

Supporting Teachers in their use of ICT in Teaching Mathematics: What Kind of Support is Necessary and when is it required?

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Abstract

This article reports on a study that was carried out to establish determinants of ICT integration in mathematics teaching and learning. This paper focuses on the kind of support teachers require to effectively use ICT in teaching mathematics. An exploratory sequential mixed methods research design was employed to conduct this study in which quantitative data was initially collected in the first phase. Qualitative data was then collected in the second phase to explain the quantitative data collected in the initial phase. The study targeted all the teachers teaching in lower grades in both private and public schools. A sample size of 40 lower primary schools were purposively selected based on the availability of ICT tools for instructional purposes in those schools. Three teachers teaching in grade one, two and three were then selected using simple random sampling technique especially in cases where more than three teachers existed. Teacher Questionnaire, Teacher Interview Protocol and Observation Protocol were used to collect data. Data was analyzed qualitatively using descriptive phenomenological analysis in which data transcriptions were divided into themes and sub-themes related to phenomena under study. The findings of the study revealed that there was a significant relationship between supporting teachers' use of ICT in the classroom and their actual use of ICT in teaching mathematics. The study findings however revealed that teachers teaching lower grades in Mombasa, Kenya were not adequately supported in their use of ICT in teaching mathematics. It was recommended that teachers must be granted adequate support in their use of ICT in teaching mathematics.

Keywords: Information and communication technology, mathematics teaching, mathematical learning, technical support, support in professional development, integration programme, development programme, technician, standby technician, technical support

Full text:

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