

## Abstract

In Kenyan secondary schools, form two is an important class for all students. The students choose relevant subjects to study in form three and four. Physics is compulsory at form one and two but optional thereafter. Performance in the subject at the end of the secondary school is usually dismal. Majority of students lack motivation for most activities related to the subject. Few boys and even fewer girls opt to study this subject. The teacher centered mode of study has often been reported as the culprit leading to this problem. This study investigated whether structured practical work can aid the process of learning the subject. Specifically, the study sought to find out the difference in academic achievement in physics between students taught using intensive practical activities and those taught using conventional teaching methods, mostly theoretically. The findings were analyzed overall and gender wise. The study involved two groups from sampled average performing secondary schools in Kakamega South Sub-County-Kenya. The quasi-experimental pre-test, post test nonequivalent group research design was adopted. The study period covered term two and three. The end of form two term one physics examination scores formed the pretest. The cumulated result on the chosen topics at the end of form two formed the post test for both groups. Two instruments were used to collect data. These are End of Term One Form Two Examination (EOTOFTE) and the Performance Test on the Chosen Topics (PTCT). Validity of the instrument was ascertained with the aid of experienced secondary school physics teachers and science education instrument construction experts. Reliability of the Performance Test on the Chosen Topics determined using Kuder Richardson KR-20 was found to be 0.95. The performance on the pre-test result was comparable for both experimental and control groups. The results of the post-test were analyzed using the t-test, Analysis of Variance and Chi-Square. Experimental group recorded better performance than the control group. The study helped in determining the value of experimentation in physics instruction. It is hoped to help shape policy on the nature and quality of practical work to be encouraged in secondary school physics instruction. The study was aimed at contributing towards realization of needs to resolve problems w 3q2 1' inherent in physics reflected in the poor performance in the subject. The findings are formed on the basis of dynamic and creative instructional strategies since good learner's intelligence and skills can be expressed if better instructional methods are in place.