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INFORMATION RETRIEVAL SKILLS AND KNOWLEDGE MANAGEMENT IN ACADEMIC LIBRARIES IN CROSS RIVER STATE.

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Abstract
This study examined information retrieval skills and knowledge management in academic libraries in Cross River State, Nigeria. The study focused on to ascertaining the relationship between search strategies, database navigation, and information organization as components of information retrieval skills and knowledge management in academic libraries. Research questions and hypothesis were raise to guide the study. Literature were reviewed according to the sub-variables. A survey research design was adopted for the study. The population comprised 252 library staff from selected academic libraries in Cross River State. From which a sample of 127 respondents was drawn using stratified and proportionate random sampling techniques. Data were collected using a structured questionnaire titled: Information Retrieval Skills and Knowledge Management Questionnaire (IRSKMQ). The reliability was established using Cronbach's alpha with reliability coefficients ranging from 0.73 to 0.81. Data collected were analyzed using Pearson Product Moment Correlation at the 0.05 level of significance. The findings revealed that there was a significant relationship between search strategies and knowledge management, database navigation and knowledge management, as well as information organization and knowledge management in academic libraries. The study concluded that effective information retrieval skills significantly enhance knowledge management practices in library management. It was therefore recommended that library management and relevant stakeholders should organize regular training and capacity-building programmes for library staff to improve their competencies in information retrieval skill like search strategies, database navigation, and information organization for effective knowledge management.

Keywords: Information Retrieval skill, Knowledge Management, Search Strategies, Database Navigation, Information Organization, Academic Libraries.

Introduction

Information retrieval skill in modern libraries is a vital process that enables users to efficiently locate and access relevant information from vast collections of resources. As libraries increasingly move towards digital platforms and manage enormous volumes of both physical and digital content, the need for effective Information retrieval skill systems has grown exponentially. These systems help organize, index, and retrieve information, ensuring that users can quickly find what they are looking for, whether it's a research paper, book, article, or multimedia resource.

Information retrieval skills are the abilities to efficiently and effectively find relevant Information from large collections of data by using search strategies database navigation, Information organization and tools to filter out irrelevant information. This involves formulating precise queries, selecting the right keywords, and evaluating the reliability of source to find what is needed for a specific task (Owolabi, 2016). Information retrieval skills are the competencies needed by users and librarians to effectively find relevant information from available resources, while knowledge management in academic libraries involves the process of identifying, acquiring, organizing and sharing both explicit (documented) and tacit (experiential) knowledge to create and deliver better library services (Onah, 2020).

Knowledge management has to do with the process or systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical and strategic requirement. It could also consist of the initiative, strategies and systems among other that sustain and enhance the storage assessment, sharing refinement and creation of knowledge. This is geared towards the improvement of information in the libraries.

Similarly, knowledge management is the efficient handling of information and resources within an organization or library. According to Zakari (2003), knowledge management is that endeavor, activity or discipline which aims at spreading and/or circulating the knowledge of a phenomenon, individuals, communities, societies and institutions in order to bring about positive change in the state-of-the-art of a system.

Hence, Knowledge management has to do with the process or systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical and strategic requirement, it could also consist of the initiative, strategies and systems among other that sustain and enhance the storage assessment, sharing refinement and creation of knowledge. This is geared towards the improvement of information in the libraries.

A library is a systematically organized institution that acquires, processes, preserves, and provides access to information resources in various formats in order to meet the informational, educational, cultural, and research needs of a defined community. According to the American Library Association (2020), a library is an organized collection of information resources and services that are made accessible to a community for reference or borrowing. This definition emphasizes that a library is not merely a physical building, but an institution structured to facilitate access to knowledge through professional organization and service delivery.

Furthermore, Ranganathan, (1931), in his Five Laws of Library Science, conceptualized the library as a "growing organism," highlighting its dynamic and evolving nature. This perspective underscores that libraries continuously expand in collections, services, technologies, and user engagement to respond to societal and academic changes. In the modern information environment, libraries incorporate digital resources such as electronic databases, institutional repositories, multimedia materials, and online catalogues, thereby extending their services beyond physical walls. Thus, a library can be viewed as a knowledge-based institution that ensures the organization, preservation, retrieval, and dissemination of information for intellectual development and lifelong learning.

An academic library is a specialized type of library established within a higher education institution to support teaching, learning, research, and community service. Similarly, Reitz (2014), describes an academic library as a library established in a college or university to serve students, faculty, and researchers by offering access to scholarly materials in both print and electronic formats. Academic libraries differ from

public or special libraries because their collections are tailored to the curricula, research priorities, and academic programs of their parent institutions.

Statement of the Problem

The dawn of 21st century has witnessed a variety of innovation in the area of Information resource management. The introduction and utilization of online resources are among these reforms that serve to provide researchers with more prompt and quality skills of information retrieval.

Empirical observation appears to indicate that knowledge management practices remain largely inadequate. This insufficiency may be attributed to several factors, including poor search strategies, limited skills in database navigation, and inadequate organization of information resources, among others. When information professionals lack effective retrieval competencies, the overall management, storage, and dissemination of knowledge within the library system may be significantly compromised.

Despite various efforts by management to address this challenge such as ensuring uninterrupted power supply, providing a conducive working environment for staff, and supplying adequate resources and facilities the problem continues to persist. These interventions, though commendable, may not sufficiently address the core issue, which appears to be skill-related rather than infrastructural.

In view of this ongoing concern, the researcher is therefore motivated to investigate the relationship between information retrieval skills and knowledge management practices in academic libraries in Cross River State, Nigeria, with the aim of identifying gaps and proposing strategies for improvement.

Research Questions

The following research questions were formulated to guide the study:

1. How does search strategies relate with knowledge management in academic libraries?

2. To what extent does database navigation relate with knowledge management in academic libraries?
3. How does information organization relate with knowledge management in academic libraries?

Statement of Hypotheses

The following hypotheses were formulated to answer the research questions:

1. There is no significant relationship between search strategies and knowledge management in academic libraries.
2. There is no significant relationship between database navigation and knowledge management in academic libraries.
3. There is no significant relationship between information organization and knowledge management in academic libraries.

Literature Review

Search Strategies and Knowledge Management

Recent scholarship emphasizes that effective information retrieval increasing depends on the user's ability to deploy advanced search strategies, particularly within digital scholarly environments. Authors consistently agree that academic libraries worldwide have shifted from print centric systems to search-driven digital ecosystem in which knowledge management principles help ensure access, retrieval, and reuse of information.

According to Ahmed and Nwosu (2020), argued that search strategies are no longer limited to keyword combinations; users must understand Boolean logic, controlled vocabularies, citation chasing and the application of algorithm driven discovery tools. These strategies are essential because the Information explosion demands that knowledge be curated through knowledge management frameworks that emphasize filtering classification and reuse. Similarly, findings by Igwe and Nkanu

(2021), In South-Eastern Nigerian Universities show that librarians play a crucial Knowledge management role by teaching structured search techniques, maintaining search guides and creating instructional materials.

Asira and Bassey (2020), found that search skills among undergraduate in the University of Calabar were strongly linked to exposure to library led information literacy sessions. The author conclude that search strategy mastery directly enhances knowledge management practices because it improves the identification, retrieval, storage, and dissemination of academic resources. Onoh and Akpan (2021), found that student at the University of Calabar and Cross River University of Technology often struggled with effective database search strategies due to inadequate information literacy institution and inconsistent user- orientation programmes. They concluded that search strategy competence has a direct effect on how well institutional knowledge resources are utilized and share.

Furthermore, Ibrahim and Nkamnebe (2019), emphasize that search strategies are not just user competencies but also organization assets. They argue that librarians themselves must maintain high retrieval proficiency in order to support broader knowledge management goals such as knowledge organization, documentation and dissemination.

On a broader state, Lawrence and Mbah (2022), argue that search strategies are essential to knowledge management because they determine how quickly users can transform raw data into usable knowledge. Without strong retrieval competencies, they contend, knowledge management systems becomes under-utilized. This viewpoint is consistent with reports by Daramola and Oladapo (2023), who foundout that inadequate search competencies hinder research productivity in Nigerian Universities.

Database Navigation and Knowledge Management

Knowledge management system uses databases to store knowledge, and its navigation allows employees to efficiently find and access information. Database navigator is an interface tool often in a left-hand panel for interacting with a database. For any University library to perform its functions effectively, it work areas must include the following: Information and communication technologies, automation,

networking, internet, administration, cataloguing acquisition, abstracting, indexing, publishing, marketing of products and services seminars. Workshops, policies, inter-library loans, staffing, knowledge management and database management among others (Fayose and Nwalo, 2000; Alegbeleye, 2010 and Etim 2010).

Effective database navigation depends heavily on the logical organization of data within the database. Well-designed database program, clear entity relationships, and proper normalization enable users to traverse data with minimal effort. When data is logically structured, users can move from one dataset to another through predefined relationships such as primary and foreign keys, which reduces redundancy and improves retrieval speed (Silberschatz, Korth, and Sudarshan, 2020). Another important aspect of database navigation is metadata usage. Metadata data that describes other data provides information about table structures, column definitions, data types and constraints. By referencing metadata, users and systems can understand how data is organized and determine the most efficient navigation paths within the database. This improves data consistency and reduces errors during retrieval (Elmasri and Navathe, 2016).

Knowledge management and the information profession have a close relationship with information and communication technologies particularly computer-based information systems and communication networks. If information is the raw materials for both knowledge management and the information profession, then technology promotes them by facilitating the creation, storage and distribution of information. Knowledge management and ICTs can bring positive change in the library organization (Alegbeleye, 2010).

Edem and Ani (2010) emphasized that effective information practices are essential for facilitating the dissemination and use of knowledge within institutions. In the context of modern academic libraries, this process is closely tied to database navigation skills, which enable information professionals and users to locate, retrieve and apply relevant scholarly materials efficiently. Database navigation involves the ability to use search techniques such as keyword selection, Boolean operators, subject headings, filters and advanced search options to refine results and access high-quality

information. When these skills are lacking, the circulation and practical application of knowledge within an institution may be significantly hindered. Thus, effective database navigation serves as a critical tool for enhancing productivity, efficiency, and informed decision-making in academic environments.

Information Organization and Knowledge Management

Information organization through cataloguing, classification, metadata creation, and indexing constitutes the structural backbone of knowledge management. Scholars cannot be effectively retrieval without systematic organization. According to Ojedokun and Ibenne (2016), state that information organization practices determine the extent to which academic libraries can support institutional teaching, learning and research. Their study shows that poor metadata quality and inconsistent classification practices severely hinder knowledge retrieval, especially in digital libraries.

In line with Eneji and Okon (2019), reveals that academic libraries struggle with inadequate cataloguing staff and lack of continuous professional development. As a result of inconsistencies in metadata creation affect the discoverability of digital resources. Their study also notes that Information organization challenges are worsened by outdated software and limited knowledge management policy frameworks.

Also William and Liao (2020), emphasize that information organization to dynamic knowledge structuring. This transition includes the deployment of machine learning-based content, semantic indexing and linked-data technologies that enhances discoverability across repositories. They argue that integrating such technologies enhances knowledge sharing reuse and long-term preservation.

Furthermore, Ramakrisha, and Solomon (2024) who carried out a study on knowledge management practices and the performance of public sector organizations: The role of information and communication technology. The researchers used both quantitative and qualitative data collect from a survey of 756 respondents from public sector organizations. The study reveals that existing knowledge practices are utilized,

the development of new knowledge needs to be improved and knowledge creation practices need to be better established.

Moreover, human resource management systems, lack of information communication technology, failure to design a knowledge management strategy and inadequate commitment and support from leadership are contextual factors that affect knowledge management. Nevertheless, the study proves that knowledge management positively impacts organizational performance, with knowledge exploitation being more effective than knowledge exploration. As a result of this, the study suggests designing and implementing a knowledge management strategy that aligns with organizational objectives and fosters knowledge sharing and transfers through human resource management systems that recognize and incentivize experienced and high performing employees.

Methodology

This study adopted a survey research design. The population of the study comprises of all library staff in the three selected academic libraries in Cross River State, making a total two hundred and fifty (252) staff.

Stratified random sampling technique was employed for sample selection. Fifty percent (50%) of the library staff in the academic libraries were selected using accidental sampling technique. This giving a total of one hundred and twenty-seven staff (127) that form the sample of the study.

The instrument used for the study was a structured questionnaire titled: 'Information Retrieval Skills and Knowledge Management Questionnaire (IRSKMQ). To determine the reliability of the instrument (questionnaire) a trial testing was done using twenty (20) respondents who do not form part of the final sample of the study. Cronbach Alpha method of reliability was used to determine the reliability estimate of the instrument. The reliability coefficient range was between 0.72-0.86 showing very high reliability.

Presentation of results and discussion

Hypothesis one

The hypothesis states that there is no significant relationship between search strategies and knowledge management in academic libraries. The result of the analysis is presented in table 1.

Table 1 showed that there is a significant relationship between search strategies and knowledge management (r = 0.213, P=0.016<0.05). Hence, the null hypothesis one was rejected, and the alternate hypothesis was sustained. This implies that search strategies are significantly related to knowledge management in academic libraries. The positive relationship of the variables shows that improvement in search strategies would lead to increase in knowledge management in academic libraries. This result also showed that the connection for both search strategies and knowledge management in academic libraries in Cross River State is strong.

Table 1: Correlation of search strategies and knowledge management in academic libraries

Variables	N	Mean.	Std.d	R	P value	Remark
Search strategies	127	15.32	4.285	0.213*	0.016	Sig.
Knowledge management in academic libraries	127	23.44	7.688			

Sig. denotes significant at p<0.05

The result of the first hypothesis revealed that the search strategies significantly relate with knowledge management in academic libraries in Cross River State.

The finding from the first hypothesis indicates that the null hypothesis was rejected and the alternate hypothesis accepted therefore implying that search strategies is capable of influencing knowledge management in academic libraries in Nigeria.

This finding further buttresses that of Doukir (2017), links efficient searching to the early stages of the knowledge management cycle (knowledge acquisition and retrieval), reveals that weak search competencies among library users often lead to poor knowledge reuse and duplication of intellectual effort within academic environment. This implies that academic libraries must ensure that staff and other library users

acquire sufficient search strategies to enable them maintain knowledge management in academic libraries in Nigeria. This also goes along way to encourage academic libraries stakeholders to be open to new knowledge and skills that would help them manage library information with ease and efficiency.

Likewise in the findings of Asira and Bassey (2020), linked search skills among undergraduate at the University of Calabar to library led information literacy. It is therefore safe to say that efficient search strategy could improves identification, retrieval, storage, and dissemination of academic resources.

Again, Onoh and Akpan (2021), opines that student at the University of Calabar and Cross River University of Technology often struggled with effective database search strategies due to inadequate information literacy institution and inconsistent user-orientation programmes. This implies that effective information management in academic libraries in Nigeria is likely hindered because of the literacy level on search strategies of academic librarians and other users.

Furthermore, the findings of the study shows a positive relationship between the variables. This could be because the presence of new technologies like mobile phones, internet, search engines, AI among others have promoted speedy communication and dissemination of information, and this could had provided librarians with multiple strategies to search for academic information.

Hypothesis two

The hypothesis states that, there is no significant relationship between database navigation and knowledge management in academic libraries. The result of the analysis is presented on table 2.

Table 2. showed that there is a significant relationship between database navigation and knowledge management ($r = 0.182$, $P=0.040<0.05$). Hence, the null hypothesis two was rejected, and the alternate hypothesis was sustained. This implies that database navigation is significantly related to knowledge management in academic libraries. The positive relationship of the variables shows that improvement in database navigation would lead to improvement in knowledge management in academic

libraries. This result also showed that the connection for both database navigation and knowledge management in academic libraries is strong in Cross River State, Nigeria.

Table 2: Correlation of database navigation and knowledge management in academic libraries

Variables	N	Mean.	Std.d	r	P value	Remark
Database navigation	127	14.58	5.811	0.182*	0.040	Sig.
Knowledge management in academic libraries	127	23.44	7.688			

Sig. denotes significant at p<0.05

The result of the second hypothesis revealed that database navigation significantly relates with knowledge management in academic libraries in Cross River State. The finding from the first hypothesis indicates that the null hypothesis was rejected and the alternate hypothesis accepted therefore implying that database navigation is capable of influencing knowledge management in academic libraries in Cross River State.

This finding is in line with the that of Yuan and Kim (2021) who reported that database navigation competency enhances the ability to manage organizational knowledge by enabling users to track usage patterns, identify knowledge gaps, and support evidence-based decision-making. In addition, strong navigation skills is seen as a foundation for robust knowledge management systems in academic environments.

Again, the finding agrees with Nkanu and Okon (2019), who after investigating database navigation competencies among librarians in Southern Nigerian Universities discovered substantial skill gabs, particularly in advanced filtering, use of metadata and exploitation of database analytics. It therefore means that equipping academic library users with these skills would improve information management in academic libraries. Also, it is in line with Okoro and Udoh (2022), who opines that librarians in Cross River and Akwa Ibom States experienced challenges navigating subscription databases due to inconsistent network availability and limited institutional funding for ICT infrastructure. Nevertheless, the authors highlight that where librarians possessed

strong navigation competencies, knowledge management practices including catalog, enhancement repository population and digital preservation were significantly improved.

Hypothesis three

The hypothesis states that, there is no significant relationship between information organization and knowledge management in academic libraries. The result of the analysis is presented on table 3.

Table 3. showed that there is a significant relationship between information organization and knowledge management in academic libraries (r = 0.179, P=0.044<0.05). Hence, the null hypothesis three was rejected, and the alternate hypothesis was sustained. This implies that information organization is significantly related to knowledge management in academic libraries. The positive relationship of the variables shows that improvement in information organization would lead to improvement in knowledge management in academic libraries. This result also showed that the connection for both information organization and knowledge management in academic libraries in Cross River State is strong.

Table 3: Correlation of information organization and knowledge management in academic libraries

Variables	N	Mean.	Std.d	r	P value	Remark
Information organization	127	14.54	3.152	0.179*	0.044	Sig.
Knowledge management in academic libraries	127	23.44	7.688			

Sig. denotes significant at p<0.05

The result of the third hypothesis revealed that information organization significantly relate with knowledge management in academic libraries in Cross River State. The finding from the first hypothesis indicates that the null hypothesis was

rejected and the alternate hypothesis accepted therefore implying that information organization is capable of influencing knowledge management in academic libraries in Cross River State.

In substantiating the findings from hypothesis three agrees with Ramakrisha, and Solomon (2024), who found that knowledge management positively impacts organizational performance, with knowledge exploitation been more effective than knowledge exploration. It further proves that existing knowledge practices must be updated with new knowledge of information to improve and create practices that are needed to improve information management in academic libraries.

Also, the finding of the study is in congruent to Masinde and Sanya (2021), who carried out a study on information organization activities in the knowledge management setting, and reported that proper information organization leads to improvement in knowledge on information gathering, storage, sharing/transfer and retrieval within the organization.

Findings from the study also buttressed the assertion of William and Liao (2020), that information organization to dynamic knowledge structuring. This transition includes the deployment of machine learning-based content classifies, semantic indexing and linked-data technologies that enhances discoverability across repositories. This implies that integrating such technologies enhances knowledge sharing reuse and long-term preservation.

Recommendations

Based on the findings of the study, the following recommendations were made:

i. In order to improve knowledge management among staff in academic libraries, stakeholders must organize periodical training for staff to update their knowledge on strategies to search for information as well as manage the information.

ii. As a matter of urgency, government and management of academic libraries in Cross River State, should not only equip the academic libraries with sophisticated database but also ensure that through training, workshop, symposium, conferences, and hands-on activities, staff gain meaningful

knowledge to navigate the database with ease for effective knowledge management in the libraries.

iii. Knowledge management can never be effective without proper information organization like, sorting, collection, collation/classification, storage, retrieval, sharing and so on. Therefore, academic library staff must ensure that they get themselves updated on all the phases of information organization, as well as practice them religiously to promote effective knowledge management in academic libraries.

iv. Libraries should develop knowledge management policies, guidelines for depositing research output and preserving university records.

Conclusion

Based on the findings of this study, it was concluded that there is a substantial association between Search strategies and Database navigation, significantly relate knowledge management in academic libraries. Again, it was concluded there is a strong positive relationship between information organization and knowledge management. With the new emphasis on digital scholarship and open access, libraries that invest in Information retrieval and knowledge management now will be the ones that will remain relevant for the next generation of scholars in Cross River State.

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