaching is to bring about the desirable behavioral changes among pupils. Teaching is thus most difficult task and everybody is not fit to be teacher. Some persons may have natural talent for teaching and such persons have the ability to awaken interest and arrest the attention of the students. Some others who are not so fortunate can improve their teaching through practice if they are fully acquainted with various methods of teaching. In order to make children learn effectively, the teacher has to adopt the right method of teaching.

The present study describes the experimental study of comparative effectiveness of Inductive Thinking Model and conventional method of teaching in terms of student's achievement. The post test only equivalent group design was used. Two groups of class XI were randomly selected as experimental group 'E' and control group 'C'. Initially the groups were made equivalent by administering, general mental ability test developed by Dr. Ahuja G.C. and previous scholastic achievement test developed by researcher. Specific units in physics of class XI were selected for the study. At the end, a comprehensive post test developed by researcher were

administered on both groups. Taking the results into consideration, it was found that the model under consideration have a positive effect on the experimental group.

Introduction:

The new trends and tryouts in education have produced corresponding innovations and new dimensions in teacher education. A model of Teaching is one of them teaching strategy arriving on the horizon of teacher education. It emerged out of the feeling that a particular method of technique may not be appropriate for achieving the multidimensional objectives.

The present study was proposed to determine the relative effectiveness of Inductive Thinking Model and conventional method in teaching of physics. It was an experimental study. The effectiveness of teaching strategies has been studied in terms of students' achievement in physics.

Statement of the problem:

Comparative study of the outcomes of teaching selected units in physics by Inductive Thinking Model and conventional method of teaching at the higher secondary level.

Objective of the study:

To find out the comparative effectiveness of Inductive Thinking Model and conventional method of teaching in terms of students achievement in the comprehensive post-test based on the specific units in physics.

Design of the study:

The post test only equivalent group design was used, as shown below.

X_1 O_1

R

O_2

Where,

R – Stands for random selection of group.

X_1 - Stands for treatment to experimental group (E)

That is teaching through Inductive Thinking Model

O_1, O_2 – stands for student's achievement in physics of experimental group (E) and control group (C) respectively.

The gain in achievement test was assessed by taking the difference between comprehensive post test among the experimental group (E) and control group (C).

The Sample

The government aided junior college of satara (Maharashtra) namely Rayat Shikshan Sanstha's, Yashwantrao Chavan Institute of Science was selected for the study. Out of six divisions, two divisions of class XI were randomly selected for the study. The total number of students in selected divisions D and E were 100 and 101 respectively. The students were alphabetically arranged in respective divisions. The total number of students selected serially for the experiment from each division were thirty of both boys and girls. The total population was 605. The size of Sample decided was about 10 % of the population which came out to be 60.

Tools used in the study:

a) To make the equivalent groups, the researcher used the following tools.

i) General mental ability test of Dr. Ahuja G.C

ii) Socio-economic status scale (SESS) of Bharadwaj R.L

iii) Previous scholastic achievement test, developed by the investigator

b) Achievement tests developed by the investigator.

Procedure of the study:

The experiment was conducted in three phases. The activities for each phase of the experiment were as follows.

Sr. No.	PHASE	ACTIVITY
1	Pre-Treatment	For equating the two groups, used in the study, the following tests were administered. i) Group test of intelligence of Dr. Ahuja G. C. ii) Socio-economic status scale (SESS) of Bharadwaj R.L. iii) Previous scholastic achievement test based on physics, developed by the researcher.
2.	Treatment	The investigator taught the specific units in physics of class XI to experimental group (E) through Inductive Thinking Model and to Control Group (C) through conventional method. The treatment was given for 8 weeks.
3.	Post-Treatment	i) After the treatment of each unit, an achievement 'unit test' was administered on the respective group. ii) At the end of whole treatment, a comprehensive post-test on specific units in physics was administered.

Analysis and Interpretations of the Data:

To know the differential effects of the treatment, statistical techniques like mean, standard deviation and t-test were employed for analyzing the data.

After the treatment of each unit, a post-test of achievement in physics on respective units was administered. At the end of the whole treatment, a comprehensive post-test of achievement, framed on specific units in physics was administered to both the groups.

Table :

Relative effectiveness of experimental group 'E' and control group 'C' on achievement in specific units in physics in terms of comprehensive post test.

Sr. No.	Group	Variable	N	Mean $(X)^-$	SD	DF	t- Value
1	E	Comprehensive post -test	30	44.70	4.39	58	7.30
2	C	Comprehensive post -test	30	37.10	3.67		

Calculated t - value = 7.3

Table value for df 58 = 0.05 = 2.00

0.01= 2.66

Significant at .01 level.

Observations :

1. The mean of experimental group 'E' on achievement test was 44.70 and the mean of control group 'C' on achievement test was 37.1.
2. The mean of experimental group 'E' was greater than the mean of control group 'C' .
3. The difference between two means was 7.6 .
4. There was no much difference in the SDs of both the groups from the means i.e. simply 0.72.
5. The calculated t – value is 7.3 which is significant at .01 level.

Conclusions :

1. This shows that the Inductive Thinking Model was more effective than conventional method, for teaching specific units in physics of class XI.
2. This study has significant implications for teaching at higher secondary school students.
3. Intelligence, socio-economic status and the previous scholastic achievement in physics have shown no constraints in achievement in physics.

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