

Mathematics Teachers' Knowledge and Skills for ICT Integration in Instruction in Secondary Schools in Bungoma County, Kenya.

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Abstract

The main problem facing mathematics instruction generally is the need to improve performance of students through use of innovative approaches that involve technology. Despite the advancements in technology, the utilization of computers and other ICTs materials is not an integral part of the curriculum. The study reported in this paper investigated the teacher's knowledge and skills for use of Information Communication Technology in mathematics instruction. The study focused on determining the knowledge and skills needed for instructional use of ICTs in mathematics. The descriptive survey research design was adopted and involved a secondary school mathematics teachers in the three Sub-Counties of Bungoma County: Kimilili, Bungoma North and Bungoma East. A sample 218 teachers and heads of departments were selected using proportionate stratified and simple random sampling techniques. Data was collected using questionnaires and interview schedule. A pilot study was conducted and the data used to validate the instruments and compute the chronbach's alpha reliability measure which was found as 0.704 for the instrument. Data analysis involved descriptive statistics that included frequencies and percentages. The findings indicated a lack of the necessary knowledge and skills for use of ICTs among teachers. Therefore the ministry of education should formulate policies that aim at ensuring professional development of teachers in ICT pedagogy and a review of curriculum to ensure teachers acquire relevant ICT knowledge and skills during initial training.

Key Words: Information Communication Technology, Knowledge, Skills, Instruction

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