



Concept Attainment Model: Reviews of Past Studies

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Abstract

Concept attainment model was developed by Joyce and Weil but term concept attainment model is historically linked with work of Jerome Bruner and his associates, that's why it is called Bruner's concept attainment model. Concept attainment model helps in strengthening the cognitive structure of the students. Many investigators conducted study to investigate the effect of concept attainment model of teaching on achievement of students in various subjects at different level. The present article reviews some of these studies. Reviews of past studies suggest that to find effectiveness concept attainment model experimental design were widely used, randomly selected sample of 30-40 students in each group were very useful and data analyzed using inferential statistics. All past studies found that achievement level of the students taught through concept attainment model was found to be higher than the achievement level of students taught through the traditional method. It can be said on the basis of review of past studies that concepts in various subjects can be taught effectively with concept attainment model.

Key Words: Concept attainment, Attributes, Exemplars (Yes/No), Category

Introduction:

The concept attainment model was developed by Joyce and Weil. The term concept attainment model is historically linked with the work of Jerome Bruner and his associates and that is why it is usually named of Bruner's concept attainment model.

Concept attainment is an indirect instructional strategy that used a structured inquiry process. In concept attainment, student figure out the attributes of a group or category that has already been formed by the teacher. To do so, student compare and contrast example that contain the attributes of the concept with example that do not contain those attributes. They then separate them in to two groups. Then concept attainment is the search for an identification of attributes that can be used to distinguish examples of given group or category from non-example.

Concept attainment is designed to clarify ideas and to introduce aspects of content. It engages students in to formulating a concept through the use of illustrations, work cards or specimens called examples. Student who catch on to the idea before others are able to resolve the concept and them are invited to suggest their own examples, while other students are still trying to form the concept, for this reason, concept attainments is well suited to classroom use because all thinking abilities can be challenged throughout the activity with

experience, children become skilled at identifying relationships in the word curds or specimens with carefully chosen example, It is possible to use concept attainment to teach almost any concept in all subject.

Many investigator conducted study to investigate the effect of concept attainment model of teaching on achievement of students in various subject at different level, here are some of those studies review in this article.

Reviews:-

Dr. Md. Mahmud Alma (2017) Conducted study to investigate the effect of concept attainment model of teaching an achievement in teaching science among secondary school students. The data was collected using group test of general mental ability constructed by S.S.Jalota (1972) and achievement test in sciences prepared by investigator. Data included 120 randomly selected students of IXth class from two schools (One Government and One Private) at Aligarh (U.P.). Descriptive and inferential statistics were used to compare the means between the groups. Finding of the study reevaluated that concept attainment is effective in terms of achievement of students in teaching of science.

Rajwinder Kaur (2018) investigates the effect of concept attainment model on academic achievement of secondary school

students in chemistry by using experimental method. The sample of study included 60 class IX students. Purposive sampling techniques were used to collect data. The students were divided into two groups (30 students in each group) i.e. experimental and control group on the basis of intelligence test. The experiment group was taught through concept attainment model and the control group taught by using traditional method. After completion of teaching, a self-developed achievement test was administered on both the groups. T-test used for drawing out the result. The result of study showed that students exposed to concept attainment model possessed higher score than the students thought through traditional method.

Arti Sharma, Digvijay Pachauri (2016) consisted study to comparison of Advance organizer model and concept attainment model for teaching concepts of science to standard IX. The study was experimental in nature. The sample consisted of 60 students which were divided in two groups, 30 students in each group. Group-1 was taught through Advance Organizer and Group-2 was taught through concept attainment model. The tool used for study was higher mental ability in science which was developed by Joshi and Sansanwal (1986). It measures the power of analysis, synthesis, application and evaluation in science. For analyzing the data mean, standard deviation. Percentile, ANCOVA, ANOVA statistical techniques were computes. Result of the study shows advance organizer model and concept attainment Model both found equally effective for teaching concepts in chemistry at IXth standard

Shaikh Kashefa Anjam, Assistant Professor Marathowada college of education, Aurangabad (2014) investigate a study of effect of concept attainment model an achievement of Geometric concepts of VIII standard students of English Medium students of Aurangabad city, Experimental research method was used for present study. A sample comprised of 120 students. Tool used for the research was Geometric Concepts test' by Dr. S C Gakhar, T-test used for data analysis.

Present study reveals that there is a significant difference between concept attainment model and traditional method, on the achievement of students in understanding of geometric concepts. Concept attainment model found more effective than traditional method.

Dr. Ruchi Bhargva (2016) studied the effect of concept attainment model on achievement in social science. The sample consisted 74 students of class 9th selected from two different school of Amritsar (Punjab). Instructional material based on concept attainment model of teaching was prepared and utilized to teach the experimental group. After pre-testing and post-testing on all the students, gain score were compute. Mean, S.D. and T-ratio were used to arrive at the conclusions that the performance of concept attainment model of teaching group was found significantly higher as compare to control group.

Soniyaben D. Punjabi (2015) conducted a study of effectiveness of concept attainment model on learning science at primary level. The study was experimental in nature. Sample of 100 students randomly selected and divide in two groups (50 students in each group). The experiment group taught through concept attainment model & control group though through conventional method of teaching. The data was collected and analyzed with the help of suitable statistical techniques. Concept attainment model was found to be effective in terms of achievement of students in science.

C.L.Bhaskar (2018) conducted comparative study of effectiveness of concept attainment model over traditional method of teaching a unit from physical science between homogenous and heterogeneous group in higher secondary classes. Experimental research method was used for study. Tool used for the research self – prepared physics lesson “thermal states of matter” from higher secondary level lesson transcripts of physics and lessons plans of traditional method and for posttest standardized by team of experts in the field of education. This study reveals that the concept attainment model will help the

students to learn the theory and apply the newly acquired knowledge simultaneously compared to that of traditional method of teaching.

Amita (2009) conducted study on effectiveness of concept mapping model and concept attainment model in biology teaching at night grade. This study was experimental in nature & sample of study comprise student of ninth grade of three different schools which was made on the basis of the judgment of the investigator. Tool used for data collection were verbal intelligence test by R. K. Tandon and the tool developed by the investigator for collecting they require data was Achievement test for selected concepts of science (biology), T-test was used for data analysis. The Results of the present study concludes that concept attainment model is aimed at teaching skills of arriving at generation through meaningful processing of large and fragmentary data. During the course of using this model, the learner develops inferential hypothesizing skill also. The classroom environment becomes more co-operative. The students are encouraged by the teacher in active responsiveness.

Falguni J. Gajjar (2015) researched on effectiveness of concept attainment model with reference to educational achievement in the subject of Gujarati of standard nine. Sample of the study comprised of 120 students from which 60 students included in experiment group and 60 students in control group experiment group taught by concept attainment model. Data collected by academic achievement test which was constructed by the researcher. The data was analyzed by SPSS computer programme. The result of this study found the student of experiment group scored more than the students of control group. The programme was equally effective with the reference to gender and area.

Bhatia K. Vyas (2014) constructed the study of effect of concept attainment model of Instruction an achievement in mathematics of under achiever and over achiever students of secondary school. The study was experimental in nature. There were

240 students from IES School and 238 students from SVP School selected as sample of the study. Tool for study were standardized unit achievement test, intelligence test and socioeconomic status scale. T-test was used for data interpretation. The major finding of this study was concept attainment model of instruction was effective in enhancing the academic achievement among over, normal and under achiever student with high, average and low socio-economic status effect of concept attainment model of instruction was found significantly higher on over, normal and under achiever students.

Conclusion:-

- It can be said on the basis of the studies that concepts in various subject can be taught effectively with concept attainment model.
- All above studies show that Achievement level of the students taught through concept attainment model was found to be higher than the achievement level of students taught through the traditional methods.
- To find the effectiveness of concept attainment model, experimental research design is widely used.
- Data were collected by various types of achievement tests & Data analyzed by inferential statistics like T-test or SPSS Package.
- The Randomly selected sample of 30 to 40 students in each group will ideal sample for the study. You can increase the sample as per requirement.

Educational Implications:-

- Concept building is the heart of learning task so children can easily and deeply learn through concept attainment model.
- The concept attainment model will help the students to learn the concepts and apply the newly acquired knowledge simultaneously compared to that of traditional method of teaching.
- Concept attainment model was effective in term of understanding of

concepts of science & many other subjects.

- Concept attainment model helps in strengthening the cognitive structure of the students.
- The concept attainment model is an excellent evaluation tool when teacher want to determine whether important ideas introduced earlier have been mastered. It quickly reveals the depth of students understanding and reinforces their previous knowledge.
- The model can also be helpful in opening up a new conceptual area by initiating a sequence of individual or group inquiries.

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