

# Chapter 17

## ICT in Education

### Development in Africa: Policy and Institutional Frameworks

**Chijioke J. Evoh**

*New York City Department of Education, USA*

#### **ABSTRACT**

*This study presents the rationale for policy and institutional frameworks in the development of ICT in secondary education in countries in Sub-Saharan Africa (SSA). As the adoption of modern ICTs slowly gain momentum, various stakeholders in education have recognized the importance of leveraging these technological tools for the improvement of teaching and learning. To a large extent, the application of modern ICTs in education remains uncoordinated in many countries. This study identifies the institutional framework as the dominant approach to ICT in education policy process in the region. This involves the participation of broad-based interest groups in the policy process. Using South Africa as a case study, the study presents elements of ICT in education policy as well as policy lessons that would enable African countries use ICTs for productive educational outcomes.*

#### **INTRODUCTION**

If well appropriated in accordance with educational and development goals, information and communication technologies (ICTs) can enable activity-based teaching and learning processes in Africa. Although ICTs have gained widespread application in secondary and tertiary education in Africa and other developing regions, many have taken a skeptical glance at the effectiveness and

sustainability of ICT in students' achievement and educational outcomes in general (Cuban, 2002). However, there is a consensus that the potential of ICTs can assist African countries to move away from the archaic and traditional 'rote based' pedagogy, which has dominated education system in the region since the colonial era. Besides, the careful integration of ICTs in the education system in Africa can enhance education equity by bringing education curriculum to hard-to-reach groups and communities, and substantially im-

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prove administrative processes and efficiency in the education sector.

The focus of this paper is on the role of policy and institutional frameworks in the development of information and communication (ICT) in secondary education in countries in Sub-Saharan Africa (SSA). Although SSA is characterized by low level of ICT distribution, governments and development agencies in the region have recognized the imperative of leveraging modern ICTs for the improvement of education. Unfortunately, the plans of integrating ICT in social and economic development in Africa have not been met with the sufficient policy and institutional actions. While many countries and development groups have focused more on computer acquisition for schools, little has been done to develop a coherent and structured policy processes and frameworks to advance an effective integration of such technologies as educational tools. For this reason, ICT in education (ICTiE) is often treated as technical projects in schools with little or no focus on issues of policy.

Against this background, this paper presents the imperatives of policy and institutional frameworks for ICT-enhanced education system in Africa. This chapter seeks to delineate ICT policy in general and ICTiE policy in particular. These policy frameworks are different in emphasis, but, at the same time, they overlap each other since the later is a continuation of the former to use ICTs to improve life quality in the society. Without being prescriptive, this study presents and analyzes essential policy frameworks and practical recommendations to inform national ICTiE policy and actions in Africa. The objective is to sensitize participative policy processes and promote ICT policy initiatives. Such steps will enable countries in the region to exploit the convergence in communication networks for education improvement and management in Africa.

This paper argues that; to realize the full potential of ICT in education; to meet the challenge of secondary education in the region; and to avoid

mistakes of the past and ensure the sustainability of several ICTiE projects, African countries need clear policy goals, guidelines and practices. It is further argued that ICTs in education and e-learning objects in general are socio-technical in nature. Hence the success of ICT-mediated learning is not only technical but also political in nature.

The following research questions will guide the study: 1) how can ICTiE policy influence effective application of technologies in educational development in SSA? 2) what policy and regulatory frameworks can facilitate a sustainable integration of technologies in the education system in Africa? This chapter is based on qualitative research methodology. Data was collected through personal interviews and informal conversations. Secondary data sources from government ministries and organizations were used and cross-referenced against information obtained through interviews and conversations. Policy-Network theory (Kennis & Volker, 1991) is used to understand the interactions between ICTiE policy and educational development in Africa.

## **DEFINING ICTS**

*Information and Communication Technologies (ICTs):* As used in this study, the term Information and Communication Technologies (ICTs) represents old and new technologies that are used for accessing, gathering, presenting and communicating information. In addition, these technologies serve as information storing and processing devices. In many fields, ICT is used interchangeably with Information Technology (IT). To this effect, ICTs encompass both the hardware and application software, which facilitate technical functions and capabilities. Although some of technologies have overlapping functions, ICTs can be divided into two broad categories: ICTs for recording and storage purposes and ICTs for broadcasting information. Example of ICTs for recording and

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