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ASSESSING THE IMPACT OF AUTOMATED CATALOGUING SYSTEMS ON CATALOGUING EFFICIENCY IN ACADEMIC LIBRARIES IN SOUTH-WEST, NIGERIA

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Abstract

This study assessed the impact of automated cataloguing systems on cataloguing efficiency in academic libraries in South-West, Nigeria. A descriptive survey research design was adopted, with total enumeration sampling capturing 89 cataloguers from 12 academic libraries across federal, state, and private institutions. Data were collected through a self-designed, close-ended questionnaire and analyzed using descriptive statistics and Pearson Product Moment Correlation (PPMC). Findings revealed that the level of automated cataloguing system operation is moderately high, with these systems being operated to a very high extent. However, challenges such as inadequate funding, limited staff skills, resistance to change, unfriendly

*interfaces, and high acquisition and maintenance costs were identified. The study showed that there was a significant relationship between library automation and cataloguing efficiency in academic libraries in South-West, Nigeria (r = .602**, P < .05); there was a significant relationship between automated cataloguing efficiency and effective service delivery in academic libraries in South-West, Nigeria (r = .761**, P < .05). It was recommended that academic library management provide adequate funding for automated cataloguing systems while developers create more user-friendly and intuitive interfaces to meet the needs of library staff and users.*

Keywords: Automated Cataloguing Systems, Cataloguing Efficiency, Academic Libraries, Library Automation, South-West Nigeria

Introduction

Academic libraries are central to the success of higher education institutions. They support learning, research, and teaching by providing access to vast collections of information resources. One of the key services offered by these libraries is cataloguing, which involves organizing and classifying library materials to ensure quick and easy access by users (Johnson, 2019). Without proper cataloguing, finding relevant resources becomes difficult, time-consuming, and sometimes impossible for students and researchers. Traditionally, cataloguing has been done manually. While this method served libraries for many years, it comes with many limitations. Manual cataloguing is time-consuming, prone to human error, and often results in inconsistent classification of resources, especially in libraries managing large collections (Ajani & Buraimo, 2022). With the growing demand for timely access to academic materials, these shortcomings have become more noticeable and problematic. To address these challenges, many academic libraries have turned to automated cataloguing systems. These systems use technology to simplify and speed up the process of organizing bibliographic records. Automation helps eliminate repetitive tasks, reduces cataloguing errors, and allows library staff to work more efficiently (Odunola et al., 2019).

Over time, automation in libraries has evolved—from simple tools for circulation and acquisitions in the mid-20th century to more advanced integrated systems that now include cataloguing functions (Igbudu et al., 2020). Well-known automated cataloguing systems such as MARC (Machine-Readable Cataloguing), Koha, and OCLC have brought about significant

improvements in how libraries manage resources. MARC helps structure cataloguing records in a consistent, machine-readable format. OCLC provides access to millions of shared bibliographic records, saving time and promoting resource sharing between institutions (Ogunniyi et al., 2023). Koha, which is free and open-source, is especially popular among academic libraries for its flexibility and low cost (Ken-Agbiriogu & Okorie, 2022). The adoption of automation is in line with the global digital transformation taking place in the education sector. Automated cataloguing systems enhance how users find and access materials through Online Public Access Catalogues (OPACs), which offer search tools with simple interfaces. These catalogues allow users to locate books and other resources using keywords, subjects, or author names, improving user satisfaction and reducing the workload of library staff (Daffi et al., 2024).

A major strength of automated cataloguing systems is their ability to process large volumes of information quickly and accurately. This feature minimizes cataloguing backlogs and ensures that new acquisitions become available to users promptly (Sikandar, 2024). Automation also allows academic libraries to connect with central databases, helping them avoid duplicate work and gain access to a wide array of resources (Emasealu, 2019). Another benefit of automation is its support for modern cataloguing functions such as metadata creation, error checking, and the use of data analytics. These features improve the quality of cataloguing and allow librarians to focus on more complex roles, such as classification and managing special collections (Ajani & Buraimo, 2022). Also, integration between cataloguing and other library operations—like acquisitions and circulation—leads to smoother and more efficient workflows (Olagoke & Kolawole, 2019). As technology continues to grow, the future of cataloguing lies in adopting artificial intelligence (AI), machine learning, and real-time data updates. AI-powered tools can identify cataloguing patterns, suggest metadata, and detect inconsistencies in records, thereby improving cataloguing accuracy and consistency (Ejiroghene, 2020). The potential of these technologies in improving cataloguing efficiency is significant, but to fully benefit from them, academic libraries must invest in infrastructure, staff training, and supportive policies (Daffi et al., 2024).

Automated systems like Koha and MARC have helped many libraries streamline their operations (Ken-Agbiriogu & Okorie, 2022). These systems also allow students and staff to spend less time searching for resources and more time using them for academic activities. One recurring issue with traditional cataloguing is that it is tedious and susceptible to mistakes, especially when dealing with large volumes of materials. Automation solves this by digitizing the cataloguing process and using built-in validation tools to identify and correct data entry errors (Ajani & Buraimo, 2022). Libraries that implement automated systems are better equipped to offer accurate, consistent, and timely access to academic resources (Ogunniyi et al., 2023). Saving time is one of the most significant gains of automation. It allows library staff to shift their focus to supporting students and managing special collections instead of spending hours inputting bibliographic data (Istifanus et al., 2023).

Another key benefit is standardization and interoperability. Using formats like MARC, automated systems such as OCLC enable libraries to share and use cataloguing data globally, reducing workload and encouraging institutional collaboration. Standardization also improves how various library functions work together. For instance, automation allows acquisitions, cataloguing, and circulation to be managed in one system. This integrated approach simplifies the librarian's job and improves the user experience (Mesagan et al., 2021). Koha has been particularly successful in helping libraries maintain consistency across cataloguing records and share resources within networks (Igbudu et al., 2020). Despite these benefits, several challenges still hinder the full implementation of automated cataloguing in academic libraries (Sugabsen & Yinasim, 2024). Many academic institutions in developing countries, including Nigeria, cannot afford the initial and recurring costs. Licenses, upgrades, and staff training stretch already limited budgets (Taufiq & Ismaya, 2024).

Furthermore, even where systems have been installed, the lack of trained personnel can limit their usefulness. Many librarians do not yet have the required IT skills to operate or maintain automated cataloguing systems effectively (Ken-Agbiriogu & Okorie, 2022). Without training, automation tools are often underused, and the library's efficiency remains low (Ejiroghene, 2020). Resistance to change among library staff is also common. Many staff who have worked

with manual systems for years are often reluctant to embrace new technologies. To overcome this, libraries must invest not just in technical training but also in change management strategies that foster innovation and adaptability (Ajani et al., 2022). Another major challenge is the poor technological infrastructure in many regions. Automated systems require stable electricity, internet access, and reliable data storage resources that are often lacking in many developing countries. Frequent power outages and network failures can disrupt cataloguing activities and affect system reliability (Sikandar, 2024). Security is another concern. Automated systems store sensitive data and are at risk of cyberattacks, such as ransomware and data breaches (Daffi et al., 2024). In light of these issues, there is a clear need to assess how automation is currently being used in academic libraries, particularly in Nigeria. Therefore this study intends to assess the impact of automated cataloguing systems on cataloguing efficiency in academic libraries in South-West, Nigeria.

Statement of the Problem

Automation in library cataloguing is meant to improve speed, accuracy, and efficiency in organizing library resources. Many academic libraries around the world have adopted automated systems to make resource retrieval easier for users. However, in South-West Nigeria, several academic libraries are still struggling to fully implement and benefit from these systems. Some libraries use automation only partially or inconsistently, making the process less effective. Others face challenges due to poor infrastructure, like irregular power supply and slow internet, which affect the performance of automated systems. In addition, the lack of skilled library staff to manage and maintain these systems causes frequent errors and delays in cataloguing. Many libraries cannot afford regular system upgrades due to limited funding, and this forces them to continue using outdated tools. These challenges slow down cataloguing and make it difficult for users, students, lecturers, and researchers to find the materials they need on time.

Moreover, when cataloguing is not properly automated, there are inconsistencies in records, which affects how well libraries share resources with one another. Although previous studies

have highlighted the advantages of systems like Koha and MARC, there is little research focused on how these tools actually perform in the local context of South-West Nigeria. Also, how much improvements in staff training or infrastructure can help is still unclear. This study, therefore, seeks to assess the impact of automated cataloguing systems on cataloguing efficiency in academic libraries in South-West Nigeria.

Objectives of the Study

The general objective of the study is to investigate the impact of automated cataloguing systems on cataloguing efficiency in academic libraries in South-West, Nigeria. However, this study will also focus on the following specific objectives to:

1. determine the level of automated cataloguing system operation in academic libraries in South-West, Nigeria;
2. ascertain the extent of automated cataloguing system operation in academic libraries in South-West, Nigeria;
3. find out the challenges associated with the use of automated cataloguing system in academic libraries in South-West, Nigeria;
4. examine the impact of library automation on cataloguing efficiency in academic libraries in South-West, Nigeria;
5. investigate the impact of automated cataloguing efficiency and effective service delivery in academic libraries in South-West, Nigeria.

Hypotheses

H_{01}: There is no significant relationship between library automation and cataloguing efficiency in academic libraries in South-West, Nigeria

H_{02}: There is no significant relationship between automated cataloguing efficiency and effective service delivery in academic libraries in South-West, Nigeria

Literature Review

Sugabsen and Yinasim (2024) highlighted the research on tools and competencies in cataloguing and classification or selected academic libraries of Adamawa state. The research employed cross-sectional survey research design. Three research objectives framed the study and included discovering the available cataloguing and classification tools, ascertaining the knowledge level of cataloguing and classification staff, and determining the issues that may be encountered when cataloguing and classifying resources. This study revealed that cataloguers and classifiers are capable, some of the newly developed cataloguing tools such as RDA and MARC were not adopted and the current major challenges facing the libraries include limited training and scarcity of professional staff. Therefore the study recommended staff training especially on RDA adequate and updated version of tools among others.

Ken-Agbiriogu and Okorie (2021) investigated the role of library automation and staff job performance in university library in South-East Nigeria. The studies used correlation research methodology. The study was informed by two research questions and two hypotheses. Automated acquisition has low but significance correlation with staff's job performance compared to automated cataloguing /classification which has high and significant correlation with staff's job performance in university libraries in south-east, Nigeria. Library operation automation will assist in improving our subject specialists' efficiency in accomplishing their ordinary undertaking, which will make them satisfied with the resultant high standard output. It shall also help in the development of the library automation knowledge base; utilization of automated libraries; efficiency and outcome of usage; positive effects; and overall result of library automation in academics.

Taufiq and Ismaya (2024) gave a brief description of the integrated library systems/software (ILS) employed in the libraries in South Sulawesi, Indonesia. It intends to draw attention to strengths and opportunities concerning ILSs and present, in short, the benefits and challenges of these systems; the cost implications of implementing the systems. The information was obtained from completed questionnaires that were distributed through an online platform as well as from interviews with specific academic libraries throughout 2019/2020. Out of 67 libraries which met the study, 53 have adopted an ILS. Nevertheless, a direct interview with

some libraries was carried out in order to find out the advantages and disadvantages of the application. According to the result of the study, most populated ILSs are SLiMS and INLISlite and other programs such as Apollo, Athenium Light, Simpus, Spektra, Jibas, KOHA, Openlibrary. The total amount of money spent is around 300 USD of average. These ILSs have aided those libraries in improving services, but where the systems are troublesome, necessary IT expertise and sufficient resources are required. An easy to use system that offers lower cost will likely be implemented in this area of research. Specifically, this research will be particularly useful for any library operating in Indonesia. Such results may also be generalized to libraries in other countries that have similar challenges of a shifting economy and technology.

Automated cataloguing system in academic libraries in some selected higher institutions in Oyo State Nigeria was examined by Odunola, Oyewumi, Ogunmodede, Oyetola and Daniel (2019). The population of the study consisted of all the forty one (41) professional and para-professional cataloguers in the cataloguing section. The finding of this study showed that the use of automated cataloguing system has the propensity to save time taken to cataloguing the information materials in the libraries. The outcome of the study also uncovered that the selected institutions did not exchange resources among themselves. The finding of the study affirm that the use of automated cataloguing system enhances the speed of cataloguing of information materials in the libraries. Hence, the study established that the automated cataloguing system in institutions' libraries is a desirable one. Therefore, the study recommended that, apart from the cataloguing section, all the other sections in the libraries should be automated and the necessary information technology tools required for effective operation of the system should be provided in the libraries.

Sodipe, Arinola, Aliyu, and Quadri (2024) examined librarians' technological competence, performance, expectancy, and perceived ease of the use of automation software in academic libraries in Ogun State. The study revealed that the primary problems affecting librarians' use of automation software are frequent virus attacks, software incompatibility, inadequate technical support, and a limited user community.

Daffi *et al.* (2024) reported the impact of library automation for efficient delivery of service duties by employees of university libraries in Benue State, Nigeria. Two research questions effectively stemming from two stated objectives guided the study and two hypotheses were carried and tested at 0.5 level of significance using Chi-square test. The following findings were revealed: the following major findings were made: Automation of library has a significant impact on cataloguing for service delivery of library staff in universities in Benue State, Automation of library has a significant impact on circulation for service delivery of library staff in universities in Benue State.

Methodology

Descriptive survey research design was adopted for this study. The population of this research study comprised library cataloguers in 12 academic libraries in South- West, Nigeria. Total enumeration sampling was employed to capture the library cataloguers in the selected academic libraries.

Table 1: Distribution of Sample

S/N	Academic libraries	Type of Ownership	Population
1	Kenneth Dike library, University of Ibadan	Federal	12
2	University of Lagos Library, Lagos state	Federal	9
3	Nimbe Adedipe Library, Federal University of Agriculture, Abeokuta, Ogun state	Federal	10
4	Hezekiah Oluwasanmi Library, Obafemi Awolowo University, Ile-Ife	Federal	11
5	Olabisi Onabanjo University library	State	8
6	Ladoke Akintola University of Technology, Olusegun Oke Library, Oyo state	State	9
7	Adekunle Ajasin Akungba University	State	7
8	Osun State University, Osogbo	State	6
9	Laz Otti library, Babcock University	Private	6
10	Caleb University, Lagos state	Private	4
11	Lead City University, Ibadan, Oyo state	Private	5
12	Afe Babalola University, Ado-Ekiti, Ekiti state	Private	2
	Sample Size		89

Research Instrument

A self-designed and close-ended questionnaire was used as the instrument in gathering data from the respondents.

Procedure for Data Collection

Eighty-nine (89) copies of questionnaires were distributed in the selected academic libraries, which cut across the twelve (12) academic libraries in South-West, Nigeria within the period of 2 weeks. The completed questionnaire was retrieved on the spot, after giving respondents enough time to fill the questionnaires.

Method of Data Analysis

The Statistical Package for the Social Sciences (SPSS version 26) was used to arrange and illustrate the data using descriptive statistics and Pearson Product Moment Correlation (PPMC).

Results

RQ1: What is the level of automated cataloguing system operation in academic libraries in South-West, Nigeria?

Table 2: Descriptive Analysis of the Level of Automated Cataloguing System Operation

S/N	Items	Yes	No
1	Is there a fully operational automated cataloguing system in your library?	56 (62.9%)	33 (37.1%)
2	Are library staff adequately trained to operate the automated cataloguing system?	47 (52.8%)	42 (47.2%)
3	Does the automated cataloguing system cover all categories of library materials (e.g., books, journals)?	53 (59.6%)	36 (40.4%)
4	Is the automated cataloguing system integrated with other library management systems (e.g., circulation)?	41 (46.1%)	48 (53.9%)
5	Has the automated cataloguing system significantly reduced manual cataloguing processes in your library?	61 (68.5%)	28 (31.5%)

Table 2 reveals that the level of automated cataloguing system operation in academic libraries in South-West, Nigeria, is moderately high. Majority (62.9%) of respondents affirmed the presence of a fully operational automated cataloguing system, with 68.5% agreed that it has reduced manual cataloguing processes. However, only 46.1% reported integration with other library management systems, suggesting a gap in system interoperability. Additionally, while

59.6% indicated that the system covers all library material categories, only 52.8% confirmed adequate staff training, highlighting potential areas for improvement in capacity building and system optimization.

RQ2: To what extent is the automated cataloguing system operated in academic libraries in South-West, Nigeria?

Table 3: Descriptive Analysis of Extent of Automated Cataloguing System Operation in Academic Libraries

S/N	Items	VH	H	L	VL	Mean ($\bar{x}$)	S.D.
1	Automated cataloguing systems are consistently used for all cataloguing processes.	43 (48.3%)	25 (28.1%)	12 (13.5%)	9 (10.1%)	3.15	1.111
2	The system is effectively integrated into overall library operations.	41 (46.1%)	27 (30.3%)	14 (15.7%)	7 (7.9%)	3.11	1.082
3	Automated cataloguing systems facilitate real-time updates of catalogued materials.	36 (40.4%)	32 (36.0%)	15 (16.9%)	6 (6.7%)	3.10	1.031
4	Academic libraries rely heavily on the system for organizing and retrieving library resources.	50 (56.2%)	20 (22.5%)	13 (14.6%)	6 (6.7%)	3.29	1.143
5	Automated cataloguing systems are utilized to enhance interoperability with external databases.	41 (46.1%)	30 (33.7%)	12 (13.5%)	6 (6.7%)	3.19	1.086
6	The system is accessible to all library staff and regularly updated for optimal performance.	44 (49.4%)	27 (30.3%)	11 (12.4%)	7 (7.9%)	3.22	1.061
7	Library staff demonstrate proficiency in operating the automated cataloguing system.	38 (42.7%)	29 (32.6%)	17 (19.1%)	5 (5.6%)	3.12	1.056
8	Automated cataloguing systems are applied to a wide range of material types (e.g., books, e-books).	48 (53.9%)	24 (27.0%)	12 (13.5%)	5 (5.6%)	3.29	1.126
9	The system effectively supports user services like searching and borrowing materials.	52 (58.4%)	22 (24.7%)	10 (11.2%)	5 (5.6%)	3.36	1.111
10	Automated cataloguing systems minimize reliance on manual cataloguing methods.	55 (61.8%)	21 (23.6%)	8 (9.0%)	5 (5.6%)	3.41	1.087
	Average Mean					3.22	1.089

Keys: VH=Very High Extent, H=High Extent, L=Low Extent, VL=Very Low Extent.

Decision rule: 1.00-1.45: Very Low Extent; 1.46-2.30: Low Extent; 2.31-3.15: High Extent; 3.16-4.00: Very High Extent.

Table 3 shows that automated cataloguing systems are operated to a very high extent in academic libraries in South-West, Nigeria, with an average mean of 3.22.

RQ3: What are the challenges associated with the use of automated cataloguing systems in academic libraries in South-West, Nigeria?

Table 4: Descriptive Analysis of Challenges Associated with Automated Cataloguing Systems

S/N	Items	Yes	No
1	Inadequate funding for automation projects affects system implementation and sustainability.	58 (65.2%)	31 (34.8%)
2	Library staff experience skill gaps in effectively operating automated cataloguing systems.	55 (61.8%)	34 (38.2%)
3	Resistance to change among library staff slows the adoption of automated systems.	54 (60.7%)	35 (39.3%)
4	Lack of user-friendly interfaces makes the system difficult for staff to navigate effectively.	53 (59.6%)	36 (40.4%)
5	High cost of acquiring and maintaining automated cataloguing systems is a challenge.	52 (58.4%)	37 (41.6%)
6	Limited access to reliable internet connectivity affects system efficiency.	50 (56.2%)	39 (43.8%)
7	Technical failures, such as system crashes, result in delays in cataloguing processes.	50 (56.2%)	39 (43.8%)
8	Frequent power outages disrupt the consistent operation of automated cataloguing systems.	49 (55.1%)	40 (44.9%)
9	Lack of regular updates and technical support hinders system functionality.	48 (53.9%)	41 (46.1%)
10	Challenges in integrating the automated system with other library management software persist.	47 (52.8%)	42 (47.2%)

Table 4 shows the most frequently cited issues include inadequate funding (65.2%), staff skill gaps (61.8%), and resistance to change among staff (60.7%). Additional challenges include difficulties with system interfaces (59.6%) and high costs of acquisition and maintenance (58.4%). Hence, the major challenges associated with the use of automated cataloguing systems are inadequate funding, limited staff skills, resistance to change, lack of user-friendly interfaces, and high acquisition and maintenance costs.

Test of Hypotheses

H_{01}: There is no significant relationship between library automation and cataloguing efficiency in academic libraries in South-West, Nigeria

Table 5: Pearson Correlation Analysis of Research Question 4

		Library automation	Cataloguing efficiency
Library automation	Pearson Correlation	1	.602**
	Sig. (2-tailed)		.000
	N	89	89
Cataloguing efficiency	Pearson Correlation	.602**	1
	Sig. (2-tailed)	.000	
	N	89	89

Table 5 presents result of Pearson correlation showing relationship between library automation and cataloguing efficiency in academic libraries. The result shows that there is a strong relationship between library automation and cataloguing efficiency (r = .602**, N=89, P < .05). Hence, library automation has significant impact on cataloguing efficiency in academic libraries in South-West, Nigeria. This is shown by its value of .000 which is less than the level of significance (0.05).

H_{02}: There is no significant relationship between automated cataloguing efficiency and effective service delivery in academic libraries in South-West, Nigeria

Table 6: Pearson Correlation Analysis of Research Question 5

		Automated cataloguing efficiency	Effective service delivery
Automated cataloguing efficiency	Pearson Correlation	1	.761**
	Sig. (2-tailed)		.001
	N	89	89
Effective service delivery	Pearson Correlation	.761**	1
	Sig. (2-tailed)	.001	
	N	89	89

Table 6 presents result of Pearson correlation showing relationship between automated cataloguing efficiency and effective service delivery in academic libraries. The result shows that there is a strong relationship between automated cataloguing efficiency and effective service delivery (r = .761**, N=89, P < .05). Hence, automated cataloguing efficiency has significant impact on effective service delivery in academic libraries in South-West, Nigeria. This is shown by its value of .001 which is less than the level of significance (0.05).

Discussion of Findings

The study showed that the level of automated cataloguing system operation in academic libraries in South-West, Nigeria, is moderately high. This finding aligns with the study of Johnson (2019), who asserted that while many libraries in developing regions have adopted automated cataloguing systems, the extent of implementation remains uneven due to funding constraints and technological gaps. Similarly, Ajani and Buraimo (2022) emphasized that although automation is gaining traction in academic libraries, the transition from manual to automated systems is often gradual, with libraries operating at varying degrees of automation. However, this finding is not in line with the research of Sikandar (2024), who reported that in some academic settings, automation levels are significantly lower, primarily due to the absence of adequate infrastructure and skilled personnel to support the systems.

The study showed that automated cataloguing systems are operated to a very high extent in academic libraries in South-West, Nigeria. This finding is consistent with the assertions of Ogunniyi *et al.* (2023), who noted that many academic libraries in the region have embraced robust systems like Koha and OCLC, leveraging them to streamline cataloguing operations and enhance service delivery. On the contrary, this finding does not align with Odunola *et al.* (2019), who observed that despite technological advancements, some academic libraries struggle to fully integrate automation, particularly in resource-constrained environments, where adoption rates remain low.

The study showed that the major challenges associated with the use of automated cataloguing systems are inadequate funding, limited staff skills, resistance to change, lack of user-friendly

interfaces, and high acquisition and maintenance costs. This finding aligns with the study of Angbade and Udofot (2020), who emphasized that financial limitations and inadequate governmental support significantly hinder the sustainable implementation of automated systems. However, this finding is not in line with Ajani *et al.* (2022), who argued that in institutions with strong leadership and robust training programs, challenges like resistance to change and skill deficiencies are often mitigated.

The study revealed that library automation has significant impact on cataloguing efficiency in academic libraries in South-West, Nigeria. This finding aligns with the study of Odunola *et al.* (2019), who affirmed that automated cataloguing systems enhance the speed of cataloguing information materials in libraries, saving time and reducing manual workloads. Contrarily, Sugabsen and Yinasim (2024) noted that while cataloguing staff in Adamawa State libraries were capable, the adoption of advanced cataloguing tools such as RDA and MARC was limited due to inadequate training and resource constraints. This suggests that the impact of automation might be less significant in regions where such challenges persist.

The study revealed that there is significant relationship between automated cataloguing efficiency and effective service delivery in academic libraries in South-West, Nigeria. This finding aligns with the study of Daffi *et al.* (2024), who revealed that library automation significantly enhances service delivery, including cataloguing, in university libraries in Benue State, Nigeria. They emphasized that automation facilitates timely access to resources, which directly improves user satisfaction and service quality. However, this finding is not entirely in line with the observations of Sugabsen and Yinasim (2024), who identified limited training and scarcity of professional staff as challenges that hinder the effective implementation of automated systems in Adamawa State libraries.

Conclusion

From the research, carried out on automating the processes of cataloguing in academic libraries in South-West Nigeria, adopted moderate operations and integrations were observed in their Automated Cataloguing systems. Current use of automated cataloguing systems shows that

they are run to a very high degree indicating their significance to library operations. The study though revealed that there some main issues that have made the level of use to be sub-optimal; these include the following: Poor funding, low level of skills among the staff, resistance to change, unfriendly user interfaces, and high cost of acquisition and maintenance. The study also showed that that the library automation increases cataloguing accuracy and speeds up processing of books. In addition, the existence of a related and positive association between automated cataloguing efficiency and effective service delivery will confirm the relevance of these systems that aim at enhancing the user satisfaction and library operational efficiency. Surgical focus should be placed on strategies of staffing, funding personnel training, and selecting more user-friendly systems to enhance the efficiency of the automated cataloguing process and continues to enhance the academic library service in the region.

Recommendations

1. Academic library management should allocate sufficient funding to support the acquisition, maintenance, and upgrading of automated cataloguing systems to address financial challenges and ensure sustainability.
2. Policymakers and academic institutions should invest in continuous training programs for library staff to enhance their technical skills and competence in using automated cataloguing systems, thereby reducing skill gaps.
3. Developers of automated cataloguing systems should create more user-friendly and intuitive interfaces tailored to the needs of library staff and users to increase adoption and reduce resistance to change.
4. Library administrators should establish strategies to overcome resistance to change, such as involving staff in decision-making and providing clear communication about the benefits of automation.
5. Governmental and non-governmental funding agencies should prioritize financial support for academic libraries, particularly for automation technologies, to address high acquisition and maintenance costs.

References

Ajani, & Buraimo. (2022). A proposed computer vision-based system for managing the self-borrowing and returning process in libraries. *International Journal of Library and Information Sciences.* https://doi.org/10.21608/ijlis.2023.239371.1216

Akidi, J. O., & Omekwu, C. O. (2019). Assessment of cataloguing and classification practices of the National Library of Nigeria in the digital age: A bibliographic control perspective. *International Journal of Library & Information Science, 8*(1), 20–34.

Angbade, D. P., & Udofot, C. (2020). Strategies of cataloging book materials in university libraries in Benue State. *African Journal of Information and Knowledge Management, 1*(9), 35–44.

Daffi, E. G., Agada, P., & Solomon, A. U. (2024). Influence of library automation on effective service delivery by library staff in universities in Makurdi, Benue State, Nigeria. *International Journal of Research Publication and Reviews, 5*(9), 2749–2759.

Ejiroghene, E. (2020). Impact of ICT on cataloguing and classification of library materials. *Library Philosophy and Practice (e-Journal), 5088.* https://digitalcommons.unl.edu/libphilprac/5088

Emasealu, H. U. (2019). Automation of academic libraries and web development: A reverie or reality. *International Journal of Knowledge Content Development and Technology, 9*(1), 43–56.

Igbudu, M. T., Asen, A. T., & Tyopev, C. M. (2020). Influence of Koha software on technical operations of the public university libraries in North Central Nigeria. *International Journal of Library Science, 9*(1), 1–6. https://doi.org/10.5923/j.library.20200901.01

Istifanus, I. L., Amiel, U. E., Yusuf, A., & Ibrahim, F. L. (2023). Cataloguing and classification practices and the challenges of cataloguers in the digital age: The case of public libraries in Northeast zone, Nigeria. *Lafia Journal of Library and Information Science, 4*(1), 10–26.

Johnson, L. (2019). The digital transformation in higher education. *EDUCAUSE Review, 54*(3), 12–18.

Ken-Agbiriogu, E., & Okorie, O. N. (2022). Automation of acquisition, cataloguing, and classification and staff job performance in university libraries in Southeast, Nigeria. *Journal of Applied Information Science and Technology, 14*(2), 46–53.

Mesagan, F. O., Ibrahim, F. M., Mole, A. J. C., & Ihekwoaba, E. C. (2021). Expected competencies for effective provision of Online Public Access Catalogue in Nigerian university libraries. *Library Philosophy and Practice (e-Journal), 6088.* https://digitalcommons.unl.edu/libphilprac/6088

Nayana, J. (2019). A study on library automation status among the aided college libraries in Bengaluru. *Library Philosophy and Practice (e-Journal), 3048.* https://digitalcommons.unl.edu/libphilprac/3048

Odunola, O. A., Tella, A., Oyewumi, O. O., Ogunmodede, T. A., & Oyetola, S. O. (2019). Evaluation of automated cataloguing system in academic libraries in Oyo State, Nigeria. *Library Philosophy and Practice (e-Journal), 2152.*

Ogunniyi, S. O., Olubiyo, P. O., & Okedele, E.-O. L. (2023). Utilization of cataloguing and classification resources by postgraduates in library schools in two selected private universities in Southwest, Nigeria. *Journal of Library and Information Science, 25*(1), 181–193.

Olagoke, D. P., & Kolawole, J. A. (2019). Effect of library automation on performance of librarians in private universities in Southwest Nigeria. *Information and Knowledge Management, 9*(5), 1–10.

Sikandar, A. M. (2024). Library automation: Enhancing efficiency and user experience. *International Journal of Research Publication and Reviews, 5*(3), 1354–1357.

Sodipe, O.M., Aarinola, A.A., Aliyu, M., & Quadri, M. O. (2024). Librarians' Technological Competence, Performance, Expectancy, and Perceived Ease of the Use of Automation Software in Academic Libraries in Ogun State. *Lead City International Journal of Library, Information & Communication Sciences*, *1*(2), 359-371.

Sugabsen, M., & Yinasim, P. M. (2024). Cataloguing and classification tools and competencies in selected academic libraries in Adamawa State. *Nigerian Library and Information Science Trends, 9*(1), 102–116.

Taufiq, M., & Ismaya, M. (2024). Overview of the library automation system in South Sulawesi libraries. *Information Technology and Libraries, 43*(1), 1–13.