

A Study of the Effectiveness of Formative Assessment Classroom Techniques on the Achievement of Grade Ten Physics Students

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Abstract

The main purpose of the present study is to investigate the effectiveness of formative assessment classroom techniques on the achievement of Grade Ten physics students. It is an experimental research. Treatment is based on instructional design concerning formative assessment classroom techniques. According to the format of that design, (7) sample lesson plans of learning materials were constructed. The target population is Grade Ten students who are learning science. Two high schools that situated in Kyeemyindaing and Insein Townships in Yangon Region were selected by random sampling method. Science combination students were selected. A total of (120) students and (4) teachers who are teaching physics participated in it. To study the effectiveness of formative assessment classroom techniques on the achievement of Grade Ten physics students, one of the true experimental designs, posttest only control group design was used. Treatments were conducted separately to two groups. The experimental groups were taught according to the principles of formative assessment and formative assessment classroom techniques. The controlled groups were taught as formal. Learning materials were selected from Chapter (10), Electricity and Magnetism, from Grade Ten Physics Textbook. The posttest scores or data were analyzed with independent samples *t* test to test the hypotheses of this study. The instrument used in this study was a posttest. The result of this study showed that, there was a significant difference in the achievements of learning physics between the students who were taught by using formative assessment classroom techniques and those who were not. It can be suggested that the formative assessment classroom techniques should be used in teaching physics. Therefore, it was concluded that formative assessment classroom techniques brings positive contributions to teaching physics at the high school level.

Key words: formative assessment, achievement, physics

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