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Title of the Thesis: A Study of Concept Formation Model Based Teaching at Elementary Level

### **Abstract**

The aims of the study were to find out the veracity of the criticism labeled against methods of teaching of science at the elementary level schools. The objectives of the study were to study the achievement of the students in science taught through Concept Formation Model and lecture cum discussion method and to compare the effectiveness of the Concept Formation Model with lecture cum discussion method on knowledge, understanding, application and Total achievement in science. To compare the effectiveness of achievement in science between controlled and experimental groups among the schools in terms of knowledge, understanding, application and total achievement in science and also to find out the difference in achievement in science between the schools. The sample size of 210 students of class VIII<sup>th</sup> of three government schools was selected randomly. Two out of five sections were selected randomly from each school of class VIII<sup>th</sup> students of science. The sample size of 210 students was divided as 105 students controlled and 105 students' experimental groups. From each of three schools one section for controlled group and one section for experimental group selected randomly. Both control and experimental groups consisted of 35 students from sampled schools. A pre-test and IQ test were administered on sampled students for both controlled and experimental group. The controlled group was taught through Conventional (lecture cum discussion) method and experimental group

were taught through experimental method (Hilda Taba's theory). 23 Lessons plans have been developed based on Hilda Taba's theory and 23 lessons plans have been developed based on lecture cum discussion by the investigator. Pre-test and post-test achievement test also were developed by the investigator. Pre -test was administered on previous Knowledge, Understanding and Application based items of class VII<sup>th</sup> science subject. Post-test was administered on Knowledge, Understanding and Application based items of sampled students. The duration of the experiment was 23 classes in the months of August-September 2016. Students of controlled and experimental groups were examined through post-test after taught the lesson. The reliability of pre-test in the science subject was found to be 0.87 and post- test reliability was found 0.89. Content validity of these two pre-test and post-test tests was judged by subject experts from sampled schools and faculty members of Jamia Millia Islamia. After scoring of the achievement of science tests scores, the data were entered and analyzed with the help of using SPSS. Computation of mean, standard deviation, *t*-Test (Independent, Paired *t*-Test), Analysis of Covariance (ANCOVA) and two- way analysis of covariance (2x3 ANCOVA) were used. The result showed that experimental group was significantly higher than controlled group students. It was also observed that there is very effectiveness of experimental group model taught by concept formation model and positive relation between concept formation model and achievement in science.

Conclusion the students of experimental group of all these three schools were better achiever of knowledge, understanding application and total in terms of achievement of science test scores than the controlled groups students.