

The Application and Use of Information and Communication Technologies (ICTs) in Academic Libraries in Nigeria: A Case Study of Ramat Library, University of Maiduguri, Nigeria

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Abstract

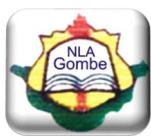
Information and Communication Technologies (ICTs), has added value to the services provided by Nigerian libraries. This study investigated the application and use of Information and Communication Technologies (ICTs) in academic libraries in Nigeria: A case study of Ramat Library, University of Maiduguri (RLUM). It focused on ICT facilities available in the RLUM Library, ascertained usage of ICT facilities in offering Library services, and challenges of using ICT'S in the Library to provide library services. The study employed a qualitative research methodology in which interview and observation guides were used to collect data from 10 respondents that included 2 Heads of Sections, five academic librarians, and, three ICT staff. In general, the study's findings revealed that a majority of the library staff are less skilled in the usage of ICTs facilities available in the library. The findings further revealed that, ICTs is used to offer few library services at RLUM Library. These services include: virtual desk services, provision of electronic resources and databases, chat with a librarian, literature searches, ask a librarian, collection development and establishing institutional repositories. However, the study revealed some challenges such as funding, erratic power supply and lack of on the job training of staff, as hindrance to the optimum application and use of these ICTs facilities in providing library services. Therefore, Adequate Funding of the library, provision of stable power supply and adequate training of library staff on using the ICTs facilities would boost the application and use of ICTs in the library.

Keywords: Information and Communication Technologies, Academic Libraries, Ramat Library and Library Services.

Introduction

Information and Communication Technology (ICT) has brought tremendous transformation to academic libraries and information services. Such areas of transformation and development occasioned by ICTs in academic libraries include; computing technology, communication technology and mass storage technology. This has reshaped the way that libraries access, retrieve, store, manipulate and disseminate information to the users. In other words, students and staff (library users) now use ICT facilities available in the universities to source for reference material, online journal as well as send and receive e-mail from within and outside the country.

According to Omagbemi, Akintola and Olayiwola, (2004) cited in Solarin (2013), prior to the advent of ICT, the operational functions of libraries in Nigeria has been cumbersome, time-wasting, without giving any room for flexibility. But with the introduction of ICT in Nigeria, particularly at the higher educational institutions there is simultaneous access for many users



at the same time and it helps to close the global information gap and create brighter future for both staff and students.

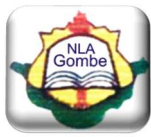
According to Olise (2010), the introduction of ICTs in education had brought about computerization of traditional materials such as books, journals newspaper and other information resources in the library. This has also led to the existence of virtual library. Educational researchers, through the use of ICTs can access current literature materials with ease. ICTs also encourage collaboration among researchers irrespective of their locations. Internet provides up-to-date information on any subject. Likewise, earlier research findings can be easily accessed through the internet. On professional duties, computers are used to automate different manual functions. Acquisition, cataloguing of library materials, circulation, cataloguing of library materials, circulation and serials management are now automated in libraries, using available software in the market. ICTs enable libraries to locate store, retrieve and disseminate information. ICT tools such as CD-ROM, e-mail are used in libraries for dissemination of information. In addition, digitization of information resources which involves converting print resources to electronic form is also carried out, using ICT. Other benefits of ICT in libraries as stated by Ashikuzzaman (2014) include:

- Provision of speedy and easy access to information.
- Provision of remote and round the clock access to users.
- Provision of access to unlimited information from different sources.
- Enable easier, faster, cheaper and more effective library operations.
- Management of information overload as information retrieval is made easier in computerized systems.
- Helps the library to save space and reduce paper.

There is no doubt that integration of ICTs into provision of library services is able to bring great benefits to the entire community and nation. ICTs which remains an enabling tool for provision of timely and current library and information services is also indispensable to the sustainable development drive in Nigeria (Nwabueze and Ozioko, 2011). However, In spite of the numerous benefits Academic libraries can derive from the application of ICTs to the library operations, from the preliminary observation by the researcher, it appears that Ramat Library, University of Maiduguri have some ICTs facilities in place but these facilities may not have been effectively applied in carrying out the library operations, hence necessitated the need for the research.

Statement of the Problem

The application of ICTs has brought significant benefits to Nigerian university libraries which have led to automation of library operations, efficient information retrieval; electronic documentary etc. given these inherent benefits and opportunities provided by ICTs, in recent times, the use of ICTs is inevitable for any library, especially academic libraries. However, despite the tremendous impact of ICTs on Nigerian University Libraries and library users, it was observed that the Nigerian academic libraries still encounter some hindrances in the effective application and use of the ICTs in the library service delivery. It is therefore against these challenges that this study seeks to investigate the application and use of ICTs in Ramat Library, University of Maiduguri through the under listed objectives.



Objectives of the study

The objectives of the study are to find out the:

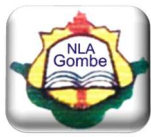
1. Availability and status of ICTs facilities in the library
2. usage of ICT facilities in providing library services
3. Challenges of using the ICT facilities in providing library services

Literature Review

ICTs have greatly changed academic library working environments (Steyn & Johanson, 2011) and the emergence of automation software and its application has seen a great shift in library operations and functions from being traditionally heavily reliant on human labour to handling of core activities technologically, this is a prime example of what ICT can do (Kumar, 2017). The extent of automation varies between libraries. Whereas some have automated all housekeeping operations (Wema, 2000) while others use ICTs to develop new computerized information services (Omosor, 2014). Overall, ICTs provide timely access to quality information to users, at any time, from anywhere, and in the right way (Fischer, 2012; Kumar, 2017).

Umana (2018) identified the following primary ICT resources as imperative in actualizing Nigeria's sustainable development goal. Likewise, the same ICT resources are paramount to effective delivery of library services. The ICT resources 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.
- 2) **The Internet:** This ICT resources 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) **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.
- 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) **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).
- 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).

Alabi (2018) conducted a study which showed that cataloguers have embraced the use of diverse library software and also utilize online catalogues for copy cataloguing. The findings further showed that Nigerian cataloguers have positive attitude towards ICT application in performing cataloguing and classification activities. The study concludes that stakeholders in libraries in Nigeria and elsewhere should devote funds towards provision of adequate ICT facilities that will drive cataloguing and classification operations. The study also pointed out that effort should be intensified towards achieving full automation of technical services, circulation, and also recommends for library management to develop and implement policies targeted towards deployment of ICT based cataloguing and classification tools in Nigerian libraries. Akanbi, Ogunleye, & Sulaiman, (2020). found that some of the library operations are not done with the aid of technological tools in these libraries and these libraries rarely make use of OPAC to provide easy access to their resources, efficiency and effectiveness of ICT in the dissemination of information were not realized because of the low usage of ICT to drive operations in the library.

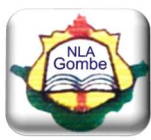
Anene, Achebe, and Uzoechina (2020) Shows that there are numerous constraints to the application of ICTs some of which include Lack of alternative power supply to facilitate the steady application of ICTs in library, High cost of ICT facilities, Poor maintenance culture of ICT Facilities, Lack of training and trained experts on ICTs, Poor funding and insufficient library budget, Software problems.

In a similar study conducted by Igwebuike & Agbo (2017) on ICT application to library and information service, revealed that a number of ICT facilities are not functional in the library which ranges from library software, Machine Readable Catalogue (MARC), Online Public Access Catalogue (OPAC), internet facilities to network facilities. The study equally showed that so many factors affect effective application of ICTs in library operation. Such factors include; inadequate funding, software problems, management problems, unstable power supply, inadequate number of staff and high cost of maintenance of ICT facilities.

Idhalama and Ifidon (2019) surveyed Information and Communications Technology (ICT) use in libraries: a plus or minus to academic libraries in Nigeria. The study revealed that ICT has positive effects on Nigerian academic libraries as it stand as a major boost to academic libraries. One may be right therefore to submit that in repositioning the academic library in the 21st century, libraries should aggressively subscribe to full introduction of IT (ICT) in our libraries. ICT remains a repositioning force in academic libraries in Nigeria amongst others.

Methodology

This study applied a qualitative methodology approach to collect qualitative and quantitative data from 10 library staff inclusive of heads of sections, Academic librarians and ICT staff. Specifically, the study's sample was made of 1 head of e-library, 1 head of collection development, 3 ICT staff, and 5 academic librarians. The study used 2 heads of sections, 3 ICT staff and 5 academic librarians as interviewees because they were considered information rich hence likely to provide in-depth information on the issues under study. The study also applied the observation method to find out about types, quantities, and operational status of ICT facilities available in the Library.



Findings and Discussions

Demographic Characteristics of Respondents

Understanding the designation of respondents was important in this study as such data provides information on respondents' responsibilities in the library. This is because designation is basically related to the duties and responsibilities assigned to a person on daily basis. Such tasks may also influence one's usage of available ICT facilities. The composition of respondents of this study is shown Table 1 below:

Table 1: Demographic Details of Respondents

Respondents	Designation	Frequency
Head of E-Library	Senior Librarian	1
Head of Collection Development	Deputy University Librarian	1
Academic Librarians	Senior Librarians	5
ICT Staff	Senior System Analyst	3
Total		10

Source: Field Data 2021

Available ICT Facilities and their Status

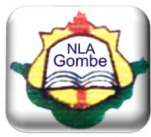
ICT staff members were asked to provide details on ICT facilities available in the Library. This required them to provide the types of facilities, their quantities, and operational status. The responses are summarized in Table 2 below;

Table 2: ICT Facilities available in Ramat Library, UNIMAID

ICT Facilities	Quantity	Status
Computer	250	Functioning
Intercoms phone	22	Functioning
Scanners	4	Functioning
Printers	5	Few are Functioning
Photocopiers	4	In bad condition
Projectors	1	Functioning
Television	2	Functioning
Internet	20 mbps	Active
KOHA (Opac System)	-	Not Active
Library Website & Chat Tool	-	Active and Functioning
Email	-	Active
CD Rom	-	In good Condition
External Hard/ Flash Drive	2	Functioning
Servers	4	In bad Condition
Inverter	30KVA	Not Functioning
Barcode Scanner	1	In good Condition

Source: Field Data 2021

Table 2 shows that Ramat Library has a wide range of ICT facilities in varying quantities and conditions which were acquired through government interventions and donor support. The findings indicate that there have been a lot of changes as a result of introduction of new ICT facilities which were not previously available. According to the respondents, these equipment when newly installed enabled library staff to perform their day to day duties with much ease as articulated by the Head of e-library and the 3 IT staff as follows:



“Most of the ICT facilities like the computers, printers, photocopier, the inverter and many others were acquired through Tetfund interventions and NIITDA support, they also helped in the provision of automating the libraries with the installation of KOHA which provide access to the OPAC system. While some facilities were acquired by the library. However, at some point, some of these facilities are either not sufficient like in the case of scanners, projectors, printers and photocopier machine, while some are not in good condition like photocopiers, KOHA (OPAC), servers and few of those in good condition like barcode scanner are actually not well utilized. The inverter which serve as an alternate source of power functioned well for a while then broke down at some point, likewise the OPAC system stopped functioning due to some hardware and software breakdown. The library is subscribed to 20mbps bandwidth of internet access; however its availability is dependent on the availability of power supply. The library has a functional library website onto which chat tool is been integrated. If not for the challenges faced with respect to some of the ICT facilities which are not in good condition, the presence of ICT facilities has simplified library duties.”

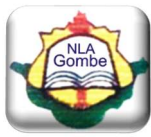
Despite the role played by ICT facilities as aforementioned, the researcher observed that a number of available ICT facilities in the Library are inadequate and some in a bad condition hence posing a challenge towards their optimal usage. The researcher further observed that there is no maintenance culture in the library as no measures has been taken to fix the facilities breakdown, as a result projects which were installed to enhance the library activities were abandoned like in the case of the KOHA (OPAC system) which simplifies library operations. A study conducted by Kumar (2017) revealed that inadequacy of ICT infrastructure is a major cause of users' dissatisfaction with services these days. This shortage forces staff members to dedicate the few available resources to performing tasks deemed central to the library's wellbeing hence leaving less or no room for innovation.

Usage of ICTs in Offering Library Services at Ramat Library

The study also required respondents to indicate how ICTs are used to offer library services in the library. According to responses obtained, the library offers a number of services with the help of ICTs. During interviews, ICT facilities were also hailed for allowing both students and staff to have access to numerous electronic resources available at University. The access to these resources, some of which are subscribed to assists researchers, academic staff, and students to obtain more of relevant and current information. Also pointing out some of the prominent databases offered by the library, the head of e-library and 3 IT staff stressed the importance of the role played by ICTs in enhancing access to e-resources as follows:

“Our users can now read online or download subscribed electronic resources through the library website. Now people do not always have to be physically in the library to get the information we offer. Through our website, our users can access databases such as EBSCO HOST, PROQUEST, AJOL and RESEARCH 4 LIFE databases such as HINARI, AGORA, ARDI, OARE, and GOAL. All these can be accessed only by bona fide RLUM Library users by using their username and password. There is also internet access in the library where users can make optimum use of in conducting their researches”.

Through the communication, facilities that come with ICTs, the library has been able to come up with better ways to enhance communication between clients and librarians. The presence of ICT facilities in the reference section has reduced the number of library users who visit to ask questions at the reference desk. The section has created platforms known as Chat with a



Librarian and Ask a Librarian which are used to get requests from clients and respond to them. Three of the Academic librarians and one IT staff said the following on this aspect:

“Chat with a librarian is a very powerful communication tool that has ensured efficiency and effectiveness in offering services in this library. This tool is a chat tool integrated to the library website. Users normally chat and ask what they want 24/7 without limitations and receive feedback instantly or after an agreeable amount of time. This is a total contrast to how things used to be in days gone by when users were expected to visit the library in order to ask questions. This has reduced reference librarians’ workload. For example, users used to request for services at the library reference desk. Now these services are integrated in ICT based applications hence reducing library staff’s workloads and making services provisions easier”.

Another interesting comment on Ask a librarian came from two of the academic librarians who went further to describe how it is used then he commented:

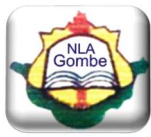
“We have four platforms under Ask a librarian namely feedback contact us forum on the library website, Facebook account, Twitter account, online reference chat tool, and e-mails. Users often use these platforms to ask questions related to the services offered by RLUM Library. These are directed to our e-library staff who direct it to the reference librarians to answer or directed to any subject specialist to answer on behalf of reference librarian. The communication is either instant or with a slight delayed reply. For both of them the primary aim is to satisfy users”.

The responses from interviews also revealed that ICT facilities give a wide range of opportunities to staff and their ability to communicate and share information, knowledge, and other resources within and outside their offices. That way, these facilities make working conditions more conducive. For example during interviews the head of the collection development said:

“Staff and students from different colleges always send to us titles of electronic journals and electronic books they need through emails, contact us page on the library website or through the integrated chat tool. We use different literature searching strategies to find requested documents. Afterwards, the documents are sent to the people who requested them through their email.”.

The results have also shown that through ICTs a new way of offering information to users has been introduced by the library, and that is institutional repository. The library has been collecting, preserving, and providing access to intellectual digital output collections of the University. During an interview session with the head of e-library, he elaborated on the role of ICTs in this respect as follows:

“At this point we are striving to get all our scholarly works converted to digital. Some of them are already in that format though not totally available through the Institution repository as there is an ongoing effort to provide a larger server for the institutional repository. These are basically there to make researchers’ lives easier by offering them access to scholarly works in an easy way. The researchers can access and choose any citation as they are ready-made in the database. Recently, we have also embarked on creating subject-specific databases, the aim is put together resources that support current national development goals such as those on research and industrialization. However,



these services have been stopped for quite a while due to the breakdown of the server unto which the Institutional Repository Software is installed”.

The results have also shown that through ICTs, the Collection Development Unit utilize it in receiving submissions and request. During an interview session, the head of collection development elaborated in this respect as follows:

“We receive submissions and request from faculties and departments through E-mails and social media platform like Whatsapp, and we sometimes use the subscribed library databases to verify the bibliographic details of the book. We further use the computer system, printer and the Microsoft word and excel package to compute and generate the lists. These computed list are further stored on an empty CD or Flash Drives.”

The responses from interviews also revealed that ICT facilities give a wide range of opportunities to staff and their ability to communicate and share information, knowledge, and other resources within and outside their offices for managerial responsibilities. That way, these facilities make working conditions more conducive. For example during interviews the academic librarians said:

“We use computers and printers to produce circulars, Telecoms are also used to communicate among staff in the library without having to physically appear before the persons, when there are vacant positions in the university, we utilize the library website in advertising these vacant positions to the public, we as well use projectors and microphones to provide group instructions and we have a Whatsapp group created for all member of staff where information are shared”

Despite the role played by ICT facilities as aforementioned in providing library services, the researcher observed that a number of the library services have not fully utilized ICT in automating the library operations in areas like circulation, Cataloguing and Classification. According to the head of e-library and ICT staff:

“The library was at one time automated, as of the time it was operating, it was utilized in cataloguing and classification and provided access to OPAC for users but at some point the management software stopped working, recommendations were made but not met which led to the non utilization of the software.”

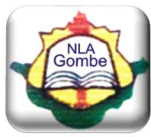
It was further observed by the researcher that, majority of the staff do not possess the ICT skills necessary to operate the library activities, most of where the ICTs where applied are done through the ICT staff of the e-library. Generally, with the current changes of ICT facilities in offering library services to users at RLUM library, most library members were not equipped with on the job training, most of library staff do not possess intermediate ICT skills in offering library services to users. As a result, all these constrain their ability to effectively use available ICT facilities to support library services at RLUM library.

Challenges faced with the Use of ICTs in Offering Library Services at Ramat Library

The study also required respondents to indicate the challenges faced with the use of ICTs in offering library services. According to responses obtained, the library is faced with a number of of challenges with regards to the use of ICTs.

During interviews, all the interviewees stressed the major challenges posed to ICTs in enhancing access to e-resources as follows:

“One of the major challenge we face is funding, when we apply, it takes sometimes a year from the application period to receive funds and sometimes it doesn't even come at all, as a result of this when ICT facilities are faulty or not



adequate, we tends to abandon them. Another problem is the lack of training the library staff, majority of the library staff are not skilled in ICTs, training were not organized to show them how to use and apply all these ICT facilities in the library operations. We are also faced with the issues of power supply; the power is usually on between 11:00 a.m to 4:00 p.m which is not sufficient enough for the library operations.”

Conclusion and Recommendations

Findings of this study revealed that University of Maiduguri library utilizes available ICTs to come up with better ways of meeting users ‘needs. However, the revelation that library staff’s ICT skill levels are not up to the desirable levels indicates that these tools are not optimally utilized. More alarming is the fact that library staff who are the ones involved in service provision have far less skills. In other words, the people who directly deal with users and are supposed to continuously come up with more innovative ways of serving users can not fully exploit the power of ICTs. This simply means that despite the promising developments at the library, more needs to be done in terms training support staff that have great potential in bringing about innovative services. In the same vein, Findings also revealed that funding has also been a major problem that hindered the library from utilizing most of these ICT facilities especially when new facilities are needed and a breakdown occurs which requires funding to fix the problem.

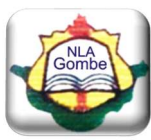
The study therefore recommends that it is imperative for the library management to ensure that there are available ICT facilities in the library and likewise ensure these facilities are functional and active.

It is also important for the library management to ensure that the available ICTs facilities are put to optimum use in performing all library operations. These facilities should be used adequately rather than been kept idle.

In the same vein, It is therefore necessary for the university to provide all necessary financial support to the library so that it can operate efficiently and effectively using and applying the ICTs. Essentially, the University of Maiduguri Library should develop long and short-term, and in-house training programmes for its staff members to enable them to effectively use and apply ICT in library services provision. This must be done regularly because information technologies change rapidly. On a broader perspective, the Library should formulate and implement an ICT strategy which in addition to being used to guide the improvement of ICT infrastructure, it should lay out short and long term skill development programs.

References

- Akanbi, M. L., Ogunleye, D. O., & Sulaiman, K. A. (2020). Application of Information and Communication Technology (ICT) in Information Dissemination in Special Libraries in Nigeria. *Record and Library Journal*, 6(1), 1-13.
- Alabi A.O (2018). Information & Communication Technologies (ICTs) Application to Cataloguing and Classification in Nigerian Libraries. *Journal of Applied Information Science and Technology*, 11 (1) (2018).
- Anene I.A., Achebe N.E, & Uzoechina C.E. (2020) Application of Information Communication Technologies (ICT) for effective user education programme in federal university libraries in south east, Nigeria. *International Journal of Library and Information Science* Vol. 12(1), pp. 16-30, January-June 2020.



- Ashikuzzaman, M. (2014). ICT based user services of blog. Retrieved from www.lisbdnet.com/ict-based user on 17-0702018
- Fischer, G. (2012). Context-aware Systems: The “Right” Information, at the “Right” Time, in the “Right” Place, in the “Right” Way, to the “Right” Person. In Proceedings of the International Working Conference on Advanced Visual Interfaces (pp. 287–294). New York, NY, USA: ACM. <https://doi.org/10.1145/2254556.2254611>.
- Idhalama, O.U. & Ifidon, E.A (2019) Information and Communications Technology (ICT) Use in Libraries: A Plus or Minus to Academic Libraries in Nigeria? *Sumerianz Journal of Social Science*, 2019, Vol. 2, No. 6, pp. 68-73
- Igwebuikwe E.U & Agbo A.D (2017) Improving ICT Application to Library and Information Services in Special Libraries in Nigeria. *Journal of Applied Information Science and Technology*, 10 (2) (2017).
- Kumar, B. N. (2017). *Use of Information Communication Technology (ICT) and Library Operation: An Overview*. Proceedings: International Conference on Future Libraries: From Promises to Practices, 2017. Bangalore: DRTC.
- Nwabueze, A.U., & Ozioko, R.E. (2011). Information and communication technology for sustainable development in Nigeria. *Library Philosophy and Practice*. Retrieved from <http://digitalcommons.edu/libphilprac/600>.
- Omagbemi, C. O., Akintola, B.A., & Olayiwola, I.B. (2004). Academic Libraries, the Internet and its Potential Impact on Teaching and Learning in Nigerian Tertiary Institutions. *Journal of Library and Information Science* 1 (1&2): 38-39.
- Olise, F.P. (2010). Information and communication technologies (ICTs) and sustainable development in Africa: Mainstreaming the millennium development goals (MDGS) into Nigerian’s development agenda. *Journal of Social Science*, 24(3), 155-167.
- Omosor, U. A. (2014). Effects of Technology on Librarians in Academic Libraries in Nigeria. *Journal of Information and Knowledge Management*, Vol. 5, No.2, pp.203-212.
- Solarin, E.O.L. (2013). The Use of Information and Communication Technology (ICT) in Academic Libraries in Nigeria: A case Study of Covenant University Library, Ota, Nigeria. Centre for Learning resources. Covenant university library, Ota, Ogun State, Nigeria.
- Steyn, J. & Johanson, G. (2011). *ICTs and sustainable solutions for digital divide: Theory and perspectives*. New York: IGI Global.
- Umana, K. (2018). ICT resources for sustainable development in Nigeria. Retrieved from <https://researchcyber.com/icr>
- Wema, E. F. (2000). *The impact of introducing computers into library services: The case of the University of Dar es Salaam library*; M.A (Information Studies) Dissertation. Dar es Salaam: University of Dar es Salaam.