

Utilization and Application of ICT in Serial Management in Academic Libraries

Tijani Abdul PhD¹ & Deborah Sarah Gadoh²

Department of Library and Information Science, Kaduna Polytechnic, Kaduna^{1,2}
atijani@kadunapolytechnic.edu.ng¹, deborah.gado@yahoo.com²

ABSTRACT

The main objective of this work is to identify the use of information and communication technology (ICT) in serial management in academic libraries. Serials are the backbone of library collections; they include journals, magazines and other research materials. They contain the most up – to – date information. The application of ICT in serials management will speed the search for information both current and backlog. It will make the work more interesting, easy in delivery of services, link with the holding of other universities through resource sharing. The lack of steady electricity supply is another problem faced by the library as constant power outages have made the sector so unreliable that electronic facilities break down easily. The high cost of ICT equipment has also contributed to the slow patronage coupled with the dwindling financial resources from government. Another problem is the lack of trained and technical experts to manage the Information and Communication Technology (ICT) equipment in the library. The study concludes that, government should make available adequate fund to the libraries to effectively equip themselves with computers and its related technologies. For the libraries to respond to the needs of the nation, there is the need to train and retrain the library staff to be knowledgeable and skilful in the use of information technologies by sending them to workshops, fresh course and in-service training on the management and utilization of information resources and technologies for the effective use of information and communication technologies in order to advance or contribute very well to the academic library in Nigeria.

Keywords: Information and Communications Technology; Serial; Serial Management; Academic Libraries

Introduction

Information and communication technology (ICT) is an umbrella term that includes all technologies for the manipulation and communication of information. It encompasses any medium to recorded information (Magnetic disk, tape, optical disk (DVD\CD), flash and paper record), technologies for broadcasting information (radio, television, cinema), technologies for communicating through voice and sound or images (microphone, camera, loudspeaker, telephone to cellular phones) and wide varieties of computing hardware (desktop computers, laptops, servers, mainframes, networked storage (Wikipedi, 2010). Along with this rapid technological advancement entered the

internet”, which has today created a borderless surge for information.

ICT has radically transformed information generation, analysis and dissemination world-wide. Information means data that have been collected and processed into messages for the purpose of consumption and dissemination. It has always played a significant role in recorded history, from the inception of the 20th century basis of human existence. This fact has made man to relentlessly seek ways to improve the processing and communicating of such information to one another irrespective of distance and on a timely basis. ICT has been beneficial in many professions as it facilitates the ease with which activities are carried out which library is not an exception. ICT in libraries has changed the mode of information storage and retrieval,

acquisition, cataloguing and classification, circulation of materials, serial control, management statistics and administrative activities such as budgeting. This has led to the provision of the performance of the libraries and other related information institutions (Chisenga, 2015). Librarians are faced with the challenges of availing themselves the opportunity of learning the skills to use the multimedia in information packaging, repackaging and delivery for optimal service delivery in the 21st century. Serial are publications issued in successive parts at intervals and intended to continue indefinitely. Serials by their nature present difficulty to library managers in collection and control. They are numerous and include such publications as journals, newspapers, magazine, manual, monographs, proceedings, transactions and memoirs of societies. Serials are usually very current and therefore represent indispensable materials source for teaching, learning and researching. The most current issues are usually displayed conspicuously for reader consultation while the old issues which may be in bound volumes are stocked away from the reach of readers and only to be retrieved on request.

In the past times, these ranges of serial resources include the computer and its associated peripherals aimed at increased access to timely, accurate relevant and current information from both immediate and remote data bases. The introduction of ICT in serial management has become necessary because of the current information explosion resulting from the astronomical rate at which information is being generated in this twenty-first century. Aina (2013) stipulates that the information explosion has further intensified by the advent of information technology especially the internet. Web publishing has now become a major route for transmitting knowledge (Aina, 2013). Information and communication technology are being increasingly used in serial library and information services for the acquisition,

processing and dissemination of information. The fundamental purpose of serial resources in any library is basically to extend the frontier of knowledge from one generation to the other, thereby bring about continuous intellectual development which is channeled towards promoting learning and expanding knowledge. However, the serial unit in most academic libraries is the least visited and less patronized unit of the library. Therefore, so many questions began to run in the minds of the researcher on why the application of ICT in the serial section and poor patronage of such an important unit. Could it be that the serial resources are not relevant, not available, not accessible, not adequate, not well indexed, abstracted, poorly shelved and poorly accommodated? Or could it be that the library does not have enough funds to maintain the serials unit? Or could it be that library staff working in the serials unit is not well trained? Based on this premise, the issue of utilization and application of ICT in serial management in academic libraries must be taken more seriously than before.

Defining the Concept of Information and Communication Technology (ICT)

Wikipedia (2010a) sees Information and Communication Technology (ICT) as the scientific technological and engineering discipline and Management technique used in information handling and processing with their associated, economic and cultural matters. In her work, Achebe (2015), saw Information and Communication Technology as the type of technology that links the computer to the global telecommunication network to make it. Possible for user to acquire process compare store and disseminate oral, printed and pictorial information. Aina and Anyaoyu (2013) described Information Technology as an omnibus term that combines computer and telecommunication Technology.

Hence, according to him it is sometimes called information and communication technology which is concerned with the technology used in handling, acquiring, processing, storing and dissemination of information. Agbecha and Ominyi (2018) viewed information and communication technology as the convergence of some electronic tools used to create, organize, store and disseminate information to whosoever is in need of such information. This paper defines information communication technology as the supplementary roles of computer, telecommunication technology and their backup technologies such as facsimile, micro-electronics, satellites etc. to improve the quality of education by organizing, handling, storing, editing and dissemination of information.

The application of ICT in libraries facilitates and enhances effective and efficient reference and information service delivery.

Concept of Library and ICT

The library is a service and information Centre where the sum total or even most of human civilization and development in print and non-print media is stocked and organized systematically for the use of all the citizens in the course for the quest for information, knowledge, learning, teaching, research, recreation and entertainment. Traditionally, the library has its role as the place for the collection, organization, preservation/storage and dissemination of information materials kept in a place. There is an improvement in the role of the library as it lays serious emphasis on dissemination of information that have been collected, organized and stored not only in a given library but from one library to another as well revealed by (Jerry, 2008). In this era library automation is the term used when information and communication technology (ICT) is used to replace manual

systems in the library. Information and Communication Technology (ICT) itself makes use of computers and related technologies for information retrieval and dissemination. The digital/virtual library has certain advantages over the conventional library as shown by Uborgu (2016) to include.

- The resources will never be out on loan and will be available at any time, any place and anywhere.
- Access is provided to more complete sets of journals, than in many instances, existing now on many library shelves.
- Cost of tracking the arrival of each journal, issue claiming and periodical binding will be eliminated.
- The need for added library space may decline; and
- Cost of retrieving borrowed materials will be reduced.

The Use of ICT in Serial Collection Control

The information communication technology has offered unlimited possibilities and capabilities in communication and dissemination of information in various forms, these capabilities are prevalent in the present day in serial section as avenues for speedy processing and access to information in both remote and immediate databases to meet the information needs of their teeming users.

According to Oketunji (2010), the benefits of computerized serial libraries include increasing the range of services offered; provision of marketing opportunity of its services; ultimately saving or even generating money; essay integration of various activities within serial library and between libraries in a network; improved preservation of serial materials that would

otherwise be lost or damaged; increased accessibility of serial materials through online access, this make it easier for researchers to find and use materials ubiquitously; ICT can help to automate many of the tasks involved in handling serial resources, freeing up librarians to focus on more complex tasks.

However, some of the benefits of computerized serial collection are: Access to regular up-to-date topic of interest; Enhancement of team work across geographical distance; Promotion of great platform to have fun and be entertained; Transfer of data between machines; Facilities for sending and receiving e-mail.

The information on a serial holdings provided by the computerized catalogue include information on title, subject holding periodicity, location, call mark, place of publication, method of acquisition, price and agent. The internet has broken down barriers of communication and information access from anywhere in the world. It is fast, reliable and does not have retractions on content or format. It also has limitless range of facilities which assist users to access the almost infinite information on the net.it offers the opportunity for access to update research reports and knowledge globally.

Also, utilization of ICT facilities in serials unit can be for the following benefits: subscription control, procurement process, order preparation, fund analysis and accounting. They can also be used for bibliographic file control, cataloguing of new serials, preparation of serials record entries and transaction control. Effecting serials additions, changes and deletions or collection control can be performed with ICT facilities. Services and preservation functions such as servicing request for serials publication, binding control file, missing issues, holdings accession of want list as well as union lists are amenable to ICT facilities use

Application of ICT to Serial Collection and Control

The collection of serial and their control libraries are facilitated by the application of information communication technologies, which has brought about maximum efficiency to service of libraries through reduction of mistakes, increased convenience, adequate statistical data keeping, control of literature growth, labor saving and easy exchange of documentation. Many libraries employ computer assistance for serials control such as accessioning which includes selection, ordering, check in renewal of subscription and for sending claim notices notices for unreceived series issues. The production of serials output can be in various forms but computer or computer typesetting are frequently used for large collections. Computer assistants can also be used for binding decision. The computer contains all necessary binding information in the master file so that the information to be sent the binders is produced automatically when required.

The application of Information and Communication Technology (ICT) to serial collection and control in academic libraries can greatly enhance efficiency, accessibility, and management. Here are various ways in which ICT is commonly applied in this context:

Digital Subscription Management:

Academic libraries use specialized library management systems that incorporate digital subscription management modules. These systems help in tracking, organizing, and managing electronic serials, ensuring that the library maintains up-to-date access to digital content.

Electronic Resource Management (ERM) Systems: ERM systems assist in the systematic management of electronic resources, including serials. These systems provide features for license tracking, renewal

alerts, and usage statistics, streamlining the acquisition and control of digital subscriptions.

Online Catalogues and Discovery Platforms: ICT is applied to create and maintain online catalogues and discovery platforms that enable users to search and access both print and electronic serials. These systems enhance discoverability and accessibility for library patrons.

Remote Access and Authentication: ICT enables remote access to digital serials for users, allowing them to access resources from anywhere. Authentication systems ensure secure access, managing user permissions and complying with licensing agreements.

RFID Technology: Radio Frequency Identification (RFID) technology is employed for efficient circulation and inventory management of print serials. RFID tags can automate tasks such as check-in, check-out, and inventory control, improving overall collection management.

Some vendor and subscription agent such as sweets, Black wall/safari etc. offer subscribed access to their on line databases. Ulrich, a notable serial vendor had Ulrich plus CD-ROM (Compact Disc Read Only Memory) database accessible through the internet and world-wide web (www). There are other silver coated CD-ROMs such as AIDS line, Medline, psychic, and index to foreign legal periodicals. Library and information sciences Abstract (LISA), that contain journal articles and abstract. There is also AGOBA (Accesses to Online Research in Agriculture) which provides access to 150 journals in agriculture, biology and related sciences. Others include EBSCO-HOST and E-Granary for current journals in various disciplines. The essential Electronic Agricultural Library (TEEAL) also known as "Library in a box which comprises 256 disks covering full text articles of 130 core

agricultural journals from 1993 to 1998 (Ikhizama, 2004). The implication of ICT Intervention in serials collection and control is that libraries worldwide can have access to numerous journal title on line without having them physically displayed on racks or shelves.

Constraint to the Use and Application of ICT to Serial Collection in Academic

Information and Communication Technology (ICT) has significantly transformed various aspects of library operations, including serial collection management in academic libraries. However, there are certain constraints and challenges associated with the use and application of ICT in this context. Here are some potential constraints:

Implementation and maintenance of ICT infrastructure require significant financial investment. Academic libraries, especially those with limited budgets, may struggle to afford the necessary technologies and updates. Inadequate technological infrastructure can hinder the effective utilization of ICT in serial collection management. Slow internet speed, outdated hardware, or insufficient software can impede the seamless integration of technology.

The successful application of ICT relies on library staff having the necessary skills and training. Lack of training programs or resistance to adapting to new technologies among staff can be a barrier to the effective use of ICT. Many academic libraries may already have established systems for managing serial collections. Integrating new ICT solutions with existing systems can be challenging and may require significant modifications, leading to resistance from staff and disruptions in workflow.

Some academic libraries face challenges related to licensing agreements and access to digital content. Issues such as restricted access, limited simultaneous users, or complex licensing terms can impact the efficient use of ICT in managing serial collections. However, the application of ICT to library operations especially serial management has faced a lot of challenge. This goes on to show that those responsible for the development of the libraries, such as government, private – agencies as well as individual librarians have not played their expected roles effectively. The libraries have been constrained to play an important role because of slow pace and absence of the use of new technologies in the delivery of libraries information services. This situation is at variance with the modern trend of computerization in all aspects of human endeavour.

The lack of steady electricity supply is another problem faced by the library as constant power outages have made the sector so unreliable that electronic facilities break down easily. The high cost of ICT equipment has also contributed to the slow patronage coupled with the dwindling financial resources from government. Another problem is the lack of trained and technical experts to manage the Information and Communication Technology (ICT) equipment in the library. The librarians must be retrained in order to equip themselves to use ICT resources for quick library delivery services.

Low utilization and application of ICT facilities for management of serial resources may be attributed to the non-availability of serials software which will enable the use of ICT for the very complex acquisition and processing activities involved in serials functions.

Conclusion

One solution to the improvement of the library towards contributing to utilization of ICT application to serial collection is that government should make available adequate fund to the libraries to effectively equip themselves with computer and its related technologies. For the libraries to respond to the needs of the nation, there is the need to train and retrain the library staff to be knowledgeable and skillful in the use of information technologies by sending them to workshops, fresh course and in-service training on the management and utilization of information resources and technologies for the effective use of information and communication technologies in order to advance or contribute very well to the academic library in Nigeria.

Recommendations

To effectively use and apply Information and Communication Technology (ICT) to serial collection management in academic libraries, the following recommendations are brought forward:

- Authorities concern should ensure that the library has a reliable and robust ICT infrastructure. This includes high-speed internet, up-to-date hardware, and scalable software solutions to support the growing demands of digital serial collections.
- Academic libraries should invest in integrated library management systems (ILMS) that offer dedicated modules for serials management. These systems should cover acquisition, cataloguing, circulation, and analytics for both print and electronic serials.
- Academic libraries should conduct regular training sessions to equip

library staff with the necessary skills to use and manage ICT tools effectively. Ensure that staff members are familiar with the latest advancements and best practices in serial collection management.

- Encourage collaboration with other academic libraries and consortia. Shared resources and collaborative initiatives can help in negotiating better subscription deals, sharing expertise, and collectively addressing challenges related to serials.
- Prioritize user accessibility by ensuring that digital serials are accessible remotely and also implement secure authentication mechanisms and user-friendly interfaces to enhance the overall user experience.
- Promote user education programs to familiarize patrons with available ICT resources and services. Provide training sessions, workshops, and informational materials to enhance user awareness and utilization of digital serials.

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