The Impact of Knowledge Utilization Practices on Service Delivery in University Libraries in Meru County

Mike Karani Iguna[1*], Prof. Paul M. Gichohi[2], Faith Mwendwa[3]
[13]Tharaka University, P.O. Box 193−60215, Marimanti, Kenya
[2]Kenya Methodist University, P.O. Box 267−60200, Meru, Kenya
Corresponding Author's Email: Mkarani736@gmail.com

Abstract

In an era where knowledge is a critical asset, effective management of knowledge resources is vital to enhancing service delivery in academic institutions. Service delivery in the university library aims to meet the diverse information needs of users, thereby supporting the core objectives of fostering learning, teaching, and research. However, the extent to which knowledge acquisition practices, utilization, sharing practices, and knowledge preservation enhance service delivery has not been established. This study explored the impact of knowledge utilization practices on service delivery in university libraries in Meru County, Kenya. The research used the SERVQUAL theoretical framework. Using the descriptive survey research design with a cross-sectional approach, the census technique allowed the collection of qualitative data from 25 library staff members and 2 library heads working in Kenya Methodist University and Meru University of Science and Technology. The research instrumentation involved the administration of open-ended questionnaires among the library staff members while library heads were interviewed. The qualitative data collected were analyzed using thematic analysis. The results showed limited use of emerging technologies, such as artificial intelligence, data mining, and the semantic web, for enhancing knowledge utilization practices and service delivery in university libraries in Meru County. The study concluded that adopted knowledge utilization practices positively impacted service delivery in the university libraries in Meru County. The findings also highlighted the integration of emerging technological tools to promote efficient knowledge utilization in the university libraries. The study recommends that university libraries leverage emerging technologies for efficient knowledge utilization practices as a strategy to enhance service delivery. Policy makers should enact policies that advocate library management to develop clear standards that support tacit knowledge management and integration of emerging technologies to enhance knowledge utilization and service delivery in university libraries.

Keywords: *Knowledge utilization practices, emerging technologies, service delivery, university libraries*.

1. Introduction

Improving service delivery in academic libraries requires effective knowledge management practices to ensure the creation, utilisation, preservation, and sharing of different forms of knowledge to create value for an organisation. Knowledge utilisation practices are among the essential aspects of effective knowledge management in organizational settings, which refer to the application of existing, created, and shared knowledge to address organizational challenges, foster innovation, and navigate emerging challenges (Shathi, 2020). Academic libraries are key information hubs that implement knowledge management practices that ensure knowledge resources are available for utilization in the educational setting. This implies that knowledge utilization is among the key services offered by academic libraries, which enable users to effectively leverage existing knowledge to generate new knowledge and academic value. Effective knowledge utilization features a combination of individual skills, expertise, and ideas, in which libraries have to provide processes and workflows that ensure optimal user experiences and outcomes (Gitonga, 2023). Inadequate knowledge utilisation practices are characterised by redundant workflows and technology limitations that lead to information overload and a lack of understanding (Igbinovia & Adetimirin, 2023). In contrast, effective knowledge utilisation practices feature library processes and support systems that ensure the availability and efficient use of knowledge for academic success. Understanding the impact of existing knowledge utilisation practices in academic libraries is central to improving service delivery in academic libraries in Kenya.

Globally, technology was integrated in libraries to promote efficient utilization of knowledge resources through innovative and convenient access to library resources, which improved service delivery in academic libraries. Castaneda and Cuellar (2020) found that libraries in most developed countries implemented knowledge networking systems that supported documentation and utilization of both tacit and explicit knowledge. In the United Kingdom, academic libraries maintained extensive digital archives with tools like ORCID IDs and open-access repositories to improve research visibility among library users (Dali et al., 2021). Libraries in the U.S. were found to adopt integrated library systems (ILS) and online repositories for managing their substantial body of published academic content (Walker & Brown, 2020). Pareek (2023) found that the quality of library services offered in Indian university libraries was improved with the integration of digital tools such as QR codes for easy and convenient access to library resources, whereas online chat features like chatbots, SMS, and email communication increased the efficiency of seeking support from librarians. Moreover, user experience was further enhanced by providing researchers with free access to e-journals and e-books and free access to premium quality-checking tools like anti-plagiarism, which led to increased user satisfaction with the university library services. The innovative service delivery in the university libraries helped support teaching, learning, and research activities efficiently and cost-effectively.

Regionally, academic libraries in Africa leveraged technological advancements and capacity-building programmes to improve service delivery by empowering library staff and users on effectively using knowledge resources. In South Africa, several university libraries had

considered the provision of digital libraries and staff training as among the critical aspects of enhancing knowledge utilization to improve service delivery (Enakrire & Smuts, 2022). Digital library resources were utilized to support the development of educational programs that increased student participation, such as online learning networks, in Nigeria (Eromosele et al., 2022). University libraries in Ghana implemented knowledge preservation practices that helped foster effective knowledge management, including open access to and digitization of library resources, as well as collaboration among library users and staff (Budu et al., 2021). In Uganda and Tanzania, academic libraries have embraced digital library applications, like online institutional repositories, to improve knowledge accessibility, foster collaboration, and enhance user satisfaction in educational settings. This suggests that capacity-building programs play a central role in enhancing technological adoption to improve knowledge utilization services offered in academic libraries.

Locally, university libraries in Kenya are also shown to be gradually adopting innovative knowledge utilization practices to enhance user experience, satisfaction, and delivery of library services. According to Demchig (2020), university libraries understand that knowledge utilization is a crucial component for enhancing service delivery, which promotes innovation, adaptability, and institutional performance that leads to enhanced efficiency and productivity in the library environment. However, various challenges adversely impacted the realization of the benefits of effective knowledge utilization practices on service delivery, which Kwanya et al. (2020) listed as comprising a lack of collaboration and skills in knowledge sharing. This implies that the implementation of knowledge utilization practices enables university libraries to remain relevant in supporting the competitiveness of their parent institutions by supporting instructional, learning, and research activities.

1.1 Problem Statement

Effective delivery of knowledge utilisation services in university libraries aims to meet the diverse information needs of users, thereby supporting the core objectives of fostering learning, teaching, and research. This involves the provision of innovative library processes and support systems that empower library users to access and use knowledge resources for optimal academic outcomes. However, the extent to which knowledge utilization practices enhance service delivery has not been established. In view of this variance, there is a need to establish knowledge utilization practices prevalent in university libraries with a view to assessing how they can contribute to effective service delivery to library users. Despite the acknowledged importance of knowledge utilization in enhancing organizational performance, there is little research examining its influence on service delivery specifically within university libraries in Meru County. This study focused on addressing this gap by examining the impact of knowledge utilization practices on service delivery in university libraries in Meru County.

1.2 Objective of the Study

To examine the impact of knowledge utilization practices on service delivery in university libraries in Meru County.

2. Literature Review

2.1 Empirical Review

Knowledge utilization is one of the essential aspects of knowledge management strategies, which involves the application of existing, created, and shared knowledge to address

organizational challenges, foster innovation, and navigate emerging challenges. Effective knowledge utilization features a combination of individual skills, expertise, and ideas to leverage existing information for strategic purposes (Shathi, 2020). Specifically, knowledge is utilized in three ways in organizations, including decision-making, action, and communication. Changes in communication behavior, such as altered communication procedures, are brought about by new knowledge. Shifts in an organization's overall mindset may result from individual learning, which reflects the application of knowledge through actions. In addition, the organization gains knowledge that leads to knowledge utilization in ways that stem from collaborative use of informational resources. University libraries collect, organize, and provide access to information for their users.

Globally, various strategies have been adopted to enhance knowledge utilization services offered in academic libraries. Adaileh et al. (2020) found that libraries in Jordan had implemented collaborative networks and platforms that enhanced knowledge utilization to create value through effective research processes. Aslam and Ansari (2024) argued that capacity-building programs were critical for ensuring that librarians had the necessary skills for providing adequate support to users on effectively using library resources and systems, which enhances user experience in libraries. Innovative knowledge utilization services facilitated by the integration of technology were shown to improve user experiences through convenient access and usage of library resources in Italy (Papa et al., 2020).

Regionally, academic libraries in Africa considered various strategies to enhance knowledge utilization and service delivery in educational settings. Enakrire and Smuts (2022) inferred that most university libraries in South Africa had integrated technologies to support efficient utilization of knowledge resources for academic success. Eromosele et al. (2022) highlighted that university libraries in Nigeria had deployed digital library resources, which supported the development of educational programs that increased student participation, such as informational resources that facilitate e-learning models. Similarly, Budu et al. (2021) indicated that university libraries in Ghana adopted online public access catalogues (OPAC) to provide digitized informational resources and institutional repositories, which enhance collaboration among library users and staff. Baro and Keboh (2021) found that academic libraries in Uganda and Tanzania had embraced digital library applications, like online institutional repositories, to improve knowledge accessibility, foster collaboration, and enhance user satisfaction in educational settings.

Locally, university libraries in Kenya are also shown to be gradually adopting innovative knowledge utilization practices to enhance user experience, satisfaction, and delivery of library services. Mullei and Misuko (2019) conducted a study on the impact of knowledge accumulation and utilization on organizational performance in selected state corporations in Kenya. The results showed that knowledge utilization significantly impacted the performance of these organizations. Chuma (2019) found that enhancing knowledge application significantly boosted user productivity and research outcomes. Nakhumicha (2024) on the access and use of digital resource platforms for teaching and research by academic staff at selected public universities in Kenya found that insufficient digital literacy skills and a slow adoption of technology by faculty members resulted in poor access to and underuse of e-resources. The reviewed literature showcases that knowledge management practices were a crucial factor that influenced user experience in academic libraries, whereby their assessment informed strategic efforts aimed at improving service delivery in libraries.

2.2 Theoretical Review

This study is underpinned by the Service Quality (SERVQUAL) Model, which assesses the quality of services offered in an organizational setting based on the difference between user expectations and experience. Jonkisz et al. (2022) explain that the SERVQUAL model determines the quality of services by measuring 5 key dimensions, which include reliability, assurance, tangibles, empathy, and responsiveness. The five dimensions acted as the factors that influenced user perceptions and experiences towards delivered services. In library settings, knowledge utilisation practices shaped these dimensions by ensuring that users effectively and efficiently accessed and used informational resources towards achieving individual academic goals. The SERVQUAL model acts as an ideal instrument for enabling this study to understand how libraries ensure the delivery of quality services to users through effective knowledge management practices. Therefore, the notion that the dimensions of the SERVQUAL model are reflected in the dynamic library environment justifies its application in this study, which allows service delivery in university libraries to be assessed based on the various dimensions that measure the quality of service.

3. Methodology

The study was conducted in Meru County, from which two universities were selected and considered for data collection, which include Kenya Methodist University (KeMU) and Meru University of Science and Technology (MUST). The study employed the cross-sectional descriptive research design to investigate the impact of knowledge utilization practices on service delivery in academic libraries. The target population consisted of 2 university library heads and 25 library staff members in Kenya Methodist University and Meru University of Science and Technology. The unit of observation featured 2 university library heads and 25 university library staff members, who were considered since their expertise on knowledge management practices in the university libraries allowed them to provide valuable insights into knowledge utilization practices and their impact on service delivery. The study adopted the purposive sampling method with a census approach in which the entire target population was considered to partake in this study.

The research instruments used in the study involved a structured questionnaire, which was administered to library staff members, and interviews were used to collect narrative responses from university library heads. Before the actual data collection process, a pilot study was conducted in Chuka University to test the validity and reliability of the research instruments. Thematic analysis was used to analyse the collected data from the different study participants, in which the qualitative data were processed using NVivo, which facilitated the systematic identification and interpretation of patterns, themes, and insights relating to the research objective. Data preparation included transcription of interview recordings, organization of responses from questionnaires and interview schedules, and familiarization through repeated reading. Coding of the transcribed data was the subsequent step, which featured open coding to segment data into units, axial coding to group related codes into categories, and selective coding linked categories to core research questions. This comprehensive approach ensured that the findings were effective for determining knowledge utilization practices and their impact on service delivery in the selected university libraries in Meru County.

4. Results and Discussion

4.1 Response Rate

The response rate of the study was 100% whereby the 25 purposively selected library staff members and 2 library heads took part in the study. This indicated a satisfactorily high response rate among the postgraduate students, which showcased that the data collected was representative of the target population of the study.

4.2 Demographic Characteristics

Table 1 illustrates the distribution of the study participants based on various demographic characteristics.

Table 1: Demographic information of the respondents

Gender	Frequency (n)	Percentage (%)
Male	16	59.3%
Female	11	40.7%
Age bracket		
20 – 30 years	4	14.8%
31 – 40 years	12	44.4%
41 – 50 years	9	33.3%
50+ years	2	7.5%
Educational attainment		
Certificate	0	0.0%
Diploma	5	18.5%
Bachelor's Degree	9	33.3%
Master's Degree	11	40.7%
Doctoral Degree	2	7.5%
Working experience		
0 – 3 years	5	18.5%
4 – 6 years	11	40.7%
7 – 9 years	6	22.3%
Above 10 years	5	18.5%
Affiliated university library		
KeMU	9	32.0%
MUST	18	68.0%
Designated Area of Work in the Library		
Conventional Library	5	18.5%
Digital Library	3	11.1%
Library Clerk	3	11.1%
Town campus	3	11.1%
Information Literacy	2	7.4%
Technical services	2	7.4%
Reprographics	2	7.4%
Library systems	1	3.7%
Acquisitions	1	3.7%
Periodicals	1	3.7%

Audio Visual	1	3.7%
User services	1	3.7%
Senior Librarian	2	7.4%

The majority of respondents were male (n=16, 59.3%), with females representing 30.8%. Most participants were aged 31-40 years (44.4%) and 41-50 years (33.3%). Educational attainment was relatively high, with 40.7% holding a master's degree, 33.3% holding a bachelor's degree, 18.5% having a diploma, and 7.5% holding doctoral degrees in information science and related fields. The majority of the respondents provided services in the conventional library area (18.5%), which offered support services to students in the physical library. Most participants had 4–6 years of work experience (40.7%), followed by library staff members with 7–9 years (22.3%), which indicated that respondents were well-positioned to give informed perspectives on knowledge utilization practices and service delivery in the selected universities.

4.3 Impact of Knowledge Utilization Practices on Service Delivery in University Libraries in Meru County

The study sought to establish the impact of knowledge utilization practices on service delivery in university libraries in Meru County. Qualitative data constituted most of the data collected from the study participants, wherein thematic analysis was performed to evaluate the responses. This section presents and discusses the study findings.

4.3.1 Findings from questionnaire responses

The first questionnaire item featured a closed-ended questionnaire item based on a 5-point Likert scale, which asked respondents to indicate the frequency of applying acquired knowledge to improve library services in their academic libraries. The responses were summarized and presented in Figure 1.
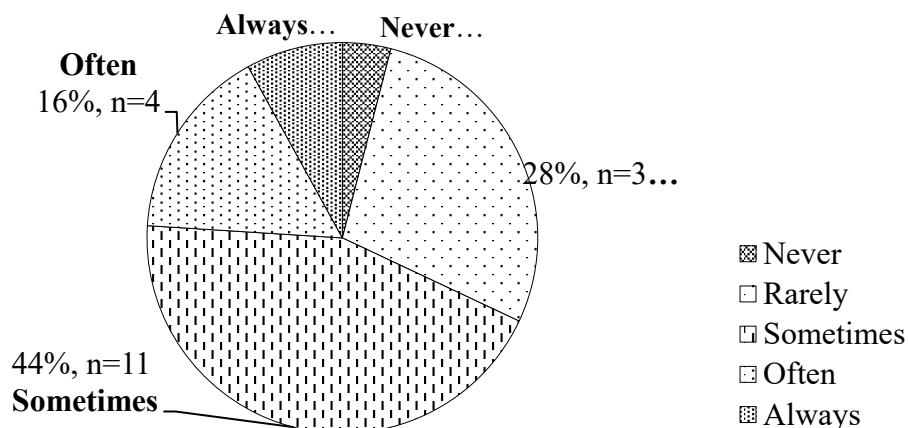

Figure 1: Frequency of library staff members using acquired knowledge in the library

The study found that 11 (44%) study participants often applied newly acquired knowledge to improve library services. 6 study participants (24%) showed that they always used it, while 4 respondents indicated that they always use newly acquired knowledge to improve library services in university libraries. In contrast, 3 respondents (12%) indicated that they rarely used, and 1 respondent (4%) never used, newly acquired knowledge to improve library services. The findings highlighted that a majority of the library staff members utilized newly acquired knowledge to improve library services, which consisted of those who often and always applied

acquired capacities to improve knowledge utilization in the university libraries. This corroborates Igbinovia and Adetimirin (2023), who argued that library staff members applied acquired knowledge and competencies to implement and manage innovative knowledge utilization practices to improve service delivery, including the adoption of electronic cataloging, OPACs (Online Public Access Catalogues), electronic acquisitions, and e-book management.

The study also revealed that various ICT systems were integrated to enhance knowledge utilization practices in the academic libraries, including social media platforms such as WhatsApp, library remote access software like MyLoft, email-based reference services, electronic books and journals, and integrated library management systems for automated search, analytics, and integration of library resources. As one of the library staff members cited:

> *The library realizes that modern library users are technology savvy and may lack time during normal office hours to use the physical library services. Thus, our library provides the MyLoft application to allow users access to library resources at any time, anywhere…*

The library staff members also highlighted that the provision of tools that enhance knowledge utilization helped users effectively use library informational resources, which supported teaching and learning in the universities. This involved providing students with revision materials and free access to proofreading and editing tools that help users ensure academic integrity as well as promote academic success (Adaileh et al., 2020).

4.3.2 Findings from interviews

The library heads highlighted that effective knowledge utilization practices were supported by the acquisition of knowledge on user needs, which allowed proactive provision of library services that improved knowledge utilization and user experiences in these academic libraries. As one of the library heads stated,

> "*Knowledge acquired from users helped the library make informed decisions on knowledge acquisition, which supported effective knowledge utilization in the library*".

This featured adoption of emergent communication channels, such as WhatsApp and chatbots, which enable librarians to conveniently identify and proactively address user needs, improving knowledge utilization experiences in the academic libraries. This highlighted that effective knowledge acquisition established a suitable premise for availing informational materials and systems that enhanced access and use of library resources as well as overall knowledge utilization experiences in the academic libraries (Mullei & Misuko, 2019).

The findings also highlighted that capacity-building programmes among library staff members empowered the provision of effective knowledge utilization practices that positively impacted service delivery in the academic libraries. The library heads cited, "*tacit knowledge to improve our library staff members' skills and competencies in providing quality services to enhance service delivery… This involves mentoring programs that help staff to pass knowledge and develop each other*". Additionally, networking events enabled library staff to socialize and gain insight into efficient ways to support knowledge utilization in the academic libraries (Ibitoye et al., 2024).

The study also found that the integrated library management services (ILMS) system had been adopted to support efficient knowledge utilization processes, which improved overall service delivery in the academic libraries. In KeMU, "the Koha library management system … offers a centralized portal for managing and providing library services", which improved knowledge utilization practices in the library. Similarly, the MUST library had implemented the BUKU, which enabled the library to offer users a diversified array of repositories that enable users to efficiently utilize knowledge from diverse knowledge sources (Nakhumicha, 2024). The ILMS systems were also shown to improve service delivery by supporting decision-making processes through analytic tools and modules that helped librarians to develop effective workflows and processes that supported knowledge utilization in the university libraries.

5. Conclusion

The study concludes that knowledge utilization practices positively impacted service delivery in the university libraries. This is supported by the high frequency of library staff agreeing that they applied acquired knowledge to enhance library services. Furthermore, various technologies have been adopted to facilitate effective knowledge utilization, including social media platforms like WhatsApp, library remote access software such as MyLoft, email-based reference services, online repositories, open access catalogues (OPAC), and integrated library management systems that automate search, analytics, and integration of library resources. The findings had also highlighted that the library staff had positive perceptions of the effect of the existing knowledge utilization practices on improving service delivery.

6. Recommendations

To maintain the positive impacts of existing knowledge utilization practices on service delivery, library heads have to strategically invest in capacity-building programs that enable library staff members to develop capacities to adopt emerging technologies, such as AI technologies, to improve the delivery of knowledge utilization services in academic libraries. Library management should collaborate with library staff members to develop and implement effective tacit knowledge management strategies that ensure continual improvements in the delivery of knowledge utilization services. Policy makers should enact policies that advocate for clear standards and guidelines that foster the adoption of emergent knowledge utilization practices that meet the diversified needs of users in the contemporary, highly dynamic library environment. Library and ICT teams have to embrace innovation by integrating emergent technologies that improve the delivery of effective knowledge utilization services, including AI-based information retrieval and use, as well as responsive support systems that meet users' evolving needs.

References

Adaileh, M., Alrawashdeh, M., Elrehail, H., & Aladayleh, K. (2020). Assessing the nexus between knowledge management and firm performance: A data article. *Data in brief*, *32*, 106283. http://dx.doi.org/10.17632/kjp4swr5f2.2

Aslam, R., Ansari, N. (2024). Knowledge Management Practices Performed at Academic University Libraries of Pakistan. *International Journal of Library Science, 12*(1), 1-12. DOI: 10.5923/j.library.20241201.01

Baro, E., & Keboh, T. (2021). Knowledge management practices in university libraries: A comparative study of selected libraries in East Africa. *Library Philosophy and Practice*, 2021, 1–18. https://digitalcommons.unl.edu/libphilprac/12345

Budu, S., Korkuvi, P., Twum, K., & Budu, R. (2021). Determining university library loyalty using library service quality of a public university in Ghana. *Library Philosophy and Practice*, *5395*. https://digitalcommons.unl.edu/libphilprac/5395

Castaneda, D., & Cuellar, S. (2020). Knowledge sharing and innovation: A systematic review. *Knowledge and Process Management*, *27*(3), 159-173. https://doi.org/10.1002/kpm.1637

Chuma, E. (2019). *Effect of knowledge management on performance of research institutions:* Case study of KEMRI, Kisumu County*, Kenya* (Doctoral dissertation, Maseno University).

Dali, K., Bell, N., & Valdes, Z. (2021). Learning and change through diversity, equity, and inclusion professional development: Academic librarians' perspectives. *The Journal of Academic Librarianship*, *47*(6), 102448. https://doi.org/10.1016/j.acalib.2021.102448

Enakrire, R., & Smuts, H. (2022). Efficacy of knowledge and skills in teaching, learning, and research in higher education institutions. In *International Conference on Knowledge Management in Organizations* (pp. 16-24). Springer International Publishing.

Eromosele, G., Adesina, O., Abdulrazaq, M., & Aliyu, M. (2022). Development of institutional repositories in academic and research libraries in Nigeria. *Library Hi Technology News, 39*(1), 16-20. https://doi.org/10.1108/LHTN-11-2021-008

Gitonga, F. (2023). *Disruptive Forces Affecting Libraries: Analysis of Strategic Responsiveness of Universities in Meru County, Kenya.* Master's Thesis, Kenya Methodist University.

Ibitoye, A., Bamidele, B., Aremu, B., Sheriff, B., & Isiaka, A. (2024). Knowledge sharing practices and digital literacy skills among academic librarians of university libraries in Kwara State, Nigeria. *Nigerian Library and Information Science Trends*, *9*(1), 37-56.

Igbinovia, M., & Adetimirin, A. (2023). Knowledge management practices in Nigerian university libraries. *Qualitative and Quantitative Methods in Libraries*, *12*(1), 77-98.

Mullei, S. & Misuko, N. (2019). Effect of knowledge accumulation and utilization on organization performance in selected state corporations in Kenya. *International Academic Journal of Arts and Humanities, 1*(2), 113-131. http://www.iajournals.org/articles/iajah v1 i2_113_131.pdf

Nakhumicha, T. (2024). *Access and utilization of information in digital resource platforms for teaching and research by academic staff in selected public universities, Kenya.* Doctoral dissertation, Kisii University.

Papa, A., Dezi, L., Gregori, G., Mueller, J., & Miglietta, N. (2020). Improving innovation performance through knowledge acquisition: the moderating role of employee retention and human resource management practices. *Journal of Knowledge Management,* 24(3), 589-605.

Shathi, S. J. (2019). Knowledge management practices in university libraries of Bangladesh. *NU Journal of Humanities, Social Sciences & Business Studies*, *6*(1).

Walker, C., & Brown, D. (2020). Adopting integrated library systems in American universities: Trends, challenges, and best practices. *Information Technology and Libraries, 39*(3), 1–16.