Economic Prospects of Automation of Academic Libraries for Librarians in Nigeria: e-Library Consultants' Perspectives

By

Muhammad Etubi, CLN
University of Jos Library
etubim@gmail.com

Abstract

This paper, economic prospects of automation of academic libraries for librarians in Nigeria, explores the experiences of electronic library (e-library) consultants in automation of academic libraries for economic gain. It systematically investigates the e-library consultants' skills, service delivery process, benefits, challenges, and prospects. Qualitative exploratory research design is adopted for this study to enable an in-depth interview of the consultants. Electronic library consultants bridge library and information science (LIS) theory and practical technology implementation. Understanding their experience helps LIS schools update curricula, libraries to know what to expect when hiring consultants, future LIS professionals to see career paths, policy makers to understand capacity gaps in digital library development.

Keywords: Automation, Economic prospects, e-Library Consultants, Academic libraries, Librarians

Introduction

The automation of academic libraries has become a defining feature of contemporary librarianship, driven by rapid advancements in information and communication technologies (ICTs), the proliferation of electronic information resources, and the demand for efficient access to scholarly content. In Nigeria, academic libraries—particularly those in universities, polytechnics, and colleges of education—have increasingly adopted automated systems such as Integrated Library Management Systems (ILMS), institutional repositories, digital databases, and electronic library (e library) platforms to support teaching, learning, and research.

The implementation of these automated systems has given rise to a specialized category of professionals known as e-library consultants. These consultants—often librarians or ICT specialists with expertise in library automation—provide services such as needs assessment, system selection, software installation, database configuration, staff training, digitization, and ongoing technical support. Through consultancy services, librarians increasingly participate in library automation not only as institutional employees but also as independent or contracted professionals pursuing economic gain.

For Nigerian librarians, the growing demand for automated academic libraries presents important economic prospects. Consultancy in library automation opens opportunities for income diversification, professional specialization, entrepreneurship, and enhanced visibility within the knowledge economy. However, engaging successfully in e-library consultancy requires advanced technical skills, project management competence, and the ability to navigate infrastructural, financial, and organizational challenges common in Nigerian academic institutions.

Despite the growth of library automation projects across Nigeria, there is limited systematic research focusing on the experiences of e-library consultants, particularly in relation to their skills, service delivery processes, economic outcomes, challenges, and future prospects. This paper therefore seeks to fill this gap by examining the economic prospects of automation of academic libraries in Nigeria for librarians, from the perspectives of e-library consultants actively involved in automation projects.

Objectives of the Study

The broad objective of this study is to examine the economic prospects of automation of academic libraries in Nigeria for librarians, using the experiences of e library consultants.

The specific objectives are to:

1. Identify the professional and technical skills possessed by e-library consultants involved in academic library automation in Nigeria.
2. Examine the service delivery processes used by e-library consultants in automating academic libraries.
3. Assess the economic benefits derived by librarians from e-library consultancy services.
4. Examine the challenges faced by e library consultants in the automation of academic libraries in Nigeria.
5. Explore the future prospects of e library consultancy as an economic pathway for librarians in Nigeria.

Research Questions

1. What professional and technical skills should e-library consultants possess in academic library automation in Nigeria?
2. What is the service delivery processes used by e-library consultants in automating academic libraries?
3. What are the economic benefits derived by librarians from e-library consultancy services?
4. What are the challenges faced by e library consultants in the automation of academic libraries in Nigeria?
5. What are the future prospects of e library consultancy as an economic pathway for librarians in Nigeria?

Literature Review

Library automation involves the application of information and communication technologies to perform routine and advanced library operations such as cataloguing, circulation, serials management, electronic resource access, and institutional repository development. Rawayyau (2024) posit that in Nigerian academic libraries, automation has become increasingly important due to pressure from accreditation bodies, the growth of electronic scholarly resources, and the adoption of blended and digital learning models. Nigerian universities have implemented varying degrees of automation using open source systems such as Koha, CDS/ISIS, and proprietary platforms such Virtua and Integrated Technical Systems; however, progress remains uneven across institutions due to infrastructural and financial constraints.

The increasing complexity of library automation projects has led to the rise of e-library consultancy as a specialized professional practice. E-library consultants provide services including system analysis, software installation, customization, digitization, data migration, staff training, and technical support. These consultants, according to Ashikuzzaman (2024) are often librarians with strong ICT competencies who leverage automation projects as entrepreneurial ventures. In Nigeria, where many academic libraries lack in-house technical expertise, consultancy services have become central to automation initiatives, thereby creating a pathway for librarians to generate income beyond salaried employment.

Successful e-library consultants possess a blend of librarianship, technical, and entrepreneurial skills. These include proficiency in integrated library management systems, database management, metadata standards, digitization technologies, networking, and basic programming or scripting (Dube et al., 2024). Soft skills such as communication, documentation, project management, and user training are equally critical for effective service delivery. Continuous professional development is emphasized as essential due to the rapidly evolving technological environment (Pierce, 2025).

E-library consultancy provides librarians with opportunities for economic gain through consultancy fees, system maintenance contracts, training workshops, and long term support arrangements. Bouchrika (2026) indicates that librarians engaged in consultancy enjoy greater professional autonomy, diversified income streams, and enhanced marketability within and beyond academic institutions. In the Nigerian context, where public sector salary structures are rigid, consultancy offers an alternative economic model through which librarians can monetize their expertise and technical skills.

Despite its economic potential, e-library consultancy in Nigeria faces significant challenges. These include inadequate funding of academic libraries, erratic power supply, poor internet connectivity, delayed payment of consultancy fees, and resistance to change among library staff (Rawayau, 2024). Institutional bureaucracy and lack of clear contractual frameworks also pose risks to consultants, often affecting project timelines and financial sustainability. These challenges emphasize the need for supportive institutional and policy environments for consultancy based automation initiatives.

The prospects of e-library consultancy in Nigeria appear promising due to the continued expansion of higher education, increased demand for digital library services, and growing emphasis on research visibility through institutional repositories and electronic databases. Pierce (2025) captures it all by indicating that emerging technologies such as cloud computing, artificial intelligence, and research data management are expected to broaden the scope of consultancy services. Scholars argue that librarians who strategically acquire advanced ICT skills and entrepreneurial competencies will remain economically relevant and professionally influential in the evolving academic library setting (Salubi, 2023).

Methodology

A group of five (5) consultants of the Belt e-library Consultants in Jos, Plateau State were approach for this research. This study adopts a qualitative exploratory research design to examine the economic prospects of automation of academic libraries for librarians in Nigeria from the perspectives of e-Library consultants. Data is collected through semi structured web link interviews with purposively selected consultants and analyzed using thematic analysis.

Results

Responses to semi structured interview on the Economic Prospect of Automation of Academic Libraries for Librarians in Nigeria were thematically organized below:

Background Information

Participant 1 (p1)

I am a library officer and e-library consultant with experience in library automation, digital repositories, and electronic resource management. I support institutions in implementing systems such as Koha, DSpace, and Open Journal Systems, while providing training and guidance on digital library services, open access, and scholarly communication.

Participant 2 (p2)

I am a Server and Network Administrator. I am involved in server installation, library web design, and cloud computing.

Participant 3 (p3)

I function as e-library Consultant with the portfolio of Server Administrator and Network Administrator. Parts of my work are koha installation and configuration, provides security for library network, and computer programming.

Participant 4 (p4)

I serve as Director of trainings and Electronic Cataloguer. I identify e-library training needs of clients and develop programmes for such trainings.

Participant 5 (p5)

I am the E-library Project Manager of Belt e-Library Cosultant, an Electronic Cataloguer and Information Manager. I provide parameters for electronic cataloguing on library software, ensures seamless interaction between human and computer of Library Management Systems and coordinates the entire computerization project of a library.

Theme 1: Skills Required for E-Library Consultancy

Librarians need skills in digital literacy, library automation, data management, information literacy instruction, research support, artificial intelligence, digital preservation, project management, and communication. Continuous learning and adaptability are also essential to remain relevant in an automated academic library environment. (p1)
Let librarian be conversant with the operation of the library software by collaborating with ICT personnel for software installation and programming. (p2)
e-library consultant sure requires skills in computer networking, programming and excellent human relations. (p3).
Software installation and knowledge of marketing the e-library work. (p4)
Librarians need to be skillful in the use of library management system modules, excel, library software installation, computer networking and programming. (p5)

Theme 2: Service Delivery Process

Networking is the backbone before other things such as apps installation (p2)
My automation workflow includes assessing library needs, implementing and configuring digital library systems such as Koha and DSpace, digitizing resources, integrating electronic databases, training staff, monitoring system performance, and providing ongoing technical support and system improvements. (p1)
Get library automation job first, negotiate mode of payment for the job, purchase hardware and software, then the job proper. (p3)
Library automation begins with preliminary investigation of the library available resources, preparation and submission of proposal, approval of proposal, request for initial payment of the project, then real work start by networking, Software installation, Customization, completion of the project, and ask for the balance of payment. (5)
Hardware and software installation, then training in the use of the library software. (p4)

Theme 3: Economic Benefits of Library Automation Consultancy

The librarian is exposed to field work and taste of professional reward. (p3)

Yes. Automation increases the economic value of librarians by reducing routine tasks and allowing them to focus on higher value services such as research support, digital resource management, data curation, information literacy, and technology integration. This makes librarians more valuable to their institutions and users. (p1)

For a salary earner, the benefit is extra money in the pocket.(p2)

Improved productivity, and career opportunities. Automation influences the earning capacity of librarians. (p5)

The economic benefit is financial gain, especially when paid as soon as project is completed. (p4)

Theme 4: Challenges Facing E-Library Consultants

There is constant experience of fluctuation in the prices of automation equipment. (p2)

Logistics challenges in the face of high cost of petrol price in Nigeria. (p3)

Institutional support of library automation is low, as such proposal for automation is at times thrown into the trash. (p4)

Prolong period before financial backing of library automation after submission of proposal. (p5)

Automation poses challenges such as the need for continuous training, the risk of skill obsolescence, increased competition for technology focused roles, and possible reduction of routine positions for librarians who do not adapt to digital technologies. (p1)

Theme 5: Economic Prospects of Automation

Library automation has created new roles in systems administration, digital libraries, electronic resource management, research support, and data management. While some routine tasks have been reduced, automation has shifted librarians toward technology driven and user focused services rather than replacing them. Automation creates opportunities in library systems administration, digital repository management, ICT consulting, staff training, research support, data management, digitization projects, electronic resource management, and freelance technology services for libraries. (p1)

Librarians would be involved in independent specialized professional practice such as digital preservation, hardware and software installations for a fee. (p5)

Library automation work is available but librarians have to search for it. (p3)

e-library consultancy will continue to be relevant because scholars in universities want their published works uploaded in institutional repository for visibility. (p2).

The job opportunity is always available, but the will power to automate remain a challenge (p4)

Discussion

The profile of participants (p1 to p5) showed a conglomerate of experts with practical experience in library automation consultancy. Each participant has responsibilities that span from automation planning (p5) to final training of personnel (p4) for utilization of installed and configured library management software (LMS), (p1, p2, and p3).

Participants agreed that librarians with interest in e-library consultancy require skills in Information and communication technology (ICT), saying that "*Librarians need to be skillful in the use of library management system modules, excel, library software installation, computer networking and programming." (p5), "e-library consultant sure requires skills in computer networking, programming and excellent human relations." (p3),* which is in line with Dube, Rammutloa and Matatiele (2024) recommendation that academic librarians need practical experience in web development and database management to facilitate information technology usage in the digital age. This implies that librarians, at whatever level of their profession, require continuous up skilling to stay economically relevant in automation consultancy services.

The findings in theme 2: service delivery process revealed Library automation workflow commences with networking and ends with customization from the quotes of the participants

indicating "*Networking is the backbone before other things such as apps installation," (p2). "My automation workflow includes .... monitoring system performance, and providing ongoing technical support and system improvements." (p1).* This denotes installations are done on machines that are connected and only software that is installed could be customized.

Librarians into automation consultancy job gain financially from their work. *"For a salary earner, the benefit is extra money in the pocket," (p2). "Yes. Automation increases the economic value of librarians by reducing routine tasks and allowing them to focus on higher value services such as research support, digital resource management, data curation, information literacy, and technology integration. This makes librarians more valuable to their institutions and users," (p1),* quoted the participants. These extracts from the participants corroborates Bouchrika's (2026) point that AI and automation are reshaping library service by fostering specialization among librarians for improved wages.

The major challenge of automation for librarians in Nigeria is financial support; either it is delayed or lack of budget for it as mentioned by the participants that "*Institutional support of library automation is low, as such proposal for automation is at times thrown into the trash," (p4). "Prolong period before financial backing of library automation after submission of proposal," (p5*). These declarations by the participants are in alignment with Siddique and Mahmood (2016) assertion that financial constraint hinders software and hardware acquisition in higher educational setups.

Comments from all participants point to abundant economic prospect in automation for Nigerian librarians. They disclose that "*Automation creates opportunities in library systems administration, digital repository management, ICT consulting, staff training, research support, data management, digitization projects, electronic resource management, and freelance technology services for libraries," (p1). "Librarians would be involved in independent specialized professional practice such as digital preservation, hardware and software installations for a fee," (p5).*

Conclusion

The workflow in automation requires librarians having skills in Information and Communication Technology. Entrepreneurial engagement in Automation increases the economic value of librarians in Nigeria by improving their earning capacity.

Recommendations

In view of the preceding results, it is recommended that LIS schools should pursue vigorously entrepreneurial studies inclusion in academic curriculum to enable students have business librarianship in their mindset.

Libraries need to collaborate with e-library consultants for the establishment of a seamless library automated operations.

Budding LIS professionals should think out of the box for professional growth beyond the library environment.

Host institutions of libraries need to support library automation proposals, administratively and financially, as the library's growth is an extension of the overall development of the institution.

REFERENCES

Ashikuzzaman, M. (2024). The impact of artificial intelligence on library professionals: Threat or opportunity? Library & Information Science Education Network. https://www.lisedunetwork.com/the-impact-of-artificial-intelligence-on-library-professionals-threat-or-opportunity/

Bouchrika, I. (2026). AI, automation, and the future of library science degree careers. Research.com. https://research.com/advice/ai-automation-and-the-future-of-library-science-degree-careers.

Dube, T. V., Rammutloa, M. W., & Matatiele, R. (2024). Skills and competencies of academic librarians to use information technology tools in the digital era: A systematic literature review. *Information Development*, 1–24. https://doi.org/10.1177/02666669241302054.

Pierce, D. (2025). AI: Helping librarians work smarter, not harder. Library Journal. https://www.libraryjournal.com/story/ai-helping-librarians-work-smarter-not-harder-lj250326.

Rawayau, U. H. (2024). The pervasive challenges of ICT integration in Nigerian library environments. *International Journal of Innovative Information Systems & Technology Research*, 12(2), 60–65.

Saddique, N. & Mahmood, K (2016). Combating problems related to library software in higher education institutions of Pakistan: An analysis of four groups. *Malaysian Journal of Library & Information Science,* Vol. 21, no. , 2016: 35-51.

Salubi, O. (2023). Transforming libraries and information professionals for the Fourth Industrial Revolution in developing countries. Alexandria: *The Journal of National and International Library and Information Issues,* 35(1–2), 3–18. **https://doi.org/10.1177/09557490231197971**.