

Access and Pedagogical Integration of Information and Communication Technology in Secondary Schools in Nairobi and Kiambu Counties: The Case of Computers for Schools Kenya

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Abstract

This study sought to explore the status of pedagogical ICT integration by teachers in Kenyan secondary schools with special focus on schools that have been supported by Computer for Schools Kenya (CFSK). The need for this study was based on the premise that educational systems worldwide are vigorously pursuing the integration of ICT to enhance pedagogy and that a failure on the part of Kenya's educational system would not only create a digital divide but also affect the quality of learning in schools. In 2006, the Ministry of Education introduced the National ICT strategy for Education and Training which empowers schools to engage with stakeholders like CFSK in partnerships to facilitate access to ICT infrastructure and enhance ICT integration. However, according to Karsenti et al., (2009), in various education systems across Africa, ICTs are increasingly being taught as a completely separate discipline, while the integration of ICTs into pedagogical practices to improve the quality of teaching and learning across disciplines remains the exception. This study aimed at examining the level and manner of ICT integration in Kenyan secondary schools. A cross-sectional and descriptive survey design was adapted for the study. Research data was collected through triangulation, which made use of questionnaires, interview guides and checklists. The study targeted 30 secondary schools from Nairobi and Kiambu Counties. The study sample comprised 278 teachers, 375 secondary school students, 30 schools and two CFSK computer trainers. The data collected was then analyzed using SPSS and MS Excel statistical packages. The analyzed data was then discussed under suitable themes derived from the objectives of the study. The results showed that across all schools participating in the study, the use of ICTs to teach subject matter other than computing itself was almost completely absent. It also emerged from the study that although most teachers have positive attitudes towards ICT, they face a myriad of challenges including teacher-level and school-level barriers, factors that constrain their attempts to integrate ICT in instruction. Further, it was noted that although CFSK is contributing towards enhancing access to technology in Kenyan schools, the ICT infrastructure that is available in schools is way below the required amount. The 1:25 computer to student ratio found in the sampled schools was too high for meaningful ICT integration in schools. Secondly, the study shows that teachers lack requisite capacity to adopt ICTs for pedagogical integration. In order to aid the endeavors of teachers in integrating technologies, the study recommends among others more robust professional development programmes which use a convergent model as well as provision of adequate technologies. These strategies would continuously provide support in order for teachers to be able to overcome the aforementioned problems and challenges faced when attempting to integrate technology. Moreover teachers need to be provided with different types of learning

opportunities, including periodic workshops, peer-to-peer training, mentoring, online training programmes, and conferences to enhance pedagogical ICT integration.

Keywords: Pedagogical Integration, Information and Communication Technology, Secondary Schools, Nairobi and Kiambu Counties, Computers, Schools, Kenya

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