

Chapter 14

Stuck in Neutral: Why Technology Hasn't Made Major Inroads Into Education in Ghana

Mawuadem Koku Amedeker
University of Education, Ghana

ABSTRACT

The chapter analyses some of the formal documents that led to integrating Information and Communication Technology (ICT) into the educational system in Ghana. These documents include Ghanaian government policy documents as well as international organisations' research works on ICT in Ghana and other African countries. Most of the documents have the vision to revolutionize existing knowledge base of the Ghanaian society through the deployment and use of ICT by all sectors of the society, including education. The chapter demonstrates that Ghana government ICT policies are not classroom-integration oriented, but rather politically motivated. Further, not enough interventions have been introduced to move teachers away from the traditional 'chalk-and-talk' approach to teaching. Thus, all the flamboyant ideas of introducing 'one child one laptop' policy do not ensure the integration of technology into education and its use for teaching and learning purposes. It is suggested that training of classroom teachers to integrate ICT into learning is the way forward.

INTRODUCTION

There is a lot of evidence that the appropriate use of Information and Communication Technology (ICT) tools for education in many countries across the world has yielded effective teaching and learning outputs. However, in Ghana it is well-known that the introduction of ICT into schools has taken such varied forms that hardly target improvement of teaching and learning. For example, the donation of computer laboratories by organisations to schools and government fulfillment of electioneering campaign promises by

widespread computer distribution to schools were efforts only aimed at supplying infrastructure and equipment. The schools, however, face daunting challenges in keeping pace with the appropriate use, maintenance and sustenance of the ICT concept. The new forms of pedagogy that are required to enable teachers to integrate ICT into their instructions appear to be unfamiliar to them. There is also the issue of availability of regular electric power supply to power ICT equipment in the laboratories. Schools in urban areas may have regular electric power supply while most rural schools may not be connected to the national power grid and may have to use solar panels or electric generators. Thus, it is clear that there is

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no equity of resources distribution to schools and these bottlenecks tend to affect the integration of ICT into the educational system.

For schools without computer facilities there is an option for them to go to the Science Resource Centres nearest to them in order to access computer use for teaching and learning. This opportunity is, however, available to senior high schools only, while basic schools (primary schools and junior high schools) that also have an ICT curriculum are not allowed to benefit from the Science Resource Centres. In most cases, schools in Ghana do not have in place policies that would enhance computer integration into education as a learning tool rather than as modernity. Similar sentiments expressed by a Cameroonian researcher (Toure, 2008) indicate that in introducing ICT into schools, provision was not made for guiding policies that would ensure its integration as a learning tool and also provide equitable access. Teachers' interest and adaptability to changes appear not be considered in introducing reforms to many educational systems. For example, teachers' thinking processes about the implementation of the curriculum need to be considered. Some studies carried out in China (Sang, Valcke, van Braak, & Tandeur, 2009) on influences of teachers' thinking processes on ICT integration have found that teachers whose teaching beliefs were constructivist inclined were more likely to integrate ICT into teaching. However in Ghana, due to lack of training to orient teachers towards ICT integration, the 'chalk and talk' approach to teaching is still dominant in the schools.

In Ghana, almost all students in the senior high schools have access to cell phones and internet. However, these emerging ICT tools are not integrated into the teaching and learning processes. For schools that have computers and internet, they are only used for acquiring computer skills and for social communication (Sarfo & Ansong-Gyimah, 2011). It is surprising that a situation of this nature should continue to exist when ICT tools are gaining widespread use in several sectors of the economy of Ghana. For example, many commercial banks are networked in Ghana while e-commerce in

the form of money transfers, payment by smart cards, withdrawal of money at Automatic Teller Machines (ATMs), business transactions by e-Zwich and many more are common in Ghana. If the school system remains oblivious to the use of ICT tools for teaching and learning then the future for ICT integration into the Ghanaian economy is bleak. From, all points of view, Ghana may be lacking authentic education, which may be defined as real life situation learning that should be integrative of modern ways of doing things.

This paper, therefore, intends to argue that the lack of will power on the part of education authorities in Ghana to implement ICT integration into education is a major drawback to the realisation of teaching with ICT tools. Furthermore, this chapter will show that non-alignment of educational objectives with the training needs of teachers and most of all implementation strategies of ICT integration into lessons are problematic. Thus, learners may not reap the full benefits of ICT use to facilitate learning at school.

Background and Initiatives at Integration of ICT into Education in Ghana

All curricula in the Ghanaian educational system recognize the role of technology in assisting learners to progress. Even the primary school science syllabus makes a definite reference to the role of technology in scientific education of children when it states "...technological literacy is necessary for all individuals, especially in developing countries..." (MOESS, 2007a). This statement implies that the development of scientific skills such as creativity and critical thinking, which can be enhanced with the use of ICT tools, is essential for human development. Thus, implicitly, right from the primary school level, the curricula require children to develop scientific and technological skills after going through that level of education. In a similar vein, the junior high school syllabus mentions scientific and technological literacy as its ultimate goal for pupils at this level. The

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