

Preparedness of Mathematics Teachers in Transforming the Teaching and Learning of Secondary School Mathematics: A Case of Tigania East District, Kenya

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Abstract

This study aimed at investigating the current level of mathematics' teacher preparedness in using technology for teaching. Teacher preparedness was measured in terms of use of available ICT resources and relevant teacher training levels. The study was carried out in Tigania East District in the year 2011 during which there were 30 registered secondary schools. The design selected was descriptive survey. The study used various instruments to collect data, namely; Mathematics teachers' questionnaires, interview schedule and observation guide. The researcher used simple random sampling technique to select 30% of the mathematics teachers to constitute the sample size. Report revealed that there was a variety of ICT resources in secondary schools in Tigania East District. It was noted that 66.9% of schools in the district had support structures such as electricity and generators. The study further showed that teachers did not use the ICT resources that were available as they lacked knowledge on appropriate usage. The lack of pre-service and in-service training was sighted as a major limitation. The study concluded that mathematics teachers in Tigania East District were unprepared to embrace ICT and to use it for transforming the learning of mathematics. This conclusion was made because they lacked relevant training and enthusiasm, and were found not to use the available ICT resources. The study recommends a retraining of Mathematics teachers through INSETs on how technology should be applied to improve the teaching of Mathematics. The study also recommends improvement of staffing of Mathematics teachers who are trained to use ICT since many schools were seen to have shortage of these teachers.

Keywords: Preparedness, ICT- Information Communication Technologies, INSET- In Service Training, SMASSE- Strengthening of Mathematics and Science in Secondary Education, in Kenya

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