

The Effectiveness of SMASSE Teacher Training Programme on KCSE Performance in Mathematics and Chemistry Subjects in Kikuyu District, Kenya

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Abstract

The changeover of the Kenyan system of education from the 7-4-2-3 to the current 8-4-4 in 1984 made science subjects (Biology, Chemistry and Physics) compulsory to all students up to form two at the secondary school level. This meant increased numbers of students in one class at a time attending the science subjects, which may compromise quality. The quality of secondary teachers and teaching is, however, influenced by many small factors rather than a few large ones. This paper is an investigation into the effectiveness of Strengthening Mathematics and Science in Secondary Education (SMASSE) training of mathematics and chemistry teachers on the Kenya Certificate of Secondary Education (KCSE) performance in Kikuyu District. The study used sixteen schools selected by stratified random sampling method. 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. The study findings indicate that SMASSE In-service and Education Training (INSET) has no impact on the performance of mathematics and chemistry, the Activity, Student-centered, Experiment, Improvisation (ASEI) and Plan, Do See Improve (PDSI) approaches are in use and have improved the teachers' confidence and ability to deliver, and the skills learnt are effective. Thus this study concludes 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 and participation by key stakeholders.

Keywords: Teacher training, SMASSE, INSET, Student performance, Effectiveness

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