Abstract:

This is a report from investigation into the influence of Strengthening Mathematics and Science in Secondary Education (SMASSE) training of mathematics and chemistry teachers on the Kenya Certificate of Secondary Education (KCSE) performance III Kikuyu District. The objective of the study was to establish whether SMASSE training has any influence on the performance in mathematics and chemistry since inception of the training, to determine the extent to which the Activity, Student-centred, Experiment, Improvisation (ASEI) and Plan, Do, See, Improve (PDSI) approaches used in SMASSE has had an influence on mathematics and chemistry teachers and to document challenges faced by the teachers on implementing ASEIIPDSI approaches. A total of sixteen schools selected using the stratified random samplings were involved in the study. Literature review covered: In- Service Education Training (INSET), the purpose of INSET, teacher training as a factor contributing to students' performance, SMASSE project and performance of mathematics and sciences in national examinations. This study gathered both qualitative and quantitative data. Data analysis was done using Statistic Package for Social Sciences (SPSS) software, Registered R and Excel. Findings are presented using percentages, trend lines, frequency distribution and means. Analysis was followed by interpretation and discussion, conclusion and recommendations. The study results showed that SMASSE INSET did not have impact on the performance of mathematics and chemistry, the ASEIIPDSI approaches are in use and have improved the teachers' confidence and ability to deliver, and the skills learnt are effective. A number of challenges to implementation of SMASSE were identified. These included inadequate time, de-motivated teachers and students' indiscipline among others. The study conclusion was that though SMASSE INSET does not show impact on the performance of mathematics and chemistry, it has influenced the teachers' ability to deliver in their teaching amidst various challenges. The research recommends that future SMASSE programmes should have a bottom up approach to enable full ownership by stakeholders.