ARTIFICIAL INTELLIGENCE (AI) FOR SMART LIBRARY SYSTEMS: A FOCUS ON AWARENESS AND LEVEL OF ADOPTION IN THE KENYAN UNIVERSITY LIBRARIES

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Abstract

Artificial Intelligence (AI) has become a buzzword in the world of technology, and its potential applications are vast. In the academic world, AI has the potential to revolutionize the way libraries operate, from automating routine tasks to providing personalized services to users. However, the adoption of AI in Kenyan university libraries is still in its infancy, and there is a need to raise awareness and promote its adoption. This research aims to explore the current state of awareness and adoption of AI in Kenyan university libraries and provide recommendations for its successful implementation.

Keywords: Library, Artificial Intelligence, Adoption and Awareness

Introduction

The landscape of higher education is undergoing a rapid transformation, fueled by the advancement of technology (Mohamed, Tlemsani & Matthews, 2022). Learning technologies and digital platforms are no longer an afterthought; they are critical for teaching and learning (Bearman, Nieminen & Ajjawi, 2023). The COVID-19 pandemic served as a catalyst for digital transformation, forcing colleges, universities, instructors, and students to shift online rapidly.

Higher education institutions are beginning to embark on a digital transformation journey to bring their systems and technology in line with student expectations (Rodríguez-Abitia & Bribiesca-Correa, 2021). Digital transformation in higher education refers to any sort of technology that helps institutions become more productive, efficient, and effective (Benavides et al., 2020). Key areas for enhancing digital learning in higher education include digital learning technologies, instructional modality, personnel and support services, organizational policies and planning, instructor development, learner development, and partnerships (Zain, 2021). The benefits of digital transformation in higher education include flexibility and accessibility to students and preparing them to solve problems in the digital age. Artificial intelligence (AI) is poised to play a key role in this transformation, and libraries are at the forefront of exploring its potential.

The awareness of Artificial Intelligence (AI) in USA university libraries is increasing. Academic libraries are actively integrating AI into their operations and services to enhance efficiency and lower human error rates (Farag, Mahfouz & Alhajri, 2021). There is a growing emphasis on developing a strong foundation for an AI culture within academic libraries, including educating employees on AI applications and managing risks associated with AI technologies. However, the adoption of artificial intelligence (AI) in university libraries in the USA faces several obstacles (Yoon, Andrews & Ward, 2022). AI adoption is hindered by significant disruption to traditional library services, a skills shortage, the need for training, unstable power supplies, and a lack of adequate infrastructure (Moustapha, & Mr, 2023). The Rise of AI in Academic Libraries (PIL #78) also discusses the implications and applications of AI in academic libraries, highlighting projects and collaborations from academic librarians who have begun to embrace AI in their work (Lippincott & Calvert, 2021). Additionally, a conceptual framework called AI-LSICF (Artificial Intelligence Library Services Innovative Conceptual Framework) has been developed to provide new insights into how AI technology can be used to deliver value-added innovative library services to achieve digital transformation (Bosler, Burr & Ihring, 2021). These sources indicate that while there is awareness of the potential benefits of AI in university libraries, its adoption is impeded by various challenges.

The awareness of Artificial Intelligence (AI) in Nigeria university libraries is relatively low. The adoption of AI by librarians in university libraries is relatively low due to various challenges specific to developing countries (Moustapha & Yusuf, 2023). Some of the obstacles preventing the adoption of AI in university libraries include a lack of skills, inadequate

infrastructure, and a need for training before applying AI (Abayomi et al., 2021). Despite these challenges, there is a growing interest in exploring the potential benefits of AI in library services, such as improving service delivery and enhancing user experiences. To improve the adoption of AI in university libraries in Nigeria, it is recommended that librarians receive training to enhance their skills in using AI, and that the university administration and libraries provide the necessary support and infrastructure for its implementation.

The awareness of Artificial Intelligence (AI) in Kenyan university libraries is relatively low, as indicated by research connecting AI to librarianship, which remains relatively low in Africa (Nzioki, 2021). Despite the benefits associated with AI adoption in libraries, challenges such as financial uncertainty, skill gaps, job loss, and lack of infrastructure hinder its smooth adoption in academic libraries in Africa. Nearly three-quarters of university librarians urgently need to address ethical and privacy concerns surrounding AI, emphasizing the need for increased awareness and education in AI among library professionals. Librarians are actively addressing AI concerns by creating guides and launching pilot projects to alleviate anxieties among faculty members, reflecting a proactive approach to staying ahead of technological challenges.

The use of AI in libraries has the potential to transform the way libraries operate, from automating routine tasks to providing personalized services to users (Ali, Naeem & Bhatti, 2020). However, the adoption of AI in Kenyan university libraries is still in its early stages. This manuscript aims to explore the current state of awareness and adoption of AI in Kenyan university libraries and provide recommendations for its successful implementation.

Despite the potential of AI to revolutionize library services, its adoption in Kenya's university libraries remains low. Kenyan university libraries are lagging behind in the adoption of Artificial Intelligence (AI) compared to other regions or international standards. This slow adoption rate hinders their ability to provide modern, efficient, and user-centric services to students, faculty, and researchers.

If the challenges associated with AI adoption remain unaddressed, university libraries in Kenya will miss opportunities to improve efficiency, user experiences, and overall performance. Moreover, failure to adapt to emerging technologies risks falling behind competitors and losing relevance in the rapidly evolving landscape of modern learning environments. Libraries will struggle to keep pace with evolving user needs and expectations, leading to a decline in their

relevance. Libraries will miss out on the potential of AI to streamline operations, personalize services, and develop new solutions to user needs.

While previous studies provide insights into the challenges facing AI adoption in university libraries globally, including those in Nigeria, there is a gap in the availability of specific, localized data concerning Uasin Gishu County. There is a need for awareness-raising programs and training initiatives to bridge the knowledge gap between librarians and users regarding AI. By addressing these gaps and actively promoting AI adoption, Kenyan university libraries can unlock the potential of this transformative technology to enhance services, improve user experience, and contribute significantly to the academic success of their communities. Therefore, this paper seeks to establish awareness and adoption of Artificial Intelligence (AI) in Kenyan University Academic Libraries; A case of public Universities in Uasin Gishu County. This study focused on the following research questions ; What is the level of awareness of AI in university Libraries in kenya and To what extent have Kenyan university libraries adopted AI in Kenya

Literature Review

Overview of AI in academic libraries

Artificial Intelligence (AI) is significantly impacting academic libraries, prompting a need for increased awareness and education among librarians to navigate the evolving landscape effectively. Roughly half of surveyed librarians by Smith 2022) study claimed to have a moderate understanding of AI concepts, emphasizing the necessity for enhanced awareness and education. Librarians are actively addressing AI concerns by creating guides and launching pilot projects to alleviate anxieties among faculty members. Abayomi et al. (2021) found that academic librarians are aware of the existence of AI usage in university libraries, with concerns about potential job loss.

Yusuf et al. (2022) demonstrated that the implementation of artificial intelligence (AI) by librarians in university libraries in Nigeria, specifically in Kwara State, is limited due to various challenges unique to developing nations. Grant and Camp (2018) noted that numerous academic libraries in developed countries have adopted artificial intelligence to cater to a variety of reader service needs, including circulation, serials, and reference services. Ajani et al. (2022) found that librarians are not prepared to implement AI in their academic libraries.

Okunlaya et al. (2022) stated that university libraries have a limited willingness to adopt AI for offering new services.

Olayode (2022) observed that the University of Calabar is currently utilizing bots and robots to manage some of its service requirements. Nawaz and Salahuddin (2020) demonstrated that Chabot is effective in delivering library reference services. Olubiyo and Olubiyo (2023) highlighted the importance of utilizing expert shelf-reading systems, book-reading bots, and library reference services, along with other applications. Yu et al. (2019) found that artificial intelligence applications such as facial recognition, chatbots, and self-service AI systems could be utilized in smart libraries. Ali et al. (2020) suggested that university libraries can utilize various AI systems such as Google Chat for chat reference, Google Drive, Drive One, big data cloud computing, RFID, 3M Gates, and Google Translator for translation services. Moustapha and Yusuf (2023) demonstrate that robots are beneficial in delivering library services.

Methodology:

Research Design

The study employed a descriptive research design to assess the awareness and adoption of AI in Kenyan university libraries, specifically focusing on universities in Uasin Gishu County. This design allowed for the comprehensive exploration of the current status of AI adoption and awareness within the targeted libraries.

Study Area

This study was conducted in Uasin Gishu County, Kenya, focusing on two public university libraries namely Moi University and University of Eldoret libraries.

Target Population

The target population consisted of 2 universities librarians, 15 senior library staff, and 150 university students who utilized the library resources and services from Moi University and University of Eldoret.

Sample Size and Sampling Techniques

A sample size of participants were selected using purposive for university librarians, senior library staff and convenient sampling for students.

Data Collection Instruments

The study utilized structured questionnaires and interviews to collect data. The questionnaires were administered to students, while interviews were conducted with university librarians and senior library staff to gather their perspectives on AI awareness and adoption in university libraries. Interview schedule was designed to be simple and unambiguous for easier understanding by the librarians.

Questionnaires were categorized into three parts; Part A, B & C. The fisrt part consisted of demographic information while other parts were formulated to collect information regarding awareness and adoption of AI in Kenyan university Libraries. Detailed questionnaire and interview schedule is attached in the appendix.

Data Analysis and Presentations

Quantitative data from the questionnaires were analyzed using statistical package for social sciences SPSS version 25. Descriptive statistics such as frequencies and percentages were used to present the findings. Qualitative data from the interviews were thematically analyzed to identify patterns and themes.

Ethical Considerations

The study adhered to ethical guidelines by ensuring informed consent from all participants. Confidentiality of the collected data was maintained, and participants had the right to withdraw from the study at any point without consequences.

Results

Demographic

This sub-section investigates on respondent's background information. Mainly it includes age category, gender distribution, education level, occupation and monthly income. Results are presented in Table 1

Table 1: Demographic Characteristics of the Respondents

Gender		**Male**	**Female**	**Total**
	Frequency	24	7	31
	Percent	77.4	22.6	100.0
Age		**18-25 Years**	**26-30 Years**	**Total**
	Frequency	27	4	31

	Percent	87.1	12.9	100.0
Level of Education		**Certificate**	**Bachelors**	**Total**
	Frequency	1	30	31
	Percent	3.2	96.8	100.0

Table 1 above show that majority of the respondents 24(77.4%) were female on the other hand 7(22.6%) were male. Further the findings shows that fast majority of the respondents 27(87.1%) were aged between 18-25 years while 4(12.9%) were aged 26-30 years. Finally, most of the respondents 30(96.8%) were undertaking Bachelor's degree only course 1(3.2%) was undertaking certificate course.

Awareness of Artificial Intelligence (AI)

Descriptive statistics for the 8 items on awareness of Artificial Intelligence (AI) was obtained using frequencies, percentages, means and standard deviations and presented using a frequency distribution table. Participants were asked to indicate the Awareness of Artificial Intelligence (AI) in Kenyan University Libraries. The results are shown in Table 2.

Table 2 Awareness of Artificial Intelligence (AI)

		S D	**D**	**N**	**A**	**S A**	**Mean**	**Std.**
1. I have heard of the term "Artificial Intelligence" (AI).	F	2	2	4	7	16	4.06	1.237
	%	6.5	6.5	12.9	22.6	51.6		
2. I can explain the basic principles of how AI works.	F	3	3	3	12	10	3.74	1.290
	%	9.7	9.7	9.7	38.7	32.3		
3. I am aware of examples of AI being used in libraries (e.g., chatbots, recommendation systems)	F	2	4	2	12	11	3.84	1.241
	%	6.5	12.9	6.5	38.7	35.5		
4. I believe AI can be a valuable tool for improving library services.	F	2	7	4	5	13	3.65	1.404
	%	6.5	22.6	12.9	16.1	41.9		
5. I am comfortable using AI-powered library resources (e.g., chatbots, recommendation systems)	F	1	2	4	6	18	4.23	1.117
	%	3.2	6.5	12.9	19.4	58.1		
6. I understand the potential	F	1	5	5	10	10	3.74	1.182

	risks and limitations of using AI in libraries (e.g., bias, privacy concerns).	%	3.2	16.1	16.1	32.3	32.3		
7.	I feel my university library is adequately informing me about AI and its applications.	F	10	7	8	4	2	2.39	1.256
		%	32.3	22.6	25.8	12.9	6.5		
8.	I believe my university library should offer more resources and training on AI literacy	F	2	4	6	3	16	3.87	1.360
		%	6.5	12.9	19.4	9.7	51.6		

Results in Table 2 shows that 23(74.2%) of the respondents agreed that they are aware of the term "Artificial Intelligence" (AI). However, 4(13.0%) of the respondents disagreed that they are aware of the term "Artificial Intelligence" (AI). As per the survey results, the participants agreed in terms of mean and standard deviation that they are aware of the term "Artificial Intelligence" (AI) (Mean, =4.06, Std. dev=1.237). Further, 22(70.0%) of the respondents agreed they could explain the basic principles of how AI works. However, 6(19.4%) of the respondents disagreed they could explain the basic principles of how AI works. From mean and standard deviation, the respondents agreed that they could explain the basic principles of how AI works (Mean, =3.74, Std. dev=0.932).

Also, 23(74.2%) of the respondents agreed they are aware of examples of AI being used in libraries (e.g., chatbots, recommendation systems). However, 6 (19.4%) of the respondents disagreed they are aware of examples of AI being used in libraries (e.g., chatbots, recommendation systems). Analysis on mean and standard deviation revealed the respondents they are aware of examples of AI being used in libraries (e.g., chatbots, recommendation systems) (Mean, =3.84, Std. dev=1.290). Another, 18(58.0%) of the participants agreed that they believe AI can be a valuable tool for improving library services. On contrary ,9(29.1%) of the participants disagreed they believe AI can be a valuable tool for improving library services. Further, the study results also showed, in terms of mean and standard deviation respondents agreed they believe AI can be a valuable tool for improving library services (Mean=3.65, standard deviation=1.404).

Furthermore, it was noted that 24(77.5%) of the participants agreed they were comfortable using AI-powered library resources (e.g., chatbots, recommendation systems). Conversely to that, it was noted that 3(9.7%) of the respondents disagreed they were comfortable using AI-powered library resources (e.g., chatbots, recommendation systems). Further, in terms of mean

and standard deviation the respondents' agreed they are comfortable using AI-powered library resources (e.g., chatbots, recommendation systems) (Mean=4.23, standard deviation=1.117). In addition, 20(64.6%) of the respondents agreed they understand the potential risks and limitations of using AI in libraries (e.g., bias, privacy concerns). However, 6(19.3%) of the respondents disagreed they understand the potential risks and limitations of using AI in libraries (e.g., bias, privacy concerns). As per the survey results, the participants agreed in terms of mean and standard deviation that they understand the potential risks and limitations of using AI in libraries (e.g., bias, privacy concerns) (Mean, =3.74, Std. dev=1.182).

Further, 6(19.3%) of the respondents agreed they feel the university library is adequately informing me about AI and its applications. However, 17(54.9%) of the respondents disagreed they feel university library is adequately informing me about AI and its applications. From mean and standard deviation, the respondents disagreed they feel university library is adequately informing me about AI and its applications (Mean, =2.39, Std. dev=1.256). Finally, 19(61.3%) of the respondents agreed they believe university library should offer more resources and training on AI literacy. However, 6(19.3%) of the respondents disagreed they believe university library should offer more resources and training on AI literacy. Analysis on mean and standard deviation revealed the respondents agreed they believe university library should offer more resources and training on AI literacy (Mean, =3.87, Std. dev=1.360).

Adoption of Artificial Intelligence (AI)

To obtain responses on Adoption of Artificial Intelligence (AI), participants were asked to indicate their level of agreement with Adoption of Artificial Intelligence (AI). The Results in Table 3 shows that 7(22.6%) of the respondents agreed the library has implemented AI-powered tools or services. However, 30(68.7%) of the respondents disagreed the library has implemented AI-powered tools or services. As per the survey results, the participants in terms of mean and standard deviation disagreed that the library has implemented AI-powered tools or services (Mean=2.13, Std. dev=1360). Further,10(32.3%) of the respondents agreed that they have used AI-powered tools or services in my library work.

However, 18(58.1%) of the respondents disagreed that they have used AI-powered tools or services in my library work. From mean and standard deviation, the respondents disagreed they have used AI-powered tools or services in my library work (Mean=3.48, Std. dev=1.435). Also, 24(77.4%) of the respondents agreed they find AI-powered tools to be user-friendly and

effective. However, 6(19.3%) of the respondents disagreed they find AI-powered tools to be user-friendly and effective. Analysis on mean and standard deviation revealed the respondents agreed that they find AI-powered tools to be user-friendly and effective (Mean, =3.81, Std. dev=1.108). Another, 7(22.6%) of the participants agreed that library provides adequate training on using AI tools. On contrary ,18(58.0%) of the participants disagreed that library provides adequate training on using AI tools. Further, the study results also showed, in terms of mean and standard deviation respondents disagreed that the library provides adequate training on using AI tools (Mean=2.48, std. dev=1.363).

Furthermore, it was noted that 19(61.3%) of the participants agreed that they believe library well-prepared to adopt more AI technologies 5(16.2%) of the respondents disagreed that they believe the library is well-prepared to adopt more AI technologies. Further, in terms of mean and standard deviation the respondents' agreed they believe the library is well-prepared to adopt more AI technologies (Mean=3.65, standard deviation=1.253). In addition, 22(71.0%) of the respondents agreed that they understand the cost of implementing AI technologies is a major barrier for Kenyan libraries. However, 3(9.7%) of the respondents disagreed they understand the cost of implementing AI technologies is a major barrier for Kenyan libraries. As per the survey results, the participants agreed in terms of mean and standard deviation that they understand the cost of implementing AI technologies is a major barrier for Kenyan libraries (Mean, =4.13, Std. dev=1.231).

Further, 19(61.3%) of the respondents agreed they feel the university library is adequately informing me about AI and its applications. However, 6(19.4%) of the respondents disagreed they feel the university library is adequately informing me about AI and its applications. From mean and standard deviation, the respondents agreed that they feel the university library is adequately informing me about AI and its applications. (Mean, =3.68, Std. dev=1.326). Finally, 21(67.7%) of the respondents agreed that Ethical considerations related to AI bias and discrimination are a cause for concern. However, 5(16.1%) of the respondents disagreed that Ethical considerations related to AI bias and discrimination are a cause for concern. Analysis on mean and standard deviation revealed the respondents agreed that Ethical considerations related to AI bias and discrimination are a cause for concern (Mean, =3.77, Std. dev=1.359)

Table 3: Descriptive statistics of Adoption of Artificial Intelligence (AI)

	S D	D	N	A	S A	Mean	Std.

1.	My library has implemented AI-powered tools or services.	F	15	6	3	5	2	2.13	1.360
		%	48.4	19.4	9.7	16.1	6.5		
2.	I have used AI-powered tools or services in my library work.	F	11	7	3	7	3	2.48	1.435
		%	35.5	22.6	9.7	22.6	9.7		
3.	I find AI-powered tools to be user-friendly and effective.	F	1	5	1	16	8	3.81	1.108
		%	3.2	16.1	3.2	51.6	25.8		
4.	My library provides adequate training on using AI tools.	F	9	9	6	3	4	2.48	1.363
		%	29.0	29.0	19.4	9.7	12.9		
5.	I believe my library is well-prepared to adopt more AI technologies.	F	3	2	7	10	9	3.65	1.253
		%	9.7	6.5	22.6	32.3	29.0		
6.	I understand the cost of implementing AI technologies is a major barrier for Kenyan libraries.	F	2	1	6	4	18	4.13	1.231
		%	6.5	3.2	19.4	12.9	58.1		
7.	Security and privacy concerns are a significant obstacle to AI adoption in libraries.	F	3	3	6	8	11	3.68	1.326
		%	9.7	9.7	19.4	25.8	35.5		
8.	Ethical considerations related to AI bias and discrimination are a cause for concern.	F	4	1	5	9	12	3.77	1.359
		%	12.9	3.2	16.1	29.0	38.7		

Correlation Analysis

The Pearson moment correlation was performed as it measures the strength and direction of linear relationship between variables. Results are presented in Table 4

Table 4: Correlations Statistics for Linear Relationships between Awareness of AI and Adoption of AI

Correlations			
		Awareness	**Adoption**
Awareness	Pearson Cor	1	.693**

	Sig. (2-tailed)		.000
	N	31	31
Adoption	Pearson Cor	.693**	1
	Sig. (2-tailed)	.000	
	N	31	31
**. Correlation is significant at the 0.01 level (2-tailed).			

From Table 4 above the results shows that awareness of artificial intelligence (ai) strongly relates with adoption of artificial intelligence (ai) as shown by correlation coefficient value of 0.693 indicating that Awareness was a significant factor and contributed 69.3 percent of the change in Adoption of Artificial Intelligence (AI).

Discussion of the results

Based on the findings, it is evident that both students and library staff possess a basic understanding of Artificial Intelligence (AI) and its application in libraries. They are familiar with AI terminology and can articulate the fundamental principles of AI functionality. Moreover, they recognize various examples of AI implementation in library services, such as chatbots and recommendation systems, and acknowledge its potential to enhance library services. Interestingly, the study reveals that students and library staff exhibit a level of comfort in utilizing AI-powered resources within the library environment. However, they also demonstrate awareness of the associated risks and limitations, particularly concerning issues such as bias and privacy concerns. Despite their familiarity with AI, participants express a sense of inadequate information provision from the university library regarding AI and its practical applications. Consequently, there is a perceived need for the university library to offer additional resources and training to enhance AI literacy among its users. These findings agree with Ajani, Tella, Salawu and Abdullahi (2022) Which in one of their findings of the study is that majority of the students are aware of the application of AI technologies and their relevance in library operations. The finding affirms the finding of Kaur (2019) in India which revealed that management students in India were aware of AI usage in library operations. In addition, the students rated their knowledge about AI technologies very high, which indicates that they are familiar with the concept.

The findings on the adoption of Artificial Intelligence (AI) in Kenyan libraries among students and library staff reveal a mixed perspective. Despite expressing disagreement regarding the current implementation of AI-powered tools or services and lacking direct experience with such technologies in their library work, participants generally view AI-powered tools as user-friendly and effective. However, they highlight a significant gap in the provision of adequate training on using AI tools, which poses a barrier to their effective utilization. Nevertheless, participants believe that the library is well-prepared to adopt more AI technologies in the future, although cost considerations remain a major obstacle. Despite feeling adequately informed about AI and its applications by the university library, participants express genuine concerns about ethical issues such as bias and discrimination related to AI. Overall, addressing training needs, cost barriers, and ethical considerations is crucial for the successful adoption of AI in Kenyan libraries, enabling them to leverage AI's potential while mitigating associated risks. This finding corroborates the finding Lund, Omame, Tijani and Agbaji, (2020) that for effective usage of AI technologies, there is need for training. They also mentioned the finding of Oracle, which clearly stated that 27% of AI users confirmed that training will make students and other users of AI impact AI adoption in libraries positively.

Conclusion and recommendations

In conclusion, the findings highlighted the importance of addressing the knowledge gap and promoting AI literacy within the university library context. By providing comprehensive resources and training, the library can empower both students and staff to make informed decisions regarding the use of AI-powered tools while mitigating potential risks. This underscores the necessity for ongoing efforts to facilitate greater understanding and utilization of AI in library services. Furthermore, while there is a positive perception of AI-powered tools and a readiness for adoption, challenges such as the lack of training and cost considerations need to be addressed to facilitate effective integration. Additionally, ethical concerns underscore the importance of incorporating responsible AI practices in library settings. Overall, a comprehensive approach that addresses training needs, cost concerns, and ethical considerations is essential for successful AI adoption in Kenyan libraries.

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APPENDIX I: QUESTIONNAIRE FOR STUDENTS

Section A: Bio Data

1. What is your gender?

   Male [ ]

   Female [ ]

2. What is your age Bracket?

   18-25 years [ ]

   26-30 years [ ]

   Over 30 years [ ]

3. What is your highest level of Education?

   Certificate [ ]

   Diploma [ ]

   Bachelors [ ]

   Masters [ ]

   PhD [ ]

SECTION B: AWARENESS OF ARTIFICIAL INTELLIGENCE (AI) IN KENYAN UNIVERSITY LIBRARIES

To what extent do you agree with the following statements in regard to the Awareness of Artificial Intelligence (AI) in Kenyan University Libraries?

SA – Strongly Agree A – Agree N – Neutral D – Disagree SD – Strongly Disagree

STATEMENTS	SA	A	N	D	SD
1. I have heard of the term "Artificial Intelligence" (AI).					
2. I can explain the basic principles of how AI works.					
3. I am aware of examples of AI being used in libraries (e.g., chatbots, recommendation systems).					
4. I believe AI can be a valuable tool for improving library services.					
5. I am comfortable using AI-powered library resources (e.g., chatbots, recommendation systems).					

6. I understand the potential risks and limitations of using AI in libraries (e.g., bias, privacy concerns).					
7. I feel my university library is adequately informing me about AI and its applications.					
8. I believe my university library should offer more resources and training on AI literacy.					

SECTION C: ADOPTION OF ARTIFICIAL INTELLIGENCE (AI) IN KENYAN UNIVERSITY LIBRARIES

To what extent do you agree with the following statements in regard to Adoption of Artificial Intelligence (AI) in Kenyan University Libraries?

SA – Strongly Agree A – Agree N – Neutral D – Disagree SD – Strongly Disagree

STATEMENTS	**SA**	**A**	**N**	**D**	**SD**
9. My library has implemented AI-powered tools or services.					
10. I have used AI-powered tools or services in my library work.					
11. I find AI-powered tools to be user-friendly and effective.					
12. My library provides adequate training on using AI tools.					
13. I believe my library is well-prepared to adopt more AI technologies.					
14. The cost of implementing AI technologies is a major barrier for Kenyan libraries.					
15. Security and privacy concerns are a significant obstacle to AI adoption in libraries.					
16. Ethical considerations related to AI bias and discrimination are a cause for concern.					

APPENDIX II: INTERVIEW SCHEDULE FOR LIBRARIANS

1. What is your understanding of artificial intelligence (AI) and its potential applications in library services?

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2. Have you received any training on how to use AI in library services? If yes, please describe the training. If no, do you feel that training would be beneficial?

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3. What are the potential benefits of AI adoption in library services, in your opinion?

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4. What are the challenges associated with AI adoption in libraries, and how do you think they can be addressed?

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5. How aware are you of the current level of AI adoption in Kenyan university libraries?

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6. What do you think are the main factors that influence the adoption of AI in Kenyan university libraries?

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7. How do you think AI adoption could impact the roles and responsibilities of librarians and library staff?

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8. What do you think are the ethical considerations that need to be taken into account when adopting AI in library services?

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9. How do you think AI adoption could impact the user experience in library services?

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10. What steps do you think should be taken to increase awareness and adoption of AI in Kenyan university libraries?

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