

ICT in Education in Cameroon

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Source: CIA World Fact Book¹

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.

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Overview

Cameroon is among the sub-Saharan African countries that are making enormous progress in the use of the Information and Communications Technologies (ICTs) in the various development sectors, including education. Private schools introduced ICTs into their curricula in the 1990s, but there is no specific policy guiding the teaching or use of ICTs in education, which has led to each private school applying its own teaching method or programme.

ICTs were officially introduced into education in 2001 by the president. The Cyber Education project launched since then by the government targets two sectors: secondary and tertiary education. Primary schools are not yet concerned. The project started a slowly, but is now gaining speed. The French government plays a great role in the implementation and is a major partner both financially and technically.

Major achievements include establishing multimedia resources centres (MRCs) in universities, professional and technological schools, and some government secondary schools; training monitors to manage MRCs; creating learning platforms; interconnecting the six state universities, and establishing training units in professional schools and universities, some of which are now operational.

However, such projects rely mainly on external funding, thus putting their sustainability into question. Moreover, government secondary schools have poor purchasing power, and no budget has been allotted to them to support ICT-related activities in schools. Most computers used in schools are donations. Private schools have not been involved in the project, thus creating a gap between the two educational systems. Most of the online learning resources accessible through the government secondary school learning platform CAM-EDUC are in French, thus constituting a handicap for the English-speaking community. Moreover, all those online resources are based in Europe, indicating the need for empowering the national stakeholders to enable them to produce online learning materials corresponding to the local environment.

Country Profile

The Republic of Cameroon (République du Cameroun) is situated in Central Africa. Table 1 provides some selected socio-economic indicators for the country.

Table 1: Socio-economic Indicators: Cameroon

Indicator	
Area	475,442 square kilometres
GDP (2005)	\$43.196 billion.
Official languages	French and English
English speaking	29%
French speaking	71%
Total population (thousands) (2005)	16,322

Population rate between 0-14 years	42%
Youths (under 25, of which 47% are between 5 and 24)	63%
Life expectancy (2005)	46
Urbanised population (2005)	53%
Average annual growth rate of urban population (1990-2005)	4.1%
Per capita gross national income (US dollars) GNI	\$1,010 (2005)
Population below \$1 a day, 1994-2004	17%

Sources: UNDP, Human Development Report 1998; First draft Cameroon NICI policy plan, 2001; UNICEF-at a glance-Cameroon Statistics, 2006, www.unicef.org/infobycountry/cameroon_statistics.html

The Education System

Cameroon has a public system of schools and universities, but there are also some schools and universities that are run by private investors. Others are run by religious organisations, mainly Christian churches. There are, however, a few Koranic schools. Both French and English are used in schools.

Table 2 provides a quantitative perspective of some selected system indicators.

Table 2: General Data on Education

Indicator	
Combined primary, secondary and tertiary enrolment ratio (% gross)*	62.3
Literacy rate	65% ²
Adult literacy rate (ages 15 and older) (2000-2004)	68%
Male adult literacy rate (2000-2004)	77%
Female adult literacy rate (2000-2004)	60%
Youth literacy rate (2000) ³	94.0
Net primary school enrolment/attendance (2000-2005)	79%
Male enrolment ratio, secondary school (% gross) (2000-2005)	51
Female school enrolment ratio, secondary school (%)	36

gross) (2000-2005)	
Central government expenditure allocated to education (1994-2004)	12%
Enrolment ratios: females as a percent of males, primary school (% gross) (2000-2005)	85%
Enrolment ratios: females as a percent of males, secondary school (% gross) (2000-2005)	71%

Sources: UNDP, Human Development Report 2206, Cameroon Fact Sheet; First draft Cameroon NICI policy plan, 2001; UNICEF-at a glance-Cameroon Statistics, 2006, www.unicef.org/infobycountry/cameroon_statistics.html

ICT Policies

Although the government officially introduced ICTs in schools in 2001, there is not yet any specific policy guiding their use in education in Cameroon.

Legal and regulatory framework

The project for introducing ICTs in schools was given an impetus by two presidential statements⁴ in 2001, which brought ICTs into the realm of education at all levels of schooling. These statements made it clear that imported computers and their accessories were to be duty free for schools. Moreover, the World Bank in its ICT task force policy has raised the concept of cyber education in the global school system⁵ to promote the development of computer technology, to improve the accessibility of learners to information technology, and to encourage digital inclusion in developing countries.

Consolidating the presidential statement and the World Bank initiative, MINEDUC authorised the Inspectorate General of Pedagogy in charge of teaching computer sciences at all levels to design and develop a project on cyber education in Cameroon. The project was implemented in April 2001.

In 2004, key strategies on using ICTs in education were highlighted in the first official draft⁶ of the Cameroon National Information and Communication Infrastructure (NICI) policy and plan prepared by the government with support from the United Nations Development Program (UNDP) and the United Nations Economic Commission for Africa (UNECA). In this document, the Cameroonian government recognises ICTs as a national priority along with education, health, forestry, and governance.

As indicated in the NICI plan document, the government has resolved to achieve the following:

- Modernising the educational system through the introduction of ICTs in schools
- Introducing ICT application training modules into national universities
- Preparing a sectoral ICT policy for the educational sector
- Training teachers in the use of ICTs
- Equipping all schools with ICT facilities
- Multiplying pedagogic resource centres for teachers and students
- Establishing distance training facilities
- Providing support for the production of ICT teaching materials (didacticals)

The plans are currently being implemented in the framework of two projects: one on cyber education, being prepared by the Ministry of National Education,⁷ and another that concerns higher education (universities and professional training schools).

In June 2005 the Prime Minister of Cameroon signed a decree⁸ creating and organising the national sub-committee for the integration of ICTs in education.

Policy implementation

The projects are implemented in collaboration with external partners and with support from the president of the country. The implementation phase started in 2001 and, since then, the government has signed a number of decrees to pave the way for the introduction of ICTs in education.

In 2002 a ministerial decision defining the condition for the creation of MRCs in government secondary schools was published. Then in 2003 a decree introducing ICTs in education was published by the Ministry of National Education (presently MINESEC, the Ministry of Secondary Education). The decree made it clear that ICTs would become an obligatory discipline beginning in September 2003.

The Ministry of Secondary Education was reorganised to include a new unit called CAAP, the National Pedagogy Support Unit (Cellule d'Appui à l'Action Pédagogique). CAAP is equipped with a distance training unit called Unité de Formation à Distance (UFAD) and is expected to ensure the training and capacity-building for teachers, which includes distance learning.

Factors influencing the implementation process include budget availability, weak linkages between stakeholders and project management, and co-ordination. There is no specific board or organ in charge of the co-ordination of the global cyber education project. Stakeholders seem to be evolving independently, thus resulting in some ignoring what others are doing.

Policy development

It was decided that an ICT policy would be prepared for the educational sector, but to date, this has not occurred. It is obvious that stakeholders are in need of adequate co-ordination and technical support to design and adopt a specific policy.

Infrastructure

Private schools introduced ICTs in their curricula in 1990, 1998, and 1999, even before the government decided to introduce them in 2001. Some of them are using high technology to connect to the Internet either through VSAT or special lines.⁹ However, the teaching is informal, and there is no record of the level of ICT penetration in those private schools. Actual figures are available only for government secondary schools.

According to the learning platform CAM-Educ¹⁰ established by CFA Stephenson,¹¹ the project on the use of ICTs for teaching and training targets two sectors: secondary schools and tertiary education.

In 2000, there were 920 government secondary schools, and as of February 2007, only 17 of them, or 2%, have been equipped with MRCs. Currently, about 60,000 students are connected to about 1,000 computers.

ICTs predominantly used

Private schools are generally equipped with computer rooms. But in the framework of the Cyber Education Project, MRCs are being established in government secondary schools and are equipped with a local area network (LAN), servers, word processing software, and peripherals such as printers, scanners, and CD-Rom. They also generally have video projectors, videotapes, televisions, and Internet connectivity, some of which is through VSAT.

Students and teachers are mainly trained to use computers for word and photo processing, accessing the Internet, consulting e-mails, and participating in e-forums. Some also use CD-Roms for playing games and watching or reading various multimedia documents. Through the learning platform, students and teachers have access to didacticals and other learning resources. Students participate in chats through Yahoo Messenger and discussion groups, the latter often being used for conferences, especially by pupils involved in SchoolNet forums.

Some private schools offer distance training in connection with foreign universities in Canada, the US, and France through the use of CD-Roms, the Internet, instant messaging software, e-mail, and video-conferencing.

Universities, technological and professional training schools are also connected to the Internet, and most of them have MRCs. They are also equipped with distance training facilities, of which two or three are already operational.

Service providers

ICTs in education are provided by the following:

- Government
- NGOs
- Private sector, including individuals and enterprises
- Development and international organisations, such as UNDP and UNESCO
- Parastatal companies and agencies such as the Cameroon Telecommunications Company (CAMTEL), the Agence Nationale des Technologies de l'Information et de la Communication (ANTIC), and the National Agency

Until very recently, CAMTEL was the only Internet service provider for government secondary schools and universities in Cameroon, but private investors such as the Mobile Telephone Network are now coming on board. NGOs like SchoolNet Cameroon have and are still contributing to the establishment of MRCs by training teachers and students in the use of ICTs and by organising e-forums.

Current ICT Initiatives and Projects

Cyber Education Project in Secondary Schools and Universities (Tertiary Education)

The Cyber Education Project aims to use ICTs to support training in secondary and technical schools and in higher education (universities).

For more information: www.cam-educ.com/

Cyber Education Project in Secondary Schools

MINEDUC¹² (now called MINESEC, the Ministry of Secondary Education), prepared this project, for which the following actions were planned for first phase (2001-2007):

- Establishing MRCs in secondary schools: at least 10 in each province and 100 for the whole country by 2007
- Developing human resources by training monitors, teachers, and administrative staff: at least 1,600 monitors trained by 2007
- Training of teachers and administrators on the pedagogy for ICT use and implementation
- Connecting all MRCs to the Internet
- Establishing learning platforms and resources for students and teachers
- Establishing a distance training unit for teachers based at Cellule d'Appui à l'Action Pédagogique (CAAP), the pedagogy support unit
- Planning for distant follow-up at the end of the project.

Major achievements of this project include:

- 17 MRCs established in government secondary schools by February 2007
- 54 monitors of MRCs trained in 2006; 90 more are currently being trained (February 2007)
- 60,000 students have access to computers compared to 10,000 in 2001
- Teachers, directors, and the administrative staff of government secondary schools are regularly trained by MRC monitors
- A teachers' distance training unit hosted by CAAP is currently being established
- ICT sensitisation campaigns and seminars have been organised
- The learning platform for secondary education, CAM-EDUC has been established

As well, according to MINESEC, 80% of government secondary schools have computer rooms (which should be differentiated from the MRCs presently installed in schools in the framework of the Cyber Education Project) and two-thirds have computer labs.

The COMETES Project

The COMETES Project is funded by the French and implemented by a project co-ordinator in collaboration with the Ministry of Higher Education (MINESUP), the Association des Universités Francophones (AUF), the Université Paris I Panthéon-Sorbonne (France), and CFA Stephenson (France). Its main objective is to develop professionalism through distance learning and training. It involves five state universities, three technology institutes, and two engineering schools.

The project aims to:

- Set up a common distance training platform in the various technological schools
- Train "tutors" (monitors) in handling distance training courses and serving as mediators between remote training centres and local students
- Create a common distance training platform

- Set up a university network in connection with UNESCO
- Develop a curriculum to teach ICTs in universities
- Train the trainers in hotel management and tourism
- Train professionals: BA (project managers), BTS (technicians)
- Create the UNESCO chair or professorship “Culture, tourism and sustainable development in Cameroon for research, training and strategy for sustainable development”

Major achievements of this project include:

- The first workshop to train distance training monitors was organised in July 2006; the second training session was held on 20 February 2007.
- A learning platform for universities has been established: Cameroon students and lecturers now have access to distance training resources via ACOLAD,¹³ which is run by the University of Strasbourg in France.
- MRCs have been established in all universities and technological schools.
- Distance training units are currently being established in universities and technological schools, some of which are already operational (e.g., IUT of Douala and the Faculty of Agriculture at the University of Dschang).
- Several seminars, conferences, and meetings have been organised to sensitise university officials on the usefulness of ICTs for tertiary education.
- All universities are interconnected through a university network called UNINET, and the establishment of a university platform is underway.

For more information: www.projetcometes.org; www.cometes.uninet.cm

The AUF Programme

The Association des Universités Francophone (AUF) has a distance training programme called Campus Numérique Francophone which covers French-speaking countries of Africa, including Cameroon. Students and teachers who register benefit from distance learning programmes, and partners are also trained to handle distance training courses.

For more information: <http://foad.refer.org>

The Commonwealth of Learning ICT and Literacy Programme

The Commonwealth of Learning (COL), in the framework of its ICT and delivery programme, supports its member countries to facilitate the use of ICTs in their educational programmes. For example, in 1998, a study sponsored by COL helped to evaluate the possibility of setting up a remote teaching programme in Cameroon.

For more information: www.col.org

The Computer and Internet Literacy in Schools and Community Centers (CILS.CC) Cameroon) project

In November 2003, MINEDUC signed an agreement with the International Children's Foundation (ICF), a local NGO, for a three-year project aimed at equipping secondary schools and community telecentres with computers. In the framework of the project, ICF was supposed to support the government initiative regarding the supply of computers to needy schools; install and network computers in partner schools and community centres; contribute to the training of students in their school's Web site design; maintain ICT equipment; mediate for the arrival of Internet ambassadors in each school and centre; mediate for the twinning of the local school or centre with an entity in the US; and train schoolteachers and community centre managers for the ICT focal point.

For more information: www.worldcomputerexchange.org/partner_plans/Cameroon-Min-Letter3.jpg

SchoolNet-Cameroon

SchoolNet-Cameroon (ISC) is a non-profit organisation that enables young people to use the Internet and other new technologies to engage in collaborative educational projects that both enhance learning and make a difference in the world. ISC is part of the International Education and Research Network and SchoolNet Africa (iEARN). ISC facilitates collaborative projects where communities of learners collectively develop on-line content related to school curriculum. It provides training to teachers in the integration of ICTs across the curriculum. Currently, it is seeking to sign an agreement with MINESEC and plans to distribute 200,000 computers to Cameroon schools.

SchoolNet also works in collaboration with ROCARE, the African Teachers Network (ATN), and the UNDP in the framework of the Tokyo International Conference for African Development-Information Technology Project.

Major achievements in this project include:

- May 2001: 388 refurbished computers donated by the World Computer Exchange Network (WCE), an American organisation, distributed to 34 schools with a combined student population of 17,000
- September 2002: 400 Pentium computers and 50 printers were shipped to SchoolNet for distribution
- 2003-2004: online ICT training session for 53 teachers in Cameroon
- 2004: two training sessions organised for 150 teachers and directors of private secondary schools in the use of ICTs (financially supported by SchoolNet Africa in the framework of the Global Teenager Project)
- Active participation of students to online collaborative and educational projects such ThinkQuest Africa,¹⁴ the African Teachers Network (ATN), and iEARN projects.
- Participation in the establishment of private multimedia resources centre in six of the 10 provinces of Cameroon (about 10 000 computers)¹⁵

- Participation in the study for the preparation of the Cameroon NICI Plan.
- 2007: 400 teachers expected to be training

For more information: www.learnonline.org and www.schoolnetAfrica.net

The ROCARE Project

ROCARE (Réseau Ouest et Centre-Africain de Recherche en Education) is a professional scientific, non-political, and non-profit association. Its members are made up of teachers and lecturers of West and Central Africa. ROCARE has national offices in Benin, Burkina Faso, Cameroun, Côte d'Ivoire, Gambia, Ghana, Guinea, Mali, Nigeria, Sénégal, Sierra Leone, and Togo. Its missions are to promote the African expertise in order to positively influence educational policies and practices. The ROCARE co-ordination unit is hosted by ISFRA (Institut Supérieur de Formation et de Recherche Appliquée) at Bamako, in Mali.

The ROCARE research programme includes the following subjects:

- Teaching quality and teacher management
- Impact of HIV/AIDS on education, and role and response of educational systems
- Education in countries in crisis or at war
- Utilisation of national languages in education
- Reform and decentralisation process; implication of the private sector in education
- Professional and scientific training and educational systems
- Contribution of ICTs to education in the African context

ROCARE works in partnership with the Ministries of Education of West and Central Africa, universities, teacher-training schools, research centre; the Association for Development and Education in Africa (ADEA); Educational Research Network for East and Southern Africa (ERNESA); Southern Africa Development Council (SADC); UNESCO; the International Development and Research Centre (IDRC), the Academy for Educational Development (AED)/SARA/USAID; Winrock International; AUF; the Centre Interuniversitaire Paul-Gerain-LaJoie de Développement International en Education (CIPGL), and the University of Québec, Montréal.

Major achievements in this project include:

- A regional study on the integration of ICTs in education in West and Central Africa was carried out. Various studies pertaining to the integration of ICTs in education were carried out in all member states. The results of those studies were validated during a workshop in December 2005.
- ROCARE, Cameroon branch, published a book on the integration of ICTs in education in Cameroon.¹⁶

All this work has been carried out with support from IDRC. Further ROCARE actions regarding the use of ICTs in education will continue to be implemented with financial support from IDRC.

For more information: www.rocare.org

The UNDP/TICAD Initiative

The TICAD project works to close the digital divide in Cameroon. Managed by the United Nations Development Programme (UNDP) , the TICAD-based initiatives have boosted the spread of ICTs in the country.

Since 2003, UNDP has provided support to the Cameroonian government for the formulation of a national ICT policy, strengthening of human and institutional ICT capacity, and enabling the private sector to maximise business opportunities offered by ICT for increased South-South co-operation. In this regard, the UNDP, along with UNECA, provided support to the Cameroonian government for the preparation of its NICI policy plan.

For more information: http://www.cm.undp.org/Gouvernance_Ticad.htm

The World Computer Network

The World Computer Network distributes computers to organisations in developing countries. A great number of computers have been distributed to Cameroonian schools through local NGOs.¹⁷ The cyber education project is implemented with financial support from the French and covers secondary schools, universities, and technological and professional training schools.

For more information: www.worldcomputerexchange.org/

The NEPAD e-School Demonstration Project

The Demonstration project is the first phase of the NEPAD e-Schools Initiative that aims to ensure that all schools on the continent are equipped with ICT facilities with teachers trained to use them. The Demonstration project is led by the e-Africa Commission in partnership with the Cameroon ministry of Education and is being implemented in Cameroon by two private sector consortia led by Microsoft and AMD. Implementation will begin in the last half of 2007.

For more information: m-jean-patrice@caramail.com

Internet-based Learning of African Languages

This project was developed by Professor Emmanuel Tonye, lecturer at ENSPT (École Nationale Supérieure Polytechnique), Professor Emmanuel Soundjock Soundjock, lecturer at the Faculty of letters at the University of Yaoundé, and Jacques Mbede from ENSPT in Yaoundé, Cameroon, in collaboration with the Ministry of Higher Education of Cameroon and the Centre Régional de Recherche et de Documentation sur les Traditions Orales et pour le Développement des Langues (Cerdotola).

The project aims to teach African languages, especially Cameroonian, through the Internet. The project was announced in 2004, but nothing has moved forward since then.

For more information: http://www.lets.africa-web.org/Publi/TONYE_6.pdf

PROTÉGÉ QV E-learning Initiatives

PROTEGE QV (which means promotion of technologies that guarantee environment and a better quality of life), is a Cameroonian NGO created in 1995. It aims to promote individual and collective initiatives to induce rural development, to protect the environment, and to improve the well-being of the community. Some of their projects have been financed by Global Knowledge Partnership, the World Bank, the French Cooperation in Cameroon, the United States Embassy, the Japan Embassy, and the Commonwealth.

Major achievements include the following:

- Open Nkam e-learning: business training for women by women using traditional ICTs and radio-based training for women entrepreneurs to support them in setting up small businesses
- The Upper Nkam Women Opened to the Challenges of Innovations in ICTS: a project that introduced 150 women to data processing on computers
- Small Business Training for Women in Cameroon 2005: An ongoing project using a standardised multimedia CD geared to reinforce the capacities of women involved in small businesses
- A radio programme entitled “Woman and The Pride of Her Being” at Radio Fotouni to sensitise and share knowledge with the targeted women through radio messages

For more information: www.protegeqv.org

Implementing ICT in Education: What Helps and What Hinders

There are a number of constraints still facing the implementation of ICTs in education in Cameroon.

Policy development

There is not yet any policy regulating the teaching and/or use of ICTs in school. Although some aspects are highlighted in the Cameroon NICI plan, the integration of ICTs in schools seems to be done in an informal basis. Partners have not yet succeeded in designing a national policy despite the various meetings organised for that purpose.

Institutional challenges

Despite the legislation establishing ANTIC, the ICT sector in Cameroon still seems chaotic. There are no fewer than eight governmental players claiming authorship or supervision of the national ICT policy. The results are power struggles and subsequent appeasements which has a negative impact on ICT-related educational projects and programmes. This also explains why stakeholders haven't

been able to reach a consensus on the preparation of a sectoral policy on ICTs in education and on distance learning.

Training and capacity-building

The great majority of teachers are computer illiterate, thus requiring a long training programme to ensure that they can use ICTs effectively. Currently, teachers don't have enough time to train themselves. Staff training started after the installation of MRCs, before even the first monitors were trained. It is clear that training needs to be accelerated.

Students' performance at school

According to ROCARE, the use of the Internet reduces students' performance in orthography and grammar, due to the vulgarisation of the argotic language used in chat rooms.

Linkages

Some actors seem to be left out. For example, private schools are not yet involved in the project on cyber education. Moreover, the African Institute of Computer Sciences-Cameroon Branch (IAI-Cameroun), which was ranked third among the top computer training centres in the world, has not been involved. The local expertise has been neglected. Additionally, there seems to be weak linkage between stakeholders, which makes collaboration difficult. Some are not even informed about what others are doing.

Learning platform

The content of the learning platform CAM-EDUC is French. Moreover, most on-line resources are in French also, especially those on literature and language. This constitutes a handicap for the English-speaking students. Either additional resources in English or a translation of the CAM-EDUC content is needed.

Management and co-ordination

There are many bureaucracy and leadership issues that slow the process of implementing ICTs in education. There is no co-ordinating unit and no secretariat to compile the reports and data on activities. A unit in charge of the teaching of ICTs in schools is needed. Such a unit should have an autonomous budget.

Sustainability

Nearly all the computers used in schools were donated, often second-hand, and they are now getting old, which means many of them are in need of repair.

Moreover, schools were not allotted any budget to purchase new computers or cover the cost of maintenance. Nearly all schools connected to the Internet are not paying their Internet bills to CAMTEL, and the connectivity hasn't been suspended only for fear of creating a disturbance that could jeopardise the government's efforts to introduce ICTs in education.

Presently, the project relies solely on external funding and is therefore not sustainable. The government needs to allot budgets to schools to support this initiative.

In private schools, students are asked to pay a fee to sustain the computer literacy programme and teachers pay for their training sessions.

Infrastructure

In some schools, MRCs are installed in inappropriate buildings, some of which have poor roofing systems. Appropriate halls need to be provided for computer literacy programmes in schools.

There is also a gap between rural and urban areas. Nearly all service providers are concentrated in urban areas. Many secondary schools are established in zones not yet reached by the electric power. To counter the situation, some have started teaching ICTs theoretically.

Building educational or learning platforms requires establishing adequate equipment to host and maintain educational Web sites and training staff to manage electronic data. This is a serious bottleneck for the various educational initiatives, since the educational institutions in general have weak ICT infrastructure. Some do not have Web sites, and the existing ones need to be well maintained to ensure that they are permanently functional.

Profit seeking

In some private schools, investors are looking for profit, and ICT courses are sometimes more theoretical than practical. Tuition in those private schools that are equipped with good ICT facilities and have a good ICT teaching programme is too high and not affordable to the average person.

Teaching materials

ICT teaching materials now used in government secondary schools do not correspond to the official programme designed by MINESEC. The ministry has still to write its own ICT teaching books and has temporarily adopted those developed by private schools.

Distance and e-learning

Despite the efforts made so far, the distance learning programme is still to be thoroughly popularised. The majority of people seem to be more comfortable with the traditional teaching methods. In Cameroon, only Yaoundé and Douala are very well connected. Prerequisites are not easy to meet at a personal level. The access to e-distance learning remains a challenge for Cameroonians.

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