

Information Communication Technology Pedagogical Integration in Mathematics Instruction among Teachers in Secondary Schools in Kenya

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Abstract

This paper reports finding of the study that sought to ascertain the extent of ICT-pedagogical integration in mathematics instruction among secondary school teachers in Kenya. Information was sought on professional development experiences and needs in computer technology use in mathematics instruction, the type of computer software used in mathematics curriculum content delivery, the influence of accessibility to ICT infrastructure and technical support, teachers' competence and confidence on ICT integration in mathematics teaching and learning. This was a descriptive survey of explanatory nature that involved 200 mathematics teachers from schools who were selected using proportionate stratified sampling techniques. Data was collected using questionnaires, interview and observation schedules. The data collected was analyzed using descriptive statistics involving computation of frequencies and percentages and inferential statistics that included Pearson correlation and multiple regression analysis. Results show that there is limited use of ICTs in mathematics instruction which is attributed to low self confidence and incompetence in use of ICTs and inaccessibility to appropriate software materials and technical support. There is need to equip schools with the necessary ICT infrastructure including content specific software and technical support. There is also need for professional development of teachers in ICT pedagogy as they require the knowledge and skills to put these tools in practice.

Keywords: ICT; Computer; Technology; Pedagogy; Profession; Innovations

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