

**Factors Influencing Teachers' Perception on The Implementation of  
Strengthening  
Mathematics and Science in Secondary Education (Smasse) in Bungoma County,  
Kenya**

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**Abstract**

The purpose of this study was to investigate factors influencing mathematics and science teachers' perception on implementation of SMASSE programme. The objectives of the study were to; find out the influence of motivational strategies on participation of mathematics and science teachers in the in-service training; assess the influence of trainers' attributes on teachers' participation in the in-service training process and; determine the extent to which the acquired skills during SMASSE in-service training are utilized in the classroom teaching and learning of mathematics and science. The study was guided by Rogers's innovation-implementation diffusion theory which posits that implementation of an innovation depends on the perceived attributes of implementers. The study was carried out in Bungoma County because it has a number of SMASSE INSET centers but performance has been dismal despite participation of mathematics and science teachers in the in-service training. Descriptive survey design was used to cover the sampled respondents in the study area and obtain in-depth information on the status of implementation of SMASSE. The target population was one thousand four hundred and fifty (1450) science and mathematics teachers teaching in two hundred and seventy five (275) secondary schools and nine (9) sub-county Quality Assurance Officers (QASO). Simple random sampling was used to select schools for the study while purposive sampling technique was used to select only those teachers who had participated in SMASSE training. A sample size of four hundred and thirty eight (438) was used. Data was collected using questionnaires, interview schedules and an observation guide. The collected data was analyzed using both descriptive and inferential statistics. From the data collected and analyzed, it was found out that provision of motivation to teachers influence their participation, trainers' attributes enhance teachers' participation and the acquired skills during in-service training highly influence instructional programme during teaching and learning of science and mathematics. It was concluded that classroom implementation of SMASSE programme was influenced by teachers' perception on motivation and trainers' attributes. From the conclusion, it was recommended that the national SMASSE office and the MoEST should consider teachers' views to enhance effective implementation of ASEI-PDSI innovation, the Trainer of Trainers' academic and professional qualifications should be recognized by the MoEST and, the government should employ more teachers to create balance between the teacher-student ratios.

**Key words:**