Importance of Library Management System in Improving Information Access in Tanzanian Higher Learning Institutions

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Abstract: The Library Management Systems (LMS) are crucial in the promotion of efficiency, access, and delivery of services in academic libraries, especially in the universities of Tanzania. With the digitalization of the education sector, the utilization of competent LMS tools is a necessity due to the needs of students, faculty, and researchers during the process of transformation. This paper discusses the importance of LMS in the university libraries in Tanzania regarding the functionality of such systems to the process of cataloging, circulation, acquisition, user accesses, and use of digital resources. The given research uses a sample of 120 respondents in different universities so as to examine how effective is the usage of LMS, challenges related to their usage, and the perceived benefits of their usage. The results demonstrated that LMS can enhance user satisfaction, automate information retrieval, complement an academic progression, and minimize the amount of workload that has to be undertaken manually by the library personnel. It also scales up the idea of inter-library cooperation and surplus supply of resources and resources, filling the breakage between the physical and digital libraries. Though these prove to be beneficial, there are challenges that are faced including inept ICT infrastructure, limited librarian technical expertise, and variable funding to complete LMS implementation and functions. The paper identifies the persistence of problems with the lack of necessity and out datedness of LMS implementation, inefficient organization of information and the delivery of services as the most frequent ones. These weaknesses are detrimental to academic purpose of universities and generate inequality in access to information. The study highlights the importance of giving a high priority to the development of LMS and overcoming the existing obstacles and provide equal access to information and subsequent enhancement of the performance of libraries. It offers findings that policymakers, librarians, university management can utilize in order to advance LMS systems, and create more sustainable open, and user-friendly academic libraries in Tanzania.

Keywords: Library Management System, University Libraries, Information Technology, Digital Resources.

I. INTRODUCTION

In Tanzania university libraries are important academic support centres, with access to scholarly resources promoting teaching, research and learning. With the increased growth of academic institutions of higher learning in terms of enrollment and variety of academic programs sites, there has been a tremendous growth in the need of efficient and technology based information services. Conventional library structures with manual cataloging and circulation of materials as well as management of stock and holdings have proven inadequate to keep up with the current demands of the students and researchers (Msuya, 2020). Therefore, there are concerted efforts by most Tanzanian universities to adopt Library Management Systems (LMS) in an effort to enhance efficiency, access and overall quality of library services.

A Library Management System consists of a system of automated and centralized systems which combine several functions of the library like cataloging, acquisition, administration of user, circulation, and the use of digital resources. Such integration improves the organization of resources, reduces the number of human errors, and gives users an option of having real-time access to physical and electronic collections (Rwegoshora & Komba, 2021). LMS has been fundamental in the Tanzanian setting with regard to enabling e-learning spaces, remote access to content, and library operations routine, especially in institutions

subscribing to digital projects, such as Consortium of Tanzania University and Research libraries (COTUL).

Although implementation of LMS faces a number of challenges including among others poor funding and ICT facilities in certain institutions, the initiative has continued to portray quantifiable positive results in enhancing service provision and management of university libraries in Tanzania. These systems help improve the record-keeping, minimize redundancy and increase user satisfaction since they allow users to access learning resources seamlessly (Ngirwa & Manda, 2022). The need to have an efficient and responsive library system cannot be overemphasized because Tanzanian universities strive to acquire global academic standards.

➢ *Statement of the Problem*

University libraries in Tanzania are faced with ageing or partially automated systems that compromise availability of resources such as books, journals, and articles and services delivery to library users, thereby decreasing the level of satisfaction. Limited funding, incompetent human resource and dismal ICT infrastructure further limits the realization of end-to-end LMS solutions. Therefore, the libraries find it difficult to satisfy the informational demands of the students, faculty, and the researchers in fast-paced academic world. The paper discusses the significance of LMS in university libraries in terms of its ability to enhance effective use of information, the collaboration process, and achievement of the academic objectives of any institution. The study also considers the obstructions of LMS uptake and provides the methods of improving its adaptation and usage in Tanzanian institutions of higher learning.

➢ *Objectives of the Study*

- To examine the implementation status of LMS in university libraries.
- To evaluate the perceived benefits of LMS among library staff.
- To identify challenges associated with LMS adoption.
- To propose strategies for enhancing LMS effectiveness.

II. LITERATURE REVIEW

A couple of research papers point out the game changer effect of LMS in academic libraries. Kumar & Singh (2019) claim that LMS has done much to enhance proper cataloguing and sharing resources among institutions. As underlined by Aina (2020), LMS facilitates the consistency of metadata standards and, in such way, enhances the searchability and access.

III. METHODOLOGY

The research design used to conduct the study was descriptive design where the researcher sought out the significance of the Library Management Systems (LMS) in university libraries in Tanzania where the sample size was 120 respondents purposely sampled in ten of the major universities. The structured questionnaires were used to collect data by sending it to librarians, library staff, and ICT staff who took part in the library activities. The most important areas where the questionnaire concentrated on were the functionality of the system, efficiency in service delivery, user satisfaction and availability of resources. To understand the scope in which LMS can be effective in efficient management of libraries, the qualitative data was analysed using descriptive statistics to show the frequency and percentage. This approach developed an in-depth picture of the role and the influence of LMS in the improving operations of the libraries in the university setting.

IV. FINDINGS AND DISCUSSIONS

➢ *Implementation Status of LMS in University Libraries*

The adoption of the Library Management Systems (LMS) in university libraries is also slowly taking shape though lopsided among Tanzanian higher learning institutions. LMSs like KOHA have also been integrated in many public universities to improve on the catalogue, resources circulation and user services so that there can be proper access of library resources. Nevertheless, there are several institutions that use or partly use a manual system because of their financial incapability, and absence of the skilled person as well as insufficiency in the ICT infrastructure. On-going contributions of consortia such as COTUL and external development partners have helped to train and upgrade systems, although wide-scale deployment and integration into digital repositories and academic systems remain under way.

Table 1 Implementation Status of LMS in University Libraries

Particular	f	%
LMS available and in regular use	30	25.0
Staff trained on LMS operations	28	23.3
Reliable ICT infrastructure in place	22	18.3
User access to LMS (students & faculty)	20	16.7
Regular system updates and maintenance	20	16.7
Total	**120**	**100**

Source: Field Data, 2025; Note: F - Frequencies, % - Percentage; n=120
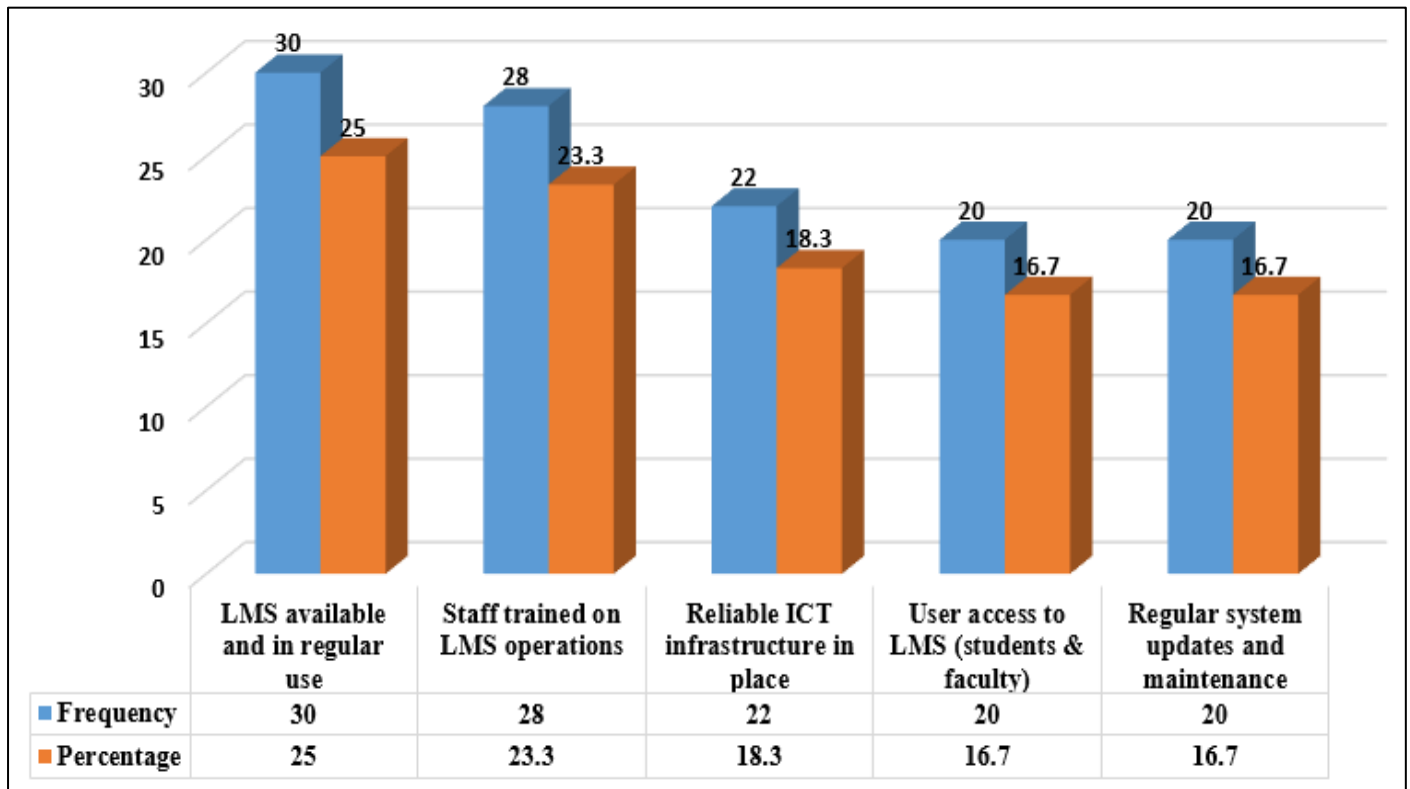
Fig 1 Implementation Status of LMS in University Libraries
Source: Field Data, 2025

In Table and Figure 1: Examined the implementation of the Library Management Systems (LMS), as applied in the university libraries shows that, 30 (25.0 %) answered that LMS is in use and regularly applied, whereas 28 (23.3 %) answered that staff in the university libraries are trained on how to use LMS. They indicated having reliable ICT infrastructure based on 22 (18.3%) and both the access by the users (students and faculty) to LMS and the upgrades and maintenance of the system as performed on a regular basis by 20 (16.7%). This implies that in spite of the habitual adoption of LMS usage, it is characterized by challenges in terms of infrastructure, accessibility, and maintenance.

➢ *Benefits of LMS as Perceived by Respondents*
During the research respondents noted a number of major advantages of using Library Management Systems

(LMS). They identified LMS as being important in improving the effectiveness and accuracy of library functions that are in the cataloguing, circulation and management of users. The system was also observed to have brought efficiency in resource access through enhancing faster search and acquisition of information, decreasing the number of manual work, and increasing service delivery. The respondents also highlighted the usefulness of LMS on digital resources integration, self-services of users, as well as provision of timely reports to decision-making. On the whole, LMS was regarded as an essential instrument in enhanced user satisfaction and facilitating to establish a fruitful access to the scholarly information in academic libraries.

Table 2 Benefits of LMS as Perceived by Respondents

Particular	f	%
Improved cataloguing and classification	28	23.3
Efficient circulation and transaction logs	25	20.8
Enhanced user access to e-resources	22	18.3
Streamlined acquisition and reporting	20	16.7
Better inventory and stock control	25	20.8
Total	**120**	**100**

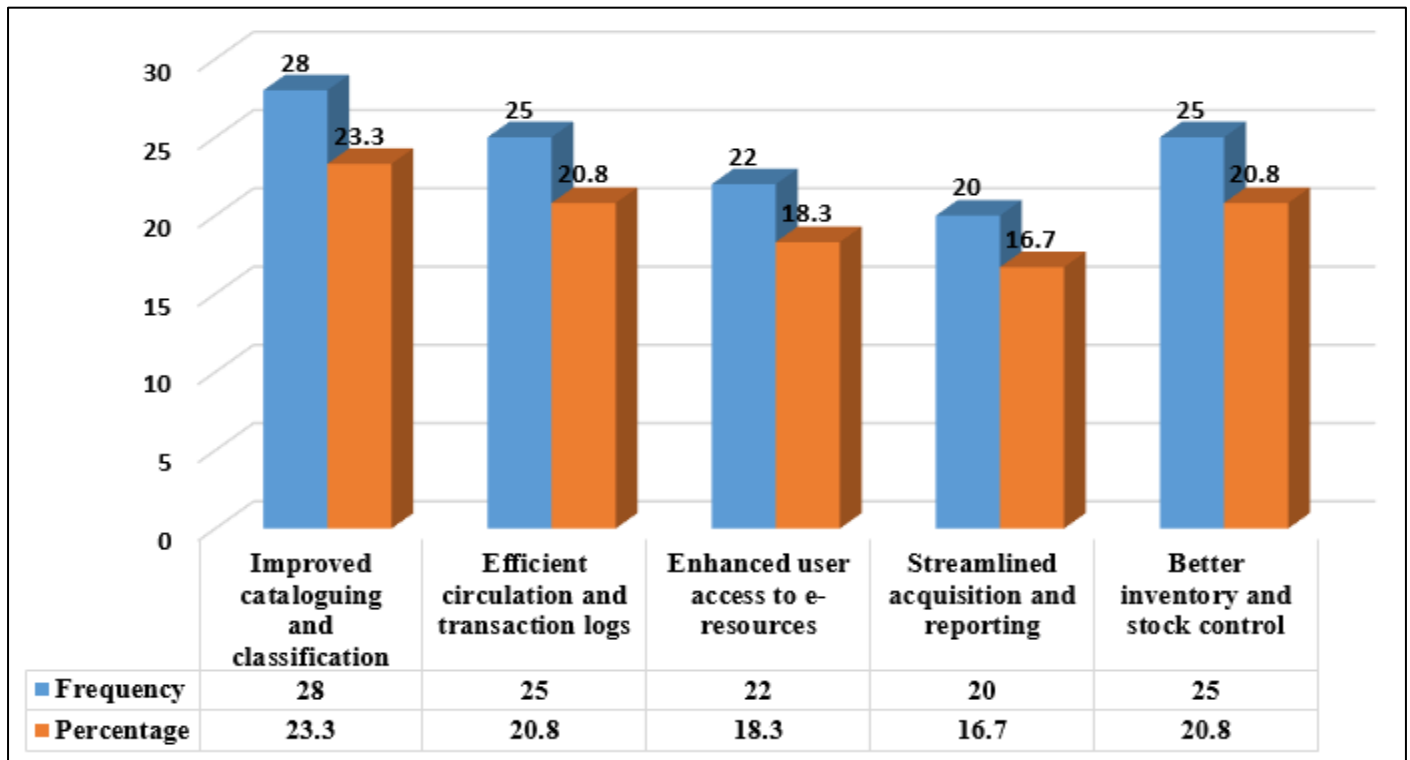Source: Field Data, 2025; Note: F - Frequencies, % - Percentage; n=120

Fig 2 Benefits of LMS as Perceived by Respondents
Source: Field Data, 2025

Table and Figure 2 demonstrates that there are a number of main advantages of the Library Management System (LMS) which is perceived by respondents. The most mentioned strength is enhanced cataloguing and classification mentioned by 28 (23.3%). This is then followed by effective circulation and transaction records and improved inventory and inventory management both of which were recorded by 25 (20.8%). Activity of improved user access to e-resources was recognized among 22 (18.3%), and the simplification of the process of acquisition and reporting was identified among 20 (16.7%). Such results indicate that LMS plays a significant role in the order, accessibility, and efficiency of library work.

➤ *Challenges Faced by Library Staff in Using LMS*
There are quite a number of challenges hindering the use of Library Management Systems (LMS) among library staff in Tanzanian high learning institutions, and which do not allow these institutions to realise fully their promised value in the enhancement of information access. Among these problems are weak ICT competence by part of the staff, absence of sufficient training capabilities as well as lack of acceptance of technological change. Moreover, the ineffective use of LMS is restricted also by no reliable internet connections and cheap infrastructure. The budget constraint tends to slow the process of upgrading the system and access to technical support as well, whereas the absence of the standardized LMS system across institutions causes the lack of the efficient use of resources and the impossibility of the resources sharing left alone. All these barriers lead to influence in efficiency and quality of library services offered to its users.

Table 3 Challenges Faced by Staff in Using LMS

Particular	f	%
Inadequate training	35	29.2
Poor internet connectivity	30	25.0
Lack of IT support staff	20	16.7
Resistance to change	15	12.4
Software glitches and system downtime	20	16.7
Total	**120**	**100**

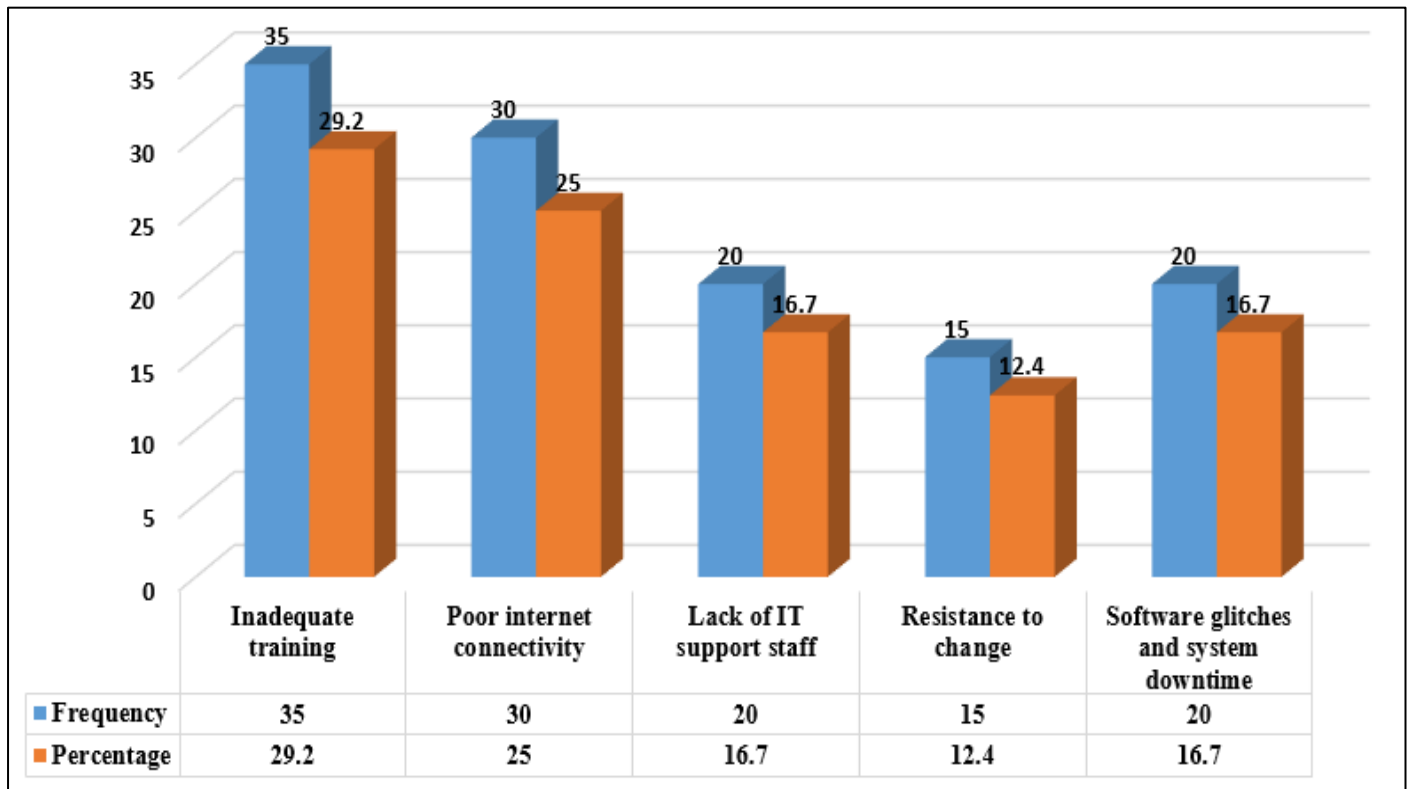Source: Field Data, 2025; Note: F - Frequencies, % - Percentage; n=120

Fig 3 Challenges Faced by Staff in Using LMS
Source: Field Data, 2025

As Table and Figure 3 shows, pervasive lack of training is the greatest challenge with the use of the Library Management System (LMS) as identified by 35 (29.2%). Next to this comes poor internet connectivity which is experienced by 30 (25.0%). To the shortage of IT support personnel, 20 (16.7%) cited, followed by software glitches/system downtime of 20 (16.7%). Resistance to change was identified by 15 (12.4%). Such results lay emphasis on the necessity of better training, solid technical assistance and strengthened infrastructure to guarantee successful utilization of LMS.

> *Strategies for Enhancing LMS Effectiveness*

In order to improve the use of Library Management Systems (LMS) within Tanzanian higher learning institutions a few strategic options will be necessary. Among them are constant education of personnel about digital means, the modernization of LMS platforms to support convenient user interface, and mobile support, and the LMS integration with online data sources (databases and institutional resources). Moreover, frequent system generational process, data copying and user query systems are vital in skipping issues of reliability and responsiveness. A further maximization of LMS in the provision of smooth and equitable access to information can occur through strengthening of the ICT infrastructure and the collaboration of different institutions in terms of sharing systems and best practices.

Table 4 Strategies for Enhancing LMS Effectiveness

Particular	f	%
Conduct regular staff training and capacity building	30	25.0
Improve ICT infrastructure and internet connectivity	28	23.3
Customize LMS features to fit institutional needs	22	18.3
Establish technical support and maintenance units	20	16.7
Encourage inter-university LMS collaboration	20	16.7
Total	**120**	**100**

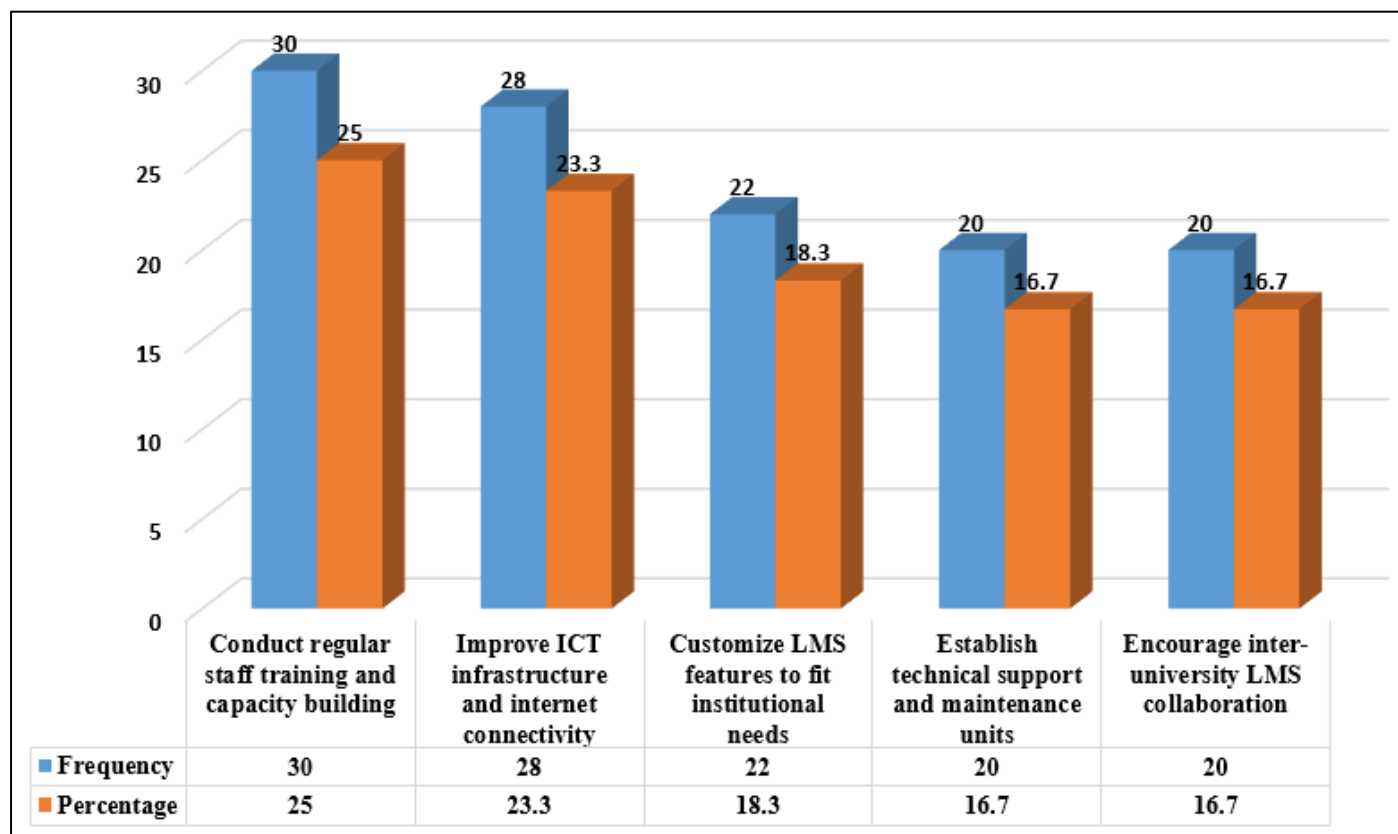Source: Field Data, 2025; Note: F - Frequencies, % - Percentage; n=120

Fig 4 Strategies for Enhancing LMS Effectiveness
Source: Field Data, 2025

Table and Figure 4 illustrates that, the highest score, among all strategies, regularly planned staff training and capacity building as a way of promoting the effectiveness of Library Management System (LMS), with 30 (25.0%). With 28 (23.3%), this comes next namely the need to improve the ICT infrastructure and access to internet. The adoption of LMS features to position to the institution specificities was proposed by 22 (18.3%), and the development of technical support and maintenance services as well as the promotion of inter-university collaboration in LMS were suggested by 20 (16.7% respectively). The findings indicate the fact that human resource development, strong ICT infrastructure, and teamwork practices are a vital addition to the enhancement of LMS performance.

➢ *Discussion*

The importance of Library Management System (LMS) in the Tanzanian higher learning institutions is to achieve effective access to information through managing library functions, digital cataloguing of libraries and user services. A good LMS can ease the automatic traffic, live monitoring of the resources, as well as connections to electronic databases, thereby improving accessibility and efficiency of the academic material to the students and researchers (Mcharazo & Olden, 2021). In addition, LMS systems facilitate work outside the office and on-demand functionality among users, pace is fundamental in ensuring fair access to educational materials, particularly in campuses with a wide geographical distribution (Mgobozi et al., 2023). The LMS comes to play a significant role in facilitating knowledge management and the learning outcomes of universities in Tanzania as they

scale up digital learning (Mtega & Dulle, 2020). Thus, the development of modern interoperable LMS solutions, as well as their subsequent investment, are the strategic needs in the development of academic performance and institutional competence.

V. RECOMMENDATIONS

In improving the efficiency of Library Management Systems (LMS) in the libraries in Tanzanian universities, regular capacity building workshops should be conducted to improve the capacity of the staff, enhance ICT infrastructure and internet bandwidth to facilitate the smooth running of the system, establish LMS technical support units within each university to encompass prompt solution to problems, customize LMS functions to suit the local needs of libraries, as well as include inter-library cooperation to coincide with updating systems and shared technical support.

VI. CONCLUSION

To sum it up, it is important to note that the adoption of Library Management System (LMS) has an immense advantage of increasing access to information in Tanzanian higher institutions of learning by facilitating library workflows and optimizing resource management by streamlining their arrangement as well as facilitating easy retrieval of academic resources. Automation and on-line inventory as libraries move to LMS, they can reduce manual error and save time and increase access to scholarly content on and off site. The reason is that the technological

development is not only an ethical support to the academic excellence and research output, but also the global trend in information management, which puts the Tanzanian institutions in the capacity of serving the students, researchers and faculties in the ever-more digitalizable world of knowledge.

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