

## ICT for Education in Malawi

by Shafika Isaacs

May 2007



Source: *World Fact Book*<sup>1</sup>

*Please note:*

This short *Country Report*, a result of a larger *infoDev*-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.

The findings, interpretations and conclusions expressed herein are entirely those of the author(s) and do not necessarily reflect the view of *infoDev*, the Donors of *infoDev*, the World Bank and its affiliated organizations, the Board of Executive Directors of the World Bank or the governments they represent. The World Bank cannot guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply on the part of the World Bank any judgment of the legal status of any territory or the endorsement or acceptance of such boundaries.

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 *infoDev* web site. For more information, and to suggest modifications to individual *Country Reports*, please see [www.infodev.org/ict4edu-Africa](http://www.infodev.org/ict4edu-Africa).

## Overview

A highly impoverished country, Malawi has a dedicated national ICT policy that includes the promotion of ICTs in education. It also has a few innovative initiatives in this area, committed largely to the promotion of ICT access in schools and integrated library and information services and networks.

## Country Profile

Malawi is one of the poorest countries in the world with a per capita Gross National Income of USD\$160.<sup>2</sup> It is classified as a least developed country by the United Nations and a highly indebted poor country by the World Bank. The country has a narrow economic base with no mineral resources and is heavily dependent on agriculture. Nearly 90% of the rural population derive their livelihood from agriculture. Agricultural produce accounts for 90% of Malawi's exports.<sup>3</sup>

However, the agricultural sector has deteriorated in the past ten years and 80% of the country's population lives in rural areas where access to basic social services is severely limited. The country is very densely populated with a very high rate of forest loss and a fragile environment.

Poverty is widespread in both rural and urban areas with nearly half of Malawi's population struggling to live on less than USD\$1 a day. Income distribution is very unequal.

A continuing food crisis in Malawi afflicts more than four million people, and more than a million of them are children under the age of five or pregnant women. Food insecurity is not only a major cause of malnutrition, but has also worsened the risk for diseases such as cholera and AIDS.<sup>4</sup>

Table 1 provides some selected socio-economic indicators for the country.

**Table 1: Basic Economic Indicators: Malawi**

Indicator	
Population (2005)	12.9 million
Languages	Official language: Chichewa. Other languages: Chinyanja, Chiyao, Chitumbuka, Chisena, Chilomwe, Chitonga.
2005 Economic activity (% of GDP)	Agriculture: 34.7% Industry: 19.4% Services: 45.9%
Human Development Index (2004)	166 (out of 177 countries)
Per capita gross national income (US dollars)	\$160 (2004); \$160 (2005)

## The Education System

Malawi has an 8-4-4 education system consisting of primary school, secondary school, and university, which is the duration of compulsory education. Most children start formal education at primary school at the age of six. The primary school takes eight years from Standards 1 to 8 at the end of which pupils write the Primary School Leaving Certificate examinations. The introduction of free primary education in Malawi has seen a large increase in the number of pupils, but this increase in access has also brought major infrastructure problems and a decline in quality.

Secondary school education takes four years from Forms 1 to 4. Students can attend secondary school in public schools run by the government or in private schools run by the private sector and individuals. The quality of secondary education varies widely. In general, fees in private schools are more than 50 times that in public schools. For a long time, secondary education was very restrictive in Malawi but this situation is changing positively due to rapid expansion of private schools as well as government-run community day secondary schools.

Malawi has two universities: the University of Malawi, which opened in 1965, and Mzuzu University, which opened in 1997.

Technical and training colleges offer courses in fields such as forestry, marine science, social welfare and hotel management, as well as in various trades. These courses lead to certificates awarded after studies lasting between six months and four years.

Primary school teachers are trained in primary teacher-training colleges. The Malawi Institute of Education provides introductory courses to give school leavers the basic skills to act as “assistant” or “pupil teachers.” Secondary school teachers are trained at Chancellor College, which offers a four-year educational programme, and at a college of education for secondary school teachers at Domasi in Zomba. The Mzuzu University now also trains secondary school teachers.<sup>5</sup>

Table 2 provides a snapshot of education indicators in Malawi.

**Table 2: Selected Education Data**

Indicator	
Enrolment in primary education (% gross)*	125 (2004)
Enrolment in secondary education (% gross)*	29 (2004)
Transition to Secondary	76 (2003)
Enrolment in tertiary education (% gross)*	0.4 (2004)

Gender Parity Index (GPI)**	1.02 in primary; 0.81 in secondary; 0.54 at university (2004)
-----------------------------	--

\*Percent of gross is the number enrolled as a percentage of the number in the eligible age group.

\*\*GPI = gross enrolment ratio (GER) of females, divided by the GER of males and indicates the level of access by females to education compared to males. In Malawi, there is gender parity for primary education, but it declines at the secondary level and again at university.

Primary school enrolment rates remain high, with no gender gap.<sup>6</sup> However, the education system in Malawi faces many challenges in most areas including access, equity, quality, and internal efficiency. HIV/AIDS affects nearly a million people, including 83,000 children. Nearly a third of infected mothers pass the virus to their babies. Half of Malawi's one million orphans have lost one or both parents to AIDS. Child abuse, sexual exploitation, and child labour are serious problems, especially among girls and orphans.

Malawi's economy also suffers a serious skills deficit, especially in the ICT sectors. Malawi reportedly has 20 skilled librarians of which only 20% have ICT skills.<sup>7</sup>

## Infrastructure

As is the case with most other developing countries, Malawi faces a number of human and financial resource constraints to the development of its ICT sector. These include underdeveloped ICT infrastructure, high cost of telecommunications, and unstable and unreliable power.

Table 3 provides an overview of Malawi's ICT infrastructure.

**Table 3: ICT Infrastructure Indicators**

Indicator	
Fixed-line subscribers (2004)	93.0 per 1,000 persons
Mobile subscribers	222 per 1,000 persons
Dial-up subscribers (2005)	16.2 per 1,000 persons
Broadband subscribers (2004)	0.0
Internet users (2004)	46.1 per 1,000 persons
Television broadcast stations	1 (2001)
Radio stations	AM 9; FM 5; shortwave 2 (2001)

Malawi adopted a communication policy in 1998 which has universal access, rural connectivity, liberalisation, and private sector involvement as key objectives. It has also established the Malawi Communications Regulatory Authority (MACRA).

## ICT Policies

### **Vision 2020**

Malawi has developed a visionary policy statement that says, in part, “by the year 2020, Malawi as a God-fearing nation will be secure, democratically mature, environmentally sustainable, self reliant with equal opportunities for and active participation by all, having social services, vibrant cultural and religious values and being a technologically driven middle-income economy.” The policy statement has a dedicated human resource development component that states that Malawians aspire to have adequate and good quality social services especially education and health and efficient and effective utilisation of human resources in both the public and private sectors.<sup>8</sup> Vision 2020 sets the conceptual parameters for subsequent policy including national ICT policy.

### **National ICT for Development Policy<sup>9</sup> (ICT4DP)**

A number of existing policies, legislation and programmes have in one way or other informed and fostered the development of this ICT4D policy as well as the Communications Act, Science and Technology Act, establishment of SchoolNet Malawi, the removal of import duty on pre-assembled computers and printers, the introduction of computer studies in secondary school curriculum, and the establishment of government Wide Area Network (GWAN).

After initial support from the United Nations Economic Commission for Africa (UNECA), which assisted with the development of a national ICT policy framework report, the Government of Malawi adopted a National ICT for Development Policy in December 2005.

The policy seeks to address an array of problems faced by the Malawian economy and society which include:

- Inadequate market information flow especially on small domestic markets
- “Brain drain” in the ICT sector due to low remuneration (Essentially, the brain-drain is at two levels: from Malawi to other countries especially within the SADC region, and from the public sector to the private sector.)
- Inadequate institutional capacity at national, sectoral, and organisational levels
- Negative attitude towards technology change
- Underdeveloped telecommunications infrastructure especially in rural areas
- Outdated laws that support ICT development, deployment, and utilisation.
- Fragmentation of administrative and political leadership in the ICT sector
- Proliferation of sub-standard ICT schools, syllabi, and service delivery
- Underdeveloped research and development capacity in ICT
- Underdeveloped ICT private sector

Its vision is for an ICT-led Malawi and its mission is to facilitate the creation of an enabling environment for efficient, effective, and sustainable utilisation, exploitation, and development of ICTs in all sectors of the economy in order to attain an information-rich and knowledge-based society and economy. This policy has a dual focus. It aims at developing the ICT industry and sector and promoting the development and use of ICTs

in all sectors for the greatest impact in socio-economic development. It is focused on eight thematic areas:

- Strategic ICT leadership
- Human capital development
- Governance
- ICT industry
- ICT infrastructure
- ICT growth sectors as identified in the Malawi Economic Growth Strategy (MEGS)
- Community access to ICTs
- Responsive ICT legal, and institutional regulatory framework

All these areas are deemed necessary for ICTs to enhance rapid growth of the economy.

The dedicated section on human capital development and education is an attempt to:

- Facilitate the deployment, utilisation, and exploitation of ICT within the educational system in order to improve access, quality, relevance, and delivery at all levels
- Achieve universal basic ICT literacy and improve the level of ICT literacy in the country
- Transform Malawi into an information- and knowledge-driven ICT literate nation
- Improve the management of education systems through the utilisation of ICT

Some of the strategies to achieve these objectives include:

- Mainstreaming ICTs throughout the entire educational system to promote lifelong learning
- Ensuring that primary and secondary schools and colleges have adequate and reliable computers
- Building facilities to promote ICT and computer-aided training at all levels including primary schools and nurseries
- Intensifying ICT education and training in all training institutions
- Encouraging collaboration between local and international educational institutions to facilitate educational exchange and promote ICT education and training
- Facilitating collaboration between the Ministry of Education and various accreditations
- Introducing ICT technical colleges in all regions of the country
- Promoting e-learning and e-teaching including e-distance education, training, and virtual learning systems to complement and supplement face-to-face campus, televised, and broadcast education and training systems
- Ensuring that all local universities and colleges take steps to progressively offer their programmes and courses on-line to broaden access to higher education to a large section of the population
- Promoting awareness on available opportunities to enable students, teachers, and educational institutions to purchase ICTs
- Facilitating the automation of libraries as a tool for e-research and e-learning
- Setting up special libraries to support ICT research and development

- Developing user-friendly electronic educational management information systems to improve the quality of management of educational institutions

Because Malawi has a severe shortage of skills, the policy also contains an accelerated plan for human resource development to promote and improve research and development capacity in ICT target the development and enhancement of technical, managerial, and operational skills in the use and deployment of ICTs in the public, private, and informal sectors.

The policy further contains strategies to reach under-served disadvantaged communities by promoting local content and applications in the ICT sector to meet the needs and requirements of the nation. It has a specific objective of building the capacity of women, youth, and other disadvantaged groups to implement ICT initiatives with dedicated strategies and funding.

### **Policy Implementation**

The implementation of the policy will be centrally co-ordinated and supported by key sector agencies and institutions. The following institutions or agencies will play a central role:

- Ministries responsible for ICT matters
- The Department of Information Systems Technology and Management Services (DISTMS)
- Malawi Communication Regulatory Authority (MACRA)
- The National Information and Communication Technology Council (NAICT)

The Ministry of Education's responsibility will be to promote and facilitate the ICT skills acquisition and utilisation in all areas and levels of education and training in order to eliminate illiteracy in the country, while the Ministry of Gender, Child Welfare and Community Service will ensure that disadvantaged and marginalised communities participate fully through specific ICT initiatives. The Ministry of Youth, Sports and Culture is responsible for promoting the active participation of boys, girls, women and disadvantaged groups through ICT clubs and other promotional incentives.

The NICTC is a national body chaired by the president or the vice president with the mission to provide national leadership on all matters relating to the development of the Malawian information society. The Malawi Information and Communication Technology Agency (MICTA) was also established as a statutory and autonomous agency to act as the national ICT implementation and co-ordination body under the direct supervision of the NICTC and to act as its secretariat.

## **Current ICT Initiatives and Projects**

There are a few noteworthy initiatives in Malawi that attempt to bridge the digital divide. Many of these initiatives depend on donor funding from groups such as the World Bank,

Swedish International Development Agency (SIDA), Department for International Development (DFID), and the Japanese International Co-operation Agency (JICA).

### **Computers for African Schools Malawi (CFAS)**

The Computers for Malawian School scheme is jointly administered by the British Council and SchoolNet Malawi, which is a registered trust within the SchoolNet Africa organisation. The scheme's administrative committee is made up of academic and business representatives, as well as Ministry of Education and British Council personnel.

- The British Council receives the goods exempt of duty in Lilongwe. They are transferred to the SchoolNet facilities in Blantyre where the SchoolNet staff check, process, and repair the equipment. Microsoft OS and MSOffice are installed by agreement with Microsoft. The SchoolNet team also sets up the computers at the recipient schools.
- As in all recipient countries, strict criteria are applied to the candidate schools to ensure they have the right facilities and security to house the equipment. Each school receives 10 to 15 computers and a printer. Training of the teachers in ICTs has been arranged by the British Council, and UK trainers have travelled to Malawi to carry out training courses.
- In conjunction with the scheme, the Malawian Ministry of Education has developed an ICT curriculum.
- Schools are encouraged to ensure long-term self-sustainability for the facilities through their PTA. They are encouraged to raise money to replace or add to their equipment through fundraising, community use of the facilities, and, if necessary, asking parents for small contributions.
- Each recipient school is required to give a report on its experience with the computers and is subject to audit.
- The committee's objective is to have an ICT lab in all secondary schools with electricity by the end of 2008.

Information on the scheme in Malawi is shown on the SchoolNet Malawi Web site and a list of recipient schools is shown on the Malawian schools page.

*For more information:* [www.cfas.org.uk](http://www.cfas.org.uk)

### **Malawi Library Information Consortium (MALICO)**

MALICO was established in May 2003 as a consortium of organisations that combine talents and resources to promote and deliver library and information services for Malawi and the global community. Its institutional membership organisation participates in the acquisition and delivery of relevant electronic resources. MALICO's mission is also to offer leadership in library co-operation, training and development, mechanisms for improved access to information, and a capacity for members to respond to the information needs of the country.

The consortium's objectives include encouraging national, regional, and international co-operation among information stakeholders in Malawi; influencing information policy in Malawi; promoting adequate ICT infrastructure for members, especially sufficient Internet bandwidth; assisting in the development of appropriate ICT skills at all levels; facilitating access to electronic journal articles in international databases; organising and digitising Malawian content; and providing information consultancy.

MALICO has initiated a few projects such as 4 VSAT. With the support of the Open Society Initiative for Southern Africa (OSISA) and with supplementary funding from the Open Society Institute and the World Bank and the University of Malawi Dossani Trust, MALICO bought four VSATs which were mounted on three University of Malawi campuses and at the Mzuzu University in February 2005. This lays the basis for MALICO to support the planned National Education Research Network (NREN).<sup>10</sup>

MALICO contributes to subscription of e-resources by PERI and the electronic Information for Libraries (eIFL) and access e-resources from a host of institutions such as WHO, FAO, INASP, and CTA. They also assist with digitising Malawi publications. For instance the College of Medicine has digitised over 300 publications, and University of Malawi has reportedly bought digitisation equipment. This project also involves creating institutional repositories through post-graduate degree programmes.

MALICO's Internet for Influence Program, which was initiated by the British Council, involves librarians training various groups on how to use computers and access the Internet. Training programmes include women members of parliament, young women leaders, lawyers, and journalists.

Malawi Research and Education Network (MAREN) is another MALICO project that involves establishing high-speed Internet connectivity among tertiary education institutions. National research and education networks are national organisations in Africa and elsewhere representing groups of tertiary education institutions. Their mandate includes, among other things, improving Internet connectivity for members. MAREN is also one of the founding members of the UbuntuNet Alliance for Research and Education Networking. MAREN has two founder members: the University of Malawi and Mzuzu University. Two other institutions are in the process of joining: the National College of Information Technology (NACIT), a tertiary institution; and the Department of Agricultural Research, a research institution. Two new universities are likely to join within the year.

*For more information:* [www.malico.mw](http://www.malico.mw)

### **National Library Services**

The National Library Services (NLS) has 10 branches throughout Malawi, many of which are in rural areas with no electricity. Its Mother and Child Project aims at encouraging mothers to read and tell stories to their children, and has introduced computer games and lessons so that the children are encouraged to learn how to use computers at a very early stage.

The NLS has also established the Baobab Project which involves offering two low-cost PCs operating on low power for each library. These computers are run on solar panels or wind turbines with a high-battery life.

### **SchoolNet Malawi**

SchoolNet Malawi is a non-governmental, non-profit organisation formed to provide and facilitate access to ICTs in Malawian schools. The ICT for schools concept is very new in Malawi and the initiating organisation itself is still in the conception stage. The ICT development for schools concept was hatched after the SchoolNet Africa Cape Town Declaration (September 1999) represented by 10 African countries of which Malawi was one. This initiative was facilitated by the International Development Research Centre (IDRC) and SchoolNet South Africa.

SchoolNet Malawi has the following objectives:

- To market and lobby ICT development initiatives to schools, CBOs, the private sector, and the donor community
- To establish a functional, transparent organisation capable of implementing ICT development in Malawi
- To build sustainable human resources capacities that are able to effectively implement the set programmes
- To provide schools with connectivity learning facilities, locally and internationally
- To supplement the current schools education system with ICT content and curriculum in collaboration with the Ministry of Education
- To research and create ways of strengthening the development ICTs in Malawi
- To develop a functional, sustainable technical distribution and support centre capable of providing service to the whole nation.

SchoolNet Malawi sources second-hand PCs from various agencies, such as Computer Aid International, Computers for African Schools, and World Computer Exchange, and refurbishes and distributes them to Malawian schools based on detailed selection criteria. The organisation also conducts training programmes for both the teachers and students after each successful distribution phase. To date six schools have their own Web sites supported by SchoolNet Malawi.

As a partner of SchoolNet Africa, SchoolNet Malawi also participates in SchoolNet Africa programmes such as its Campaign for 1 Million PCs, and ThinkQuest Africa (now called Mtandao Afrika). The latter programme involves both the students and the teachers and provides them with advanced knowledge on how to create personal Web sites in the local language. This has become a sort of competition, with the winners enjoying a camping holiday in an African country. The participants are also given certificates of participation.

In 2006, SchoolNet Malawi partnered with Malawi Open Source Society to lobby and advocate for the use of open source in schools. Together they hosted a workshop with the support of OSISA in early 2006.<sup>11</sup>

SchoolNet Malawi also employs volunteers on both the technical and training side. Volunteers assist with testing and maintaining computers, packing computers for distribution in schools, and training teachers and students.

SchoolNet Malawi's partners include the British Council Malawi, Computers for Africa (CFAS), ComputerAid International, Old Mutual, Malawi Telecommunications Limited, Reserve Bank of Malawi, ComputerLand Limited, Microsoft South Africa, Open Society Initiative for Southern Africa (OSISA), and SchoolNet Africa. To date SchoolNet Malawi has distributed more than 832 computers to 50 participating schools.<sup>12</sup>

For more information: [www.schoolnetmalawi.org](http://www.schoolnetmalawi.org)

### University of Mzuzu

The University of Mzuzu offers library and information science and ICT degree programmes.

For more information: <http://www.mzuni.ac.mw>

## Implementing ICT in Education: What Helps and What Hinders?

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

**Table 4: Factors Influencing ICT Adoption**

<b>Factors</b>	<b>Enabling Features</b>	<b>Constraining Features</b>
<i>Policy framework and implementation</i>	Malawi has a national ICT policy that includes significant dedication to ICTs in education and human capital development.	
<i>Advocacy leadership</i>	Malawi has champions for the cause of ICTs for development at the highest level in government, in various government ministries, and within civil society and the local private sector.	
<i>Gender equity</i>	The national ICT policy mentions a commitment to gender equality and women's empowerment. The	

	policy also allocates responsibility for the promotion of girls and women through the use of ICTs with the Ministry of Gender. Malawi also has a number of women champions promoting ICTs in education who serve as worthwhile role models.	
<b><i>Infrastructure and access</i></b>	Malawi's national policies promote a commitment to universal access and a range of organisations and groups have made headway in improving the country's ICT infrastructure.	Malawi has a very poor and underdeveloped ICT infrastructure and very low levels of ICT access in education institutions.
<b><i>Collaborating mechanisms</i></b>	Malawi's national ICT policy refers to dedicated intergovernmental structures to promote collaboration in the realisation of policy objectives.	
<b><i>Human resource capacity</i></b>		Malawi has extremely limited human resource capacity exacerbated by very high levels of illiteracy.
<b><i>Fiscal resources</i></b>		Malawi's ICT for development strategy is strongly dependent on external donor funding.
<b><i>Learning content</i></b>	Malawi's information services and library organisations have made headway in digitising Malawian publications	There is little digital education content based on the local curriculum frameworks available in Malawi's education institutions.
<b><i>Procurement regulations</i></b>	Malawi has legislated a tax waive on the import of computers and accessories.	
<b><i>Attitudes</i></b>	Malawian government, local private sector, and civil society have demonstrated an enthusiasm and positive attitude in promoting ICTs for development in general and in education in particular.	

## Notes

1 The World Factbook 2007. <https://www.cia.gov/cia/publications/factbook/geos/mi.html>

2 Data and Statistics. 2004. World Bank.

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,menuPK:258665%7EpagePK:146732%7EpiPK:146813%7EtheSitePK:258644,00.html>

3 “The Development of Education in Malawi.” Report Prepared for the 47th Session of the International Conference on Education 07-11 September 2004. Ministry of Education and Malawi Commission for UNESCO. <http://www.ibe.unesco.org/International/ICE47/english/Natreps/reports/malawi.pdf>

4 [http://www.unicef.org/infobycountry/malawi\\_2424.html](http://www.unicef.org/infobycountry/malawi_2424.html)

5 <http://www.sdn.org.mw/edu/new/education-in-malawi.html>

6 [http://www.unicef.org/infobycountry/malawi\\_2424.html](http://www.unicef.org/infobycountry/malawi_2424.html)

7 Salanje, G. “The Role of Librarians in Bridging the Digital Divide in Developing Countries. The Case of Malawi.” Presentation at 32nd IAMSLIC Annual Conference 9-12 October 2006, Portland, Oregon, USA. 2006. <https://darchive.mblwhoilibrary.org>

8 <http://www.sdn.org.mw/~esaias/ettah/vision-2020/>

9 <http://www.malawi.gov.mw/publications/nationalICT4DPolicy.htm>

<sup>10</sup> Ngwira, M. “Malico VSAT Network Initiative is Implemented!” 2006. Open Society Initiative for Southern Africa. South Africa. [www.osisa.org/files/openspace/1\\_3\\_p46\\_margeret\\_ngwira.pdf](http://www.osisa.org/files/openspace/1_3_p46_margeret_ngwira.pdf)

<sup>11</sup> Nyirenda, B. “SchoolNet Malawi and MOSS Launches the Use of FOSS in Malawi Schools.” 2006. Open Society Initiative for Southern Africa. South Africa. [www.osisa.org/files/openspace/1\\_3\\_p53\\_bessie\\_nyirenda.pdf](http://www.osisa.org/files/openspace/1_3_p53_bessie_nyirenda.pdf)

<sup>12</sup> Salanje, G. “The Role of Librarians in Bridging the Digital Divide in Developing Countries. The Case of Malawi.” Presentation at 32<sup>nd</sup> IAMSLIC Annual Conference 9-12 October 2006, Portland, Oregon, USA. 2006. <https://darchive.mblwhoilibrary.org>

*Given the constantly changing nature of the Internet, we suggest that you copy the document or web site title (and author or organization name, as appropriate) of a resource below into your favorite search engine if a link on this page is not working.*