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Influence of Library Automation on Effective Service Delivery by Library Staff in Universities in Makurdi Benue State. Nigeria.

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ABSTRACT

This study investigated the influence of library automation for effective service delivery by library staff in universities in Benue State, Nigeria Two specific objective with two corresponding research questions guided the study and Two hypotheses were formulated and tested at 0.5 level significance using Chi-square test of goodness of fit (2). Descriptive survey design was adopted. The population of the study was 272 Library staff in the three university libraries in Benue State with theentire population of 272 library staff in four universities libraries in Benue State were used for the study. The instrument for data collection was structured questionnaire titles "Influence of library automation for effective services delivery in universities (ILASDUQ). With 14 items questionnaire used to elicited information relating to the objectives of the study. The instrument was validated by three experts and to ensure internal consistency of the instrument, it was trial tested on 40 library staff in University of Jos which are not part of the study but possessed a similar characteristic. Two research assistants were used for the study. Data collected were analyzed using Descriptive statistic of Mean and Standard Deviation to answer the research questions of the study. The following findings were revealed: the following major findings were made: Automation of library significantly influence cataloguing for effective service delivery by library staff in universities in Benue State, automation of library significantly influence circulation for effective service delivery by library staff in universities in Benue State The study University libraries should allocate adequate financial resources and institutional support essential for successful implementation and maintenance of library automation systems, Institutions should organize regular training sessions and workshops to enhance the technical competencies of library staff in utilizing library automation software.

Keywords: Influence of Library Automation, effective, service delivery.

1. INTRODUCTION

A library is a key social institution with the primary function of acquiring, processing, organizing, preserving, and maintaining both print and digital resources for its users. It is responsible for gathering information-rich materials, systematically organizing them to ensure easy access for reference and dissemination purposes. Libraries serve as beacons of information, addressing the growing demand for knowledge across different subjects and levels. In this context, the university library plays a crucial role, acting as the backbone of the academic system by supporting teaching, research, and curriculum development through the provision of information resources and services (Nayana, 2019). University libraries are vital to higher education, serving as key centers for academic development and intellectual discovery. They provide a wide range of resources, such as books, journals, and digital content, which are crucial for students and faculty to conduct research, study, and teach. More than just collections of information, these libraries cultivate a learning culture by offering spaces for study, collaboration, and idea exchange. Modern libraries also emphasize building information literacy, helping users effectively find, evaluate, and apply information. As Oakleaf (2010) states, "Information literacy is a key outcome for libraries, empowering users to access, evaluate, and use information effectively. Additionally, they are embracing technology by offering digital tools and resources to enhance research and learning. This shift mirrors the evolving nature of higher education, where digital access and online materials are increasingly important, reflecting the ongoing digitization of educational resources (Johnson, 2019). By fostering an environment that promotes academic achievement as university libraries continue to play a central role in supporting both individual and group intellectual efforts.

The university library has been described by Igbashal,Asue and Beetseh (2019) as " the heart of the university". It is the brain and the central point of intellectual activities. It play a crucial role in supporting formal education, promoting literacy, and cultivating a culture of lifelong learning. Moreover, they serve as community anchors, hosting events, workshops, and providing a quiet haven for contemplation. In an era marked by rapid technological advancements, libraries remain not only guardians of the past but also gateways to the future, embodying the timeless importance of access to knowledge and information for the enrichment of society.

According to Oluwaniyi (2015), University library is the central point of all academic activities where staff and students resort to for academic nourishment. University library as the heart of the university system provides suitable materials useful for teaching, learning and research thus supplement classroom-teaching work along with provision of knowledge required to attain intellectual pursuits. Library is a collection of books and other forms of recorded information purposefully selected and systematically organized and preserved by qualified library personnel for use by either the public or a target group. The provision of library services is therefore crucial and indispensable to educational system. Every school needs a library; teachers and students need to use library collections for teaching and learning process (Emasealu 2019). Today, with the advent of computer and internet technology, presents a great challenge to the traditional library management; in that, in the era of traditional library management system, information resources were basically in print form and the card catalogue was the entry point to the library's physical holdings which makes many libraries to experience backlog in cataloguing and circulating of their information materials. Therefore, the area where change is essential is in the area of library automation process, as a result of the information explosion and the development in information technology (IT), it is imperative for university library to go outside the walls of its own collection to satisfy its clientele information needs (Adekanye, 2015). In order to exploit the immense information resources available in this global village, a library must be automated and university libraries, in particular, need to join this trend if they are not ignorant of the enormous role of library management systems in meeting the information needs of the 21st century library users. These 21st library users are more sophisticated in their quest for information. In order to satisfy these set of users, libraries have to shift from the traditional way of acquiring, processing, storage and disseminating information in a more feasible way with which library operations and resources are projected to the whole world through ICT. The idea of computerization of library gave birth to the development of library automation.

The adoption of library automation has significantly transformed service delivery in university libraries. Automation streamlines routine tasks such as cataloguing, circulation, and acquisitions, enabling staff to manage large volumes of data efficiently. By leveraging information technology, library staff can focus more on providing advanced services like research support and information literacy training, improving user satisfaction. This role can be achieved quickly and efficiently only through modern technologies, which will contribute to making academic library services more effective and efficient. Moreover will enhance user satisfaction with the services provided and save time for both library staff and beneficiaries (Ajani & Buraimo, 2022). .Moreover, automation facilitates seamless access to digital resources and remote services, aligning with the growing demand for accessible academic resources in modern education. However, for full benefits, ongoing training in ICT skills is essential to keep staff updated on emerging technologies, ensuring optimal service delivery in automated environments. Library automation holds paramount importance in modernizing and streamlining library operations, significantly enhancing efficiency and accessibility. By leveraging technology to automate routine tasks such as cataloguing, circulation, and inventory management, librarians can redirect their focus towards more value-added services, fostering an enriched user experience. Automated systems facilitate quick and accurate retrieval of information, reducing the time spent on manual tasks and enabling libraries to handle larger volumes of data. Moreover, these systems enhance resource discovery, ensuring patrons can easily access a wealth of information. Additionally, library automation contributes to improved data accuracy, timely updates, and the seamless integration of digital resources, thereby promoting a more responsive and technologically advanced environment that aligns with the evolving needs of patrons in the digital age (Igbudu M.T., Asen and Tyopev. (2020).

According to Groover, M. P. (2020), Automation refers to the technique of making an apparatus, a process, or a system operates automatically." In other way, Automation is the use of computers to perform duties that are done manually. Library automation is the application of mechanical and electrical devices to carry out certain tasks in the library which was formerly performed manually. It is the application of information and communication technology to take the place of human organ of observation, effort and decision in order to achieve and improve productivity and efficiency in the library. Therefore, Library automation can be defined as the utilization of computer and other information communication technologies for provision of better, wider, immediate and relevant information to users at the right time in order to sustain and manage different library resources and operations such as acquisition, cataloguing, circulation, serials and provision. Library automation no doubt offers information managers many opportunities to improve Library services delivery to their clients. It makes information resources easier to be located and retrieved. Also, it enables library staff to serve library patrons better by facilitating execution of multitude operational tasks such as cataloguing, acquisition, circulation, OPAC, management of e-resources and reference services among others with less stress.

As the rate of publication increased, libraries realized that they could not acquire and process materials fast enough with traditional manual systems and that automation could help to control costs on labour-intensive operations, Borgman (2019), added that the goals for library automation include: efficiency of internal operations, access to local library resources, and access to resources outside the library. Library automation in university libraries has evolved from managing internal library operations to providing access to information and information resources in various formats and in many locations through a combination of Information and Communication Technologies (ICT), following this development, there is a paradigm shift from local collections to global information access, thus making it possible for the removal of geographic constraints to library services (Gbaje 2017).

Library automation services refer to the process of automating in-house functions such as acquisition, cataloguing, circulation, serial controls to make easy access to information. It means the application of machines to perform the different routine, repetitive and clerical jobs involved in functions and services of the libraries. Automation process entails the integration and application of the intricacies of Information Communication Technologies (ICT's) into the work activities such as open software. In view of this, the use of open source software packages is being embraced by libraries and librarians for effective operations and productivity. The question is "how sustained are these packages. Sustainability in relation to library is the physical development and institutional operating practices that meet the needs of present users without compromising the ability of future generations to meet their own needs (UCLA). For libraries to be sustained in this era of global village as a result of Information Communication Technology, they must be ready to transform their operations and information environment through automation to meet users' needs promptly. Library Automation processes involved the use of software, the library software such as CDS/ISIS, Integrated Management System, KOHA, ADLIB, E-Print, DSPACE, GLAS, SLAM, VIRTUA, TINLIB,

and ALICE are the heart of any automation programmes in the university libraries for effective service delivery (Ujoumunna; Nyemezu and Lowery (2021)

ICT have greatly improved the provision of information services in the library and its influence has revolutionized all the routine activities in the library. Library automation has Influence Cataloguing and Circulation Operation for Library Services delivery. Before library automation, cataloguing procedure was done manually using the Anglo America Cataloguing Rules (AACR 2) and classification schemes by different libraries to process their information materials.

Cataloguing is a critical intellectual activity that involves thoughtful analysis and decision-making when assigning classification numbers to information materials. This process is often time-consuming, leading many university libraries to face cataloguing backlogs, which hinder the smooth transition of materials to the circulation and reference sections. Due to the complexity, time, and cost involved in this process, university libraries have increasingly depended on copy cataloguing, particularly Cataloguing-in-Publication (CIP) data provided by institutions like the Library of Congress. With the advent of automation, manual cataloguing was gradually replaced by MARC (Machine-Readable Cataloguing) formats, allowing for the transfer of catalog data on tapes or within books as part of the CIP program. The subsequent introduction of the Online Public Access Catalogue (OPAC) enabled libraries to transition further into digital systems, where users could search and browse indexed records via Telnet clients, mimicking the traditional card catalogue navigation experience. This shift in cataloguing and library management sparked a growing interest among university libraries in developing and implementing computer-based circulation systems, which have now become integral to modern library operations. Circulation service is the mechanization of activities such as charging of books to users, renewing of books, processing, reservation, monitoring of utilization of books, operating short term loans of document processing, overdue notices and calculating fines, answering library queries, discharging returned materials and checking for possible hold request. Circulation system operation is the computerization of all the activities that are involved in the provision of services to the users (Olufeagba 2017). Therefore, automated circulation service controls sub-system which includes all the features and function needed to keep tract of the location of specific items (e.g., in reserve collection on long-term loan to a faculty member on inter – library loan, at the bindery or branches etc.), circulate them efficiently, and carry out all the checking, discharges and renewals. This system can automatically check borrower's records for overdue items; personalize messages, overdue notice, recall and reservation of library materials and also keep an up-to-date record of the location of all types of library materials in circulation and keep daily record of the increase of library materials using currently awareness service (CAS).

Statement of the Problem

The rapid advancement in information technology has transformed service delivery in libraries worldwide, and university libraries are not left out. Libraries automation help to enhanced efficiency, accuracy, and improved user access to information easily by streamlining operations like cataloguing and circulation. However, in Benue State, many university libraries still grapple with effective service delivery, largely due to limited automation infrastructure, inadequate training, and other systemic challenges.

Despite the benefits of automation for library staff and library users, universities libraries in Nigeria are still at the crawling stage of the automation of their library services. It was observed by the researcher that cataloging and circulation include references service are providing information to library users using old manual method, this have hamper quick and easy access to information materials as library staff provide services manually instead of automation where library users can access any needed information from every four-wall of the globe. if the problem of automation is not address in university for library to be fully automated, and for users to access information materials from any location across the world, most users of the libraries especially Nigeria students will be denied access to important information materials that are supposed to use for their scholarly intercourse, as searching for information materials manually has become tedious and combarrison due to information explosion in the library.

Library is a growing organism as formulated by Ranganathan which means library grow from time to time and without automation of library easy to those resources will discourage or undermine users due to long and tedious process of searching through shelves. Nigerian universities libraries may have invested a lot of time, money and energy to see that their services and operations become automated in line with global best. But unfortunately, most of the efforts yielded underwhelming returns which has inhibited the spread of library automation in Nigeria. Nevertheless, it is expected that the arrival of automation of library will revived the hope of Nigerian Libraries staff in catching up with the rest of the world in term of information dissemination to users using modern technologies. However, this may not be so. It is against this backdrop that prompts the researcher to investigate influence of library automation on effective service delivery by library staff in universities in Benue State.

1.3 Objective of the Study

The main objective of the study is to investigate the influence of library automation on effective service delivery among librarians in universities in Benue State Nigeria. The specific objectives of the study are;

1. To determine the extent to which library automation influences cataloguing for effective service delivery by library staff in universities in Benue State.
2. To determine the extent to which library automation influences circulation for effective service delivery by library staff in universities in Benue State.

1.4 Research Questions

The following research questions were raised and served as guide to the study:

1. What is the extent to which library automation influences cataloguing for effective service delivery by library staff in universities in Benue State?

2. What is the extent to which library automation influences circulation for effective service delivery by library staff in universities in Benue State?

1.5 Statement of Hypotheses.

The following null hypotheses were formulated and were tested at 0.05level of significance:

$H0_1$: Automation of library does not significantly influence cataloguing for effective service delivery by library staff in universities in Benue State.

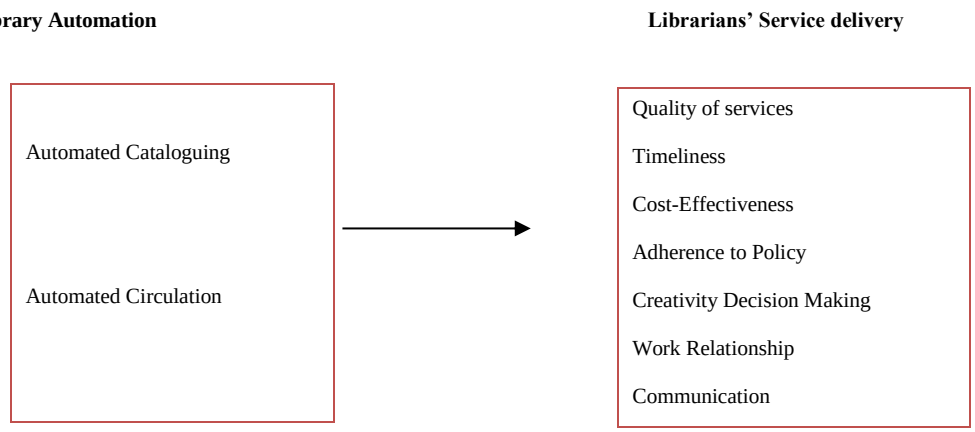
$H0_2$: Automation of library does not significantly influence circulation for effective service by library staff in universities in Benue State.

LITERATURE REVIEW

CONCEPTUALIZATION

The term 'library automation' is not a new concept as far as librarianship is concerned. According to Venkatesha and Sarasvathy (2018), it is a general term for computer based library systems that replace manual systems by a faster and more effective means of operation through information and communication technology (ICT), Jan and Sheikh (2011). According to Otunla (2016), library automation is being referred to as the application of computers and ICT to complement the manually performed library operations. Olakoge and Kolawole (2019) defined library automation as the process of automating all the departmental units of the library like reader services, technical unit, acquisitions, gifts and exchanges so that all the routine operations are performed electronically. Abbas (2014) indicated that library automation performs by bringing about improvement in accessing information among library patron and also making library operations more effective and efficient for library users with less stress, by using machines and ICT operations.

Conceptual Model



The conceptual model shows linkages and relationship between library automation and librarians services, Automation (independent variables) and librarians' (dependent variable). Library automation in this context is related to daily activities of libraries which include acquisition processes of any materials in the library, the cataloguing of library materials, circulation process (checking in and checking out of library materials), serials control (these keep the frequency of journals) and the OPAC where library materials are visible to users. The automated services in the library helps library staff to process library materials without wasting time and enable them to meet up with the request from their patron. The automated services in the library will bring improvement in the quality of services rendered by the library. The term 'library automation' is not a new concept as far as librarianship is concerned. According to Venkatesha and Sarasvathy (2018), it is a general term for computer based library systems that replace manual systems by a faster and more effective means of operation through information and communication technology (ICT).

Igbudu, Asen and Tyopev (2020) in accordance, investigated the influence of library automation using Koha Software for library services in public university libraries in North Central Nigeria. Data collection was achieved through a self-developed questionnaire "Influence of Koha Software on Technical Operations Questionnaire" (IKSTOQ). Data was analysed using descriptive statistics and chi-square at 0.05 level of significance. It was found that Koha software packages have significant effect on acquisition, cataloguing and classification operations in public university libraries in North Central Nigeria. The study is related to the present study because it investigated Influence of library automation using Koha Software for library services. Both studies differ from each other in-terms of content coverage as the present study intends to cover only universities in Benue State regardless of its ownership as the study under review focused all public Universities in North Central Nigeria. Furthermore, both studies similar in-terms of statistical tools employed, as the study under review used descriptive statistics of Mean, Standard Deviation and Percentages to answer the research questions and Pearson Product

Moment Correlation Analysis, Multiple Regression Analysis using Partial Lease Square Method (PLSEM), were used in testing the null hypotheses at 0.05 level of significance, while the present study also used Chi-Square. This is the gap the present study intends to fill.

Library Automation has bridged the gap encountered nowadays as a result of the increased in the number of people using libraries, coupled with the high demand of library and information services, thereby rendering the manual system of organizing and retrieving information less effective. Libraries had no choice but to embrace mechanized information retrieval system. Ibrahim & Ajala (2017), stated that mechanized information retrieval system is the best way for improvement over the library manual system; only input and retrieval processes were mechanized as against other processes such as acquisition, circulation, cataloguing. He further buttressed the fact that due to the high demand for information and the number of people wanting to use the system, the system was not able to cope with the challenges of time; hence the system was short lived. The advent of the computer age provided solutions to this problem. The mechanical way of library operations gave birth to automation. Okoro, (2022), rightly noted that never had human kind devised a more powerful or versatile machine than the computer.

Dolapo Peter and Joseph Adeniyi (2019) investigate effect of library automation on the performance of librarians in South-West, Nigeria. The study adopts survey research design; the population for study was 349 librarians from 22 private university libraries in South-West Nigeria. Data was collected and analysed using descriptive statistics and Pearson's Product Moment Correlation Coefficient. Findings of the study revealed that out of the six library services identified in the study, five were fully automated and 90% of the private university libraries have automated their services. From the findings, librarians' performance had been increased by 70% as a result of automated library in private universities in South West Nigeria. The study showed that there was significant and positive relationship between library automation and librarians' performance in university libraries. The study is related to the present study because it investigated the effect of library automation on the performance of librarians. Both studies differ in-terms of geographical and content coverage as the present study intends to cover all universities in Benue State regardless of its ownership as the study under review focused only on private Universities. Also, the study under review focused on the effect of library automation on librarians' performance in private universities in South-West, Nigeria, while the present study focus on influence of library automation on services delivery in universities in Benue State. Both studies differ in-terms of statistical tools employed, as the study under review used descriptive statistics and Pearson's Product Moment Correlation Coefficient while the present study use descriptive statistics of Mean, Standard Deviation to answer research question.

Igbashal and Beetseh K (2021) investigated the effect of library automation on effective library services delivery in academic libraries in Plateau State, Nigeria. This is of interest as library automation for service delivery is in consonant with impact of library automation in academic library for effective service delivery. The study was guided by five objectives with five corresponding research questions guided the study and five hypotheses were formulated and tested at 0.05 level of significance. The study adopted a survey research design. The target population for the study was the entire 321 library staff made up on professional and non-professional library staff in the academic libraries in Plateau State. The study made use of all the 321-library staff in the three Institutions University of Jos, Plateau State University and Federal College of Education, Pankshin. The instrument use for data collection was a self-developed structured questionnaire titled "Impact of Library Automation on Effective Library Service Delivery Questionnaire (ILAELSDQ). The reliability for the instrument was trial test using Cronbach alpha method yield reliability coefficient of 0.86. The Data collected was analysed using Means and Standard Deviation to answer the research question and Chi-Square Statistic to test the null hypotheses at 0.05 level of significance. Findings of the study revealed that, Koha software, Internet and Compact Disc Read-Only Access Memory (CD-ROM) significantly impacts positively, effective library service delivery in academic libraries in Plateau State. Further, the findings revealed a positive impact of Mobile technology and Online Public access (Catalogue on effective library service delivery in academic libraries in Plataea State. The study concluded that automation of library operations in academic libraries in Plateau State has greatly impact effective library service delivery among the staff. The study recommendations among other that academic libraries yet to adopt Koha software to library operation should take drastic efforts in doing so as this can reduce work load on library staff this enhancing their effective service delivery, acquisition and installation of academic library's own internet server to ensure that the library has absolute control over its activities to deliver effective library service should be adopted in libraries as this may facilitate resource sharing by library staff thus enhancing their delivery of library services and since the use of OPAC has been found to greatly impact effective service delivery in academic libraries, libraries which has not subscribed to its use in cataloguing of library resources should endeavour to do as this can reduce the work of the cataloguing staff to address promptly any challenges that they may encounter in operating the system.

The study is related to the present study because both study library automations on effective library services delivery in academic libraries. However, both studies differ in that reviewed study focused on the effect of library automation on effective library services delivery in academic libraries, while the present study intends to look at influence of library automation on services delivery in universities in Benue State. The both study also differ in term of objective. The both study further differ in terms of geographical locations. The study under review was carried in two schools in the Jos, while the present study will be carried out in all universities in Benue State. This is the gap the present study intends to fill.

Influence of library automation on cataloguing for service delivery.

The use of information and communication technology (ICT) is gaining momentum in university libraries especially now that most universities in Nigeria are adopting ICT in the development and improvement of their services (Oriogu, Ogbuiyi and Ogbuiyi, 2014). ICT has greatly improved the provision of information services in the library and its influence has revolutionized all the routine activities in the library. This change was possible because of automation. Library automation is the application of mechanical and electrical devices to carry out certain tasks, in the library which was formerly performed manually. It is the application of information and communication technology to take place of human organ of observation, effort and decision in order to achieve and improve productivity and efficiency in the library. Before library automation, cataloguing procedure was done manually using the Anglo America Cataloguing Rules (AACR 2) and classification schemes by different libraries to process their information materials. Therefore, cataloguing is an intellectual process that requires rationale consideration and decision making in determining the class number of an information material;

this whole process is time consuming which makes many academic libraries to experience backlogs which slows the smooth flow of information materials to circulation and reference sections. As a result of this rigorous process that takes time and cost intensive; university libraries have greatly relied on cataloguing copy (cataloguing in Publication) – i.e., descriptive cataloguing information done by Library of Congress. Hence, the advent of automated system transformed the manual cataloguing to MARC tapes and on books as the cataloguing in Publication. Later the Online Public Access Catalogue (OPAC) was adopted by academic libraries, using a Telnet client, and now users could search a handful of pre-coordinated indexes and browse the resulting display in much the same way they had previously navigated the card catalogue. It is pertinent to note that the automation of cataloguing only focus on one part of cataloguing activity which involves using a computer to facilitate access to cataloguing copy. It is as a result of this change in the library system, that most academic libraries have developed high interest in computer based library system.

Influence of library automation on circulations for service delivery

According to Olufeagba (2017), circulation system operations is the mechanization of activities such as charging of books to users, renewing of books, processing, reservation, monitoring of utilization of books, operating short term loans of document processing, overdue notices and calculating fines, answering library queries, discharging returned materials and checking for possible hold request. Circulation system operation is the computerization of all the activities that are involved in the provision of services to the users. Therefore, automated circulation system operation controls subsystem which includes all the features and function needed to keep tract of the location of specific items (e.g., in reserve collection on long-term loan to a faculty member on inter – library loan, at the bindery or branches etc.), circulate them efficiently, and carry out all the checking, discharges and renewals. This system can automatically check borrower's records for overdue items; personalize messages, overdue notice, recall and reservation of library materials and also keep an up-to-date record of the location of all types of library materials in circulation and keep daily record of the increase of library materials. It is based on this discourse that Robert (2019) maintains that a more sophisticated use of statistics (which had hitherto been unavailable and unrealistic with manual system) to forecast, stimulate and model all phases of library operation especially those of circulation which will eventually sharpen management's ability to control by an order of magnitude the strength of library decision making and in formulating policy guidelines.

This is why Anozie (2020) observes that an automated circulation system operation increases consistency in the system operations; improves response time for queries and other functions. He also notes that automated circulation system could simplify implementation of daily activities because circulation system is the "service centre of the library". Definitely Majid, Nadeem & Muhammad (2021) maintain that: "Library interest in automated circulation control is, in large part, based on a long-standing awareness of the problems inherent in manual circulation systems. These problems include labour-intensive and time-consuming recordkeeping work routines, in- accuracy, high personnel turnover, and inability to generate statistics about circulation activity, and the lack of an interface between circulation files and other library files which contain much the same bibliographic data. Circulation system operation is one of the most widely automated library operations, and it is often the first and simplest activity to be automated in a given library, possibly because circulation system operations bear an obvious resemblance to inventory management, retail charge card operations, and other transaction processing activities which have been automated in general business.

In the late 1970s, before the advent of integrated library systems, the circulation operations were firstly intended to computerize. The circulation control system was integrated with the catalogue module, and vendors were offering a circulation system with an Online Public Access Catalogue from the late 1970s; these functionalities expanded their products as a library management system. Automation has been impacting circulation since the advent of computers in the field of library organizations. As Jahangir, Siddique & Adil (2021) described the impacts and benefits of automation on circulation functions in observed models: a complete record of holdings from circulation file; file accuracy; up-to-date information of circulation activities such as charges, overdue, reserves and renewals; automated updates of file through a computer system; automatic due notices of fines and overdue; borrower did not fill charge slips; feedback of circulation detail to renewal subsystems and acquisition; statistics derived from classifications, charges, discharges, reserves, and renewals. Musa (2016) conducted a research work on "Development and Validation of Circulation Software Package for Libraries in Federal Universities of North Central, Nigeria" and concluded the importance of library automation systems that many benefits can be availed from automated library systems as online interlibrary loans facility can be availed at decent charges.

METHODOLOGY

The design for this study is a survey design. It is a type of research in which a group of people is studied by collecting and analysing data from opinions of a few people considered to be a representative sample of the entire population through the use of questionnaire as one of the methods for data gathering techniques for the purpose of describing, interpreting and evaluating the phenomena as they exist (Emaikwu, 2019).The choice of the survey research design is justified because the study has to do with collecting data on the opinions of a group of persons regarding a situation or phenomenon that is already on ground which can then be generalized to the entire population as well. Benue state was the area of study with emphasis on three universities namely, Joseph Sarwuan Tarka University, Benue State University, and University of Mkar, Mkar, The population of the study was 272 of all the professional and para-professional library staff in universities libraries in Benue State. The total enumeration sampling technique was used to cover all the two hundred and seventy-two (272) professional and paraprofessional library staff at the (three libraries selected. This method is adopted because of the small size of the population. The instrument for data collection was self-structured questionnaire with 14 items that elicited information based on the objectives of the study. The response options were very high influence (VHI), high influence (HI), low influence (LI) and very low influence (VLI) with the benchmark of 2.50 and above. A face-to-face method was employed in administering the questionnaire. Data was analyzed using mean and Standard. A mean score of 2.50 and above was considered as influence while less than 2.50 was rejected. Meanwhile, Chi-square test of goodness of fit (2) was used in testing the research hypotheses at 0.05alpha level of significance, and the decision was based on P-value and Alpha values. Where P<•05, the null

hypothesis was rejected and the result was considered significant, but if P>•05, the null hypothesis was accepted and the result was not considered significant.

RESULTS

Research question 1 to what extent does library automation influences cataloguing for effective service delivery by library staff in universities in Benue State?

To answer this research question, data on the extent to which library automation influences cataloguing for effective service delivery by library staff in universities in Benue State were collected and analyzed as presented on Table

Table 1: Mean and Standard Deviation analysis of the extent to which library automation influences cataloguing for effective service delivery by library staff in universities in Benue State

S/No	Item Statement	Mean	Std. Dev	Decision
1	Library automation reduce the time spent in cataloguing processes	3.31	.97	High Extent
2	Automation of Cataloguing (MARC) enhance librarians to provide materials quickly and fast to user	3.38	.92	High Extent
3	Automation of cataloguing help library staff to scanned document directly into the catalogue database	3.51	1.10	High Extent
4	Automation of cataloguing help librarians to use bar codes on books for easy retrieval.	3.18	.99	High Extent
5	Automation of cataloguing service enhance librarians for quickly identifies inventory stock when budgeting for new library materials.	3.17	.88	High Extent
6	Automated cataloguing enhance librarians to improve on the task of keeping track of library materials that much easier.	3.42	.91	High Extent
7	Automation of Cataloguing help librarians for easy references using online vendor-supplied catalogues	2.75	.97	High Extent
	Cluster Mean	**3.25**	**.96**	**High Extent**

Table 1 shows the mean responses of the respondents on the on the extent to which library automation influences cataloguing for effective service delivery by library staff in universities in Benue State with corresponding Standard Deviations values. From the table as presented, the respondents rated 'high extent' on all the items (Items 1-7) with Mean values ranging from 2.75 – 3.51 which are above the benchmark of 2.50. The table also revealed close standard deviation values ranging from .91 – 1.10 which showed the homogeneity of the responses of the respondents. The table further revealed a cluster Mean of 3.25 and SD = .96. With this cluster mean (3.25) which is above the benchmark of 2.50, it means that, the extent to which library automation influences cataloguing for effective service delivery by library staff in universities in Benue State is high.

4.1.2 Research question 2

To what extent does library automation influences circulation for effective service delivery by library staff in universities in Benue State?

To answer this research question, data on the extent to which library automation influences circulation for effective service delivery by library staff in universities in Benue State were collected and analyzed as presented on Table 2

Table 2: Mean and Standard Deviation analysis of the extent to which library automation influences circulation for effective service delivery by library staff in universities in Benue State

S/No	Item Statement	Mean	Std. Dev	Decision
8	Automation of circulation section helps to keep track on location of item in the library in turned enhances their service delivery	3.19	1.02	High Extent
9	Automation of circulation section help librarians to check the borrower/ loan, overdue books to enhances their service delivery	3.27	.87	High Extent

Table 2 shows the mean	10	Automation of Circulation section help librarians to saves time of users during search.	3.41	.87	High Extent
	11	Automation of Circulation section increase sharing of information across wide range which enhances service delivery	3.67	.79	High Extent
	12	Automation of Circulation section help librarians to reduces error during circulation of materials	3.26	.97	High Extent
	13	Automation of Circulation section aid easy transfer of information which enhance service delivery	3.49	.88	High Extent
	14	Automation of Circulation section increases multiple access to information which enhances service delivery	3.38	.83	High Extent
		Cluster Mean	**3.38**	**.89**	**High Extent**

responses of the respondents on the on the extent to which library automation influences circulation for effective service delivery by library staff in universities in Benue State with corresponding Standard Deviations values. From the table as presented, the respondents rated 'high extent' on all the items (Items 8-14) with Mean values ranging from 3.19 – 3.67 which are above the benchmark of 2.50. The table also revealed close standard deviation values ranging from .79 – 1.02 which showed the homogeneity of the responses of the respondents. The table further revealed a cluster Mean of 3.38 and SD = .89. With this cluster mean (3.38) which is above the benchmark of 2.50, it means that, the extent to which library automation influences circulation for effective service delivery by library staff in universities in Benue State is high.

Hypotheses Testing

The hypotheses of the study were tested using Chi-Square ($\chi 2$) goodness of fit at 0.05level of significance.

Hypothesis 1: Automation of library does not significantly influence cataloguing for effective service delivery by library staff in universities in Benue State.

Table 4: Chi-Square Goodness of fit test of significance of the influence of Automation on cataloguing for effective service delivery by library staff in universities in Benue State

Response Options	Observed N	Expected N	Df	$x^2 cal$	Sig	α - level	Remark
SA	94	68.0					
A	136	68.0					
D	24	68.0					
SD	18	68.0					
Total	272		3	243.083	.000	.05	Significant

Df = Degree of Freedom; $x^2 cal$ = Chi-Square Calculated Value; Sig = P-Value, P<0.05

Table 7 shows the Chi-square calculated value ($\chi 2$) of 243.083, degree of freedom df =3 and a sig (P-value=0.00) which is less than the alpha value (α=.05). Since P<.05, the result is significant, therefore the null hypothesis is rejected. This implied that, automation of library significantly influence cataloguing for effective service delivery by library staff in universities in Benue State.

4.1.8 Hypothesis 2: Automation of library does not significantly influence circulation for effective service delivery by library staff in universities in Benue State

Table 4: Chi-Square Goodness of fit test of significance of the influence of Automation on circulation for effective service delivery by library staff in universities in Benue State

Response Options	Observed N	Expected N	Df	$x^2 cal$	Sig	α - level	Remark
SA	106	68.0					
A	138	68.0					
D	16	68.0					

SD	12	68.0					
Total	272		3	272.154	.000	.05	Significant

Df = Degree of Freedom; $x^2 cal$ = Chi-Square Calculated Value; Sig = P-Value, P<0.05

Table 4 shows the Chi-square calculated value ($\chi 2$) of 272.154, degree of freedom df =3 and a sig (P-value=0.00) which is less than the alpha value (α=.05). Since P<.05, the result is significant, therefore the null hypothesis is rejected. This implied that, automation of library significantly influence circulation for effective service delivery by library staff in universities in Benue State.

Summary of Major Findings

The following findings emanated from the study:

- Automation of library significantly influence cataloguing for effective service delivery by library staff in universities in Benue State
- Automation of library significantly influence circulation for effective service delivery by library staff in universities in Benue State

4.3 Discussion of Findings

Based on the results of the study, the following were discussed:

The first finding of the study revealed that automation of library significantly influence cataloguing for effective service delivery by library staff in universities in Benue State. This finding corroborate with that of Igbudu, Asen and Tyopev (2020) whose study on the influence of library automation using Koha Software for library services in public university libraries found that Koha software packages have significant effect on cataloguing and classification operations in public university libraries. The finding also agreed with that of Ajani and Buraimo (2021) who investigated the impacts of automation on library services delivery and found that automation of library services makes it easier for locating of library materials on the shelves easier and reduces repetitiveness of routine jobs. More so, the findings of the study agree with that of Ken-Agbiriogu and Okorie (2022) who examined library automation and staff job performance in university libraries in South-East, Nigeria and found that the correlation between automated cataloguing/classification and staff job performance is high. This parallelism in findings can be attributed to several key factors. Firstly, the adoption of automation technologies streamlines cataloging processes by digitizing and centralizing library collections. Hence, by utilizing software such as Koha, librarians gain access to robust cataloging tools that facilitate quicker and more accurate organization of materials. This efficiency translates to improved service delivery as staff can devote more time to assisting patrons rather than manually cataloging resources. Secondly, automation enhances the accuracy and consistency of cataloging and classification operations. With automated systems, libraries can enforce standardized metadata schemas and classification schemes across their collections. This standardization minimizes errors and discrepancies in catalog records, ensuring that users can easily locate desired resources through uniform search queries. Moreover, automation enables libraries to keep pace with the evolving landscape of information management and retrieval. In an era characterized by exponential growth in digital content and interdisciplinary research, traditional manual cataloging methods may prove inadequate. By harnessing automation tools, libraries can efficiently manage diverse formats of information, including electronic resources and multimedia materials, thereby catering to the varied needs of their user community. Furthermore, the findings reflect the growing recognition among library professionals of the strategic role that automation plays in modernizing library services. As libraries strive to remain relevant in an increasingly digital world, investing in automation technologies becomes imperative for staying competitive and meeting user expectations for seamless access to information

Secondly, the findings of the study revealed that automation of library significantly influence circulation for effective service delivery by library staff in universities in Benue State. The finding agreed with that of Dolapo and Adeniyi (2019) who investigated the effect of library automation on the performance of librarians in South-West, Nigeria and found that that there was significant and positive relationship between library automation and librarians' performance in university libraries. The finding also align with that of Daniels and Onyema (2020) who found that there is a significant relationship between web application skills, library networking skills and cloud technology skill, and effective library services delivery. More so, Ken-Agbiriogu and Okorie (2022) revealed that automating library operations will help to enhance librarians and or information managers' effectiveness in performing their routine task thereby getting them fulfilled with the resultant high-quality output. This alignment can be attributed to several underlying factors. Firstly, automation technologies streamline circulation processes by automating tasks such as check-in, check-out, and renewal of library materials. By implementing systems like RFID (Radio Frequency Identification) or integrated library management software, libraries can expedite circulation transactions, reduce waiting times, and alleviate workload burdens on library staff. This efficiency translates into improved service delivery as patrons experience faster access to resources and enhanced user satisfaction. Secondly, automation facilitates the implementation of self-service options, such as self-checkout kiosks or online renewal portals, empowering patrons to independently manage their borrowing activities. By offering self-service functionalities, libraries not only augment convenience for users but also free up staff resources to focus on more complex inquiries and specialized services, thereby enhancing overall service quality. Moreover, automation enables libraries to gather and analyze circulation data more effectively, providing insights into usage patterns, resource popularity, and collection needs. Armed with this information, librarians can make data-driven decisions regarding collection development, resource allocation, and service enhancements, ultimately optimizing the library's offerings to better meet the evolving needs of its user community. Furthermore, the findings reflect a broader trend within the profession towards recognizing the strategic value of automation in modernizing library operations and enhancing user experiences. As libraries increasingly embrace automation technologies to adapt to the digital age,

the positive impact on circulation services becomes increasingly apparent, driving improvements in service efficiency, effectiveness, and patron satisfaction.

Conclusion

Based on the findings of the study, the researcher concluded that there is a clear positive influence of library automation on various aspects of service delivery, including cataloging, and circulation. This suggests that the adoption of automation technologies enhances the efficiency and effectiveness of library operations, ultimately improving the quality of services provided to users.

Recommendations

Based on the findings of the study, the following recommendations were made

- University libraries allocate adequate financial resources and institutional support essential for successful implementation and maintenance of library automation systems.
- Institutions should organize regular training sessions and workshops to enhance the technical competencies of library staff in utilizing library automation software. Training programs should cover software manipulation, troubleshooting, and ICT skills development to empower staff to effectively leverage automation technologies for service delivery also university and library management should invest in upgrading and maintaining reliable ICT infrastructure within library facilities by improving network connectivity, upgrading hardware and software, and ensuring access to stable internet connectivity.

Contribution to Knowledge

The study established that library automation has enhanced effective library service delivery in terms of cataloguing and circulation. The study also established that library automation has improved effective service delivery in the library in terms of selective dissemination of information and reference services.

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