

**THE IMPACT OF STRENGTHENING MATHEMATICS AND
SCIENCE IN SECONDARY EDUCATION (SMASSE) ON
STUDENTS' ACHIEVEMENT AND TEACHERS' EFFICACY IN
PHYSICS: A CASE STUDY OF SHINYALU DIVISION,
KAKAMEGA COUNTY, KENYA.**

By

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ABSTRACT

This study aims at establishing the impact of Strengthening Mathematics and Science in Secondary Education (SMASSE) on student's performance and teachers' efficacy in Physics in Shinyalu Division, Kakamega County. The target population of this study comprises of 12 secondary schools, 49 SMASSE trained teachers, 12 school heads, District Quality Assurance and Standards officers (DQASO), Science District SMASSE facilitators and D.E.O. Purposive sampling technique was used in this study. A lesson observation schedule was used to assess aspects of lesson to verify the implementation of PDSI –ASEI approach. Eighty (80) questionnaires was administered to the SMASSE trained Physics teachers. The DQASO and the school Principals were interviewed in the study.

A documentation profoma was used to collect data on students' (No. of students and gender form) performance in K.C.S.E before and after the advent of SMASSE. Data collected was analyzed using basic descriptive statistics such as mean, mode, standard deviation and variance. Inferences were made based on Pearson Product Moment Correlation and t-test. It is expected that the findings of this study would help education stakeholders in alleviating the student's problems associated with Physics achievement and participation. It was also expected that the findings of this study would help to examine and analyze teacher's quality and access its relationship to student's motivation to learn Sciences and their achievement.