

A Study of the Effectiveness of Interactive Teaching Methods on Students' Achievement in Science at the Middle School Level

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Abstract

The primary purpose of this study is to investigate the effectiveness of interactive teaching methods on the achievement of Grade Seven students in teaching science. Specially, this study aims to analyze the effectiveness of interactive teaching methods of teaching science to Grade Seven students and to compare the students' achievement between the students who are taught through interactive teaching methods and those who are not. 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 the random sampling technique. The participants in this study were (120) Grade Seven students from the selected schools and they were also selected random. The instruments used in this study were Pretest, Posttest and Attitude Questionnaire. Pretest and Posttest were achievement tests based on the content area of Chapter (4 & 5). Attitude Questionnaire was developed based on three variables: cooperative learning, discussion method and demonstration method. Independent samples "t" test was used to find the difference in the achievements of students who learned through interactive teaching methods and those of students who learned through teacher-led instruction. According to the result, there was no significant difference between the achievement of students who learned through interactive teaching methods and those of students who learned through teacher-directed methods at knowledge level. But, there were significant differences between the achievements of students at comprehension and application levels. Therefore, the research findings showed that interactive teaching methods such as cooperative learning, discussion method and demonstration method could improve students' achievement at comprehension and application level and the students who learned through interactive teaching methods showed the positive attitudes towards their learning science.

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