ICT in Education in Burundi

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May 2007

Source: *World Factbook*[1]

Please note:

This short *Country Report*, a result of a larger *info*Dev-supported *Survey of ICT in Education in Africa*, provides a general overview of current activities and issues related to ICT use in education in the country. The data presented here should be regarded as illustrative rather than exhaustive. ICT use in education is at a particularly dynamic stage in Africa; new developments and announcements happening on a daily basis somewhere on the continent. Therefore, these reports should be seen as "snapshots" that were current at the time they were taken; it is expected that certain facts and figures presented may become dated very quickly.

It is expected that individual *Country Reports* from the *Survey of ICT and Education in Africa* will be updated in an iterative process over time based on additional research and feedback received through the *info*Dev web site. For more information, and to suggest modifications to individual *Country Reports*, please see www.infodev.org/ict4edu-Africa.

Overview

The crisis of 1993 and the long drawn-out conflict that followed in Burundi had a devastating effect on education and greatly exacerbated the underlying problems that existed before. However, a new momentum has been achieved and Burundi is now fully in recovery.

Critical to recovery is the education development plan that is expected to be finalised this year and that will spell out the government strategy for the education sector. The national ICT for development policy that was adopted recently is expected to focus the adoption and use of ICT by the country to achieve its strategic objectives.

It is, however, important that an ICT for education policy that identifies the priority areas in which ICT can catalyse development and improve both access and quality of education in the county be developed. This sector-specific policy should take into account the overall education strategic goals drawn up from the development plan.

Country Profile

Since 2000, Burundi has made considerable progress towards peace and political reconciliation and has taken the first steps towards economic and social recovery. The country has undergone a major transformation since its first democratically elected president was assassinated in October 1993 after only 100 days in office, triggering widespread ethnic violence between Hutu and Tutsi factions. Over 200,000 Burundians perished during the conflict that spanned almost a dozen years. Hundreds of thousands of Burundians were internally displaced or became refugees in neighbouring countries.

An internationally brokered power-sharing agreement between the Tutsi-dominated government and the Hutu rebels in 2003 paved the way for a transition process that led to an integrated defence force, established a new constitution in 2005, and elected a majority Hutu government in 2005. The new government signed a South African-brokered cease-fire with the country's last rebel group in September 2006, but it still faces many challenges.

Covering an area of 27,834 square kilometres, Burundi is one of the most densely populated countries in the world, with an average of nearly 250 people per square kilometre. Burundi is landlocked, neighbouring Tanzania to the east, Rwanda to the north, and Democratic Republic of the Congo to the west. The country has an annual population growth rate of 3.7% while 46% of the population is under 14 years. The economy is predominantly agricultural with more than 90% of the population dependent on subsistence crops. Economic growth depends on coffee and tea exports, which account for 90% of foreign exchange earnings.[1]

Table 1 provides some selected socio-economic indicators for the country.[1,2]

Table 1: Socio-economic Indicators: Burundi

Indicator	
Population	8 million (2006)
Languages	Official languages: Kirundi and French. Other: Swahili.
GDP per capita	$700 (2006)
Human Development Index (2004)	169 (out of 177 countries)
Human Poverty Index (2004)	78 (out of 102 countries)
Expenditure on education (as a percentage of GDP)	5.2% (2004)

The Education System

The Burundi education system comprises formal and informal teaching. The formal education is made up of four levels: pre-primary (kindergarten), primary, lower secondary, and technical secondary and upper secondary. Kindergarten schools enrol children aged three to six years. The schools providing this type of education in Burundi are mostly privately owned. Primary education lasts for six years leading to the Certificat d'Etudes Primaires (elementary education).

Secondary education is divided into lower (four years) and upper (three years) education. Lower secondary education lasts four years and is available to those who pass the National Entrance Examination. Upper secondary level takes another three years after lower education and leads to the Diplôme d'Etat, which gives access to higher education. Technical secondary education lasts seven years.

Higher education is mainly provided by the University of Burundi. It is largely financed by the State and enjoys administrative and management autonomy. It is administered by a rector appointed by the president of the Republic for four years. Policy-making is the responsibility of a governing board appointed by the president of the Republic and representing the major spheres of activity concerning higher education development. Four private universities have been created recently.[3, 4]

Primary school teachers are trained in high schools (lycées pédagogiques), which offer studies divided into two cycles of two years each. In-service training of primary teachers is a regular activity of the Office for Rural Education (BER), a curriculum development agency.

Table 2 provides rates of enrolment at various levels of education.

Table 2: Selected Education Statistics[5]

Indicator	
Primary enrolment (% of gross)*	93.1 (2004)
Secondary enrolment(% of gross)*	29.3 (2004)

Tertiary enrolment(% of gross)*	5.6 (2004)
Gender parity index (GPI) **	0.8 (2004)

*Percent of gross is the number enrolled as a percentage of the number in the eligible age group.
**GPI = the level of access by females to education compared with males.

Education Policies

Burundi is currently developing its education sector development plan which is expected to be ready by the end of 2007. Several development partners have been assisting in this process and support for some of the component of the plan is already being sought out.[6]

In absence of the plan, the education sector is broadly directed by the country's poverty reduction strategy (PSRP),[7] which has identified improvement in access to and quality of education as one of its priorities. The strategy efforts are primarily focused on rehabilitating facilities damaged during the crisis, building new facilities, redeploying personnel to areas where there are shortages, ensuring the availability of minimum supplies and teaching materials, organising teacher-training courses, and examining in-depth reforms to the system.

Primary School Level
The specific objective at the primary school level is universal enrolment. To achieve this, primary schooling has gradually been made compulsory for all, and last year the government made it free. The government is now struggling with the significant financial effort in sustaining the free basic education.

Secondary School Level
The government has encouraged the establishment of community and private secondary schools and colleges. Substantial support from government and donors is still required, however, to provide the schools with adequate teaching materials, qualified teaching staff, and the minimal facilities needed to ensure an acceptable quality of education.

Higher Education Level
At the higher education level, focus has been on training teachers and developing retention strategies for teachers. The strategy also calls for a balance between training needs and market needs at the university and other colleges of higher leaning.

Education for All
In line with objectives for Education for All (EFA) the government created a team at the Ministry of Education and Culture (MINEDUC) to produce a comprehensive Strategy Note.[8] A draft of the Strategy Note has already been produced and validated, and it was formally presented to all financial and technical partners in October 2006. The main principles of the Strategy Note are to:

- Expand access and retention at the primary level to reach universal completion by 2015
- Improve quality and pertinence at all levels
- Improve equity and efficiency in the allocation of education resources
- Improve human resources and administrative and information management

- Manage the transition between education cycles to ensure a sustainable path to 2015

Tertiary Level
The Burundi Youth Training Centre was established to provide practical training for youths in order to prepare them for the job market. It has been at the forefront of ICT training in the country, teaching youths productivity software applications and operating systems such as Windows and Linux.

Infrastructure

Burundi adopted a national ICT development policy late in February 2007 as an update to the national ICT strategy adopted in 2004, but it has not been implemented due to the government's focus on the post-war cease-fire issues and lack of funding. The national ICT development policy has six strategic objectives:

- Capacity-building
- Enhancement of a legal and regulatory environment
- Promotion of a base infrastructure
- Promotion of good governance
- Promotion and encouragement of private investment
- Promotion of the development of content and applications

Table 3 provides some current statistics for ICT infrastructure in Burundi. [9]

Table 3: ICT Infrastructure in Burundi

Indicator	
Telephone lines	35,000
Mobile phone subscribers	200,000
Internet users	2,000 (2006)
Television stations	2
Internet hosts	1,088 (2006)
Radio stations	12

Despite having a policy in place, ICT uptake in Burundi is still very low with most of the ICT facilities concentrated in the capital city Bujumbura. The country lacks a specific policy for ICT use within the education sector despite recognising ICT as an enabler in increasing access and quality of education.

ICT in Schools
There is no documentation indicating that there is any use of ICT in the national public school system currently. However, there are a number of privately owned secondary schools that teach basic computer lessons for productivity applications such as word processing and spreadsheets. Computers are also used for administrative purposes, but not for learning and teaching.

ICT in Universities

There is much more use of ICT at the university level, although the facilities are still insufficient. The University of Burundi has a campus network for approximately 500 users, which was funded mainly by the United Nations Development Programme (UNDP). This network is connected to the Internet through one of the local ISPs. Connectivity between its campuses in Bujumbura is achieved through an omni-directional wireless link that is placed at the same campus that has the connection to the ISP.

The university has approximately 120 computers that are mainly used by lecturers and other university employees. A limited number of students have access to the computers and hence few have the privilege to surf the Internet on the campus network. But the university is expecting 500 donated computers for the university laboratories that will provide greater access to the students.

The university's main library, which is located at the main campus in Mutanga, is developing an e-library to share resources and publications with other universities abroad (National University of Rwanda, University of Bukavu, and University of Goma in the east of the Democratic Republic of the Congo).[10]

The Université Lumière de Bujumbura has approximately 55 computers with a wireless Internet connection from CBINET (ISP) on one campus and approximately 45 computers and a direct link to Intelsat with a VSAT dish on the second campus. Other universities have minimal ICT infrastructure, and it is mainly used for administrative purposes. These include University of Ngozi, Université du Lac Tanganyika, Université des Grands lacs, Université de Mwaro, and Université Martin Luther King.

Current ICT Initiatives and Projects

Reflect and ICT Project

This DFID-funded project explores potential applications of ICTs for poor and marginalised people and links to existing Reflect groups in Uganda, Burundi, and India. Reflect is an approach to adult learning and social change through which groups of people meet regularly to discuss and analyse local issues and devise action plans using participatory techniques. The basic unit is a circle, or group, usually at the village level, supported by a facilitator who is drawn from the local community and trained by the Reflect implementing organisation. In Burundi, ActionAid is the implementing organisation. There are six Reflect circles in Rutana and a national network of 10 independent Reflect associations.

For more information: http://www.reflect-action.org/Initiatives/ict/home.htm and http://www.reflect-action.org/Initiatives/ict/project/country/Burundi/burundi.htm#reflect

IT IS-LTAR e-Collaborative Learning Management System

This is an innovative e-collaborative project between professors in ITIS, an Italian technical school, and Lycée Technique Alessandro Rossi (LTAR), a technical school in Burundi, to

utilise broadband Internet to experiment with new ways of distance teaching and learning through screen sharing, video-conferencing and voice over IP. The project has also set up a learning management system using Moodle where teachers from the Italian school can collaborate with their Burundian colleagues to exchange experience and design learning

For more information: http://ltarngozi.org/moodle/mod/resource/view.php?inpopup=true&id=119 and http://www.ltarngozi.org/moodle/

LTAR School Connectivity Project
The World Istituto Tecnico Alessandro Rossi, a small Italian NGO, has raised and invested almost €500,000 for the support of a twin technical high school – the Lycée Technique Alessandro Rossi – in Ngozi, Burundi. The school has now been equipped for students studying electronics, computer maintenance, and electromechanics. The school received a donation of a VSAT system for broadband Internet connectivity from Eutelsat, one of the largest VSAT service providers in the world. The school has a network of 25 PCs, laptops, and a Wi-Fi antenna covering the entire school area.

For more information: http://www.elearning-africa.com/newsportal/english/news54.php

Computer Trailer: Burundi Youth Training Centre
In 2006 volunteers from the Burundi Youth Training Centre began a campaign to introduce ICTs in secondary schools by creating awareness among the school teachers, administrators, and pupils. The centre believes that ICT can play an important role in improving the quality of education in countries in development. The Computer Trailer project pilot phase equipped two secondary schools with 20 computers and a laser printer each. The second phase of the projects was to initiate computer clubs in these schools where volunteers will train the pupils in the schools. Those who receive training are then used to train others in order to spread the skills and awareness on ICT. This project is supported by African Computing and Webvolcans, both French NGOs.

For more information: http://www.bytc.bi/

Implementing ICT in Education: What Helps and What Hinders?

Table 4 provides a summary of the current stage of ICT development in Zambia in terms of enabling or constraining features in the education system.

Table 4: Factors Influencing ICT Adoption

Factors	Enabling Features	Constraining Features
Policy framework	The country recently adopted a national ICT for development policy that identifies ICT as an enabler in improving access and	The lack of an ICT for education policy and strategy means that implementation of ICT initiatives are not mainstreamed into the government

	quality of education.	development plans and therefore lack focus, resources, and a nationwide outlook.
Availability		Ninety percent of the population is rural, but most of the infrastructure is based in and around the capital city Bunjumbura, making the ICT infrastructure available only to the urban dwellers.
Access		ICT is still elitist in Burundi, making it too costly for most people. The lack of competition in most of the services also adds to suppliers maintaining high prices.
Effects of war	Given the size of the country, it can bounce back quickly and reconstruct the infrastructure from scratch using the latest technology that is cost effective and easier to deploy.	Due to the civil strife in the country most of the infrastructure was destroyed and therefore the country needs to reconstruct its ICT infrastructure.
Gender parity		Due to the war, a lot of children and especially girls have been affected by the displacement of families and therefore they are not attending school.
Electricity		Like in many other African countries, Burundi is struggling to provide reliable electricity to its citizens. Currently, however, only the major urban areas have grid electricity thereby inhibiting the use of ICTs in rural areas.
Level of priority		A lot of resources in the education sector are aligned with the sector development programme which is a bigger project dealing with basic fundamental challenges such as construction of classrooms and availability of textbooks. ICT is not a priority area.
Human resources		Lack of trained teachers with ICT knowledge contributes to the lack of interest or seeming lethargy in adopting ICT in the classroom. This aside, Burundi is also struggling with

		its human resource needs also as an effect of the war.
Interested partners	Two of the main distributors of refurbished computers in schools, Computer Aid and World Links have started working with the Ministry of Education. The pilot by World Links is now due for a wider rollout.	
Awareness levels		Lack of awareness is one of the major inhibiting factors in the use and adoption of ICT in the education sector.

Notes

1. The World Fact Book 2007. https://cia.gov/cia//publications/factbook/geos/by.html
2. Country Fact Sheets: Burundi. Human Development Report 2006. http://hdr.undp.org/hdr2006/statistics/countries/country_fact_sheets/cty_fs_BDI.html
3. Burundi Embassy in Berlin. http://www.burundi-embassy-berlin.com/BDepth/BDepth.html
4. "Burundi Wants Education For All by 2015." New Vision – Burundi Development Review. http://www.enteruganda.com/brochures/burundi0703index4.html
5. Summary Education Profile: Burundi. World Bank. http://devdata.worldbank.org/edstats/SummaryEducationProfiles/CountryData/GetShowData.asp?sCtry=BDI,Burundi
6. Minutes of Videoconference with Burundi. 11 October 2006.World Bank. http://www1.worldbank.org/education/efafti/documents/Burundi_minutesVC112006.pdf
7. *Interim Strategic Framework for Accelerating Economic Growth and Reducing Poverty (Interim PRSP).* November 2003. http://poverty2.forumone.com/files/Burundi_IPRSP.pdf
8. Burundi Comprehensive Strategy Note. 2005. http://web.worldbank.org/servlets/ECR?contentMDK=20989150&contTypePK=4610&folderPK=60890&sitePK=260799&callCR=true
9. Presentation by Eng. Sabin Nikoyagize, Telecoms Advisor, Ministry of Transport, Posts and Telecommunication at the Eighth Meeting of the Regional e-Government Working Group, Nairobi, 19 March 2007.
10. Ntareme, H. and M. Issa. "Case Study: Academic Networking in Burundi." Royal Institute of Technology, KTH http://www.wideopenaccess.net/files/webform/submission/Academic_Networking_in_Burundi_Draft.pdf

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