EFFECT OF USING COOPERATIVE LEARNING METHODS ON SECONDARY SCHOOL STUDENTS’ ACHIEVEMENT IN KINEMATICS IN KENYA

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ABSTRACT

Performance in physics at secondary school level in Sabatia sub-county in Kenya has shown no significant improvement in recent years. This poor performance has mainly been attributed to techniques of teaching physics. There is a need to compare traditional teaching strategies and emerging instructional methods. The purpose of the study was to investigate effect of using cooperative learning on secondary students’ achievement in kinematics in Sabatia sub-county in Kenya.

The research objectives were to; find out whether there is any difference in achievement amongst the students due to cooperative learning, determine whether there is any difference in achievement in kinematics between county and sub-county school due to cooperative learning and determine whether there is any difference in achievement amongst boys and girls due to cooperative. A quasi-experimental pre-test, post-test non-equivalent research design was adopted for the study. The study population involved forms three students doing physics in public mixed secondary schools in Sabatia sub-county. A stratified random sampling technique was used. This involves categorizing the schools into county and sub-county public mixed secondary schools then purposive sampling was used to select the only two county mixed secondary schools after which, simple random sampling used to select ten schools from the sub-county schools. Finally, Simple random sampling was used to select one class that does physics per selected school. All the students doing physics in the selected class were included in the sample for the study. Experimental and Control groups were drawn from different schools. A total of 272 respondents were selected for the study. All the respondents were pre-tested in achievement. The control group was taught using conventional learning and the experimental group was taught using cooperative learning. The two groups were then post-tested in achievement. The research instruments were piloted in two schools in Sabatia sub-county. Reliability of the instruments was determined through a test-retest technique. The ATK1 yielded a reliability of 0.84, ATK2 yielded 0.85. The instruments had a reliability coefficient of above 0.7 which is deemed satisfactory. Data was collected using students’ achievement tests in kinematics. Data was analyzed using inferential and descriptive statistics. Results were presented using tables. The results showed that students who were taught using cooperative learning performed better than those who were taught using conventional learning in achievement. The results also indicated that gender and school types have no effect on achievement in kinematics. It was concluded that use of cooperative learning improved achievement in kinematics. The study recommends teachers teaching physics in public mixed secondary be encouraged to use cooperative learning and curriculum developers to design programs that would help teachers fully utilize cooperative learning in order to improve achievement in kinematics.

KEY WORDS: Achievement, Cooperative Learning, Conventional Learning.
REFERENCES


