

Academic Libraries in the Digital Era: Adoption and Adaptation of e- Paradigms in Public Universities in Zambia.

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Abstract

The study investigated the adoption and adaptation of digital platforms (e-Paradigms) in four university academic libraries: the University of Zambia (UNZA), Copperbelt University (CBU), Mukuba University (MKU), and Chalimbana University (CHAU). Using a concurrent embedded mixed methods design with a pragmatic approach; data were collected through self-administered questionnaires and in-depth interviews. A total of 403 participants, including 400 students and 3 Chief Librarians, were selected through stratified and purposive sampling. Quantitative data were analyzed using SPSS version 26 for descriptive statistics and regression analysis, while qualitative data were examined using content analysis and fishbone diagram techniques.

The findings highlighted key factors influencing digital platform adoption, such as academic programs, cost, user needs, internet connectivity, technical support, and accessibility. Regression analysis revealed that accessibility ($R^2 = 0.053$), ease of use ($R^2 = 0.078$), and complexity ($R^2 = 0.14$) contributed to digital platform adoption variations ($R^2 = 0.271$), with other factors, including policy frameworks, accounting for the remaining 72.9%.

The study recommended that academic libraries in Zambia establish systematic criteria for selecting digital platforms, develop policy guidelines, and proposed the Digital Platform Adoption and Adaptation Conceptual Model (EN_DPAA) to enhance accessibility and utilization.

Keywords: Academic Libraries, Adoption, Adaptation, e-Paradigms, Public Universities.,

Introduction

In an era marked by rapid technological advancement and ongoing digital transformation, academic libraries across the globe are facing increasing pressure to adapt and evolve. The traditional role of libraries as physical repositories of information is being reshaped in response to the demands of the digital age, which has introduced a rapidly changing information landscape. Libraries are no longer confined to the storage and management of physical resources; instead, they are now expected to integrate and leverage technology to meet the diverse, complex, and evolving needs of today's students, faculty, and researchers (Nokuthula, 2018).

Academic libraries are utilizing technology in automating key and routine internal processes such as cataloguing, inventory management, as well as streamlining resource integration through advanced library management systems. These systems enable libraries to create scalable, efficient infrastructures for managing both physical and digital collections. Additionally, academic libraries are increasingly integrating institutional repositories with digital platforms, allowing for seamless access to research materials, publications, and other scholarly resources. As Joseph (2020) and Wong and Diana (2017) highlights that, library services have evolved significantly from the days of restricted access and manual browsing to the introduction of Online Public Access Catalogues (OPACs) and the growing prominence of open access and institutional repositories. This shift has led to a reimagining of academic libraries as hybrid environments with capabilities not for enhancing the accessibility of information but also for providing more dynamic, flexible, and user-centric services. As a result, academic libraries are now under increasing pressure to demonstrate their value in this rapidly changing landscape.

In Africa, Bawack (2019) and Ayakwah (2021) argue that for academic libraries to fully harness the potential of disruptive innovations. Chimpembele et.al (2025), further that with the emergence of AI in technologies libraries still in exploratory phases, with few practical applications such as chatbots, machine learning-based recommendation systems, and automated cataloging services in place mainly in South Africa, Nigeria, and Kenya. As such libraries must develop strategic responses to several challenges which include inadequate infrastructure, limited human capital, and insufficient stakeholder engagement. Moreover, clear policy guidelines are essential to support the adoption of new technologies and address issues such as the digital divide (Luyando, 2010; Zulu, 2010).

In Zambia, the process of adopting and adapting e-paradigms in academic libraries faces similar challenges, (Chipembele, 2014; Moruwawon, 2020; Chitumbo, 2021). The Higher Education Authority (HEA) Act No. 23 of 2021 provides a legal mandate for academic institutions to incorporate digital libraries into their services. In acknowledgment, Bwalya (2021) highlights that 42 out of 54 libraries in Zambia have automated their operations in accordance with the HEA Act, which requires Higher Education Institutions (HEIs) to integrate Information and Communication Technologies (ICTs), including electronic resources and subscriptions to journals and databases.

Research Purpose

The objective of this study was to examine the contextual factors that enhance adaptation of digital platforms, adoption processes, and adaptive strategies influencing the comprehensive integration of digital platforms at The University of Zambia (UNZA), Copperbelt University (CBU), Chalimbana University (CHAU), and Mukuba University (MKU).

Literature Review

Bawack (2019) reports that radical changes in ICTs, and changing context in Higher Education have placed academic libraries in Cameroon in crisis. Exceptional transformations in the information landscape because of ICTs has led to a digital revolution, causing academic libraries no choice but to move from one paradigm to another. However, the study acknowledges that academic libraries are faced with declining budgets, absent or inadequate state of the art technology and infrastructure and lack of trained human resources to leverage technological advancements. A similar study by Kumar and Kumar-Singh (2018)

contend that the continuous developments ICTs have directly influenced information consumption and dissemination necessitating academic libraries to change models of service delivery and resulted into the creation of digital repositories of e-Contents. The study concluded that academic libraries are gradually sifting from paper-based to paperless information centres or systems. However, issues ranging from internet connectivity, electricity connectivity, costly smart electronic devices, and the low level of infrastructure are challenges anticipated for paperless academic library systems in India.

Further, Wong (2020) reports that in Canada web-scale discovery services WSDS have been widely embraced in Canadian academic libraries. This study shows that academic libraries in Canada have migrated from traditional library system to Integrated Systems (ILS) and incorporating LSP vendors web-scale discovery service. In acknowledgement, Omuluzor (2020) established that the adoption of ILS in libraries is changing the way libraries deliver services to their patrons. In contrast, recommended that ILS developers should consider dynamic needs of libraries and their patrons through incorporating specific Candidate Variables (CVs) in the design of these systems to enhance the quality of service provided. On the other hand, Aliyo and Dutse (2019) points that perceived ease of use and perceived usefulness have emerged as significant factors effecting automation systems adoption by the Bauchi State academic libraries in Nigeria.

It is also worth noting that other studies have developed an Artificial Intelligence Library Service Innovative Conceptual Framework (AI-LSICF) to provide new insight into how AI technology can be used to deliver value added innovative library services to archive digital transformation. (Okunlaya et al., 2022)

In addition, Ukoma and Kayonde (2020) revealed a correlation among facilitating conditions determine cloud computing adoption for web-based services in academic libraries in Nigeria are perceived benefits, user friendliness, perceived ease of use, perceived security, ease of maintenance, perceived flexibility, perceived reliability and increased performance/productivity and adoption of cloud computing for web-based services. The study recommended that academic libraries in Nigeria should ensure that the security of cloud computing systems adopted is not compromised by the providers.

Despite the notable benefits of digital platforms in academic libraries globally, there are some common challenges which libraries have experienced. Studies by Velasquez and Campbell-Meier (2015) and Nokuthula (2018) and Hoskins, and Tafuma (2020) established that while digital platforms were integrated in academic libraries some staff were resistant toward changes in technology and that contributed to the challenges faced by management. Similarly, Choi and Pivett (2019) investigated the drivers and barriers to Open Sources Software (OSS) adoption and measures, awareness and adoption stages in US academic libraries and established that low levels of internet connectivity to adopt current non-adopters was a major barrier. Another study by Masenya (2018) to establish a framework for preservation of digital resources in academic libraries in South Africa, recommended the implementation of policies and strategies, provision of adequate resources, sufficient funding and digital preservation knowledge and skills of the major factors influencing digital preservation sustainability in academic libraries. These assertion are not different in Zambia where developments in ICTs have promoted a paradigm shift in the way academic libraries are expected to deliver information to its users (Chewe and Chitumbo, 2018). In addition, in Zambia Bwalya, (2021) revealed that the adoption of Free Open-Source Library Management Systems

has resulted in efficient and effective provision of Library services and control over bibliographic records. concluded by noting that in Zambia mostly colleges and universities use FOSLMS more than other types of HEIs. However, Chewe and Chitumbo (2018) further highlight that poor Internet connectivity and lack of ICTs competencies among students and librarians have emerged as major obstacle to leveraging online information platforms in Zambia.

Theoretical and Conceptual Framework

The study explored several theoretical frameworks and adapted the Unified Theory of Acceptance and Use Technologies (UTAUT), Innovation Diffusion Theory (IDT) and the Technology Organisation-Environment Theory (TOE) as the theoretical perspective as shown in the Table 1.0 below:

Table 1.0: Summary of Theories used in the Study

Theory	Contribution	Application of theory to the study
Unified Theory of Acceptance and Use of Technologies (UTAUT) By Venkatesh, Morris, Davis, and Davis (2003)	It puts into consideration certain factors such as, ease of use, complexity, and social influence which may affect the user's decisions against any technology and the methods of its usage	The study adopted the UTAUT model to assess the use of digital platforms in academic libraries in Zambia. In trying to understand the student's intention of using technology and their level of acceptance and satisfaction using the constructs as defined by the model
Innovation Diffusion Theory (IDT), originally developed by Everett M. Rogers in the 1962 and was later fine-tuned by Rogers (2003).	The Theory explains the process through which innovations (new ideas, technologies, products, or practices) spread and are adopted by individuals, groups, organizations, or societies.	The theory helped the study to build an understanding on the adoption rates of digital platforms in academic libraries. It provided basis also to understand why some innovations are adopted more quickly than others in academic libraries.
The Technology Organization-Environment (TOE) Theory by Tornatzky and Fleischer in the 1990s	Theory is widely used in the field of management and information systems to understand how organizations adopt and implement technology in response to their external environment.	TOE framework was used to assess technological, organizational, and environmental factors, including platform features, infrastructure, policies, stakeholder involvement, and external influences like

		market dynamics and regulations.
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Source (Davis 2003; Rogers 2003; Tornatzky and Fleischer 1990)

Study Hypothesis

The following factors, "accessibility, ease of use and complexity," were adapted from the UTAUT and IDT theories to determine the extent to which they influenced the adoption of the library's digital platforms, thereby increasing usage of the library's digital platforms. The study hypotheses were tested at a 95% confidence level, p-value < .05 and included the following assumptions:

H₀ There is no significant relationship between factors: accessibility, ease of use and complexity, and adoption of the library's digital platforms.

H₁ There is a significant relationship between factors: accessibility, ease of use, and complexity and the adoption of the library's digital platforms.

Methodology

The study used a pragmatic worldview to understand factors affecting adoption and adaptation of e-paradigms in academic libraries in public universities in Zambia. It also employed embedded concurrent mixed methods research design to leverage quantitative and qualitative research methods for probing the phenomena from different vantage points.

The study total target population was 34,898 students from UNZA, CBU, CHAU and MKU based on the criteria that these are government-funded Universities and located within Zambia. The sample comprised (2) chief librarians and 1 senior librarian sampled through extreme or deviant case study purposive sampling and 400 students sampled using stratified quota sampling.

A semi-structured questionnaire was used to collect quantitative data from students at UNZA, CBU, CHAU and MKU libraries while in-depth interviews were carried out for chief librarians at the respective institutions through Zoom. Further, quantitative data was analyzed using SPSS version 26 and regressed to determine the factors that had influence on adoption and adaptation of digital platforms. On the other hand, verbatims were used to present qualitative data, and further summarized using Fishbone analysis to determine the factors that enhance adoption and adaptation of digital platforms in academic libraries.

The interviews were recorded for accuracy using the Zoom application.

Findings and discussion

The study was based on five principal constructs aimed at assessing their impact on the adoption of digital platforms at the libraries of UNZA, CBU, CHAU, and MKU. These constructs included qualitative measures for criteria in adopting digital platforms and policy guidelines, as well as quantitative assessments of accessibility, ease of use, and complexity.

All the three key respondents including Chief Librarians were interviewed, and 401(100%) responses rate was obtained for quantitative data. The response rate shows a representative sample of the target

population at 95% confidence with a significance value of $p = .05$, which provided a basis for inferences on the adoption and adaption of e-paradigms in public libraries.

Qualitative Variables of the Study

Adoption of Digital Platforms

The study started by establishing common digital platforms adopted in academic libraries. Librarians indicated that RemoteXs, KOHA (OPAC), Institutional Repository (DSpace), Liberty 5, Open sources databases and resources, ID Room System, and e-learning platform Moodle were the major platforms adopted at UNZA, CBU, CHAU and MKU libraries. A similar study by Ternege and Kashimana (2019) contend that some of the digital platforms adopted in academic libraries in Benue State, Nigeria, include e-Journals, e-Newspapers, Online Public Access Catalogue (OPAC), CDROM databases, e-Research reports, virtual library online, Science Direct online, and EBSCO host reference databases were the types of electronic information resources available for research by students. The similarities in type of digital platforms as indicated in the two studies inform standard practices in academic libraries in the digital era. Adopting these platforms has positively impacted on the delivery of library services and enhanced processing of user requests.

Further, the study sort to establish the criteria used by academic libraries when adopting digital platforms. Librarians at UNZA, CBU, CHAU and MKU were at variance in the way they adopt digital platforms. For instance, at one university, the programs that the institution offers was key when determining a bouquet of electronic resources to include as part of their digital platforms. At another university, the desire for an online presence and the cost of acquiring information management systems were indicated as key criterion. While at another university, factors such as how widely the digital platform has been adopted regionally or locally, technical and maintenance issues, cost implications, the advantages and disadvantages of adopting such platforms by the library, users' needs and user-friendliness were used as criteria in adopting digital platforms. It was stressed that usually, a committee is formed where such factors are discussed before deciding to adopt a platform. Studies by Bwalya (2021) and Ighinovia (2021) identified environmental and context-based factors such as organisational, security/privacy, adequate end-user training, reliable internet connectivity, and technical support as factors were determinants of IoT and free open-source library management systems (FOSLMS) adoption in Libraries of developing countries. Ukoma and Kayode (2020) further revealed a correlation among facilitating conditions including, perceived benefits, user-friendliness, perceived ease of use, perceived security, ease of maintenance, perceived flexibility, perceived reliability and increased performance/productivity and adoption of cloud computing for web-based services.

Moreover, the Innovation Diffusion Theory by Rodgers (1962) proposes five attributes of innovation that influence behavioural intentions: relative advantage, compatibility; complexity; trialability; and observability which are key in the considerations made to adopt such an innovation. It is also worth noting that the TOE Theory proposed by Tornatzky Fleischer (1990) explains the complex interactions between an organisation's technological capabilities, internal processes, and external factors that influence its technology adoption decision. It is rooted in the idea that the attributes of the technology itself do not solely determine technology adoption but are informed by the organisation's characteristics and its external context. The model's environmental context postulates that an organisation's external environment plays

a significant role in technology adoption decisions. This dimension considers factors such as competitive pressures, regulatory requirements, market conditions, and the availability of external support mechanisms like government incentives or industry standards. Given the perspectives presented by the TEO there exist different contexts that influence decisions for adopting innovation on whose premise academic libraries could consider in developing systematic criteria for the successful adoption of digital platforms. However, the criteria for the adoption of digital platforms may vary from library to library depending on different contextual factors such as technological, organisational, environmental, and security/privacy.

Policy guidelines and procedures for Adoption of Digital Platforms

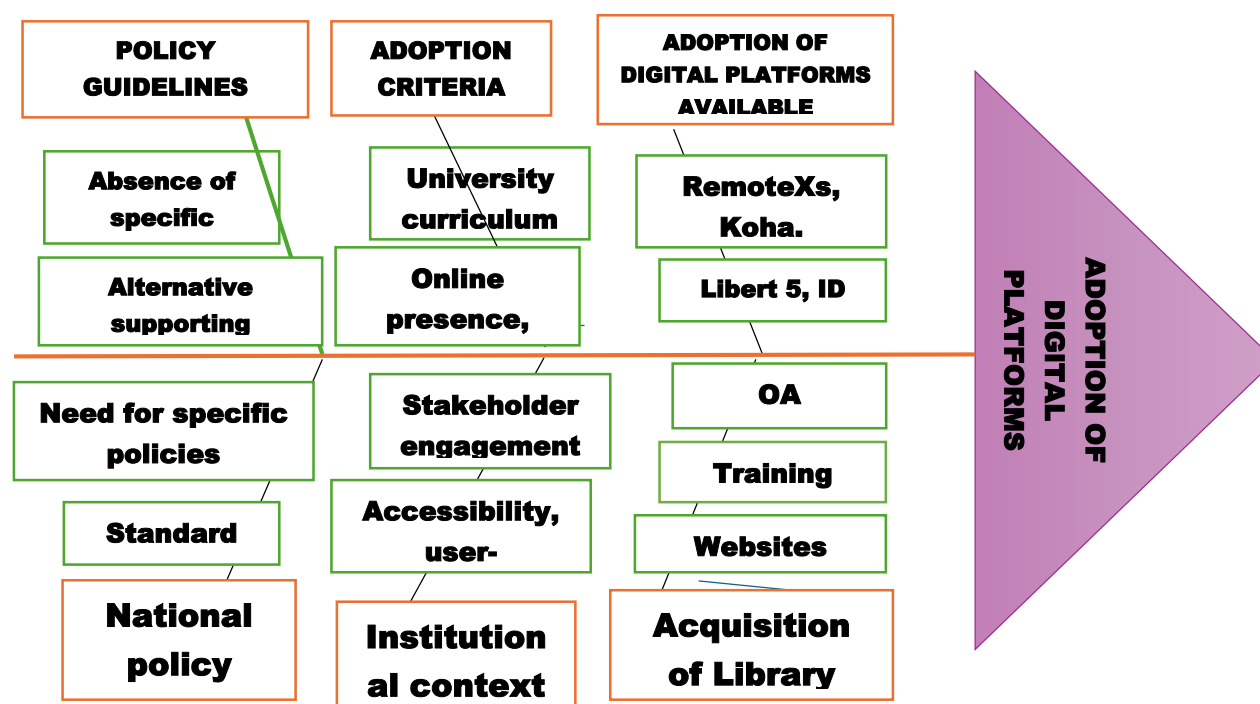
The study further sought to establish the policy guidelines and procedures that guide the adoption of digital platforms. Librarians from UNZA, CBU, and MKU libraries stated that they needed specific standards and guidelines to inform the adoption of digital platforms. They also indicated that they mostly use standards and guidelines from the IT department which may not be helpful in guiding libraries to adopt user-friendly digital platforms. Further, these policy standards and guidelines are mainly communicated to library staff and faculty through executive committee meetings, departmental staff meetings and board of studies meetings for effectiveness in terms of usage of library resources and may not be available to all key library stakeholders. Additionally, the respondents indicated that they were benchmarking what other libraries are doing in the same regard as industry best practice.

Studies by Masenya (2018) and Carter (2019) reported that following the emergency of e-resources, librarians developed licensing guidelines, standards, models, and understanding to educate, increase efficiency and retain rights afforded by copyright law. In addition, ACRL (2018) developed a framework of standards for libraries in Chicago's higher education to design standards to provide a comprehensive framework for effective service delivery and be prepared to address changes in higher education. Thus, the continued absence of specific standards and guidelines at the respective libraries may impede the library's contributions to their organisation's overall vision and mission.

Further, policies governing the adoption and use of digital platforms at the respective libraries were investigated. It was established that respective libraries need specific policy guidelines and procedures in line with adopting digital platforms. However, other substitute policies, such as ICT and Collection Development policies, were in place to support the adoption of digital platforms. In a similar study, Bwalya (2021) supports this assertion and recommended that the ministries responsible for HEIs lobby the Zambian government to formulate Policies to promote adoption of FOSS. Policies inform the critical decisions and steps management takes regarding the institution's various aspects. It is also worth pointing out that even though libraries at UNZA, CBU, and MKU indicated that they sometimes use other related policies such as the collection development policy and the ICT policy, these policies available may not adequately help academic libraries make informed decisions for adopting digital platforms that are sustainable, especially with the dynamic nature of technologies. Similarly, Rabatsetsa, Maluleka, and Onyancha (2021) revealed that most libraries in South Africa need policies specific to managing social media usage platform and for guiding them to effectively adopt and manage digital platforms. However, the adoption of digital platforms in most academic libraries has little or no emphasis on formalities to ensure that libraries are acquiring the right platforms consistent with the institutional strategic directions

in place. The summary for the qualitative data is presented in the fishbone analysis in Figure 1.0 as shown in the figure below:

Figure 2.0: Summarized Fish Bone Analysis for e-Paradigms Adoption and Adaptation in Academic Libraries



Source (2023 Field Data)

Quantitative Variables of the Study

Factors Affecting Usage of Digital Platforms

Based on the factors adopted from the UTAUT and IDT model, the study conducted a regression analysis to establish the extent to the factor's accessibility, ease of use, complexity enhance usage of digital platforms in academic libraries in the given context. This was necessary to establish the correlation and impact the quantitatively measured variables have on additional features or improvements to enhance usage of the library's digital platforms that correspond to usage of digital platforms at UNZA, CBU, CHAU and MKU.

a. Accessibility

The study analysed the impact of accessibility (independent variable) sub-variables on enhancing acceptance and use of digital platforms (dependable) at UNZA, CBU, CHAU and MKU libraries. It was revealed that all the sub-variables for accessibility (online catalogue search portals; eBooks/eJournals; databases; online research guides/tutorials; and online reservations/renewal of books/reference services) were correlated with features to enhance acceptance and use of digital platforms in the library. To

determine how much variation in enhanced usage of digital platforms in libraries was due to accessibility, the R square value for all the sub-variables of accessibility was 0.53, which means that 5.3% of the variations in enhanced usage of digital platforms in libraries were attributed to accessibility. Additionally, the findings were consistent with a study done by Wong (2020), who found that accessibility to e-resources and databases influenced the increase in usage of library platforms. Most academic libraries in Zambia have adopted online catalogues and search portal services to access library resources easily. As such, the online catalogue was more prevalent among students when searching and accessing library resources at UNZA, CBU, MKU, and CHAU.

b. Ease of Use

Further analysis to establish the impact of ease of use (Independent variable) on enhanced acceptance and use of digital platforms (Dependent variable) at UNZA, CBU, CHAU and MKU libraries was done. It was revealed that all the sub-variables (I find online catalogue/search portal easy to use; I find eBooks/eJournals easy to use for my studies; I find databases easy to use; I find online search guides/tutorials for research and assignments easy to use; I find online reservations/renewal services easy to use) of ease of use were correlated with features on enhanced the usage of the library's digital platforms. To determine how much variation in enhanced usage of digital platforms in libraries was due to ease of use, the R square value for all the sub-variables of ease of use as 0.78, which means that 7.8% of the variations in enhanced usage of digital platforms in libraries were attributed to ease of use. A similar study by Aliyo and Dutse (2019) established that automated systems' perceived ease of use and usefulness collate with the extent of the adoption rate of systems in libraries. As such, user perceptions of how safely, effectively and efficiently a product or service will make users (student) see the platform mostly beneficial. The study's findings indicate that students at UNZA, CBU, MKU and CHAU mostly find tutorials and research guides accessed on the digital platforms most helpful for their research needs compared to the other platforms.

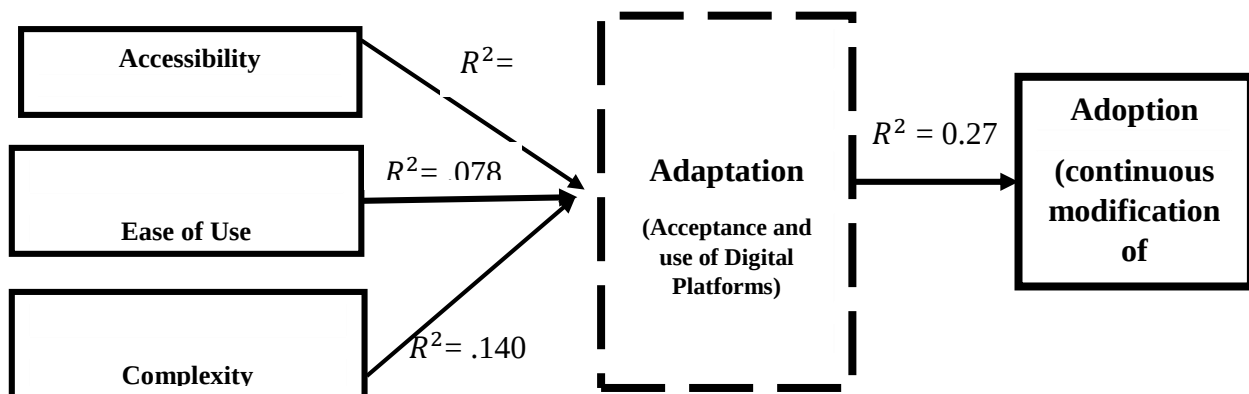
However, their ability to navigate through a platform may be due to other factors, such as their IT skill base and the level of training that they have acquired. Using a cross-tabulation analysis to assess the extent of training at UNZA, CHAU, CBU and MKU, the study findings showed that 176(43.8 %) of the students, needed to be trained on how to use the digital platforms at these libraries. Similarly, Crystal, Dominique, and Amanda (2016) in US San Diego established that over 400 first-year students who had completed the library module indicated a marked increase in comfort when using library resources by the end of the module end. Therefore, students who receive an orientation to library resources and services are more likely to succeed in research. To provide effective digital library services, designers and as well as library managers need to have a good understanding of the factors that influence use and non-use of digital libraries, user's perceptions, and satisfaction. As such, the role of librarians and HEI leaders to ensure leverage of digital planforms for maximum usage. It must also be pointed out that the implication is that the library staff also need to have some level of knowledge and skills to handle digital platforms effectively for them to be able to extend the same knowledge to the users. As such, other avenues can be explored to access the continuous professional development needed for them to remain relevant to the profession apart from those that their institutions initiate.

c. Complexity

Further, analysis was conducted to establish the impact of complexity (independent variable) enhance the acceptance and use of the library's digital platforms (dependable variable) usage at UNZA, CBU, CHAU and MKU. To determine how much variation in enhanced usage of digital platforms in libraries was due to complexity the R square value for all the sub-variables (digital platforms not easy to use; limited access to digital platforms due to slow network; inadequate computers; lack of digital skills to navigate digital platforms; difficulty to find information/open some documents) of complexity was 0.140, which means that 14% of the variations in enhanced usage of digital platforms in libraries were attributed to complexity. Additionally, the findings of this study are consistent with studies done by Chew and Chitumbo (2018); and Williams, et al. (2021) highlighted the challenges affecting the adoption of innovative platforms at UNZA, including poor internet connectivity as a significant obstacle to accessing online information and the lack of ICT competencies among some Librarians. Some of the factors established include poor network connectivity and access, which was reported as a challenge that led to the non-adoption of Facebook and Twitter; as such, accessibility and frequency of use of online information services were very low. Other factors identified impeding the availability and accessibility of e-platforms in libraries surveyed included inadequate ICT facilities, low bandwidth, poor funding and high cost of internet subscription.

The summarized overview of the regression analysis is given in Figure 2.0 below.

Figure 2.0: Digital Platforms Adoption and Adaptation (EN_DPAA) Conceptual Model for UNZA, CBU, CHAU and MKU.



Source: Study findings established from the regression analysis 2023

According to Figure 2.0, the R squared values and the statistical significance of the three variables represents the effect these variables have on usage of digital platforms in these academic libraries. As such, the results show that accessibility predicts .053 of enhanced usage of digital platforms, ease of use predicts .078 of enhanced usage of digital platforms, while complexity predicts .140 of enhanced usage of the library's digital platforms.

This means that when accessibility accounts for a 5.3% of increase on the usage of the digital platforms, ease of use accounts for 7.8 % of increase in the usage of digital platforms and complexity accounts for 14% increase in usage of the library's digital platforms thereby giving us a total impact of 27.1 % on

increase of the library's digital platforms at UNZA, CBU, CHAU and MKU. From the indications established, complexity influences the extent to which digital platforms are accessed and used more compared to the other factors accessibility and ease of use. As such, the adoption process of digital platforms should focus more on reducing the complexities that exists and thereby enhance the use of digital platforms in academic libraries.

However, the variance in the model maybe accounted for by other factors such as criteria for adoption, policy guidelines and other factors which were measured qualitatively in this study. Therefore, this was a limitation for the study.

Implications of the Digital Platforms Adoption and Adaptation (EN_DPAA) Conceptual Model

- The model proposed in this study applies to UNZA, CBU, CHAU and MKU and may apply to other public universities in Zambia.
- The three variables that were measured quantitatively have some positive impact and correspondingly on the increase in the usage of digital platforms at UNZA, CBU, CHAU and MKU and other public universities. This further shows that the study respondents (students and librarians) indicated that providing them accessibility to digital platforms that are easy to use and not complex will become useful and beneficial to their utilization of their library's digital platforms.
- The construct ease of use provides students with a system that is easy to interface and is flexible. Computer competencies developed through orientations and training provides an enabling environment to encourage improved use of the library's digital platforms.
- The findings of this study have important implications on increasing adoption and adaptation of the library's digital platforms thereby consequently enhancing usage of these platforms at UNZA, CBU, CHAU and MKU, accessibility, ease of use and complexity have a significant impact on enhanced usage of the library's digital platforms. The model for UNZA, CBU, CHAU and MKU (Digital Platforms adoption Model) shows connectivity between the independent constructs and enhanced usage factors. This therefore means that the DPAA model is valid for UNZA, CBU, CHAU, MKU and will be of benefit to stakeholders in Zambia in a similar context.
- Further, future studies could focus on inclusion of other factors that influence adoption and usage of digital platforms in academic libraries to provide for wholistic list of contextual factors that influence adoption and usage. This would help provide the strengths and weaknesses of the model.

Conclusion and recommendation

Academic libraries in the digital age should provide dynamic information services beyond the four walls of the library that are current, user-friendly, responsive, relevant to the core business activities of host universities. It is also evident that effective adoption of digital platforms in academic libraries requires a clear adoption criterion based on contextual factors such as such as technology, organization, and environment aligned to academic libraries at UNZA, CBU, CHAU and MKU as well as other institutions with similar characteristics; and deliberate policy guidelines and procedures which to help establish methodologies for successful and sustainable avenues of adopting and adapting digital platforms for the libraries. Additionally, there is a growing need for academic libraries to rise to the occasion and respond to the continuously emerging information needs is critical. The study findings also stress the need

academic libraries to adopt integrated digital platforms that users can easily access, easy to use and less complex to the emerging information needs of users in the 21st century learners at UNZA, CBU, CHAU and MKU.

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