



# Strategies and best practices of knowledge management in Academic Libraries in Nigeria

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## Abstract

*Knowledge has become a crucial resource in our society. Managing knowledge (KM) helps information professionals in improving services rendered to library users. The digital era has revolutionised the landscape of KM in academic libraries, presenting new opportunities and challenges for information professionals. Academic libraries face the complex task of formulating effective strategies and implementing best practices for knowledge management. To actively participate in KM activities, certain competencies and skills are required by library personnel. Thus, this study explores knowledge management practices in academic libraries in Nigeria. The study adopted descriptive survey research design. The population of the study consists of 114 library professionals working in the eight (8) academic libraries in Nigeria. The sampling technique adopted for this study was random selection and the main research instrument was a structured questionnaire. The collected data were analysed using descriptive and inferential statistics. Results revealed the main purposes of implementing KM in academic libraries are improving library services, managing information explosions, and meeting information needs of users. The highest rated areas of KM include digital and online services, reference services and technical services while strategies of KM included providing and using available ICT facilities, training in ICT and KM, and developing a knowledge sharing culture. The benefits of KM include gaining new skills, eradicating duplication of work, and providing new jobs and roles to library professionals. The study recommends that library management needs to make adequate provision for staff training and technological infrastructure to facilitate knowledge management and improve library services.*

**Keywords:** Academic libraries; digital age, knowledge, knowledge management, library personnel.

## Introduction

Academic libraries help in the fulfillment of the mission of their parent institutions; they create knowledge and equip users with knowledge to serve society and improve the wellbeing of mankind. Tertiary institutions cannot accomplish their twofold mission of spreading knowledge and broadening research progress without first enhancing and enriching their library resources and services. Academic library resources comprise print resources, electronic resources, and human resources (library personnel).

Library personnel are categorised as knowledge workers. They are indispensable as they work to fulfill the vision as well as the mission of the parent institutions by disseminating knowledge to the scholarly community in an academic environment. As academic libraries continue to play an essential role in the intellectual life of their institutions, understanding and harnessing the potential of knowledge management in the digital era becomes paramount. In this digital age, academic libraries face

transformative opportunities and unique challenges in managing and disseminating knowledge effectively. As information technology continues to evolve, libraries have become pivotal players in facilitating access to vast digital resources, supporting scholarly research, and promoting information literacy within academic institutions. Knowledge management has emerged as a strategic discipline that empowers academic libraries to harness the potential of digital technologies and optimise the use of knowledge to enrich the learning, teaching, and research experiences of their academic communities.

Moreover, knowledge management is no longer confined to the realm of physical collections and cataloging systems. It has expanded to encompass a wide array of activities, including data management, information literacy training, research support, and the development of dynamic virtual spaces that foster learning and collaboration. The role of library personnel has advanced from mere curators of information to active facilitators of knowledge creation and dissemination. However, alongside these opportunities, academic libraries in the digital era face significant challenges. Information overload, digital preservation, data security, and the need for constant adaptation to rapidly changing technologies pose complexities that require strategic solutions. Effective knowledge management practices are crucial for academic libraries to remain relevant and provide seamless services to their diverse user base.

The purpose of this study is to explore knowledge management practices in academic libraries in the digital era. This study seeks to identify the purposes of knowledge management, strategies for applying knowledge management, potential areas of academic libraries where knowledge management can be applied, benefits of knowledge management practices for academic libraries, the skills and competencies required for academic library personnel, and problems faced by academic libraries in their pursuit of effective knowledge management. By exploring the problems and benefits of knowledge management in academic libraries, researchers aim to contribute to the advancement of academic libraries and their mission to foster learning, research, and improvement in the ever-changing landscape of knowledge dissemination. The findings will contribute to the body of knowledge on this critical subject and offer practical recommendations for academic libraries to enhance knowledge services in this digital era.

### **Statement of the problem**

Tertiary institutions as learning environments place knowledge in high esteem. The effectiveness of tertiary institutions and academic libraries could improve when appropriate knowledge is managed and made accessible for users. Academic libraries play a pivotal role in knowledge management, ensuring efficient organisation, preservation, and dissemination of information to support the academic community's research and learning needs. However, as the digital era presents new challenges and opportunities, academic libraries face the complex task of formulating effective strategies and implementing best practices for knowledge management. Literature also revealed that there are great challenges for librarians to apply knowledge management in the library (Isfandyari-Moghaddam, 2013) due to lack of know-how about knowledge management, lack of strategy, lack of management commitment, lack of teamwork, and shortage of resources. Unfortunately, there has been a dearth of information and studies on strategies and best practices for knowledge management in academic libraries. It is on this note that this study is set to investigate strategies and best practices for knowledge management in the digital age.

### **Objectives of the study**

The objective of this study was to investigate knowledge management practices in academic libraries in the digital era. Specific objectives were to:

1. Find out the purposes of knowledge management implementation in academic libraries.
2. Investigate potential areas where knowledge management can be applied in academic libraries.
3. Identify strategies for applying knowledge management in academic libraries.
4. Find out the benefits of knowledge management for academic libraries.
5. Find out the problems being faced by academic libraries in implementing knowledge management.
6. Investigate the required skills and competencies for academic library personnel to engage with knowledge management activities in this digital age.

### **Literature Review**

#### **Concept of knowledge management**

Knowledge remains a resource and an essential component of every organisation's operation, including libraries. It is also a result of an experience that is worthwhile for other people. Two major types of knowledge exist: explicit and implicit knowledge.

Knowledge that can be readily conveyed to others by symbols, such as words and numbers, is known as explicit knowledge. Capturing, organising, codifying, and disseminating explicit information is easier. On the other hand, tacit knowledge is known as people's internal knowledge. It is challenging to record or codify implicit information, and more challenging to communicate it over time and distance (Nonaka and Takeuchi 1995). The best way to communicate it is through face-to-face and by demonstration. It can be lost over time if not shared and documented. Whatever form it takes, knowledge is important to exchange and apply to the success of library operations. Knowledge management could be seen as a viable means by which academic library services can be improved in the digital age. It is an effective way to manage information and resources within an organisation.

According to Hajric (2018), knowledge management is the efficient management of an organisation's knowledge assets to create value and satisfy tactical and strategic needs. It includes the initiatives, strategies, processes, and systems that facilitate and improve the gathering, evaluating, sharing, improving, and creation of knowledge. Knowledge management is about providing the appropriate knowledge or resources (including people) to the appropriate individuals at the appropriate moment. In library management, knowledge is more an asset when it is shared. To meet the various information needs of the library community, there is a need to continuously identify, capture, and share knowledge with diverse colleagues and their users. Knowledge management in academic libraries helps to efficiently develop, capture, acquire, share or record knowledge.

#### ***Purposes of implementing knowledge management in academic libraries***

The implementation of knowledge management in academic libraries serves several purposes that contribute to improved service, user experience, and better decision making. Rajurkar (2011) states that the goals of knowledge management in libraries are: to increase knowledge inter-networking and knowledge flow; to promote relationships within libraries and between libraries; as well as between the library and its patrons. According to Jain (2012), the main goals of implementing knowledge management in academic libraries are to increase library productivity and services, leverage existing knowledge, produce more for less due to financial constraints, control the explosion of information, make wise decisions,

establish best practices, and avoid effort duplication.

Roknuzzaman and Umemoto (2009) stressed that the goal of KM implementation in academic libraries is to enhance the library operations and services. In addition, Raja, Ahmad, and Sinha (2009) and Pathak (2014) identified the primary objectives of knowledge management implementation in academic libraries. It includes promotion of collection, promoting scientific research, processing, storage, and distribution of knowledge, fostering relationships between libraries and users, protecting intellectual property rights, building knowledge repositories and managing knowledge as an asset, organising knowledge value as well as improving research efficiency.

#### ***Potential areas where knowledge management can be applied in academic libraries***

Literature has revealed that knowledge management can be applied to many library operations. For instance, Nazim and Mukherjee (2013) affirmed that KM can be incorporated into sections of libraries, such as reference and information services, technical services, policy and decision making, resource sharing and networking, planning of information services, and administrative services. Also, Ralph and Ellis (2009) argue that knowledge management can be applied to library technical services. A study by Ahmed, Arslan, & Akram (2018) also affirms that knowledge management can be incorporated into all library operations, particularly reference services, resource management, digital and online services, information literacy programs, resource sharing and networking, decision making, as well as planning and policy making.

#### ***Strategies/methods of applying knowledge management in academic libraries***

Every human endeavour requires strategy to ensure that necessary tasks are satisfactorily achieved. In general, knowledge management demands some strategies. Ferreira, Mueller, & Papa (2018) stated that knowledge management strategy is the overall approach an organisation takes to align knowledge resources to carry out knowledge management activities. Twum (2021) affirmed that the execution of knowledge management strategies depends heavily on organisational leadership. Similarly, Asiedu, Abah and Dei (2022) opined that executing knowledge management strategies properly guarantees good outcome and ensures the greatest result in academic institutions.

Olubunmi (2015) asserted that knowledge management strategies could have an impact on organisational culture and management support systems because librarians employ shared knowledge to access and retrieve information whenever they provide services to users. To promote innovation and growth in an organisation, certain strategies have been found to perform much better when the appropriate caliber of trained, qualified, experienced, competent, and dedicated teams are available (Enakrire 2016). It should be noted that “people, technology, and processes” are necessary for every knowledge management endeavour to be successful (Trivella & Dimitrios, 2015).

Literature on knowledge management strategies shows that there are several strategies for knowledge management in academic libraries. These include managing people’s intellect, providing efficient and effective knowledge management entities, deepening research and learning processes, maintaining decision-making policies, and ensuring that ICT facilities are available and accessible to meet information needs of users and staff. Frequent face-to-face interaction among colleagues was also noted as being important. In a study on understanding knowledge management strategies in institutions of higher learning and the corporate world, Asiedu et al. (2022) discovered a dearth of literature on knowledge management strategies in higher learning institutions. They recommended strategies like communities of practice as well as knowledge consorting and harvesting. Friedrich, Becker, Kramer, Wirth, and Schneider (2020) stressed that knowledge management reward strategies increase employee motivation. Librarians need to employ specific knowledge management strategies to optimise the support services they provide to their users to manage daily inflow of knowledge and the users’ complex information needs (Enakrire & Onyancha 2020).

### ***Benefits of Knowledge Management for Academic Libraries***

Knowledge management is truly a unique approach that helps organisations not only acquire knowledge but also share information and communicate with individuals in terms of production. Knowledge management has the potential to make libraries more efficient for parent organisations and their users as they participate in the creation, acquisition, organisation, storage, transfer, sharing, and preservation of knowledge. The goal of

knowledge management is to improve the efficiency and sustainability of any organisation. Knowledge management has the potential to be vital for libraries to overcome the challenges librarians face in a competitive and changing environment. Literature has revealed that there are several benefits to implementing knowledge management, such as raising efficiency, productivity, quality, and decision-making (Yap and Lock, 2013).

Respondents in a study by Sarrafzadeh, Martin, & Hazeri (2010) strongly agreed that knowledge management can help improve the future prospects of libraries. Libraries can also improve knowledge-based services for internal and external users by creating an organisational culture that shares knowledge and expertise within the library. According to Porumbeanu’s (2010) knowledge management plan for academic libraries can reduce costs, increase efficiency, improve library activities, products, and services, and at the same time improve the performance and position of libraries in this knowledge age. Knowledge management helps academic libraries refine extracted services for their users. Thus, in academic libraries, knowledge management cannot be underestimated, as it helps to extend traditional functions into the digital age.

Literature revealed that knowledge management offers new opportunities for information professionals to expand their current roles and responsibilities. Roknuzzaman & Umemoto (2009) pointed out that there are more and more job openings with new titles and roles originating from knowledge management. The new job titles include knowledge engineers, knowledge analysts, knowledge publishers, knowledge browsers, knowledge retainers, knowledge brokers, and knowledge asset managers. Knowledge management offers libraries the opportunity to improve their efficiency, both for themselves and for their parent institutions (Townley in Nazim and Mukherje, 2011). Knowledge management, for instance, is used in academic libraries’ strategic planning to build an external gateway with connections to publications, research groups, and user groups.

### ***Problems faced by academic libraries in implementing knowledge management***

The development and management of knowledge present many obstacles for organisations. According to Noreen (2018), one of the biggest obstacles to the application of knowledge management strategies in academic libraries is a lack of training. Lack of

knowledge and skills, library professionals' resistance to change, lack of understanding of knowledge management concepts, lack of a culture of knowledge sharing, lack of incentives or rewards for innovation and knowledge sharing, lack of commitment from top management, lack of collaboration, and lack of resources are the major challenges discussed in literature (Roknuzzaman et al., 2009; Ugwu & Ezema, 2010; Sarrafzadeh et al., 2010).

Roknuzzaman and Umemoto (2009) identified several issues and barriers to knowledge management implementation in library operations, such as staff resistance, a lack of resources, a lack of understanding of knowledge management ideas, and a lack of a culture of knowledge capture and sharing. Nazim and Mukherjee (2013) affirmed that the implementation of knowledge management in academic libraries presents several challenges for library personnel. These challenges include inadequate IT infrastructure, lack of understanding of knowledge management concepts, lack of incentives and rewards, non-commitment from top management, lack of knowledge sharing culture, and lack of financial resources.

### ***Skills and competencies required for academic librarians to engage in knowledge management activities in the digital age***

The dynamically changing role of library personnel in academic libraries emphasises the necessity of constantly updating or gaining new competencies to remain relevant in the current library setting. To effectively support and serve the demands of a large and diverse academic community, academic libraries may need to re-organise their functions, broadening their roles and responsibilities (Noreen and Tariq, 2018). Furthermore, Husain and Nazim (2013) noted library personnel will become irrelevant and obsolete in the modern library environment if they are unwilling to change their mindset and acquire new skills. Also, Siddike and Islam (2011) affirmed mentoring skills, facilitation skills, communication skills, coaching skills, networking skills, consensus-building skills, negotiating skills, and teamwork skills as necessary skills for the implementation of knowledge management.

In their contribution, Ugwu and Ezema (2010) identified four essential skills required to implement knowledge management. The skills include leadership skills, cultural skills, restructuring skills, and strategic skills. Ahmed, Arslan, and Akram (2018) also conducted a study on implementing knowledge

management in the University Libraries of Punjab. They found communication skills, information technology skills, information management skills, leadership skills, mentoring skills, networking skills, project management skills, and teamwork skills to be necessary for the implementation of knowledge management.

### **Methodology**

This study employed a survey research design which involves a one-time interaction with librarians and library officers in the study area. A survey design is often used to assess thoughts, opinions and feelings. This design is considered appropriate because it is a unique way of gathering information from a large cohort. It has a statistical power and ability to gather large amounts of information and have the availability of validated models. The population of the study consists of 114 library personnel working in the eight (8) academic libraries in Ondo state tertiary institutions. These tertiary institutions comprise Adeyemi Federal Univeristy of Education; Federal College of Agriculture, Akure; Federal Polytechnic, Ile-Oluji; Federal University of Technology, Akure; AdekunleAjasin University; Ondo State University of Science and Technology; Rufus Giwa Polytechnic; and Elizade University, Ilara-mokin. The population of this study was limited to professionals (librarians) and paraprofessionals (library officers) only. The sampling technique adopted for this study was total enumeration because of the population size. The research instrument for the study was a structured questionnaire. The collected data were analysed using descriptive and inferential statistics.

### **Findings of the Study**

This section presents the findings of the study in line with the research questions raised.

#### ***Demographic characteristics of respondents***

The demographic characteristics such as gender, highest educational qualification, and years of work experience of the respondents were illustrated below. The results are presented in Fig. 1, Fig.2 and Fig.3 respectively.

Fig. 1 Respondents' gender

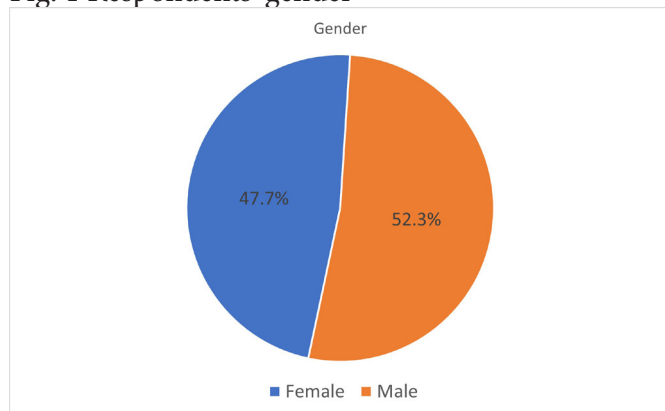


Fig. 2 Educational qualifications

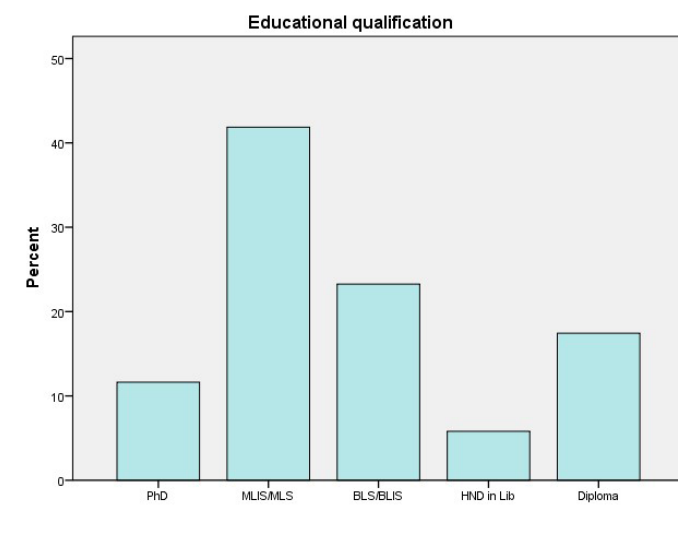


Fig. 3 Experience of the respondents



In terms of gender distribution (Fig. 1), 45 (52.3%) of the respondents were male while 41(47.7%) were female. This shows that there were more male participants in the study than their female counterparts. On the highest educational qualification of the respondents, the result (Fig. 2) showed that majority of the respondents had MLIS, MLS, M.Sc degrees (41.9%) while only a few of the respondents claimed to have a Higher Diploma in Librarianship

as their highest educational qualification (5.8%). This shows that most of the library personnel in tertiary institutions in Ondo State were holders of master's degree in library and information science. Also, in terms of years of work experience, the findings (Fig.3) revealed that the majority of the respondents, 44 (51.2%), claimed to have 11-20 years of experience, while the least number of respondents, 10(11.5%) claimed to have 21-30 years of work experience.

### ***Purposes of implementing knowledge management in academic libraries***

Respondents were asked to indicate the purposes of implementing knowledge management in Ondo State academic libraries. Table 1 revealed their responses.

Table 1 revealed the purposes of knowledge management implementation in academic libraries, which includes improvement of library services ( $\bar{x} = 3.56$ ), "to make the best use of the library budget" ( $\bar{x} = 3.42$ ), "to manage information explosion" ( $\bar{x} = 3.26$ ), "to the meet information needs of the users" ( $\bar{x} = 3.23$ ), "to manage knowledge decay" ( $\bar{x} = 3.21$ ) and so on.

### ***Potential areas where knowledge management can be applied***

In this section, respondents were asked to indicate areas where knowledge management can be applied in academic libraries. The results are presented in Table 2.

Table 2 revealed the highest-rated areas of knowledge management in academic libraries to include digital and online services ( $\bar{x} = 3.42$ ), reference services ( $\bar{x} = 3.26$ ), technical services ( $\bar{x} = 3.17$ ), information literacy programs ( $\bar{x} = 3.16$ ), resource management ( $\bar{x} = 3.10$ ), policy and decision making ( $\bar{x} = 3.07$ ), and so on.

Respondents were asked about the strategies for applying knowledge management in academic libraries. Table 3 revealed that strategies of knowledge management include using available ICT facilities for knowledge management activities ( $\bar{x} = 3.26$ ), provision of ICT infrastructures ( $\bar{x} = 3.21$ ), training in ICT and knowledge management ( $\bar{x} = 3.13$ ), developing culture of knowledge sharing ( $\bar{x} = 2.81$ ), and mentorship ( $\bar{x} = 2.78$ ).

Table 1: Purposes of implementing knowledge management in academic libraries

Rank	Purposes	SA		A		D		SD		$\bar{x}$	STD
		N	%	N	%	N	%	N	%		
1	To improve library services	50	58.1	35	40.7	0	0.0	1	1.2	3.56	0.566
2	To make the best use of the library budget	44	51.2	37	43.0	2	2.3	3	3.5	3.42	0.711
3	To manage information explosion	37	43.0	37	43.0	9	10.5	3	3.5	3.26	0.785
4	To meet information needs of users	38	44.2	37	43.0	4	4.7	7	8.1	3.23	0.877
5	To manage knowledge decay	35	40.7	37	43.0	11	12.8	3	3.5	3.21	0.799
6	To leverage existing knowledge	26	30.2	27	31.4	21	24.4	12	14.0	2.78	1.034
7	To establish best practices	25	29.1	29	33.7	16	18.6	16	18.6	2.73	1.078
8	To increase visibility of libraries	21	24.4	38	44.2	9	10.5	18	20.9	2.72	1.059

Scale: SA = Strongly Agree, A = Agree, D= Disagree, SD = Strongly Disagree)

Total number of respondents (n) = 86

Table 2: Potential areas where knowledge management can be applied in academic libraries

S/N	Potential Areas of Knowledge Management Application	SA		A		D		SD		$\bar{x}$	STD
		N	%	N	%	N	%	N	%		
1	Digital and online services	44	51.2	37	43.0	2	2.3	3	3.5	3.42	0.711
2	Reference services	37	43.0	37	43.0	9	10.5	3	3.5	3.26	0.785
3	Technical services	39	45.4	27	31.4	16	18.6	4	4.7	3.17	0.897
4	Information literacy program	39	45.3	27	31.4	15	17.4	5	5.8	3.16	0.919
5	Resources management	30	34.9	40	46.5	11	12.8	5	5.8	3.10	0.841
6	Policy and decision making	34	39.5	28	32.6	20	23.3	4	4.7	3.07	0.905
7	Resources sharing and networking	26	30.2	26	30.2	26	30.2	8	9.3	2.81	0.976
8	Human resource management	22	25.6	26	30.2	30	34.9	8	9.3	2.72	0.954
9	Administrative services	18	20.9	37	43.0	17	19.8	14	16.3	2.69	0.985

Scale: SA = Strongly Agree, A = Agree, D= Disagree, SD = Strongly Disagree)

Total number of respondents (n) = 86

Table 3: Strategies of applying knowledge management in academic libraries

S/N	Strategies	SA		A		D		SD		$\bar{x}$	STD
		N	%	N	%	N	%	N	%		
1	Using available ICT facilities for knowledge management activities	37	43.0	37	43.0	9	10.5	3	3.5	3.26	0.785
2	Provision of ICT infrastructures	35	40.7	39	45.3	7	8.1	5	5.8	3.21	0.826
3	Capacity building in ICT and knowledge management	35	40.7	31	36.0	16	18.6	4	4.7	3.13	0.878
4	By culture of knowledge sharing	26	30.2	26	30.2	26	30.2	8	9.3	2.81	0.976
5	By developing mentorship in libraries	26	30.2	27	31.4	21	24.4	12	14.0	2.78	1.034
6	By supporting communities of practice	25	29.1	29	33.7	16	18.6	16	18.6	2.73	1.078
7	By developing electronic collection	21	24.4	38	44.2	9	10.5	18	20.9	2.72	1.059

8	Central knowledge repositories for the whole University	18	20.9	37	43.0	17	19.8	14	16.3	2.69	0.985
9	Deepening research articles, books and monographs	25	29.1	32	37.2	9	10.5	20	23.3	2.72	1.124
10	Universal access to information and knowledge	19	22.1	23	26.7	27	31.4	17	19.8	2.51	1.049

Scale: SA = Strongly Agree, A = Agree, D= Disagree, SD = Strongly Disagree)

Total number of respondents (n) = 86

### **Benefits of knowledge management for academic libraries**

Respondents' perceptions were sought on the benefits of knowledge management in academic libraries. Table 4 revealed the result.

Table 4: Benefits of knowledge management for academic libraries

Rank	Benefits of knowledge management	SA		A		D		SD		$\bar{x}$	STD
		N	%	N	%	N	%	N	%		
1	Helps to gain new skills	50	58.1	35	40.7	0	0.0	1	1.2	3.56	0.566
2	Reduces the chances of duplication of work	43	50.0	39	45.4	2	2.3	2	2.3	3.43	0.660
3	It provides new jobs and roles to library personnel	41	47.7	37	43.0	8	9.3	0	0.0	3.38	0.654
4	It transforms library into a learning organisation	37	43.0	37	43.0	10	11.6	2	2.3	3.27	0.758
5	Helps librarians to respond effectively to users' needs	37	43.0	37	43.0	9	10.5	3	3.5	3.26	0.785
6	Makes academic libraries more relevant to their community	35	40.7	37	43.0	11	12.8	3	3.5	3.21	0.799
7	Improves self- development skills	30	34.9	40	46.5	11	12.8	5	5.8	3.10	0.841
8	Help creates culture of knowledge creation and sharing	34	39.5	28	32.6	20	23.3	4	4.7	3.07	0.905
9	It can help libraries to survive in competitions	20	23.3	42	48.8	15	17.4	9	10.5	2.85	0.901
10	Improves self-image of library personnel	20	23.3	41	47.7	14	16.3	11	12.8	2.81	0.939
11	It can improve ability of effective team players	26	30.2	27	31.4	21	24.4	12	14.0	2.78	1.034
12	Improves performance of library and their future prospect	25	29.1	29	33.7	16	18.6	16	18.6	2.73	1.078
13	It can integrate value to library operations and services	10	11.6	43	50.0	31	36.0	2	2.3	2.71	0.701
14	It can speed up decision making	10	11.6	43	50.0	29	33.7	4	4.7	2.69	0.740

Scale: SA = Strongly Agree, A = Agree, D= Disagree, SD = Strongly Disagree)

Total number of respondents (n) = 86

Table 4 shows that respondents were very positive about the benefits of knowledge management. According to the sample, KM can help to gain new skills ( $\bar{x}$  = 3.56), KM can reduce the chances of duplication of work ( $\bar{x}$  = 3.43), KM can provide new jobs and roles to library professionals ( $\bar{x}$  = 3.38), KM can transform libraries into learning organisations ( $\bar{x}$  = 3.27), KM can help library personnel respond effectively to users' needs ( $\bar{x}$  = 3.26),



and so on.

### **Problems faced by academic libraries in knowledge management implementation**

Respondents were asked to indicate problems academic libraries faced in implementing knowledge management. Table 5 revealed the result.

*Table 5: Problems faced by academic libraries in implementing knowledge management*

Rank	Problems	SA		A		D		SD		$\bar{x}$	STD
		N	%	N	%	N	%	N	%		
1	Persistent budget decline	53	61.6	31	36.0	2	2.3	0	0.0	3.59	0.540
2	Lack of clear guidelines and policy on knowledge management	43	50.0	39	45.4	2	2.3	2	2.3	3.43	0.660
3	Inadequate staff training	37	43.0	37	43.0	10	11.6	2	2.3	3.27	0.758
4	Inadequate Technology to harness benefit of KM	37	43.0	37	43.0	9	10.5	3	3.5	3.26	0.785
5	Lack of appropriate rewards and incentives	26	30.2	26	30.2	26	30.2	8	9.3	2.81	0.976
6	Lack of KM skills and competencies among library personnel	26	30.2	27	31.4	21	24.4	12	14.0	2.78	1.034
7	Non- commitment of top management to effectively incorporate KM practices in the library	25	29.1	29	33.7	16	18.6	16	18.6	2.73	1.078
8	Lack of cooperation among staff	15	17.4	38	44.2	9	10.5	24	27.9	2.51	1.082
9	Lack of knowledge capturing and sharing culture	10	11.6	37	43.0	20	23.3	19	22.1	2.44	0.965
10	Lack of willingness of the library professionals to accept the change	17	19.8	21	24.4	28	32.6	20	23.3	2.41	1.056

*Scale: SA = Strongly Agree, A = Agree, D= Disagree, SD = Strongly Disagree)*

*Total number of respondents (n) = 86*

Table 5 shows that the major problems indicated by the respondents were budget decline ( $\bar{x} = 3.59$ ), lack of clear guidelines and policy on knowledge management ( $\bar{x} = 3.43$ ), inadequate staff training ( $\bar{x} = 3.27$ ), inadequate technology ( $\bar{x} = 3.26$ ), and lack of appropriate rewards and incentives ( $\bar{x} = 2.81$ ), among others.

### **Skills and competencies required for academic library personnel to engage with knowledge management activities in this digital age**

Respondents were asked to indicate the skills and competencies required for implementing knowledge management. Table 6 revealed the result.

*Table 6: Skills required for knowledge management activities*

Rank	Skills	Very Important		Important		Not Important		Not sure		$\bar{x}$	STD
		N	%	N	%	N	%	N	%		
1	Information management skills	68	79.1	16	18.6	2	2.3	0	0.0	3.77	0.477
2	Leadership skills	65	75.6	19	22.1	2	2.3	0	0.0	3.73	0.495
3	IT skills	53	61.6	33	38.4	0	0.0	0	0.0	3.62	0.489
4	Communication skills	60	69.8	20	23.3	1	1.2	5	5.8	3.57	0.790

5	Decision making skills	50	58.1	34	39.5	0	0.0	2	2.3	3.53	0.627
6	Team working skills	43	50.0	41	47.7	2	2.3	0	0.0	3.48	0.547
7	Project management skills	53	61.6	21	24.4	10	11.6	2	2.3	3.45	0.792
7	Mentoring skills	45	52.3	37	43.0	2	2.3	2	2.3	3.45	0.663
8	Human resources management skills	39	45.4	45	52.3	2	2.3	0	0.0	3.43	0.543
9	Change management skills	37	43.0	27	31.4	10	11.6	12	14.0	3.03	1.057

Scale: 1= Not sure, 2= Not important, 3= Important, 4= Very important

Total number of respondents (n) = 86.

Result arising from Table 6 on the skills and competencies required for implementing knowledge management shows that respondents indicated all ten skills are important for knowledge management implementation, as the mean values of all skills were greater than three. This finding corroborates those of Siddike and Islam (2011) and Ahmed, et al. (2018), who found skills necessary for the implementation of knowledge management to include communication skills, information technology skills, information management skills, leadership skills, mentoring skills, networking skills, project management skills, and teamwork skills. The results of this study and previous studies revealed that there are several skills required for knowledge management practices in this digital era.

## Discussion of Findings

The finding on the purposes of implementing knowledge management in Ondo State academic libraries corroborates those of Jain (2012), Jain (2013), and Ahmed, Arslan, and Akram (2018) who also reported similar findings. The finding also supports the position of Roknuzzaman and Umemoto (2009) that the main purpose of knowledge management is to promote better services for library users. Therefore, this finding affirmed that library personnel understand the purposes of knowledge management implementation in academic libraries.

Findings on potential areas where knowledge management can be applied in academic libraries confirms the previous studies by Nazim and Mukherjee (2013) and Ahmed, Arslan, and Akram (2018), who also found that reference services, policy and decision making, digital and online library services, technical services, and information literacy programs are potential areas for the implementation of knowledge management in libraries.

On strategies of applying knowledge management in academic libraries, the findings are in line with the submission of Ahmed, Arslan, and Akram (2018), who also reported that strategies of knowledge management in academic libraries include the provision of training to staff, using ICT for knowledge management, fostering a knowledge sharing culture in the library, and developing mentorship in the libraries. Ramanigopal (2012) also identified training and mentoring as knowledge management strategies.

In his study, Dei (2017) listed knowledge management strategies to include personnel training, sharing of experiences, and workshops, among others. Results on benefits of knowledge management for academic libraries corroborates previous studies by Aryanto, Prima, and Lusa (2020), Ahmed, Arslan, and Akram (2018), Dhamdhare (2015), Nazim & Mukherjee (2013), Yap and Lock (2013), and Asogwa (2012), who found similar results for benefits of knowledge management in academic libraries.

Findings on problems faced by academic libraries in knowledge management implementation corroborates the previous studies by Yaacob, Jamaluddin, and Jusoff (2010), Jain (2012), Nazim and Mukherjee (2013), Mostofa and Mezbah-ul-Islam, (2015), Ahmed, Arslan, and Akram (2018), and Aryanto, Prima, and Lusa (2020), who highlighted major challenges of knowledge management as: constant budget decline, inadequate staff training, lack of incentives, insufficient technology, lack of clearly defined guidelines on knowledge management implementation, and lack of knowledge sharing culture. Consequently, there is uniformity in the literature as regards the problems of knowledge management identified in this study.

## Conclusions

This study established that library professionals understand the purposes of implementing KM in libraries. The study also affirmed that KM can be applied in all sections of libraries. The benefits of

implementing KM in academic libraries cannot be overemphasised, as respondents in this study were very positive towards all the listed benefits of KM. However, there are a few challenges facing academic library personnel while implementing KM. The challenges include lack of clear guidelines and policies on knowledge management, inadequate staff training, inadequate technology, and lack of appropriate rewards and incentives, among others. This study affirmed that library personnel require a number of competencies and skills to implement KM effectively. Some of the needed skills are information management skills, leadership skills, IT skills, communication skills, and decision-making skills, among others. This study will empower libraries to thrive as vibrant knowledge hubs in the digital era. It is necessary for academic libraries to manage their knowledge to facilitate easy and timely sharing and use of knowledge for the betterment of the academic community. With knowledge management, academic library personnel will enhance their capacity for knowledge creation; it will strengthen relationships among library personnel and promote inter-networking between personnel, libraries, and users.

### **Recommendations**

Based on the findings, the study recommends that it is crucial for library personnel to learn the core skills of implementing knowledge management, especially IT skills, communication skills, leadership skills, information management skills, decision making skills, and teamwork skills. The study also recommends that management make adequate provision for staff training and technological infrastructure so as to facilitate knowledge management in academic libraries and improve library services.

### ***Practical Implications for knowledge management in academic libraries in a digital era***

Here are some practical implications for knowledge management in academic libraries in a digital era:

1. **Digital Repository:** Knowledge management can assist to create a digital repository to store and manage intellectual assets such as research papers, theses, dissertations, and other scholarly content.

2. **Information Architecture:** With Knowledge management user-friendly information architecture to facilitate easy access and navigation to digital resources can be designed.

3. **Search Engine Optimization:** Knowledge management will give room to optimize the library's

digital resources for search engines to improve visibility and accessibility.

4. **Digital Literacy:** Academic libraries can employ knowledge management to offer training and workshops on digital literacy, information literacy, and research skills to support academic success.

5. **Collaboration Tools:** Knowledge management can be used to provide collaboration tools and platforms for students and faculty to work together on research projects and share knowledge.

6. **Knowledge Sharing:** Knowledge management will encourage knowledge sharing among library staff, students, and faculty through blogs, wikis, and other knowledge management systems.

7. **Digital Preservation:** Knowledge management can be used to develop strategies for digital preservation to ensure long-term access and preservation of digital resources.

By implementing these practical implications, academic libraries can effectively manage knowledge in the digital era and support the academic success of students and faculty.

### **Limitations and Areas for Further Studies**

Here are some limitations and areas of further study for knowledge management in academic libraries in a digital era:

#### ***Limitations***

Technological constraints such as limited infrastructure, outdated hardware, and software compatibility issues and information overload in managing the vast amount of digital information and filtering out irrelevant content are major identified limitations in the course of this study.

#### ***Areas for further study***

1. **Artificial intelligence and machine learning applications:** Exploring AI and ML to enhance knowledge management, discovery, and recommendation systems.

2. **Virtual and augmented reality integration:** Investigating the potential of VR and AR to enhance knowledge management and user experience.

3. **Big data analytics and visualization:** Developing strategies to analyze and visualize large datasets to inform knowledge management decisions.

4. **Knowledge management systems evaluation:** Developing frameworks to assess the effectiveness and impact of knowledge management systems in academic libraries.

5. Collaborative knowledge management: Investigating models for interdisciplinary and inter-institutional knowledge management collaborations.

6. Ethical considerations and values: Examining the ethical implications of knowledge management in academic libraries, including privacy, inclusivity, and social responsibility.

By acknowledging these limitations and exploring these areas of further study, academic libraries can continue to innovate and improve knowledge management practices in the digital era.

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