

**AN EVALUATION OF THE IMPACT OF STRENGTHENING
MATHEMATICS AND SCIENCE IN SECONDARY EDUCATION
PROGRAMME ON KENYA CERTIFICATE OF SECONDARY
EDUCATION EXAMINATION IN TRANS-NZOIA COUNTY**

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ABSTRACT

Strengthening of Mathematics and Science in Secondary Education (SMASSE) is an initiative of the Government of Kenya with support of the Japanese International Co-operation Agency (JICA). It was launched in 1998 with the aim of improving performance in mathematics and science subjects which had been unimpressive. By the year 2007, all secondary school mathematics and science teachers were expected to have attended the four cycles of SMASSE training. This was expected to translate into good students' performance. This study aimed at evaluating the impact of SMASSE programme on academic performance of students in mathematics, biology, and chemistry. The study was based on Reigeluth's (1999) elaboration theory model, the independent variable being SMASSE programme in secondary education, and the students' performance in KCSE examination being the dependent variable. The study was carried out in 30 public secondary schools in Trans-Nzoia County using ex-post-facto research design. Purposive sampling was used to select 30 teachers from each of the subjects under study, while stratified sampling was used to select 30 head teachers out of a total of 102 head teachers. Validity and reliability were established using test-retest method. Data were collected using questionnaires and interviews instruments, with respondents being Mathematics, Biology and Chemistry teachers, Head teachers of the secondary schools and District Quality Assurance Standards Officers (DQASOs). Data were analyzed using descriptive statistics that included mean, frequencies and percentages. The study revealed that: SMASSE training had resulted in improved student performance in the subjects. From this study, it was concluded that SMASSE programme had a positive impact on subject performance in the Trans-Nzoia County. The study recommended the identification and training of those subject teachers who had not been trained in the basic cycles of SMASSE programme, redesigning of mathematics and science teachers' assessment forms and the inclusion of SMASSE training curriculum at pre-service training of the subject teachers.