

# **An Analytical Study of the Effectiveness of Interactive Teaching Methods and Teacher-Directed Methods in Teaching Science to Grade Seven Students**

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## **Abstract**

The primary purpose of this study is to study the effectiveness of interactive teaching methods and teacher-directed methods in teaching science to grade seven students. Specially, this study aims to analyze the effectiveness of interactive teaching methods of teaching science to Grade Seven student and to compare the students' achievement between the student who are taught by interactive teaching methods and those who are taught by teacher-directed methods. The design adopted in this study was pretest-posttest control group design which is one of the true experimental designs. Two townships were randomly selected from four districts in Yangon Region. One High School from each township was selected by using random sampling technique. The participants in this study were (120) Grade Seven students from the selected schools and they are also selected in random. The instruments used in this study were Pretest Question, Posttest Question and Attitude Questionnaire. Pretest Question was achievement test based on the content area of Chapter (2, 3 & 4) and Posttest Question was also achievement test based on the content area of Chapter (5). Attitude Questionnaire was developed based on four variables-cooperative learning, discussion method, experiment and doing activities. Independent samples "*t*" test was used to find the difference in the achievements of students who learned by interactive teaching methods and those of students who learned by teacher-directed methods. According to the result, there was no significant difference between the achievement of students who learned by interactive teaching methods and those of students who learned by teacher-directed methods at knowledge level. But, there were significant differences between the achievements of students at comprehension and application level. Therefore, the research findings showed that interactive teaching methods such as cooperative learning and discussion method could improve students' achievement at comprehension and application level and the students who learned by interactive teaching methods showed the positive attitudes towards their learning science.

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