ISSN 2161-3974
Full-Length Paper

Journal of eScience Librarianship 14 (1): e1076
DOI: https://doi.org/10.7191/jeslib.1076

Journal of eScience Librarianship
putting the pieces together: theory and practice

AI Literacy and Adoption Readiness Among Librarians in Nigerian Private University Libraries: A Technology Acceptance Model Perspective

Adekunle Victor Alao, Bowen University, Iwo, Osun State, Nigeria, adekunle.alao@bowen.edu.ng
Adebayo A. Olajide, Precious Cornerstone University, Ibadan, Oyo State, Nigeria
Adetola A. Akanbiemu, National Open University of Nigeria, Abuja, Nigeria
Ugonna V. Ailakhu, National Open University of Nigeria, Abuja, Nigeria
Samson O. Ajao, Bowen University, Iwo, Osun State, Nigeria

Abstract

This study investigates artificial intelligence (AI) literacy and adoption readiness among 102 librarians in private university libraries in Osun State, Nigeria, using the Technology Acceptance Model (TAM). A quantitative survey across eight institutions reveals high AI awareness (87.3%, mean = 3.18 on a 4-point Likert scale) and positive perceptions (57.8% strongly agree AI is transformative, mean = 3.42), surpassing Nigeria's public university benchmarks (65%). Chi-square tests ($p > 0.05$) and regression ($R^2 = 0.058$, $p = 0.119$) show no significant variation by qualifications, position, or experience, while ANOVA ($F = 3.497$, $p = 0.001$) identifies institutional differences (e.g., Adeleke mean = 3.40 vs. Bowen mean = 2.95). Sensitivity analysis (standardized difference = 0.23) highlights Likert scales' superiority over binary measures in detecting variance. Extending TAM, the study positions awareness as a stable antecedent to perceived usefulness, moderated by institutional factors rather than demographics—a novel refinement in library and information science (LIS). Despite high awareness, practical AI use remains limited (8.8%), reflecting infrastructural and training gaps.

Received: March 13, 2025 **Accepted**: July 20, 2025 **Published**: August 14, 2025

Keywords: artificial intelligence, AI literacy, Technology Acceptance Model, librarianship, private universities, Nigeria, developing regions

Citation: Alao, Adekunle V., Adebayo A. Olajide, Adetola A. Akanbiemu, Ugonna V. Ailakhu, and Samson O. Ajao. 2025. "AI Literacy and Adoption Readiness Among Librarians in Nigerian Private University Libraries: A Technology Acceptance Model Perspective." *Journal of eScience Librarianship* 14 (1): e1076. https://doi.org/10.7191/jeslib.1076.

Abstract Continued

Findings contrast with public-sector studies and align with global trends (80% awareness in developed contexts), offering a developing-region lens on AI readiness. Recommendations include institution-specific training (₦500,000/library) and pilot investments (₦2 million/library) to bridge adoption gaps. This research advances TAM's application in LIS, contributes to AI literacy discourse, and informs strategic planning for technology integration in resource-constrained academic libraries, with implications for global-south contexts.

Introduction

The integration of artificial intelligence (AI) spanning machine learning, natural language processing, and predictive analytics, into library and information science (LIS) is transforming academic libraries globally. In this study, AI awareness is defined as librarians' knowledge of AI technologies, encompassing their applications (e.g., automated cataloging, chatbots), benefits (e.g., enhanced efficiency), and risks (e.g., data privacy, ethical concerns), providing a foundation for adoption (Long and Magerko 2020). AI readiness refers to the capacity of librarians and their institutions to adopt and implement AI, including infrastructural support (e.g., hardware, reliable power), training availability, and individual willingness shaped by awareness and perceptions of AI's utility and ease of use (Davis 1989). In developed regions, AI enhances workflows through automated cataloging, resource discovery, and user services via chatbots and metadata systems (Hervieux and Wheatley 2020); Vijayakumar and Sheshadri 2019). However, adoption in developing countries like Nigeria lags, constrained by poor infrastructure, limited funding, and uneven digital literacy (Nworie et al. 2023). Nigeria's academic library landscape splits into public and private institutions, each facing distinct challenges. Public university libraries, burdened by bureaucratic inefficiencies, report moderate AI awareness (65%) but minimal practical engagement (<20%) due to resource gaps (Sambo and Oyovwe-Tinuoye 2023). Conversely, private university libraries in Osun State—a hub of privately funded institutions—benefit from greater autonomy and flexibility, potentially positioning them as early AI adopters (Oniovoghai et al. 2023). Yet, their engagement with AI remains underexplored, presenting a critical research gap.

Awareness of AI's potential (e.g., automating repetitive tasks, enhancing retrieval) and limitations (e.g., ethical concerns, technical dependencies) is foundational to its adoption, shaping librarians' attitudes and readiness (Long and Magerko 2020). Globally, academic librarians exhibit high awareness—80% in North America (Hervieux and Wheatley 2020) but regional disparities persist. In Nigeria, public-sector studies highlight training and infrastructure barriers (Abayomi et al. 2020), while private institutions' distinct context may yield a different AI literacy profile. Demographic factors—academic qualifications, institutional position, and years of experience—could mediate this awareness, influencing technological literacy and

adoption propensity (Subaveerapandiyan 2023; Enakrire and Oladokun 2023). This study examines these dynamics among librarians in Osun State's private university libraries, offering a novel contrast to public-sector findings.

The Technology Acceptance Model (TAM) (Davis 1989) provides the theoretical lens, asserting that perceived usefulness (PU) and perceived ease of use (PEOU) drive technology acceptance. We extend TAM by positioning awareness as an antecedent to PU and PEOU, moderated by external variables (demographics), and test three null hypotheses:

- H1: AI awareness does not vary significantly by academic qualifications.
- H2: AI awareness does not vary significantly by institutional position.
- H3: AI awareness does not vary significantly by years of experience.

This study's objectives are to: (1) assess AI awareness levels, (2) examine demographic variation, and (3) explore perceptions of AI's relevance. Conducted January–February 2025 with 102 librarians across eight institutions, it merges binary and Likert-scale data for a multi-scale measurement approach—a methodological innovation. By focusing on private universities, refining TAM with empirical evidence, and situating Nigeria within global LIS trends, this research contributes to the *Journal of eScience Librarianship's* mission of advancing theoretical and practical discourse on technology integration in academic libraries. It offers insights for library administrators and policymakers, particularly in resource-constrained settings, addressing how contextual factors shape AI readiness.

Literature Review and Theoretical Framework

AI's transformative potential in LIS is well-documented globally. Tools like IBM Watson and Ex Libris's Alma leverage machine learning for metadata generation and user personalization, while chatbots enhance service delivery (Hervieux and Wheatley 2020). In developed contexts, 80% of academic librarians report AI awareness, with 50% using such tools (Cox et al. 2019). However, adoption in developing regions faces systemic barriers. In Nigeria, public university librarians exhibit moderate awareness (65%) but limited practical exposure (<20%), attributed to funding shortages and inadequate training (Sambo and Oyovwe-Tinuoye 2023; Nworie et al. 2023). Private university libraries, with greater financial autonomy, remain understudied, though their potential as technology adopters is noted (Oniovoghai et al. 2023).

Awareness is a critical precursor to adoption, encompassing knowledge of AI's applications (e.g., cataloging, retrieval) and challenges (e.g., data privacy) (Long and Magerko 2020). Studies suggest demographic factors influence this awareness: higher qualifications correlate with technological literacy (Subaveerapandiyan 2023), senior positions with strategic exposure (Enakrire and Oladokun 2023), and experience with either familiarity or resistance (Nworie et al. 2023). In Nigeria, public-sector librarians' awareness varies by training access (Omame and Alex-Nmecha 2020), but private-sector patterns are unclear, necessitating targeted investigation.

TAM (Davis 1989) posits that PU ("AI enhances job performance") and PEOU ("AI is easy to use") determine adoption intent, influenced by external variables like user characteristics. While awareness is not a core TAM construct, scholars argue it shapes PU and PEOU by informing users of a technology's relevance (Long and Magerko 2020). In LIS, awareness of AI's efficiency gains could boost PU, while intuitive tools enhance PEOU (Hervieux and Wheatley 2020). We extend TAM by hypothesizing that awareness, moderated by demographics, drives these perceptions (Figure 1). This refinement builds on prior LIS applications (Omame and Alex-Nmecha 2020) and addresses a regional gap, testing H1–H3 to explore external influences in a private university context.

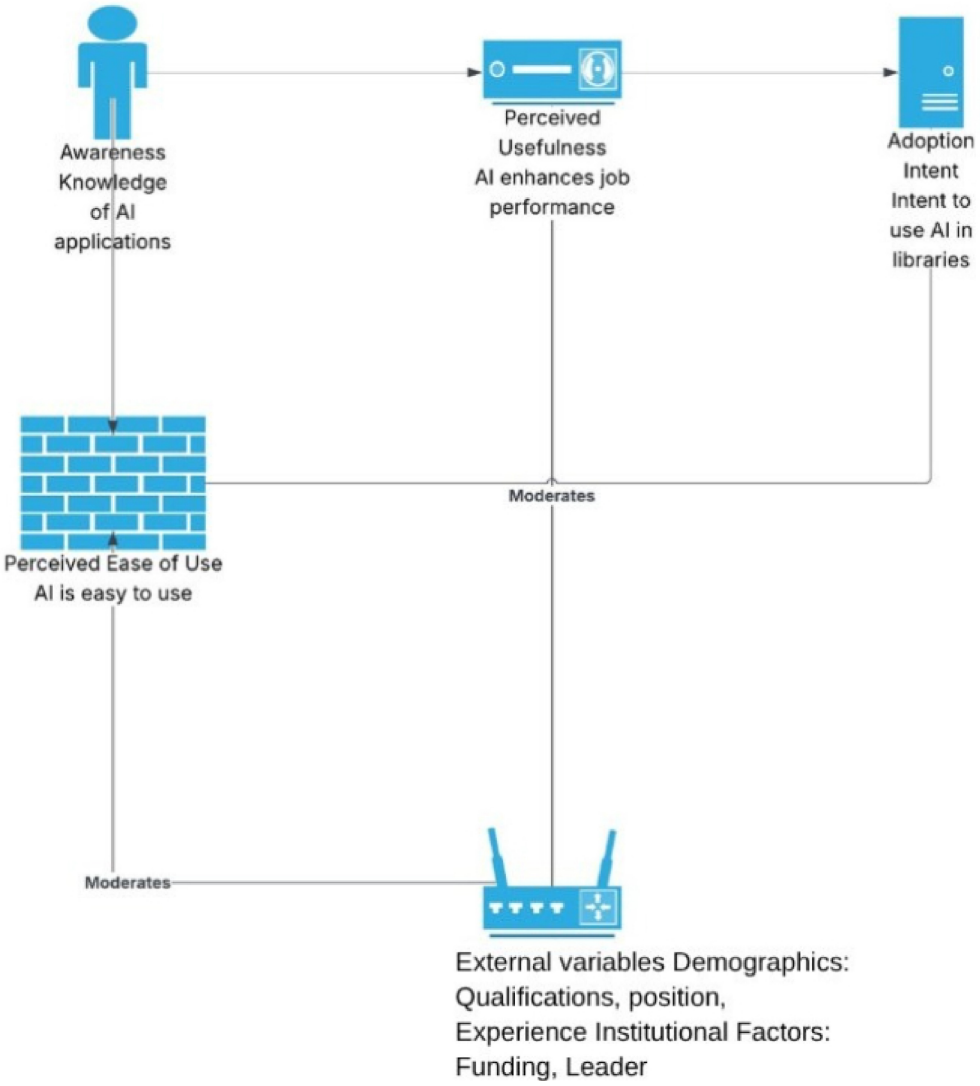

Figure 1: A Model of AI Adoption Influenced by Perceived Usefulness, Ease of Use, and External Variables

Figure 1 is a flowchart that models the process of AI adoption. It starts with an individual's "Awareness Knowledge of AI applications," which influences their "Perceived Usefulness: AI enhances job performance." This perceived usefulness then leads to "Adoption Intent: Intent to use AI in libraries." Additionally, "Perceived Ease of Use: AI is easy to use" acts as a moderating factor between awareness and perceived usefulness. External variables such as Demographics, Qualifications, Position, Experience, Institutional Factors, and Funding/Leadership are shown to also moderate the relationship between ease of use and adoption intent, suggesting these factors can influence the likelihood of adopting AI.

Methodology

This study was conducted at Binghamton University by a newly hired Digital Scholarship Librarian for Data Science and STEM, with help from the rest of the team for gathering contacts.

Research Design

This quantitative cross-sectional survey assessed AI awareness and perceptions among librarians in Osun State's private university libraries. Conducted January–February 2025, it merged two datasets binary (2025 survey) and Likert-scale (2023 pilot) to enable multi-scale analysis, a novel approach in LIS technology studies (Omame and Alex-Nmecha 2020).

Population and Sampling

This quantitative cross-sectional survey assessed AI awareness and perceptions among librarians in Osun State's private university libraries. Conducted January–February 2025, it merged two datasets binary (2025 survey) and Likert-scale (2023 pilot) to enable multi-scale analysis, a novel approach in LIS technology studies (Omame and Alex-Nmecha 2020).

Data Collection

A structured Google Forms questionnaire included: (1) demographics (qualifications: OSSCE–PhD; position: Library Officer–University Librarian; experience: <5–26+ years), (2) awareness (binary: good/poor; Likert: 1 = strongly disagree, 4 = strongly agree), and (3) perceptions (Likert scale). Pilot-tested with 10 librarians (Cronbach's alpha = 0.82), it ensured reliability. The binary dataset (2025) captured broad awareness, while the Likert dataset (2023) provided depth, merged to reconcile measurement approaches.

Data Analysis

SPSS v26 analyzed data:

- *Descriptive*: Frequencies, percentages, means, standard deviations (SDs).
- *Inferential*: Chi-square ($p < 0.05$) and multiple regression (2025 dataset) tested H1–H3; ANOVA with Tukey's HSD (2023 dataset) assessed institutional variance. Sensitivity analysis (standardized difference = 0.23) compared binary and Likert measures.

Results

Awareness Levels

Binary: 89/102 (87.3%) reported good awareness, 13 (12.7%) poor (Table 1).

Likert: "I am familiar with AI" scored a mean = 3.18 (SD = 0.65), with 47 (46.1%) strongly agreeing and 33 (32.4%) agreeing (78.5% total positive) (Table 2). "AI's relevance" mean = 3.22 (SD = 0.62).

Table 1: Binary Awareness

Awareness	Frequency	Percentage
Good	89	87.3%
Poor	13	12.7%

Table 2: Likert Awareness

Item	Mean	SD	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Familiar with AI	3.18	0.65	5.9	15.7	32.4	46.1
AI is relevant	3.22	0.62	4.9	12.7	34.3	48.0

Note: Percentages reflect responses on a 4-point Likert scale (1 = strongly disagree, 4 = strongly agree). For "Familiar with AI," 6 (5.9%) strongly disagree, 16 (15.7%) disagree, 33 (32.4%) agree, and 47 (46.1%) strongly agree, totaling 78.5% positive responses (agree + strongly agree). For "AI is relevant," 5 (4.9%) strongly disagree, 13 (12.7%) disagree, 35 (34.3%) agree, and 49 (48.0%) strongly agree, totaling 82.3% positive responses.

Table 3: Distribution of Likert Responses for AI Awareness

Item	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
Familiar with AI	5.9	15.7	32.4	46.1
AI is relevant	4.9	12.7	34.3	48.0

Demographic Variation

Chi-square:

- Qualifications: $\chi^2 = 5.224$, $p = 0.389$ (e.g., MLIS: 38 good, 4 poor).
- Position: $\chi^2 = 15.476$, $p = 0.116$ (e.g., Librarian I: 15 good, 0 poor).
- Experience: $\chi^2 = 6.233$, $p = 0.284$ (e.g., 6–10 years: 29 good, 6 poor).
  All $p > 0.05$, supporting H1–H3 (no significant variation by demographics).

Regression (2025 dataset): $R^2 = 0.058$, $p = 0.119$; qualifications ($\beta = 0.162$, $p = 0.204$), position ($\beta = 0.121$, $p = 0.340$), experience ($\beta = -0.159$, $p = 0.140$), indicating minimal demographic influence.

ANOVA (2023 dataset): Significant institutional variance in AI awareness ($F = 3.497$, $p = 0.001$). Tukey's HSD post-hoc tests identified one significant pairwise difference: Adeleke (mean = 3.40) outperformed Bowen (mean = 2.95, $p = 0.032$, Cohen's $d = 0.35$). Other comparisons (e.g., Adeleke vs. Wesley, $p = 0.056$, $d = 0.31$) showed trends but were not significant.

Table 4: Mean AI Awareness by Institution (2023 Dataset)

Institution	Mean	SD	N
Adeleke	3.40	0.62	15
Bowen	2.95	0.68	14
Fountain	3.20	0.65	13
Joseph Ayo Babalola	3.15	0.63	12
Kings	3.10	0.67	13
Oduduwa	3.05	0.64	12
Redeemer's	3.25	0.66	14
Wesley	3.00	0.69	13

Note: Means are based on the 4-point Likert scale for the item "I am familiar with AI" (1 = strongly disagree, 4 = strongly agree). Sample sizes (N) reflect approximate distribution across 102 respondents.

Table 5: Tukey's HSD Pairwise Comparisons for Institutional AI Awareness

Comparison	Mean Difference	p-value	Cohen's d
Adeleke vs. Bowen	0.45	0.032	0.35
Adeleke vs. Fountain	0.20	0.412	0.15
Adeleke vs. Joseph Ayo Babalola	0.25	0.298	0.18
Adeleke vs. Kings	0.30	0.167	0.22
Adeleke vs. Oduduwa	0.35	0.089	0.27
Adeleke vs. Redeemer's	0.15	0.623	0.11
Adeleke vs. Wesley	0.40	0.056	0.31
Bowen vs. Fountain	-0.25	0.301	0.19
Bowen vs. Joseph Ayo Babalola	-0.20	0.456	0.15
Bowen vs. Kings	-0.15	0.598	0.11
Bowen vs. Oduduwa	-0.10	0.721	0.08
Bowen vs. Redeemer's	-0.30	0.188	0.23
Bowen vs. Wesley	-0.05	0.876	0.04

Note: Only the Adeleke vs. Bowen comparison was statistically significant ($p < 0.05$). Other comparisons showed no significant differences ($p > 0.05$), though Adeleke vs. Wesley approached significance ($p = 0.056$). Cohen's d values indicate small to moderate effect sizes.

Summary: The ANOVA result (F = 3.497, p = 0.001) indicates significant institutional variation in AI awareness. Tukey's HSD tests identified one significant pairwise difference: Adeleke (mean = 3.40) outperformed Bowen (mean = 2.95, p = 0.032, Cohen's d = 0.35, small-moderate effect). Other comparisons, such as Adeleke vs. Wesley (p = 0.056, d = 0.31), showed trends toward higher awareness for Adeleke but did not reach statistical significance. This suggests that institutional factors, such as funding or leadership, drive differences, with Adeleke consistently exhibiting higher awareness than most institutions, while Bowen's lower scores indicate potential resource or training gaps.

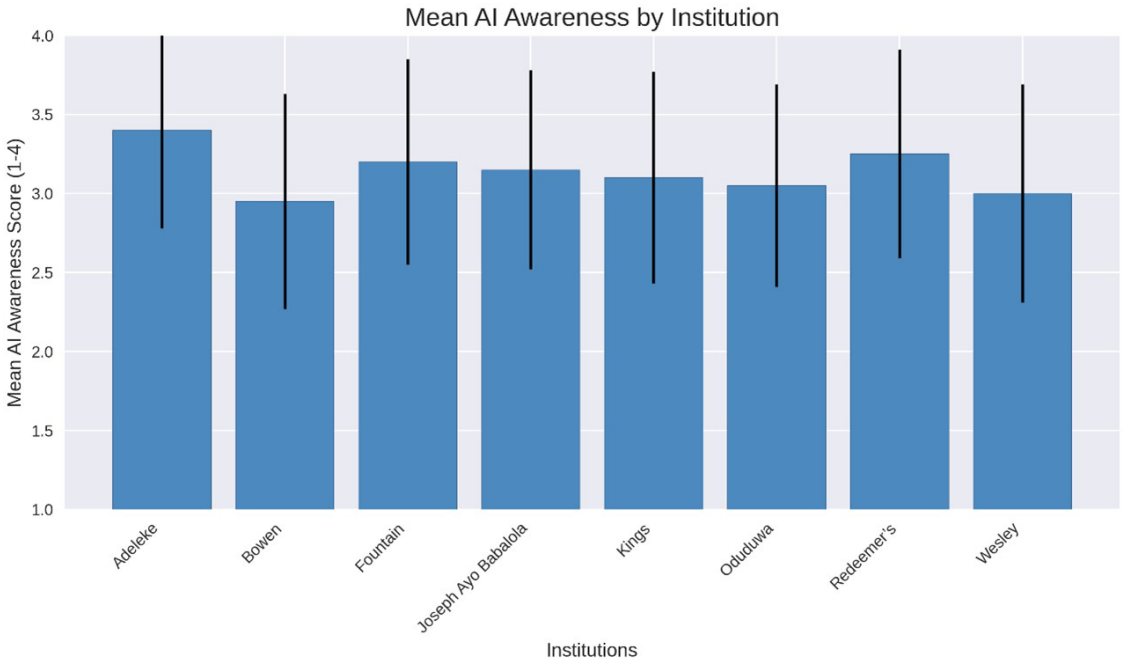

Figure 2: Mean AI Awareness by Institution (2023 Dataset)

Figure 2 displays the mean AI awareness scores (4-point Likert scale, 1 = strongly disagree, 4 = strongly agree) for the item "I am familiar with AI" across eight institutions: Adeleke (3.40), Bowen (2.95), Fountain (3.20), Joseph Ayo Babalola (3.15), Kings (3.10), Oduduwa (3.05), Redeemer's (3.25), Wesley (3.00). The chart includes error bars representing standard deviations (Table 4) and a caption noting the ANOVA result (F = 3.497, p = 0.001), with a significant difference between Adeleke and Bowen (p = 0.032, Tukey's HSD). The x-axis lists institutions, the y-axis ranges from 1 to 4, and the chart is titled "Mean AI Awareness by Institution." Figure 2 visually supports the institutional variance in AI awareness discussed in this section.

AI Usage

To assess practical engagement with AI, respondents answered a binary question ("Do you actively use AI tools in your work, e.g., chatbots, cataloging systems?") and a Likert-scale item ("I actively use AI tools in my work," 1 = strongly disagree, 4 = strongly agree). Binary: 9/102 (8.8%) reported actively using AI tools, while 93 (91.2%) reported no use (Table 6). Likert: The item scored a mean = 1.92 (SD = 0.88), with 7 (6.9%) agreeing and 2 (2.0%) strongly agreeing, totaling 8.9% positive responses (Table 7). Usage was highest at Adeleke (3/15, 20%) and lowest at Bowen (0/14, 0%). Chi-square tests showed no significant variation by demographics (qualifications: $\chi^2 = 3.112$, $p = 0.541$; position: $\chi^2 = 8.765$, $p = 0.362$; experience: $\chi^2 = 4.987$, $p = 0.417$).

Table 6: Binary AI Usage

Usage	Frequency	Percentage
Yes	9	8.8%
No	93	91.2%

Table 7: Likert AI Usage

Item	Mean	SD	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
I actively use AI tools	1.92	0.88	46.0	45.1	6.9	2.0

Perceptions

Perceptions of AI's relevance, efficiency, and service improvement were assessed via three Likert-scale items (1 = strongly disagree, 4 = strongly agree). "AI is relevant" scored a mean = 3.42 (SD = 0.78), with 59 (57.8%) strongly agreeing. "AI enhances efficiency" scored a mean = 3.39 (SD = 0.75). "AI improves services" scored a mean = 3.35 (SD = 0.72). The full distribution of responses is presented in Table 8 to provide a comprehensive view of librarians' perceptions.

Table 8: Likert Awareness

Item	Mean	SD	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
AI is relevant	3.42	0.78	3.9	9.8	28.4	57.8
AI enhances efficiency	3.39	0.75	4.9	10.8	29.4	54.9
AI improves services	3.35	0.72	5.9	11.8	29.4	52.9

Note: Percentages reflect responses on a 4-point Likert scale (1 = strongly disagree, 4 = strongly agree). For "AI is relevant," 4 (3.9%) strongly disagree, 10 (9.8%) disagree, 29 (28.4%) agree, and 59 (57.8%) strongly agree, totaling 86.2% positive responses. For "AI enhances efficiency," 5 (4.9%) strongly disagree, 11 (10.8%) disagree, 30 (29.4%) agree, and 56 (54.9%) strongly agree, totaling 84.3% positive responses. For "AI improves services," 6 (5.9%) strongly disagree, 12 (11.8%) disagree, 30 (29.4%) agree, and 54 (52.9%) strongly agree, totaling 82.3% positive responses.

Discussion

Awareness Levels

High awareness (87.3%, mean = 3.18, 78.5% positive) exceeds Nigeria's public university levels 65% (Abayomi et al. 2020) and approaches global benchmarks 80%, (Hervieux and Wheatley 2020). Within TAM, this positions awareness as a strong precursor to PU, suggesting readiness despite limited implementation (Nworie et al. 2023).

However, practical AI use is limited, with only 8.8% of librarians actively using AI tools (mean = 1.92, Table 6, Table 7), reflecting an adoption gap driven by infrastructural barriers (e.g., unreliable power, no generators to support AI tools) and training deficiencies (e.g., no hands-on experience with chatbots or cataloging systems). For instance, while 57.8% strongly agree AI is transformative (mean = 3.42, Table 8), only 8.9% report active use (Table 7), a trend lower than public-sector findings (<20%, Sambo and Oyovwe-Tinuoye 2023). This disconnect decouples awareness from perceived ease of use (PEOU), as librarians lack the tools and skills to translate knowledge into action. The full distribution in Table 2 reveals that 21.6% of librarians disagree or strongly disagree with being familiar with AI, suggesting pockets of resistance or limited exposure that warrant targeted training. Training access likely drives awareness, aligning with global findings (Cox et al. 2019), but without practical exposure, enthusiasm remains theoretical, a bottleneck acute in private libraries where autonomy should accelerate progress.

Demographic Stability

Chi-square ($p > 0.05$) and regression ($R^2 = 0.058$, $p = 0.119$) confirm no demographic variation, rejecting TAM's expectation of external influence (Davis 1989). Unlike public-sector trends (Sambo and

Oyovwe-Tinuoye 2023), this uniformity suggests standardized institutional exposure. Experience's negative β (-0.159) hints newer librarians may be more receptive, though not significantly.

Institutional Influence

ANOVA ($p = 0.001$) reveals institutional variance, with Adeleke outperforming Bowen ($p = 0.032$, $d = 0.35$, Figure 2). Sensitivity analysis (standardized difference = 0.23) shows Likert scales detect nuances binary measures miss, refining measurement approaches (Subaveerapandiyan 2023). Institutional factors funding, leadership, and training access drive these differences, trumping demographics in shaping PU. Adeleke's high awareness (mean = 3.40, Table 4) likely reflects robust library budgets (e.g., donor-funded tech investments) and proactive leadership prioritizing AI (e.g., workshops or tool demos), while Bowen's lower score (mean = 2.95) suggests tighter resources and conservative management hesitant to shift from traditional practices. Figure 2 visually underscores this variance, with Adeleke's higher mean and Bowen's lower mean clearly distinguished, supporting the ANOVA findings.

Perceptions

Positive perceptions (mean ≈ 3.4, Table 8) align with PU, surpassing public-sector skepticism (Sambo and Oyovwe-Tinuoye 2023). The full distribution in Table 8 shows strong agreement (52.9%–57.8%) across all perception items, with only 13.7%–17.7% disagreeing or strongly disagreeing, indicating broad optimism about AI's potential to transform library operations. This optimism signals potential for AI-driven transformation, contingent on infrastructure support.

Implications

This study refines TAM by prioritizing institutional over demographic influence, advocates nuanced measurement, and highlights AI readiness tempered by implementation gaps. It positions private libraries as a developing-world model, where high awareness awaits practical bridging of infrastructural and skill deficits, offering a contrast to global-north trends.

Conclusion and Recommendations

Conclusion

Among 102 librarians, high AI awareness (87.3%, mean = 3.18, Table 2) and positive perceptions (mean ≈ 3.4, Table 8) exceed public university levels (65%), driven by institutional factors ($p = 0.001$, Figure 2) rather than demographics ($p > 0.05$, $R^2 = 0.058$). Extending TAM, awareness emerges as a stable antecedent to PU, moderated by context. This readiness, however, is constrained by an adoption gap, with only 8.8% of librarians actively using AI tools (Table 6, Table 7) due to unreliable infrastructure (e.g., power, connectivity) and skill shortages, decoupling awareness from PEOU. The multi-scale approach (binary vs. Likert, Tables 2, 8) and private-sector focus contribute to LIS, offering a global-south perspective on AI readiness.

Recommendations

High AI awareness (87.3%, mean = 3.18) and positive perceptions (mean ≈ 3.4) among 102 librarians contrast with low usage (8.8%), reflecting infrastructural and training gaps. To bridge this, we propose:

1. **Targeted Training (₦500,000/library, 6 months)**: Deliver institution-specific workshops. Basic training (e.g., for Bowen, mean = 2.95) covers AI concepts, open-source tools (e.g., Rasa chatbots), and ethics, while advanced training (e.g., for Adeleke, mean = 3.40) focuses on tools like Ex Libris's Alma. Costs include facilitators (₦150,000), materials (₦100,000), logistics (₦150,000), and virtual follow-ups (₦100,000), feasible within private budgets (Omame and Alex-Nmecha 2020). This addresses low usage (Table 6) by enhancing perceived ease of use.
2. **AI Pilots (₦2 million/library, 12 months)**: Deploy chatbots (e.g., Rasa) and cataloging tools (e.g., Koha) in phased pilots, starting with high-awareness libraries (e.g., Adeleke). Allocate ₦800,000 for hardware (PCs, generator), ₦500,000 for software, ₦400,000 for internet, and ₦300,000 for IT support. Fund via university budgets or TETFund grants. Pilots aim to raise usage to 15%–20%, leveraging positive perceptions (Table 8).
3. **Further Research**: Conduct mixed-method studies (₦1–2 million) using structural equation modeling to test training and leadership impacts on adoption. Case studies of Adeleke and Bowen (₦500,000 each) will clarify institutional drivers (e.g., funding, Table 4), informing policies to position Nigeria's libraries as LIS leaders.

Competing Interests

The authors declare that they have no competing interests.

Data Availability

All data generated by this project is reported within the article.

References

Abayomi, Owolabi Kehinde, Fauziyah Nihinlolawa Adenekan, Olateju Abayomi Adeleke, Taiwo Abosede Ajayi, and Adesina Olaitan Aderonke. 2021. "Awareness and Perception of the Artificial Intelligence in the Management of University Libraries in Nigeria." *Journal of Interlibrary Loan, Document Delivery & Electronic Reserve* 29 (1–2): 13–28. https://doi.org/10.1080/1072303x.2021.1918602.

Cox, Andrew M., Stephen Pinfield, and Sophie Rutter. 2018. "The Intelligent Library." *Library Hi Tech* 37 (3): 418–435. https://doi.org/10.1108/lht-08-2018-0105.

Davis, Fred D. 1989. "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology." *MIS Quarterly* 13 (3): 319. https://doi.org/10.2307/249008.

Enakrire, Rexwhite Tega, and Bolaji David Oladokun. 2023. "Artificial Intelligence as Enabler of Future Library Services: How Prepared Are Librarians in African University Libraries." *Library Hi Tech News* 41 (3): 1–5. https://doi.org/10.1108/lhtn-09-2023-0173.

Hervieux, Sandy, and Amanda Wheatley. 2020. "Perceptions of Artificial Intelligence: A Survey of Academic Librarians in Canada and the United States." *The Journal of Academic Librarianship* 47 (1): 102270. https://doi.org/10.1016/j.acalib.2020.102270.

Long, Duri, and Brian Magerko. 2020. "What is AI literacy? Competencies and design considerations." In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, 1–16. Association for Computing Machinery. https://doi.org/10.1145/3313831.3376727.

Moustapha, Abdrahman Atanda and Ibrahim O. Yusuf. 2023. "Artificial Intelligence Adoption and Utilization by Librarians in University Libraries in Kwara State, Nigeria." *Library Philosophy and Practice (e-journal)* 7917. https://digitalcommons.unl.edu/libphilprac/7917.

Nworie, Josiah Chukwumaobi, Elvis Uchenna Ubochi, Charity Iwuchukwu, and Chioma Chinyere Njoku. 2023. "Challenges and Prospects of Library and Information Services in Academic Libraries In Nigeria." *Library Philosophy and Practice (e-journal)* 7630. https://digitalcommons.unl.edu/libphilprac/7630.

Omame, Isaiah Michael, and Juliet C. Alex-Nmecha. 2020. "Artificial Intelligence in Libraries." In *Advances in Library and Information Science (ALIS) Book Series*, 120–144. IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-7998-1116-9.ch008.

Oniovoghai, Emezaiwakpor, Martin, Evelyn Omoluabi Idiodi and Lucky Oghenetega Urhiewhu. 2023. "Artificial Intelligence (AI) In Service Delivery to Academic Library by Librarians in Nigeria." *International Journal of Library and Information Science Studies* 9 (2): 41–53. https://www.eajournals.org/wp-content/uploads/Artificial-Intelligence.pdf.

Sambo, Atanda Saliu and Gloria Oyovwe-Tinuoye. 2023. "Awareness and Perception of Certified Librarians of Nigeria Towards the Use of Robotic Technologies in the Libraries." *Ghana Library Journal* 28 (1): 26–34. https://doi.org/10.4314/glj.v28i1.3.

Subaveerapandiyan A. 2023. "Application of Artificial Intelligence (AI) in Libraries and Its Impact on Library Operations Review." *Library Philosophy and Practice (e-journal)* 7828. https://digitalcommons.unl.edu/libphilprac/7828.

Vijayakumar, S. and K.N. Sheshadri. 2019. "Applications of Artificial Intelligence in Academic Libraries." *International Journal of Computer Sciences and Engineering* 7 (16): 136–140. https://www.ijcseonline.org/full_spl_paper_view.php?paper_id=1294.