The Need for Information and Communication Technology (ICT) in Libraries for Meeting the Millennium Development Goals (MDGs)

By

JANE NGOZI EKWUEME
Chief Librarian
Federal College of Education,
Kano.
.

Abstract

The awareness for Information and Communication Technology (ICT) is fast growing in different part of the world. It is the fastest technology, that can be used to meet the Millennium Development Goals (MDGs), because it's advent has changed the way we do things and has helped to transform many aspects of humanities in the world. It is in this realm, that this paper examined the need for ICTs in libraries to meet the MDGs. It started with an introduction, dealt with conceptual clarification of ICT, MDGs and library. Identified some of the types of ICT facilities available in library, and x-rayed the ways these facilities mentioned can be used to meet the MDGs. After which some constraints were identified, recommendations stipulated and finally conclusions were drawn.

The perceived failure in national development has sober reflections on what might have been wrong with our circumstances that impeded national development. This is done with a view of meeting the Millennium Development Goals (MDGs). No wonder it is often said, that education is the key that unlocks the door to development, it is education that defines, designs and redesigns the socio-political and economic life of a nation, and without adequate education of the citizenry, the development of a nation will be impaired. While Information and Communication Technology (ICT) in libraries are seen as an important instrument to achieve this. This is because of their important roles, in providing information on educational needs of the nation. To this therefore, the library is seen as a symbolic heart of an entire academic community.

This paper particularly looks into the importance of ICT in libraries to achieve the MDGs. It is obvious that libraries as an agency of information has been so design to

conserve knowledge, preserve the cultural heritage, support education, research and serve as a place for recreation. This is why Iya (2004) in her write up sees the library as a place where materials are collected, organized and preserved, which provides immediate access to the content of information sources so acquired to library users.

The need for ICT in libraries in meeting the MDGs cannot be over-emphasized, it was in September 2000 at the United Nations millennium summit that world leaders met and agreed to a set of time-bound and measurable goals and target for combating poverty, hunger, disease, illiteracy, environmental, degradation and discrimination against women. Those time-bound and measurable goals are known and called as MDGs by 2015 (United Nations Department of public information, 2002).

Conceptual Clarifications

Before any meaningful discourse can be embarked upon, on the subject matter, academic responsibility demands that certain important concepts and terms used in this paper, need to be briefly explained. Such concepts are ICT, MDGs and libraries.

What is ICT?

ICT means Information and Communication Technology. The concept has been variously defined because it is relatively a new phenomena which has brought the world, into a global village. ICT can be seen as Information and Communication Technologies. World Bank Document in Rodrizuez (2000), defines ICTs as "the set of activities which facilitates by electronic means the processing, transmission and display of information. It can also be seen as the science of information processing which deals with the use of computers and terminals, modems and interface, digital papers, satellites, microwaves and wireless application protocols etc to collect, process, store, retrieve and transmit or disseminate information to any part of the world. It can also be known as a science of collecting and processing information, facts, values, skills, thoughts, texts, graphics, pictures, cards sounds, news and all other forms of data in digital form of dissemination in both immediate and remote locations (Nwana, 2009).

In ordinary sense, it can be referred to technologies people use to share, distribute, gather information and to communicate through computers and computer networks. It also represents a cluster of associated technologies defined by their functional usage in information access and communication of which one embodiment is the internet. Hall and smith (1991), defined ICT as the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numeric information by a micro-electronic based combination of computing and telecommunications.

What are the Millennium Development Goals (MDGs)?

The Millennium Development Goals (MDGs) are the goals set out by the United Nations as strategies on how to help the developing countries on the achievement of education for all, eradication of poverty, improvement on health and nutrition, curbing environment degradation and promotion of gender equality etc by the year 2015.

The Millennium Development Goals (MDGs) are:

1) Eradication of extreme poverty and hunger.
2) Achievement of free universal primary education.
3) Reduction of child mortality rate.
4) Improvement of maternal health.
5) Combating HIV/AIDS, malaria and other killer diseases.
6) Promoting gender equality.
7) Ensuring environmental sustainability.
8) Establishing global partnership for development.

While NEEDS meaning National Economic Empowerment and Development Strategy was developed as Nigeria strategy for attaining the Millennium Development Goals (MDGs) (National Planning Commission, 2004).

What is a Library?

Libraries are regarded as agencies through which sources of information of accumulated knowledge and experiences are selected, acquired, organized preserved and disseminated to those who need them. Iya (2009) sees it as an essential tool in learning at any level. It is the intellectual center of the society containing records not only the intellectual, but also the cultural, economical and social inclination. Because of the high level of need for information, users are exposed to varieties of information.

The library provide much wider range of information services both from local and central government, national and international levels.

Libraries are information and communication centers, this is because they communicate and provide information to users, through the wide range of both printed and non-printed materials they disseminate to users. The libraries help to beef the level of education of the citizens. Iya (2009) in her work observed that, most programmes in a nation is aimed at improving the lives of people, and this will depend on the level of education of the citizenry.

Libraries as an agency of information has been so designed to conserve knowledge: preserve the cultural heritage; support education; research and serve as a place for recreation. This is why Ekwueme & Iya (2008) in their write up, sees the library as a place where materials are collected, organized, preserved and provided immediate access to the content of the information source. So acquired to library users, it is then important that users should be educated on how this information can easily be located in the library. Besides, the processes of sighting, locating, retrieving processing and preserving, information are retrieving processing and preserving, information are undergoing changes because of the dynamic nature and globalization of the world.

Types of ICT Facilities that can be found in the Libraries

Information and Communication Technology (ICT) provided an opportunity to implement electronic networks and achieve the provision of access to remote computerized information services products much easier than before. It is quite obvious

that library are taking advantage of the facilities available on the internet and integrate them, into their daily operations.

Hassan (2009) outlined the following types of ICT found in libraries.

1. Computer
2. Internet
3. Library world wide wave
4. Online catalogues and electronic database
5. E-mail communication
6. Digital library

Contributions of Information and Communication Technology (ICT) facilities in the libraries for Achievement of the Millennium Development Goals (MDGs)

Computer

Goal I: Eradicate extreme poverty and hunger.

The role of computer to this goal

Computer is an electronic or electro-mechanic devise that is capable of accepting data or information, holding a list of instruction in its memory, processing the information given by following those instructions to carry out a task without human reservation at the end.

It is quite obvious that ICT generally has been able to reduce the level of poverty to certain degree due to its employment creation among the citizenry. With computer in the library, users can have access to programme/packages in the computer like Microsoft word or works, word perfect, Adobe page maker etc, which gives them the awareness of the importance of the computer to create employment.

However, it can create job awareness for the graduate of computer science or engineering, even in maintenance and repairs of computer system and mobile phones.

Thus, this aforementioned ICT is already helping in eradicating poverty and hunger in the country as well as upgrading users of libraries on ways the computer systems can help create employment for the citizens, so that the proportion of those who suffer from hunger can be drastically reduced.

Internet Facilities

Goal 2: Achieve Universal Primary Education

Target: Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

The role of internet facilities to this goal

Internet are high speed fiber optic network of networks that use TCP/IP protocols to interconnect computer networks around the world, enabling users to communicate via e-mail, transfer data and programme files, find information on the world wide web, and access remote computer system such as online catalogues and electronic data base easily and effortlessly, using an innovation techniques called packet switching (Hassan, 2009).

The internet serves in the library as a reference tool and one big virtual library to supplement information resources found in libraries.

The role internet plays in education cannot be overemphasized it can be used to get information and realize certain objectives in developing our educational system. No wonder, Emerole et al., (2007) in their work opined that, libraries play significant role in the provision of functional education and successful implementation of any viable programme.

However, no excellent educational programme can be developed without the support of a well stocked and organized school library. In the same vein, UNESCO (2006) summarized five key ways in which the internet can support the literacy level of a country: namely;

- ✓ Enhancing learning
- ✓ Access to literacy education
- ✓ Creating local content
- ✓ Proccesional development
- ✓ Cultivating literacy conducive for learning.
  Aside from the above, ICT through the internet, the following can be achieved.
- ✓ Distance training of teachers e.g. NTI, Open University, etc.
- ✓ Improve the efficiency and effectiveness of education ministries.
- ✓ Skill development
- ✓ Teachers empowerment
- ✓ Broaden availability of quality educational materials/resources
- ✓ Provision of vocational training outside the school.

To achieve the UPE through the ICT, there is need to engage in so many educative programmes on radio, television, computer instruction, internet etc.

Infact, the information from the internet will help to equip both the teachers and the learners on how to achieve the goals 2 mentioned above..

Goal 3: Promote gender equality and empower women
Target: Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education not later than 2015.

Through the internet in the library the more knowledge on how educational and literacy programmes can be achieved specifically on girl-child education and women.

When women are empowered through education they will be job creation without any disparity.

Goal 4: Online Catalogs and electronic database
Target: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.

The online catalog and electronic database, came up as a away of replacing the traditional manual card catalogues. With the computer terminals, librarians and their user, have access not only to information on their local library collections but also to their collections located in other remote libraries and database. Libraries are also

provided with facilities through which access to online public access catalogues (OPACS), electronic data bases and cooperative resources sharing can be done.

It was reported by NYSC (2006), that the infant mortality rate (per 1,000 live births) in Nigeria was 107 and 101 in the year 2001 and 2004 respectively. This type of document can be gotten through the online date base. The online catalogue, database and the internet can be used in monitoring and sharing information on diseases and other vital issues in health related problems.

The ICT 4 Development (2004) outlined the following as advantages of ICT in library to health.

- ✓ It increases access to health information;
- ✓ Helps monitor and diagnose of patients' health problems;
- ✓ Enhances delivery of basic and in-service trainings for health workers;
- ✓ Increases access to rural care givers to specialist support and remote diagnosis of a particular ailment;
- ✓ Facilitates knowledge exchange and networking among policy makers;
- ✓ Practitioners and advocacy group:

Library World Wide Web
Goal 5: Improve Maternal Health
Target 6: Reduce by three quarters, between 1990 and 2015, the maternal mortality rate

The introduction of World Wide Web (www) facilities on the internet opened the way for organizations and individuals to start publishing information on the internet. Business institutions, academic and research institutions are using the 'www' to advertise their products. Libraries also have their own website and home page.

The library is the greatest reservoir of knowledge, which can be used for the achievement of MDGs. As people visit the libraries online, through their website, knowledge on how to improve maternal health and family planning caring and increase access to reproductive health information, can be accessed.

Goal 6: Combat HIV/AIDS, Malaria and other disease
Target: Have halted by 2015 and begun to reverse the spread of HIV/AIDS, the incidence of malaria and other diseases

The ICT in libraries will help to increase information sharing on deadly disease. Jimoh and Salawa (2009) says that, people will have access to reproductive health information, including information and awareness on prevention, management and coping with people with this deadly diseases. People will get up-to-date information on basic and in-service training on the deadly and dangerous diseases.

E-mail Communication
Goal 7: Ensure environmental sustainability
Target: Integrate the principles of sustainable development into country policies and programme

This is the services where messages in electronic form are transmitted by various means between the sending and receiving computers in libraries. The e-mail is used for both official and personal communication. It is being used for the transmission of interlibrary loan request, making of inquiries. Erdmann et al., (2004) stipulated how the e-mail communication can be useful in the area of environmental sustainability and they are:

Increasing access and awareness of sustainable development strategies in areas such as agriculture, sanitation and water management, mining, etc.

It facilitates knowledge exchange and networking among policy makers, practitioners and advocacy group.

Digital Library
Goal 8:   Developing a Global Partnership for Development
Target: Develop further an open, ruled-based predictable, non-discriminatory trading and financial system, including a commitment to good governance, development and poverty reduction, both nationally and internationally.

The digital library is a library where significant proportion of the resources are available in machine readable format. The ICT paved the way for the establishment of global digital library which is made up of an interconnection of libraries computer server containing books and journals in electronic forms along with index to help users find other material (Gore, 1994). This will enable the users and librarians to have access to digital information, on ways a global partnership for development can be developed. Other ways the ICT through the digital library can be used to meet the MDGs are:

- ✓ It promotes telecenters
- ✓ By improving youth learning skills on ICT and using ICT to meet the challenges of the knowledge-based global economy of the 21st century.
- ✓ By promoting digital literacy, though e-learning e.g. the Open University of Nigeria.

Constraints facing the Use of ICT in Libraries
The need for the use of ICTs in the library cannot be over-emphasized. There are lots of challenges hindering it's effective utilization in the library. Among them are:

i.   **Inadequate Funding**
Funding is the bedrock of any project or programme. It is obvious that most libraries are funded by parent institutions, but the funding is not adequate. The mega amount voted for library material are not enough to provide good internet connection/services.

ii.   **Inadequate Telecommunication Facilities**
The above constraints leads to the provision of inadequate telecommunication facilities, the reasons can also be attributed to the slow development of

telecommunication infrastructure. Like Hassan (2009), rightly observed, that this slow pace is also affecting the pace of electronic connectivity in libraries in Nigeria.

Aside from the pace of development, the high cost of these infrastructures is also a factor, which makes it difficult for most libraries to stay connected. More so, the telecommunication tariff for internet connections is high, and most libraries cannot afford to be connected to the internet.

iii.   **Lack of Skilled Human Resources**
The ICT and electronic networking needs skilled manpower to operate it, but most libraries are lacking this skilled manpower.

iv.   **Poor power Supply**
Most libraries lack power supply, and for this technologies to work, they need an uninterrupted power supply.

Conclusion

The Millennium Development Goals (MDGs) are goals that came up as result of a general global problem faced by most developing countries, and to become part of those to meet up with the goals, the Information and Communication Technology must be embraced because it will help create awareness, give access to the knowledge and information needed to meet the goals. No wonder the saying that "information is power" and if you are not informed, you will be deformed".

Recommendations
1. The need for government and parent institutions of the libraries to provide enough fund, so that they will be able to purchase the required Information and Communication Technologies for the library.
2. Government to organize ICT building capacity training for libraries and information scientists, to enable them have updated information and training on skills required for operating the ICTs.
3. All school in Nigeria should have ICT infrastructures/facilities, and with the trained teachers, the pupils/students can be trained.
4. Creating awareness programmes on the importance of using the ICTs in the libraries where they are available to access information on the MDGs.
5. Provision of fund by the parent institution to buy generators for the libraries, which can be used incase of an interrupted power supply by PHCN (Power Holdings Company of Nigeria).

References

Ekwueme, N.J. & Iya, J.A. (2008). Refocusing library education as a factor in national development in Nigeria. *NAFAK*, 16 (1): 149-153.

Emerole, N., Ogugua, J.C & Egwin, F.O. (2007). Provision of library services for distance education in Nigeria: The Challenges Ahead. *Brono Library, Archival and Information Science Journal,* 6 (1): 8-15.

Erdmann, L., Hitty, D. & Goodman, J. (2004). *The future impact of ICTs on environmental sustainability.* Spain: European Communities.

Gore, A. (1994). Forging the new Athenian age of democracy. World telecommunication conference Buenos Aires; Global information and libraries in sub-hasara Africa". *Library Management* 21 (4), 20.

Hall, J. & Smith, J. (1991). *Information technology for all*. England: McGraw-Hill

Hassan, S.D. (2009). The role of ICT in academic libraries and the achievement of the MDGs. *The Voice of Teachers* 1 (2), 141-144.

ICT 4 Development (2004). The use of ICT to achieve MDGs. Retrieved February 2010, From ICT Development Website: http://www.cit4development.org/resource/book.htm

Iya, J.A. (2004). Role of library in national development. *Education Services* 1 (4): 114.

Iya, J.A. (2009). The role of libraries in achieving The MDGs. *The Voice of Teachers*, 1 (2): 95-100.

Jimoh, A.A. & Salawu, S.A. (2009). The role of information and communication technology (ICT) in achievement of MDGs. *The Voice of Teachers*, 1 (2), 149-154.

National Planning Commission (2007). *National economic empowerment and development strategy (NEEDS)*. Abuja: NPC Press.

National Youth Service Corps (NYSC) (2006). *Debate to action: Development knowledge facilitator course materials.* Abuja: NYSC.

Nwana, S. (2009). Needed ICT and educational technology resources in non-formal education for meeting the MDGs. *NAFAK* 19 (2), 75-80.

Rodrignez, F. & Wilson, E. (2000). Are poor countries losing the information revolution? *MFO development working paper*, Washington DC: World Bank.

United Nations Department of Public Information 2002. P.5.

United Nations Education Scientific and Cultural Organization (UNESCO) (2006) *Using ICT to Develop Literacy.* Bankgkok – Thailand: UNESCO.

The goal of this paper is to discover the correlations among SDGs and information and communications technologies (ICTs). This paper discusses the roles and opportunities that ICTs play in pursuing the SDGs. Therefore, there are essential and urgent needs to raise the awareness and call for attentions on how to innovate and energize ICTs in order to best assist all nations to achieve the SDGs by 2030. I. INTRODUCTION. ICTs for sustainable development by connecting the WSIS Action Lines to SDGs. An initiative to teach children in over 100 countries about the SDGs. For example, the Millennium Declaration, a UN conference organized in 2000, formulated and reached about 60 SDGs, and the eight famous millennium development goals, which had been adopted globally.