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# The Application of ICT in the Circulation Services of the University Library, Federal University, Lokoja-Kogi State, Nigeria.

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## **Introduction**

In today's world, Information and Communication Technology (ICT) has taking over all sphere of human endeavour. Presently, most organizations employed the use of ICT to revolutionize their various activities for effective service delivery, libraries as a growing organism is not left behind in this tides of change taking place in workplaces. The application of ICT in library operations cannot be overemphasized, reasons being that, ICT has come to stay in our day-to-day activities. Just as Yakubu (2014) affirmed that, library and information have undergone various stages of transformation, storage and retrieval of information application in delivering library services.

In this vein, the Integrated Library Services (ILS) is the application of computers and other peripherals or devices to actualize or perform routine tasks in the library. These tasks are formally undertaken by manual processes. The application of ICT in this task allows for effective acquisition, organization, dissemination of information as quickly and accurately as possible. According to Hussain, Khan, & Zaidi (2013) ICT has exerted a profound influence on traditional academic libraries. They have no option but adapt themselves to new developments. This statement implies that, ICT has become a permanent feature in the routine library service delivery which has come to stay. Corroborating this, Gama (2013) agreed that, advancement in Information and Communication Technologies (ICTs) world over has necessitated a drastic shift by organizations including libraries from the traditional ways of providing services to ICT based service delivery. All this shows the value of ICT in service delivery, particularly in today's library.

In any typical library system, the circulation/customer services performs the traditional role of borrowing or loaning out of library resources to users, registering new users, charging of fines

etc. At the present time, most of these activities are now being undertaken by the use of ICTs based on the functions performed therein for effective service. This unit of the library is essential to library service delivery, which is why it is referred to as public service point. Ujuanbi (2008) cited in Saliu & Abdussalam (2014) sees circulation service as part of the functions of library system that allows the library to achieve its goals.

Though, some libraries in this part of the world are still grappling with the implementation of ICTs in their libraries operations, some are at the varying stages of their applications in their libraries operations. According to Mairaj & El-Hadi (2012) the pace of ICT applications in libraries in developing countries has been very slow. With this, one can see that ICTs application in most libraries in this part of the world is still growing and at the low level trying to catch up the pace with other information service outlets elsewhere.

### **The University library: Historical Development**

The Federal University Lokoja was established along with eight (8) other new Federal Universities on the 16<sup>th</sup> February, 2011 by then President Goodluck Ebele Jonathan. The University Library of Federal University, Lokoja came into existence in November, 2012. The University is sited at Lokoja, the capital city of Kogi State of Nigeria, in the north central part of Nigeria. Essentially, a University Library exists to support the teaching, learning, research and community services, and function of the University it is meant to serve. This is done especially through the provision of relevant and current information resources in both print and electronic formats as well as through the provision of the state of the art library and information services in both online and offline services regimes. A library is said to be useful and responsive to its customers if only its resources and services are easily accessed and utilized by the users to meeting their diverse information needs and expectation.

The Integrated library Service is used in the University Library; Federal University Lokoja is known as Koha. Koha is the foremost free library automation software package. The product is widely acceptable and used. Koha is used by libraries of all sizes, and a true enterprise-class Integrated Library Management Software (ILMS) with comprehensive functionality including basic and advanced options. Koha includes modules for acquisitions, circulation, cataloguing, serials management, authorities, flexible reporting, label printing, multi-format notices, offline circulation for when Internet access is not available, and much more. Koha is also designed to work for consortia of all sizes, multi and single branch libraries. The Koha features continue to evolve and expand to meet the needs of its user base.

### **Statement of the problem**

The provision of library routine operations via ICT has come to stay with the introduction of Integrated Library Management Software (ILMS) that enables each task to be carried out with prompt efficiency and effectiveness of service delivery. Circulation/customer services is among the numerous services the library offers to its clientele. As such, the circulation/customer services unit of the library is regarded as the main focal point for service delivery in any library, this unit provides services like, charging and discharging of information resources, registering of users, collection statistics on library use etc. The infusion of ICT based library services has revolutionized the way library routine tasks are being undertaken. The application of ICTs to circulation/customer service has greatly helped the level of customer satisfaction on library services, for its effectiveness and efficiency.

However, despite the aforementioned importance of ICT application in library and information services, observation and research has shown that the application of these ICT facilities to

operational services of some libraries is still inadequate thereby rendering service delivery of such library to be ineffective. Issa, Ayodele, Abubakar & Aliyu, (2011) maintain that ICT application in library and information services in Nigerian institutions of higher learning is grossly inadequate. On that note, the researchers deem it fit to investigate the level of application of these ICTs in the operational routine of the Federal University Lokoja Library, by ascertain the types of services rendered, types of ICTs used, what services re ICTs applied, how they apply this ICTs and the challenges associated with the use of ICTs in rendering circulation/customer services.

### **Objectives of the study**

The purpose of this study is to investigate the application of ICT in the circulation services of the University Library, Federal University, Lokoja-Kogi State, Nigeria with specific objective to:

1. Find out the type of services rendered in circulation/customer services section of the University Library, Federal University, Lokoja-Kogi State, Nigeria.
2. Find out the types of ICT use in circulation/customer services operations provided by the library under study.
3. Find out the types services provided using ICT in circulation/customer services operations of the library under study
4. Find out the methods applied in using ICT to provide circulation/customer services in the library under study
5. Identify the challenges faced by staff when using ICT to provide services in the library under study

### **Research questions**

The study will be guided by the following research questions and they are as follows:

1. What are the type of services rendered in circulation/customer services section of
2. What ICT facilities or tools are in use in the circulation/customer services operations of the University Library, Federal University Lokoja-Kogi State, Nigeria?
3. What services do you provide using ICTs in the circulation/customer services operations of the library under study?
4. How do you provide services using ICTs based circulation/customer services operations in the library under study?
5. What are the challenges faced by staff in using ICT services in the operations of circulation/customer unit?

### **Justification for the study**

One important aspect of ICTs application in this 21<sup>st</sup> century library services is the provision of quick and effective service delivery. This has formed the baseline for many researchers who have carried out studies on ICTs application in library routine services. However, much emphasises is being geared towards its use in the library as a whole, instead of focusing more attention on the various sections or subsystems of the library where such technology is much needed. This study therefore, provides an avenue upon which the uses of ICT are applied in operations of circulation/customer service unit of the University Library, Federal University, Lokoja-Kogi State, Nigeria. The study particularly throws light on the aspects of ICT application in circulation/customer services unit and shows areas that required encouragements, assistance or modification to enhance effectiveness and efficiency of service delivery. The study also inspires interest of more research endeavour in the area of ICT application of library routine activities in other subsystems. All the above are in addition to contributing to the existing literature on the subject matter.

## **Literature review**

The study reviewed literatures pertinent to the research objectives.

### **ICT facilities/tools use for circulation/customer services operations**

The use of ICT in libraries is to provide prompt and efficient services by infusing some kind of technology devices to the operational routine for good service delivery. Mishra & Mishra (2014) sees ICT facilities or resources that can be used for effective library operations and services to include; barcode technology, chat services, document scanning services, electronic book, internet, electronic mail etc. Saleem, Tabusum & Batcha (2013) explain that, there are several ICTs tools for various housekeeping, management and administrative functions of the library, different electronic and digital media, computer aided electronic equipments, networks and internet that has provided significant role in retrieval and dissemination of information and playing a vital role for modernization of libraries. This shows that, for every housekeeping task in libraries, there are different applications that take cares of this routine task for effective and efficient service delivery. Corroborating this, Afolabi & Abidoeye (2012) highlights the types of ICTs use for library housekeeping operations to includes; computers, Internet facilities, electronic mail, video conferencing, networks and system experts. All this facility aids the operation transactions of the library, particularly in providing circulation/customer services to users. In the same vein, Antherjanam & Sheeja (2008) note that, the use of technological devices such as computers, barcode scanners and its software in circulation helps in performing the routine operations easily and quickly.

### **Services provided using ICTs in circulation/customer services unit**

Circulation/customer services provides series of services to its clientele, now a days, most of this services are been provided using ICTs. Ebunuwele, Ola, & Uduebor (2014) explained that, ICTs

is used in circulation/customer service operations to obtain statistics information from the system such as, total number of book borrowed, subject by subject and number. The system can equally print overdue notice, and books available on new arrival to the library. Whong & Zakari (2014) note, the circulation section involves core duties such as issuing, renewing resources, reserving items and charging and discharging of books. In addition, charges and fines are also imposed on clients who have overdue books. The application of ICTs to library services cannot be overemphasized for its uniqueness in prompt service delivery. Babafemi & Adedibu (2007, p.24) agreed computers are now being used for charging books out, record keeping, writing of overdue notices etc. More so, Osawele & Uzairue (2013) acknowledge the use of ICTs in providing services by saying, the computer has been considered as the backbone, nucleus, or hub of ICT application. Madu and Adeniran (2000, p.72) stated that computer are now been use in recording fines and keeping statistics of customer services.

### **Method used in applying ICTs in providing circulation/customer services operations in the library**

The use of ICTs in library services is becoming more and more inevitable as a result of its important roles. ICTs are applied to library routine services to improve the quality of services render. However, the computer serves has the most important ICT device that helps input information and process transactions such as charging and discharging in circulation service, which allow for effective and efficient service delivery. According to Aina (2004) cited in Whong & Zakari (2014) posited, the application of technologies on routines and operations peculiar to the library has improved efficiency in resource organization, service delivery and dissemination of information making them effective and easy while at the same time eliminating repetitive and routine tasks in the library. The above statement implies that, ICT application in

library routine services particularly in circulation/customer service unit will allow for easy circulation operation where there are many users to attend to. ICT proliferation has continued to shape the type and kind of services libraries provides in this 21<sup>st</sup> century. More so, on the methods of applying ICTs to circulation/customer service operations in the library, quoting Babafemi & Adedibu (2007, p.27) “circulation control subsystem includes all the features and functions needed to keep track of the location of specific items, circulate them efficiently, carry out all the checking, discharges and renewals. It can automatically check borrowers' records for overdue items; personalize messages, overdue notice, recall and reservation of library materials. Above all, with automation in place, inter-library loan services will also be more efficient.

### **Challenges faced by staff in using ICTs for circulation services in library**

Many organizations are bedeviled with series of problems that is impeding their progress. Libraries as a growing organism are not left behind in these enormous challenges. Manpower development, funding, training and retraining of staff and technical issues associated with the Library Automation Software in use are some of the problems identified by some scholars (Abbas, 2014; Qutab, Bhatti & Ullah (2014); Mairaj & El-Hadi 2012; and Afolabi & Abidoeye (2012). To Aina (2004) cited in Lawal-Solarin (2015) the negative attitude of libraries and high cost of ICT training are other factors militating against the development and use of ICT in university libraries in Nigeria. Islam & Islam (2007) noted that problems facing the application of ICTs in most libraries to include: administrative barriers, lack of shared initiatives, financial constraint, inadequate skilled manpower among others.

### **Research Method**

This study employed the use of qualitative research method to investigate the application of ICTs to the circulation/customer service operations of the University Library, Federal University

Lokoja-Kogi State, Nigeria. The population of the study comprises of the circulation/customer service librarian and four (4) other staff of the unit, making five in all. Purposive type of non-random sampling was used to select the interviewee. Research Methodology (2016) an online webpage defined purposive sampling as a method characterized by a deliberate effort to gain representative samples by including groups of typical areas in a sample. Interview method was adopted as instrument used to investigate the application of ICTs to the circulation/customer service operations in the library. Gill, Stewart, Treasure & Chadwick (2008) described interview method as most appropriate instrument where little is already known about the study phenomenon or where detailed insights are required from individual participants. Fact finder type of interview was used to generate data. MacDonald & Headlam (2009) described this type of interview as one used to obtain specific information from an interviewee and usually includes structured or standardized interview questions. Therefore, a structured interview checklist was administered to the circulation librarian and four (4) other staff that was purposively selected. The data generated were analysed using citation analysis. Citation analysis in interview method of qualitative research is done by quoting some elements of the interview when reporting the findings. As stated by MacDonald & Headlam (2009), citation is directly quoting parts of the interview in the main body of the report.

### **Discussion of findings**

The circulation/customer service unit is the main public service point usually located at the main entrance of a conventional library; this is peculiar to the University Library, Federal University Lokoja-Kogi State, Nigeria. The operational routines performed at the circulation/customer service unit of the library are users registration, lending and charging in of information resources, track materials for damage and channel them for repair or replacement, compilation of users

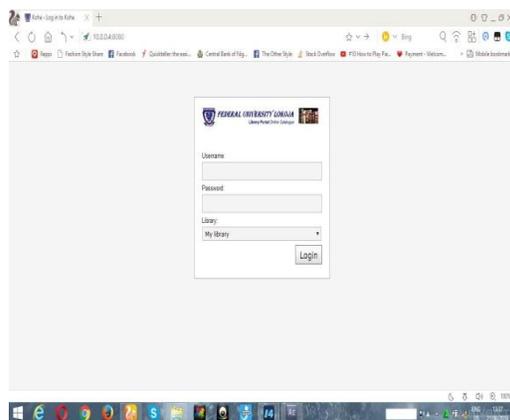
statistics, etc. Though the library circulation system processes are not fully automated, so the library still engaged in some sort of manual operations for some of its services. There is eight (8) staff in the unit including the head of unit; four professionals and four Para-professionals.

The information obtained from the interview based on the research objectives was analysed using citation analysis.

### **ICT facilities in use in circulation/customer service unit**

The essence of ICT use in library and information centres is to facilitate prompt and effective service delivery to its clientele. These ICTs are of different types and they includes but not limited to the following; computer, internet, electronic mails, networks, video conferencing, keyboards, mouse, Magnetic disks (CD/DVD) etc. However, findings revealed that, the library under study employed the use of ICT facilities in some of its operational functions. The ICTs tools available within the unit under study quoting the (Circulation/customer Services Librarian, interview, June 21, 2016) include: “desktop computers, internet, printer, flash drives, internet, networks, keyboard, mouse, intranet, CD/DVD and KOHA software package.”

**Fig 1:** The picture below shows the KOHA sign in page as used in the University Library, Federal University Lokoja-Kogi State.

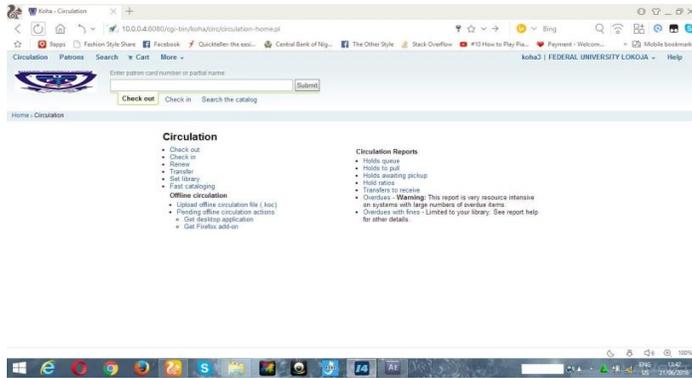


### **Services provided using ICT facilities in the unit**

Traditionally, the circulation/customer service unit of the library is tasked with the responsibility of providing and making available for use information resources to users, and performs some of these other services: Registration of users; Lending and charging in of information resources (charging and discharging); Reservation of information resources; Charging of overdue information resources; Generation of users statistics; Inter-library loan, etc.

Meanwhile, in the cause of this study, findings revealed that the library under study has not fully implement the use of ICT to provide all the circulation routine services that are manually provided. Rather, the library has only being able to start with the student registration to enable automated charging and discharging which has commenced earnestly. On the application of ICT to provide services in the unit, (Circulation/customer Services Librarian, interview, June 21, 2016) explained that “for now we have only started with the registration of users and charging and discharging of materials”. ... “And for inter-library loan and book reservation, activation of such services will soon commence”. This implies that the circulation unit of the library is gradually implementing the application of ICTs in its operations taking it stage by stage. Supporting this, Babafemi & Adedibu (2007, p.24) agreed computers are now being used for charging books out, record keeping, writing of overdue notices etc.

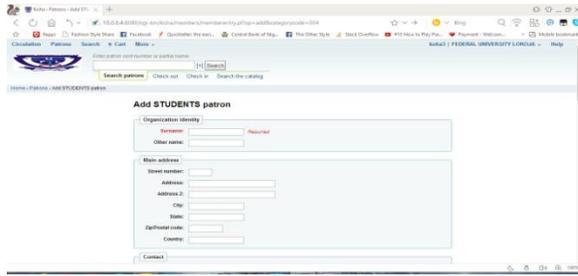
**Fig 2:** showing the full circulation module with services provided.



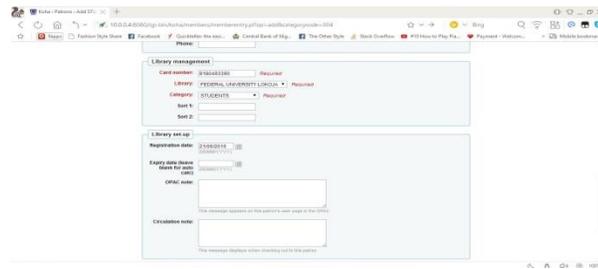
### Methods used in applying ICTs to service rendered in circulation/customer service unit

The circulation/customer service unit of the University library, Federal University Lokoja- Kogi State is not fully automated though, but a low level integration of ICT is use to undertake some routine tasks such as; charging and discharging of information resources to clientele, users registration, as well as tracking of information resources. According to (Circulation/customer Services Librarian, interview, June 21, 2016) “we use ICT to charge in and charge out books, registering our users, used to traced or track missing materials and also to know where this materials can be located” Corroborating this, Otolo and Anie (2009) cited in Aba, Ezeani & Cyprian (2015) affirmed, ICT application in circulation operations enhances the process of lending and locating library information resources, provides up-to-date information on loan services, etc. This shows the methods in which ICTs is being applied to provide functional services to clientele.

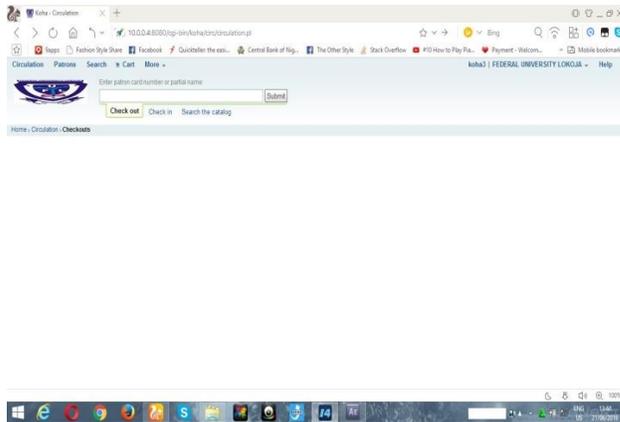
**Fig 3:** The user’s registration module



**Fig 4: Users registration module**



**Fig 5: charging and discharging module as shown in KOHA**



**Challenges faced by staff in applying ICT to circulation/customer services**

Every service has its attendant challenges. The library as a growing organism also encountered a lot of challenges that hampered service delivery at times. Circulation/customer service unit transactions are therefore not exempted from challenges relating to the service provided. The study identified some challenges that are facing the unit in actualizing their goal of prompt service delivery to their clientele. Quoting (Circulation/customer Services Librarian, interview, June 21, 2016) “some of the major hindrances facing the staff of the unit in discharging their functions accordingly are inadequate ICT savvy among staff due to low level of ICT training/education, issue of network problem at times due to fluctuation or bad network that affect the use of ICTs to provide some services like charging and discharging of information resources to users, another concern is inadequate power supply which affect the overall application of these ICT tools to provide services, and also, software associated problems due to too much work sheet that need to be entered”. Corroborating these challenges, Balarabe, (2015) mentioned that power supply, poor network and inadequate ICT facilities for the effective application of the ICT based customer service provision in the libraries. Also, Idowu (2000) cited in Babafemi & Adedibu (2007, p.27) observed that software packages available for use in the libraries are not problem-free, and they include; frequent breakdown of the system, frequent network errors and software maintenance.

### **Conclusion and Recommendation**

The application of ICT tools are increasing in Libraries and Information Centres, especially in Academic Libraries. These applications were incorporated to ensure prompt, effective and efficient services delivery. The ICTs based library service of the circulation/customer service unit of University Library, Federal University Lokoja-Kogi State, Nigeria was found to be on low level ICT application in their operational services. The study revealed some major challenges

facing the unit in actualizing the maximum benefits of ICT applications in their routine activities. Therefore, the support of the University authority is imperative to the successful completion of the library automation by addressing such challenges as: inadequate power supply, poor funding, network and software issues, and inadequate staff training. The full application of an ICT based library services will have well boost the service efficiency and effectiveness of the library. As Aba, Ezeani & Cyprian (2015) rightly pointed out that computer technologies can be used to eliminate cumbersome process of charging and discharging in the manual process of circulation and also be use to maintained borrowers list and generate overdue resources automatically. With this, one can see the value-added of ICT application to operational routines of library and information centres.

It may be concluded with this recommendation that:

- ✚ Adequate financial resources are to be made available to execute major project relating to library automation;
- ✚ Sufficient power supply in place with the provision of alternative power supply such as; inverter, solar or a stand by generator to improve the quality of services rendered, because an ICT based library services depend solely on constant power supply to make transactions possible;
- ✚ Training and retraining of staff is highly encouraged: With the proliferation of ICTs and its attendant needs in modern library services, there is an urgent and immediate call to train and keep retraining library staff on the use and maintenance of these ICT applications or tools, this will help in strengthen their ICT application to library services particularly in the circulation/customer services unit of the library, Federal University Lokoja-Kogi State; Abbas (2014) maintained that libraries should, as a matter of urgency

embark on rigorous training and retraining program for their staff as no librarian can thrive and effectively discharge his/her responsibilities without ICT skills and knowledge in this 21st Century information society

- ✚ Network and Software issues: provision of better and effective network system is put in place to ease to the problem associated with delay in offering charging and discharging services and other services that is network dependent. And also, software issues are address by ensuring software compatibility with the library service operational routines to avoid minor technicalities.

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