10-25-2020

Information and Communication Technology (ICT) in Nigerian Libraries for Sustainable Development Goals (SDG).

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INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN NIGERIAN LIBRARIES FOR SUSTAINABLE DEVELOPMENT GOALS (SDG).

Abstract

The main purpose of this paper is to explore the crucial roles of Information and Communication Technology (ICT) in provision of library services, for sustainable development goals in Nigeria. The rationale behind the SDGs, understanding the content and contexts of the SDGs, analysis of the library-related SDGs, the place of the libraries in actualization of the SDGs were well articulated. Despite the availability of wide opportunities offered by the advent of ICT, it has been observed that application of ICT to library services in Nigeria seems inadequate probably due to variety of challenges. With the methodology of simple literature review, the paper made effort to review related literature on ICT resources and ICT based services in libraries, benefits of ICT and the role of library in sustainable development of Nigeria. The paper further identified the challenges of ICT application in libraries. It was recommended among others that, there should be improvement in the capacity and level of ICT adoption by libraries.

Keywords: Information and Communication Technology (ICT), Libraries, Sustainable Development Goals.

INTRODUCTION

The United Nations launched the seventeen sustainable development goals in 2015 to create a common set of development goals for all communities in every country with a deadline for attainment of 2030 vision. These goals are focused on some special areas of the country economy. However, the actualization of the SDGs will be feasible, provided all the essential infrastructures, including information agencies, are given the desired attention to contribute their quota in that direction (Onah, Urom, & Unagha, 2015). In the era of Millennium Development Goals, the roles of the libraries and information centre were not highly pronounced. However, looking at our society today, the library and information centre is an important institution that serves as a channel to knowledge, provides information literacy skills, long life learning, research and learning development of an individual. In the opinion of Okoro, Akidi & Arua (2014), libraries are tools for the development of society. Thus, in order to enable the people to live responsibly, library must be able to meet their needs at the appropriate time. Lozano (2002)

agreed that the general library roles are to provide information to its community, therefore acquisition of knowledge dispels ignorance, as such the general objective of the library is to serve as a centre for information where people acquire the needed knowledge to reduce their ignorance and level of uncertainty about their environment. The library can effectively achieve this feat through the application of Information and Communication Technology (ICT).

Information Communication Technology (ICT) has remained a catalyst in the issue of national advancement and development. Information as power is effectively an infinite resource and a vital tool needed for the development of all sectors in any nation. It is therefore, imperative that ICT application in libraries would go a long way in satisfying the information need of the citizens. It is worthy of note, that the emergence of ICT has impacted greatly on the quality of information provided through libraries. It also enables proper and adequate provision of library services to library users from all disciplines. In this 21st century, the drastic role of ICT in library operations cannot be over emphasized. Many library routines and operations that were initially performed manually are now being converted to computerized operations which means, applications of ICT techniques to providing better and faster services to the end users. A nation without functional libraries and information centres may lack access to information that would enable her sustainable development. In this era of globalization, in which the world is connected, information gains its power through permanent storage and wide distribution, which could only be achieved through ICT. According to Janakiraman and Subramaniah (2015), the world now experience a digital scenario in which ICT has changed the possibilities of the library job promotions and has brought changes to expected library performances.

CONCEPT OF SUSTAINABLE DEVELOPMENT GOALS

Sustainable development goals (SDG) were chosen from a global consultation in 2015. The 17 sustainable development goals were built on the success of the Millenium Development Goals (MDG) of the years 2000-2015. Recent studies described sustainable development as the process of transformation of a country's economic, social, political, educational, religious and cultural value towards improvement in human dignity and the general well-being of its citizens (Obi. & Obiadazie 2014; Adebayo, Ahmed, & Adeniran, 2018; Abata-Ebire, Adebowale, & Ojokuku, 2018; Ogbole, & Ngara, 2017). Sustainable Development Goals (SDGs) is a global decision aimed at making the world a better place to live. Sustainable development has been defined in many ways, but the most frequently used description is that given by Brundtland Commission (1987), as "a development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." In other words, it means a better quality of life for everyone, now and for generations to come. Sustainable development is a programme that is developed to meets the needs of the present generation and also those of the future generation. According to Nicholas & Perpetual (2015), Sustainable development is the overall change and improvement in any given society as related to individual progress. Sustainable development covers a wide range of interrelated issues in the areas of environmental, economic, social, and political, all within the limits of the world's natural resources to ensure that all people enjoy peace and prosperity by the year 2030. Furthermore, sustainable development is the development that provides a better quality of life for both the present and future generations (Shah, 2012).

The 17 SDG goals include:

Goal 1: No Poverty

Goal 2: Zero Hunger;

Goal 3: Good Health & Well - being;

Goal 4: Quality Education;

Goal 5: Gender Equality;

Goal 6: Clean Water & Sanitation;

Goal 7: Affordable & Clean Energy;

Goal 8: Decent Work & Economic Growth;

Goal 9: Industry, Innovation & Infrastructure;

Goal 10: Reduce in - equality

Goal 11: Sustainable Cities & Communities;

Goal 12: Responsible Consumption

Goal 13: Protect the Planet

Goal 14: Life below water

Goal 15: Life on Land

Goal 16: Peace and Justice

Goal 17: Partnership for the goal

Sustainable Development Goals Image.

From Adebayo, Ahmed, & Adeniran, (2018).

United Nations Millennium Declaration identifies environmental protection, social and economic developments as the inseparable components of human progress. Specifically, Ahuja (2012) stresses that economic development is expressed in the following parameters:

- Increase in improvement in human capital

- Increase in food supply and agricultural output

- Increase in income

Social development is reached when peace and unity reign while environmental protection entails maintaining safer and healthier environment. The well-being of the three areas intertwines to produce balance and sustainable development. For example, a healthy prosperous nation relies on a healthy environment to provide food resources, safer drinking water and clears air for the people (Shah, 2012). Achieving sustainable development depends on the initiative, resourcefulness, creativity and discipline of human beings who are the managers of developmental programmes. Invariably, sustainable development will make the world a better

place to dwell for the present and future generations. The ability of a nation to meet the demands of sustainable development depends on the human and physical capitals which are directly and indirectly products of information and communication technology.

CONCEPT OF ICT

Information and Communication Technology (ICT) is the convergence between the computer and communication technologies, ICTs are technologies used to communicate and to create, manage and distribute information. Such technologies include computers, the internet, telephone, television, radio and audiovisual equipment. However, this definition has been expanded to include any device and application used to access, manage, integrate, evaluate, create and communicate information and knowledge (Agim, Iroeze, Osuji, & Obasi-Haco, 2018). Thus, contemporary ICT devices include but not limited to radio, television, cellular phones, computer hardware and software, network hardware and software, satellite systems, peripherals, connections to the internet, digital technologies and others. Also considered in the ICT are the services and applications used for communication and information processing functions associated with these devices. ICT changes the way we live learn and work. As a result of these changes, technology tools, and creative application of technology, have the capacity to increase the quality of people's lives by improving the effectiveness of teaching and learning, the productivity of industry and government and the well-being of nations. ICT was introduced to perform library functions and provide innovative user services.

Considering the meaning of ICT, Oliver and Tower (2000) view ICT literacy as the set of skills and understandings required by people to enable meaningful use of ICT appropriate to their needs. In their settings, the ICT literacy of a student is a relative measure of the student's

capacity to make appropriate use of ICT for educational and learning purposes. Likewise, the ICT literacy for librarians is relative measures of the librarians' capacity to make appropriate use of ICT for information acquisition, organization, retrieval and dissemination as information professionals. This involves the level of skills needed by librarians to use computer for their work and to independently function in a web-based, on-line learning environment. They also pointed out that skills/competencies still remain the underpinning elements of computer and ICT literacy and measures the extent and scope of ICT applications and uptake among different computer users. Olusesan and Emmanuel, (2016) identified the four distinct areas of skills and expertise as the ability to independently operate personal computer system, an ability to use software for preparing and presenting work, an ability to use the internet and its various features as communication device, and an ability to access and use information from world wide web (www) were seen as attributes of an ICT literate individual. An ICT literacy skill generally is the familiarity with mobile phones, computers, the internet and other ICTs; the ability to use ICT features and applications and the ability to use ICTs to work individually or in teams. In fact, it involves the awareness of technologies and application of their relevance, use of technology for information and knowledge encompassing skills or abilities to access, retrieve, store, manage, integrate, evaluate, create and communicate information and knowledge and participate in networks via the internet and understanding that ICT acquisition and use impacts on personal and social development. Therefore, ICT literacy has a positive impact on economic life of individuals and nations (Unagha, 2011).

ICT has been identified as the tool with which to attain sustainable development. This is true because ICT according to Agi (2013) is a science that propagates information as well as scientific knowledge and procedures through discovery process. Effective ICT literacy will

produce individuals that could manipulate the environment in such a way that sustainable development could be attained. The achievement of sustainable development is facilitated by the application of ICT in Library services.

CONCEPT OF THE LIBRARY

The key role of library is to provide structured access to information with the increasing reliance on ICT. Libraries are playing a significant role in implementing and moderating a country's information society agenda (Umana 2018). Library is the focal point of learning and research activities in academic institutions due to its information acquisition, organization, storage, retrieval and dissemination functions to the community. The achievement of the goals of the university for instance, is paramount to the establishment of the university library. Librarians are at the threshold of these activities and are now faced with the emergence of information technology in the scene of information exchange. This brought new tools and techniques of acquiring and handling information. To effectively serve the academic community in the ICT environment, the librarians need to move along with the new development. Librarians are those who have the care of library and its content; the work includes selection of stock, its arrangement and exploitation in the widest sense, and the provision of a range of services in the best interest of all groups of users (Ezekwe, & Muokebe, 2012). They are also involved in the coordination of activities, setting of priorities, evaluation and other managerial tasks and their involvement in the community they serve facilitate sustainable development.

In the present age, besides using the new tool to fulfill the traditional roles of the library, librarians, as the managers of libraries evolved some new practices in the profession (Anene, Nwankwo, Olorunfemi, Okonkwo, 2020). Some of the new developments include digital

environment for information acquisition, processing and dissemination. All these practices anchor on ICT. Information is now mostly in electronic format. Library services are also affected by the new format. Nicholas, and Perpetual, (2015), described digital library as an information service in which all the information resources are available in computer processable form. This requires new managerial skills for the administration of the new environment which is ICT compliant. Therefore, the new era librarians that can operate in the digital or ICT environment are indispensible (Onah, Urom, & Amanze-Unagha, 2015). Librarians are compelled to be content creators of information, web page planners and designers and internet navigators. As a result of the digital technology inroad into the profession, such nomenclatures as internet librarians, digital librarians, cyberians or weberians were attributed to the emerging librarians. These are librarians that have acquired the new literacy skills in the manipulation of the ICT tools for information service delivery to the library clientele. Libraries with ICT literate librarians, furnish their users with information that foster sustainable development where the users are ICT friendly.

ICT RESOURCES IN LIBRARIES FOR SUSTAINABLE DEVELOPMENT
ICT as aggregate of computers, telecommunication gadgets, multi-dimensional resources and other related technologies are applied and utilized in the total process of information management and dissemination. The various components of ICT have provided a facelift for the support of varying professional services. Nwabueze and Ozioko, (2011); Umana (2018) asserted thet ICT resources are imperative in actualizing Nigeria's sustainable development goal. Likewise, the same ICT resources are paramount to effective delivery of library services. The ICT resources according to Adebayo, Ahmed, & Adeniran, (2018) include:

1) **Computers**: These are essential management tools which can be used to handle different operations more efficiently. Computers can be used for various activities such as information generation, processing, storage, analyzing and information dissemination for sustainable development. The use of computers in the library is noted with great assets such as speedy information transmission, cost effectiveness and optimal utilization of available resources. Other computer accessories include CDs, Flash drive and so on. The computers are used to perform various library operations and routine such as ordering/acquisition, circulation etc.

2) **The Internet:** This ICT resource is a means to speedy flow of information. It is a network of computers, communicating with others, often via telephone line. The internet provides a worldwide platform for information sharing among individuals, institutions and organizations. The use of internet enables the provision of current and useful information to enhance productivity and good governance.

3) **Social networking:** Social networking is the use of Internet-based social media sites to stay connected with friends, family, colleagues, customers, or clients. Social networking can have a social purpose, a business purpose, or both, through sites such as Facebook, Twitter, LinkedIn, and Instagram, among others

4) **World Wide Web (WWW):** This is also an internet- based resource. Websites help individuals, organizations or institutions find products or information and transacts business. Relevant information is made available to members of the public through the websites of many organizations or institutions. Being on the web, places any nation or organization on the right

cause of speedy and sustainable development in line with emergence of changes in technology, economic and political area.

5) **Webinar meetings:** A webinar is an online meeting or presentation held via the Internet in real-time. To put it simply, it is an **online event**, which connects individuals with viewers across the world. The main feature of live webinars is interactivity, or the ability to discuss, send and receive information in real-time.

6) **Printing Technology:** A printer is a device that converts computer output into printed images. There are different kinds of printers used in library. They include Laser printer, Inkjet Dot-matrix printer and so on.

7) Online Public Access Catalogue (OPAC): It is the computer form of library catalogue to access information materials in the library. It is an online database of materials held by a library or group of libraries. It is a computerized library catalogue made available to the public. Most OPACs are accessible over the internet to users all over the world (Mishra and Mishra, 2014).

8) Video Conferencing: This enables people at different locations to hold conferences by data communication network. It is convenient and less expensive for conducting a conference between two or more participants situated at different remote location (Mishra and Mishra, 2014).

9) Telephone: A *telephone* is a telecommunications device that permits two or more users to conduct a conversation when they are too far apart to be heard directly. Librarians can deliver some library services using telephone or cell phone.

10) Electronic Mail (E-mail): This is the most widely used resource of the internet. It is used for sending and receiving of messages otherwise known as mails. The messages are communicated through electronic device. E-mail enables faster and cheaper organizational communication.

ICT BASED SERVICES IN NIGERIAN LIBRARIES FOR SUSTAINABLE DEVELOPMENT GOALS

The advent of ICT is indeed a boost to the library services as it now assists many librarians to use their ICT potentials to reach out to library users. Chisenga (2004) identified some of the ICT-based services that are provided by libraries as follows:

- **Provision of web access to OPAC:** Libraries are providing access to web-based Online Public Access Catalogue (OPAC) interfaces. The OPAC makes it easier for users to access and use information resources. OPAC is the computer form of library catalogue, to access materials in the library (Afolabi and Abidoye, n.d.)

- **Electronic Document Delivery:** Libraries implement ICT-based interlibrary lending system, through the use of electronic networks for documents delivery. In essence, the Document Delivery Service (DDS) enables a library to use copies of research papers or other research document, from other libraries. These documents could be journal articles

or other documents in digital format. They are mainly in portable document format (PDF) and they delivered to library users' desktops.

- **Online Instruction/User Education:** There is implementation of online based bibliographic or library user programmes such as online tutorials on searching online resources and virtual tours of library collections. Libraries can also use internet or CD-ROMs to educate users.

- **Online Readers Advisory Services:** Libraries now implement web-based versions of reader's advisory services to include informing users about new acquisitions, provide reviews and recommendations and so on in using the web.

- **Reprographic Technology:** These are widely used in libraries globally. Reprographic machines are provided in libraries to ease photocopying of documents on demand.

- **Library Retrieval System:** This involves the use of compact disc read only memory (CDROM), a technological mechanism for acquisition of specialized CD-ROM databases in various discipline such as law, sciences, medicine technology, agriculture, humanities and so on.

- **Indexing and Abstracting Services:** It is a service that is carried out to provide summaries of documents and also to assign descriptors for referencing documents.

- **Institutional Repositories:** It is an online archive for collection, preservation and dissemination of digital copies of the intellectual output of academic or research of institution, this could be journal articles as well as digital versions of theses and dissertations. This service is mostly provided in academic or research libraries.

- **Document Scanning Services:** Scanner is important equipment in modernization of library. It is useful for scanning text, image and content page of books and providing great help for establishing digital and virtual library.

- **Networked Information Resources:** Libraries now provide users with access to networked information such as database, electronic scholarly journals and other publications from various publishers. The services rendered in a library differ from one library to another, depending on the type of library, the type of patrons and the parent body's objectives.

- Other library services as highlighted by Idowu (2011) include: Reference Service, Current Awareness Services (CAS), Selective Dissemination of Information (SDI), Reprographic Service, Exhibition and Display, Technical Services, Serials Control, Computerized Interactive Search, Borrowing, Renewing and Reserving. (Adebayo, Ahmed, & Adeniran, 2018).

ICT IN LIBRARIES FOR SUSTAINABLE DEVELOPMENT

S/	GOAL	STATEMENT	ICT IN LIBRARIES

N			
1.	**Poverty**	By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including Microfinance.	ICT is the key to poverty eradication and library and information centre serve as the hub through which information is made available. Libraries provide meaningful information on poverty alleviation and eradication both in electronic and traditional format. Also they must ensure that both the rich and the poor should have equal rights to information materials concerning economic resources, as well as property, inheritance, including microfinance. Libraries foster digital literacy and access to technology among every nation's poorest residents living in remote rural areas.
2.	Zero Hunger	Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.	Libraries organize programmes that help farmers learn how to use the ICT in libraries to access financial forms and submit them to the government, for subsidies, saving time and money. Thus there is anticipated increase in food production resulting to zero poverty by the year 2030. Libraies use ICT to create awareness and provide enabling environment where information on sustainable agricultural practices accessed and used by farmers.
3.	Good Health & Well-being	By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.	Library and information centres provide information on child mortality and improved maternal health, effect of bad dietary, causes of diseases, diseases prevention, family planning, sexual and reproductive health-care etc. This is achieved by the library using ICT facilities.
4.	Quality Education	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.	Library and information centre should provide information literacy skills, digital literacy skills and life-long learning for the public by educating and enlightening youth and adults who have relevant skills, including technical and vocational skills, for employment,

			decent jobs and entrepreneurship. Libraries should organize programs that improve children's literacy so as to catch them young. Libraries should provide education and training for both the young and old to make sure that they have access to information in an affordable way.
5.	Gender Equality	Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.	Library and information centres should encourage gender equality and when selecting information resources, the use of enabling technology should be adopted by libraries, in particular information and communications technology, to promote the empowerment of women. There should be programmes that increase the economic well-being of women through technology skills.
6.	Clean Water & Sanitation	Support and strengthen the participation of local communities in improving water and sanitation management.	Library and information centres should facilitate access to hygiene-related information through raising awareness, campaigns, and symposiums. Also, they should support and strengthen the participation of local communities in improving water and sanitation management.
7.	Clean Energy	By 2030, ensure universal access to affordable, reliable and modern energy services.	Library and information centres should provide public access to ICT, study rooms, and classes on using mobile phones and ensure universal access to affordable, reliable and modern energy services through library campaigns. Many public and community libraries around the world are the only place where people can get reliable access to light and electricity to read, study and apply for a job.
8.	Decent Work & Economic Growth	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value. By 2020, substantially	It is also their responsibility to make sure that people find jobs through their public library and this will allow the Public access to ICT and skills enables people to apply for jobs, as the application process for most, if not all jobs has moved online.

		reduce the proportion of youth not in employment, education or training	
9.	Industry, Innovation & Infrastructure	Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.	Library and information centres should provide access to information technology and endeavor to provide affordable access to Internet facilities to less developed areas. This can be achieved by engaging in lively debates, quizzes and spelling competitions through smart phone, laptop and video Conferencing project.
10.	Reduce inequality Goal	Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.	Library and information centres should encourage safe and dependable mobility of citizens through a reliable migration policy that is well planned and managed. Library Services including information and support about legal, childcare, housing, health, education; providing support with applications for citizenship, residence, subsidized housing, government Benefits. Public libraries should in Nigeria should provide resources, English language training, local language trainings, events and information about daily life to help new immigrants settle in.
11.	Sustainable Cities & Communities	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.	The National Library and other libraries should digitize and preserve heritage from loss, and make it accessible for everyone. Libraries should through ICT, provide and protect the nation's cultural and natural heritage for posterity. It is the responsibility of the public library to develop and implement Disaster Risk management at all levels in the community.
12.	Responsible Consumption	Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle. By 2030, ensure that people	Libraries should encourage organizations to adopt sustainable practices and to integrate sustainable information into their reporting cycle. Libraries can come together to ensure that all countries have access to information.

		everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.	
13.	Protect the plannet (Climate Action)	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.	Climate Information awareness and access program should be conducted. This should include resources on climate change and action; it is early warning, mitigation, adaptation, and impact reduction. This is achieved through free access to the Internet.
14.	Life below Water	By 2030, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.	Through ICT infrastructures in the libraries, scientific information on preservation and conservation aquatic organisms that live below water is provided for the citizens.
15.	Life on Land	Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.	A good library has all information concerning the need for afforestation and the evils of deforestation. Information on general land abuse is made available to the common man by the library at no cost. The threats from man and nature to land can be safeguarded by information from libraries. Libraries have a key role in preservation of indigenous knowledge – which includes local decision-making about fundamental aspects of life including hunting, fishing, land use, water management.
16.	Peace, Justice & Strong Institutions	Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.	Libraries through ICT, make Internet access available to the community at no or low cost and ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
17.	Partnership for the Goals	Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2030 and enhance the use	Libraries provide access to technology oriented information in most countries through ICT. Librarians, therefore, can foster understanding and communication through library awareness campaign

		of enabling technology, in particular information and communications technology.	strategy, and this brings together some of the ideas for global development Abata-Ebire, Adebowale, & Ojokuku, (2018).

CHALLENGES FACING LIBRARIES TOWARDS ACHIEVING SUSTAINABLE DEVELOPMENT GOALS USING ICT:

Poor Funding: Libraries in Nigeria are not properly funded. Thus it is difficult for libraries to serve the purpose for which they were established. Without good fund, libraries cannot acquire ICT accessories like computers, internet subscription to mention but a few.

Poor Power Supply: The current trend in the supply of electricity in Nigeria is so disheartening. Constant power outage does not encourage good use of ICTs media in the libraries be it public, school, or academic. Most of the libraries cannot afford standby generator due to poor funding.

No Trained Staff: This is another challenge facing the library and information centres. Most library staff are not ICT literate thus they cannot give what they do not have. Most libraries do not have experienced and well-trained staff to run the system (Apotiade, 2002). Because of this, the achievement of the goals could be jeopardized or slowed down.

Poor Internet Network: The Internet network in most Nigerian libraries fluctuates thereby frustrating the library users. This hampers the achievement of the sustainable development goal in the libraries using ICT.

Inadequate ICT Equipment: Libraries lack the appropriate ICT facilities required for sustainable development. For instance, most libraries have outdated desktop in their holdings. Certainly, this cannot encourage any form of sustainable development through ICT.

Unskilled users: Most of the library users lack ICT literacy. Such users find it difficult to use the ICT facilities provided for their information seeking. This also slows down the propagation of information for sustainable development.

RECOMMENDATION AND CONCLUSION

The place of information and communication technology, ICT, in libraries cannot be overemphasized. Libraries are essentials tools in the society and they play an important role in achieving sustainable development goals using ICT. If sustainable development goal in Nigeria is to be sustained, citizens need to be ICT literate and well informed. This can only be done through information selection, processing, organizing and dissemination of resources taking into account the development indicators raised in the sustainable development goals (SDGs). Nigerian libraries should partake in hosting local forums where people can discuss problems such as community health, education, environmental issues, climate change etc. If the government of Nigeria can give positive attention to provision of ICT infrastructure to libraries, the nation will to a reasonable extent overcome some of the challenges militating against information provision. Hence, the sustainable development goals will be achieved by the year 2030. This study therefore recommends that:

1. The government and other parent institutions should fund the libraries adequately. This would enable the library management to acquire all ICT equipment required for a 21st century library.

2. The authorities in-charge of electricity supply should improve in their services. This would enable the libraries to always have light to power their ICT equipment like computers.

3. Library management should ensure that a staff must at least be computer literate before being hired to work in the library. There should be on the job training of library staff on ICT literacy.

4. Libraries should acquire functional Wi-Fi that can provide internet consistently without fluctuations.

5. More innovative new model ICT gadgets should be provided for the libraries. Stale and antiquated ICT equipments should be replaced.

6. Library management should organize ICT literate training for the clientele. This will enable the users make adequate use of the ICT facilities available in the library.

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