

STUDY OF EFFECTIVENESS OF INQUIRY TRAINING MODEL ON THE ACHIEVEMENT IN BIOLOGY OF 8TH CLASS STUDENTS

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Abstract

Science is a subject which cannot be followed or understood by mere lecturing, students should be actively involved rather than being passive listeners. If the students are promoted to learn by themselves by self learning, the course can be finished within no time and it will help the students to develop their abilities, attitude and interests. It also develops their insight which will affect their scholastic achievement. Teaching science as inquiry emphasis the investigative process of science so that the students learn science as a process and understand the empirical basis of scientific evidence. Teaching by inquiry involves instructions that emphasis activities of identifying problems, observing, measuring, classifying, inferring, predicting or making hypothesis, discovering meaningful problems, designing experiments, interpreting and analyzing data and verifying.

Present paper deals with the administration of lessons through Inquiry training Model and to comparatively study the effect of teaching on classroom.

Key Words- Models, Inquiry training, Achievement, Attitude, Science



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Introduction

The Search for Good Teaching: -

“The One Right Way” Fallacy.

Teaching learning process is a means through which the teacher, the learner, the curriculum and other variables are organized in a systematic manner to attain pre-determined goals and objectives.

Teaching-learning process is a means whereby society trains its young ones in a selected environment (usually the school) as quickly as possible to adjust themselves to the world in which they live with the passage of time the teaching – learning process has undergone revolutionary changes. teaching-learning process has undergone revolutionary changes. Modern teaching-learning process assigns an important place to students – activity. It calls for a child- centered approach. The most distinctive feature of modern society is its science- based technology which has been making a profound impart. The recent changes in

the concept of teaching – learning process have led to the development of newer areas of educational Endeavour. In the modern society, the main aim of teaching learning is the awakening of curiosity, the stimulation of creativity, the development of proper interests, attitudes and values and the building of essential skills such as independent study.

The Programmed Instruction, Simulation Techniques, Models of Teaching, Teen Teaching, Micro Teaching, CAI and Multi Media Techniques are some of the modern trends in teaching methodology. CAI, Multimedia and Models of Teaching emerged as one of the major innovations in the field of Education.

Models Of Teaching

A Model of Teaching is a description of a learning environment. The descriptions have many uses, ranging from planning curriculums, courses, units and lessons to designing instructional materials – books & workbooks, multimedia programs and computer- assisted learning programs. Because the model provide learning tools to the students, they are uniquely suited to the development of programs for students, whose “Learning Histories” are cause for concern.

From the dictionary meaning the model is a pattern of something to be made of reproduced, and means of transferring a relationship or process from its actual setting to one in which it can be more conveniently studied. The most important aim of any model of teaching is to improve the instructional effectiveness in an interactive atmosphere and to improve or shape the curriculum.

Inquiry Training Model

“Science is Inquiry” Inquiry is defined as a search for knowledge or truth. The emphasis is on search rather than the product. According to R.J. Suchman, “Inquiry training is designed to supplement the ordinary science classroom activities. Teaching science as inquiry emphasis the investigative process of science so that the students learn science as a process and understand the empirical basis of scientific evidence. Teaching by inquiry involves instructions that emphasis activities of identifying problems, observing, measuring, classifying, inferring, predicting or making hypothesis, discovering meaningful problems, designing experiments, interpreting and analyzing data and verifying.

Objectives of the Study

- 1) To study the effect of Inquiry Training Model in teaching Biology
- 2) To compare the effect of teaching through Inquiry Training model and Traditional teaching method on the achievement of students.

Hypothesis

- 1) There will be no significant difference between Inquiry training Model in terms of achievement of students.
- 2) There will be no significant difference between inquiry training model and traditional teaching method on the achievement of students.

Sample

In the present study purposive sampling method was used. Sample was drawn from Kendriya Vidyalaya, Ajani, Nagpur. From this school two sections were selected of VIII class. Total 20 students were selected from Kendriya Vidyalaya, Ajani, school of Nagpur district.

Tools

As per objectives of the study, to measure the students during pre-test and post-test on the Achievement of students

The following tools were developed by the investigator for collecting the data-

- i) Achievement Test (Pre- Test and post Test)

Research Methodology

The present study was experimental in nature. Quasi experimental two parallel group designs have been used for the study.

Analysis of Data

- 1) **Hypothesis -1-** There will be no significant difference between Inquiry training Model in terms of achievement of students.

Table -I

Relative Effectiveness: C.R of pre-test and post-test mean scores on Achievement in Biology taught by Inquiry training Model

Groups	N	df	Mean	S.D	C.R
Pre -Test	20	19	16.7	1.45	4.76*
Post-Test	20	19	18.75	1.33	

* Significant at 0.01 level and 0.05

The above table shows that the critical ratio between Pre and Post Test of Experimental Group taught by Inquiry training Model is 4.76 which is significant at both the level. Hence the above hypothesis is rejected. Therefore the achievement of post test of Experimental group is more. It is clearly seen that the students taught by Inquiry Training model score better than the simple method.

- 1) **Hypothesis -2-** There will be no significant difference between inquiry training model and traditional teaching method on the achievement of students.

Table –II

Relative Effectiveness: C.R for Biological Science Inquiry Training Model and Traditional Method on Achievement of students.

Groups	N	df	Mean	SD	C.R
Expt.Group	20	19	18.75	1.33	5.67*
Control Group	20	19	16.65	1.10	

* Significant at 0.01 and 0.05 level.

The above table shows that the critical ratio between experiment group taught by Inquiry training Model and Control group taught by traditional method is 4.76 which is significant at both the level. Hence the above hypothesis is rejected. The mean score of Experimental group is 18.75 which is more than control group 16.65 which reveals that students taught by Inquiry training model achieve more than taught by traditional method of teaching.

Conclusions

- 1) Students taught by Inquiry Training model score better in post test than in pre test.
- 2) Students taught by Inquiry training model achieve more than taught by traditional method of teaching.

Suggestions

- Study can be repeated for various classes and grade levels using different contents to conform the results and conclusion of the study.
- Variables like pupils cognitive level, creativity, problem solving ability, persistency, students background, conceptual level, environment factors and the like can be studied.
- Teachers acceptance can study for different information processing models of teaching.
- Model can be used for various disadvantaged groups, handicapped and the gifted students.

References

- Agrawal, J C., *Essentials of Educational Technology, Teaching Learning*, Vikas Publishing House Pvt. Ltd. New Delhi, 1995.
- Best John. W., *Research in Education*, prentice Hall India Pvt. Ltd., New Delhi, 1989.
- Brady, L., *'Models and Methods of Teaching'*, Prentice Hall of Australia, Sydney, 1985.
- Chauhan, S.S., *'Innovations in Teaching Learning Process'*. Vikas Publishing House, Pvt. Ltd., 1979.
- Garrete, H.E. &Woodworth, R.S., *Statistic in psychology and Education*, Vakils, Feffer& Simonds Ltd., Bombay , 10TH Edition, 1981.
- Joyce Bruce & Weil Marsha, *Models of Teaching*, Prentice Hall of India Pvt. Ltd. New, Delhi, 1985.
- Kaul, Lokesh, *'Methodology of Educational Research'*, Vikas Publishing House (Pvt.) Ltd., (Reprint, Second Edition), 1993.