ICT for Education

Dr Sibongile Mtshali
Director of Education, Swaziland
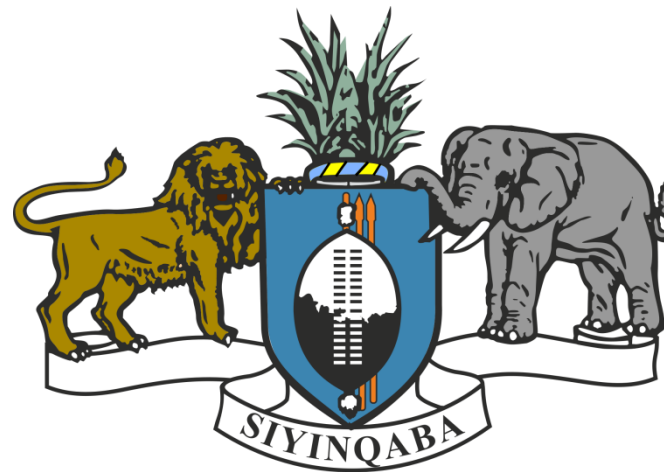
The Ministry of Education and Training understands Information and Communication Technologies as embraced by the World Bank which states: Information and Communication Technologies consists of hardware, software, networks and media for collection, storage, processing, transmission and presentation of information (voice, data, text images), as well as related services. ICTs can be divided into two components, Information and Communication Infrastructure (ICI) which refers to physical telecommunications systems and networks (cellular, broadcast, cable, satellite, postal) and services that utilize those communication infrastructures (Internet, voice, mail, radio and television), and Information Technology (IT) that refers to the hardware and software of information collection, storage, processing, and presentation.

The paper addresses issues of Information and Communication Technologies in the context of the education sector in Swaziland. The Ministry of Education and Training recognizes the critical use of Information and Communication Technologies (ICT) in the transformation of society to ultimately meet the universal requirements of an ever changing global environment. The education sector also recognizes that the new information and communication technologies are closely linked with many aspects of human activity and therefore clearly significant in lifelong learning.

It cannot be over-emphasized that ICT provides a great deal of advantage in enhancing human capacity, energizing the teaching/learning environment, delivery of equitable education and encourages an environment that supports creativity and critical thinking. It is therefore imperative that we expose our children, parents and teachers to ICT in order to develop individuals capable of functioning in a technologically driven, knowledge – based economy. The all-encompassing use of ICT in education optimizes the operations and the management of the Ministry of Education and Training in providing the highest quality of service to the citizens of Swaziland.

The Ministry of Education and Training's core mandate is developing human capital, so as to ensure that the country's citizens develop to their full potential and compete effectively in the global village. The Ministry has been doing this through provision of opportunities to every Swazi child. One of the areas where the Ministry has strived to perform is the area of Information and Communication Technology (ICT). Government's mission is to ensure that the use of ICT in the education system is strengthened to expose all children who leave the system to new technologies. ICT skills are viewed as very critical and essential in the global village. This is in line with the aspirations of the Ministry which are enshrined in its mission and vision statements:

The vision of the education sector is to ensure the attainment of quality in educational opportunity for all pupils of school going age and adults irrespective of their socio economic background, with the ultimate goal of enhancing their productive capacity, thus improving the quality of their lives. However, the vision of the education sector in relation to ICTs is to be the base Ministry leading and transforming education and training through the use of ICT with the view of meeting challenges for the 21st century through the provision of ICT infrastructure, ICT solutions, sustainable socio – economic development, accelerated poverty reduction and equal opportunities, regardless of gender and physical ability.

The mission of the education sector is to provide relevant and affordable quality education and training opportunities for the entire populace of the Kingdom of Swaziland in order to develop all positive aspects of life for self- reliance, social and economic development and global competitiveness. However, the mission of the education sector in relation to ICTs is to establish a technology-centred infrastructure focused on enabling education and training to be responsive to the dynamics of the social and economic environment that prepares all Swazi learners, educators and communities of today for the world economy.

ICTs are used to achieve the basic aim of education, ensuring that all citizens of the country live a better quality life. ICTs are used to increase access to education and information. Therefore, ICTs are used as a vehicle to achieve universal basic education, thus facilitating the achievement of Millennium Development Goals (MDGs), Education for All (EFA) and national goals of education. The country has witnessed this through initiatives such as the radio, electronic, oral and print media.

Moving towards the new ICTs, Swaziland embarked on a number of initiatives which began with equipping schools with computer equipments. These initiatives include the initiatives such as the Republic of China-Taiwan computer project, the Computer Education Trust, the UNESCO Japan funded project, the Coca-Cola Foundation and lately the joint partnership with MTN-Swaziland from the private sector. The key thrust of these activities is to introduce e-learning and give basic IT literacy skills to children. Most of these efforts are targeted but are not limited to secondary/high schools.

ICT in education usually takes two broad formats, i.e. their use in teaching / learning / training / research and their use in the management and administration of education. The Ministry of Education and Training embraces and uses both formats. Issues of connectivity between the educational institutions and the Ministry as well as access to the web, Internet and security are very pertinent in this sector. The Ministry advocates for connectivity but at reasonable costs. The high costs of connectivity in the country militate against access to the Internet in the country thus the use of computers in education is limited to the normal use. Quite a few schools and Government departments have access to the web; internet connectivity currently does not even exist in some regional education offices. The Ministry of Education and Training strongly believes that access should not be limited to the formal sector but to non-formal sectors such as Open and Distance Learning (ODL), non-formal and adult education, to promote lifelong learning in Swaziland. What is noted is that the changing paradigms of education delivery demand extensive

use of ICT and libraries are no longer the only source of information. The Internet is now an information highway and needs to be complemented with traditional sources of information such as libraries.

The Ministry of Education and Training has also revived its radio slot at Swaziland Broadcasting and Information Services (SBIS) which has been used for education in the past as 'listen and learn', and other educational programmes. The overall and overarching goals of ICTs in education include:

Promotion of access to the use of ICT to all citizens of the country, students and teachers at all levels and forms of education;

Promotion of the use of ICT in the management and administration of education at all levels and forms;

Use of ICT to facilitate decentralization and capacity building in all regional offices;

To ensure equitable distribution and management of educational resources from school level to national level. This of course calls for targeted interventions, especially in communities that are severely disadvantaged. This requires very comprehensive management and information system;

Use of ICT for development and emancipation. This includes access to information, use of information for informed decision and policy making, sharing of information through a number of media, print, radio, TV use of ICT for guidance and counseling, inclusive education, networking, research and capacity building.

In conclusion, as the education sector tries to mainstream ICTs in education, there are a number of challenges which are technical and financial in nature; however, it is beyond the scope of this paper to discuss challenges of implementing ICTs in Swaziland.