SCHOOL OF LIBRARY, ARCHIVES AND DOCUMENTATION STUDIES (SLADS) - BAGAMOYO

A RESEARCH REPORT ON:

AN ASSESSMENT ON LIBRARY INFORMATION MANAGEMENT SYSTEMS IN ACADEMIC LIBRARIES: A CASE STUDY OF DAR ES SALAAM INSTITUTE OF TECHNOLOGY (DIT) LIBRARY

BY

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A Research Report Submitted to the School of Library, Archives and Documentation Studies (SLADS) as a Partial Fulfillment of Requirement for the Award of Ordinary Diploma in Library and Information Management.

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CERTIFICATION

The undersigned certify that she has read and hereby recommended for acceptance by the School of Library, Archives and Documentation Studies Research report entitled ***"An Assessment on Library Information Management Systems in Academic Libraries"*** as a partial fulfillment of the requirements for the award of Ordinary Diploma in Library, records and information studies (SLADS).

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DEDICATION

This research report is dedicated to my almighty God, the creator and source of everything in the universe. To my beloved Father and Aunt Mr.. Said Yusuph and Mrs Zena Yusuph also to my beloved young sisters Nasra Said Yusuph I always pray for you, love you so much and I appreciate you're to my friends may the almighty God bless you.

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LIST OF ABBREVIATIONS

AfLIA: African Library and Information Associations and Institutions

DIT: Dar es Salaam Institute of Technology

ERMS: Electronic Resource Management System

ICT: Information and Communication Technology

IFLA: International Federation of Library Associations and Institutions

ILS: Integrated Library System

LIMS: Library Information Management System

LIS: Library and Information Science

OPAC: Online Public Access Catalogue

SLADS: School of Library, Archives and Documentation Studies

TAM: Technology Acceptance Model

TCU: Tanzania Commission for Universities

UNESCO: United Nations Educational, Scientific and Cultural Organization

URT: United Republic of Tanzania

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ABSTRACT

This study assessed the Library Information Management Systems (LIMS) at Dar es Salaam Institute of Technology (DIT) Library. Specifically, the study sought to identify the types of Library Information Management Systems available at DIT Library, examine the usage of the systems, identify challenges affecting their utilization and determine strategies for overcoming those challenges.

Descriptive survey research design and mixed-methods approaches were employed. The study involved a sample of 35 respondents, comprising 30 students selected through simple random sampling and 5 library staff selected through purposive sampling. Data were collected using questionnaires and interviews. Quantitative data were analyzed using frequencies and percentages with the aid of Microsoft Excel, while qualitative data were analyzed through thematic analysis.

The findings revealed that the majority of respondents were aware of the Library Information Management Systems used at DIT Library and considered them effective in supporting library operations and academic activities. The study also established that the systems improved information retrieval, cataloguing and access to electronic resources. However, challenges such as poor internet connectivity, inadequate ICT infrastructure, insufficient technical skills and occasional system failures affected effective utilization of the systems.

The study concludes that Library Information Management Systems play a significant role in improving library services at DIT Library. It recommends improvement of ICT infrastructure, continuous training for library staff and users, regular system maintenance and increased institutional investment in library technologies to enhance service delivery.

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CHAPTER ONE
INTRODUCTION AND BACKGROUND OF THE STUDY

1.0 Introduction

This chapter presents the background to the study, statement of the problem, objectives of the study, research questions, significance of the study, scope of the study, limitations of the study and definitions of key terms. The chapter provides a foundation for understanding Library Information Management Systems in academic libraries, particularly at Dar es Salaam Institute of Technology (DIT) Library.

1.1 Background of the Study

Library Information Management Systems (LIMS) are software applications designed to manage core library functions such as cataloguing, circulation, acquisitions, serials control, and user services. They represent a shift from manual record-keeping to automated and digital systems, enabling libraries to improve efficiency and expand access to resources (Breeding, 2015).

Historically, libraries relied on manual systems such as card catalogues and paper registers. These methods became inadequate with the growth of collections and diversification of formats. The introduction of computerized systems in the late 20th century marked a significant transformation, automating cataloguing and circulation (Rosenberg, 2005). Today, libraries are evolving into hybrid environments that combine print and digital resources, necessitating robust information management strategies (Alemna & Sam, 2006).

The study of LIMS is often grounded in theoretical frameworks such as Information Systems Theory, which examines how technological systems support organizational processes, and Knowledge Management Theory, which emphasizes the role of information systems in capturing and disseminating knowledge (Alavi & Leidner, 2001). Models like the Technology Acceptance Model (TAM) (Davis, 1989) and the DeLone and McLean Information Systems Success Model (DeLone & McLean, 2003) are frequently applied to assess user adoption, satisfaction, and system effectiveness.

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Library information management is a critical component of academic institutions, encompassing the organization, storage, retrieval, and dissemination of information resources to support teaching, learning, and research. Effective information management ensures that libraries deliver high-quality services, such as timely access to books, journals, digital databases, and archival materials, thereby enhancing user satisfaction and institutional productivity. Scholars like Gorman (2000) emphasize that information management is not just about cataloging but involves strategic processes that align with user needs, technological advancements, and educational goals.

Globally, academic libraries have evolved from traditional repositories to dynamic hubs integrating digital technologies. The International Federation of Library Associations and Institutions (IFLA, 2021) highlights that modern information management systems, such as integrated library systems (ILS) and digital repositories, improve efficiency and accessibility. However, challenges persist, including budget constraints, outdated infrastructure, and the digital divide. In developed countries, libraries employ advanced tools like RFID tagging and open-access platforms to streamline service delivery. In contrast, developing regions often grapple with limited funding, inadequate training, and slow adoption of technology, leading to inefficiencies in information retrieval and user engagement (UNESCO, 2022).

In the African context, academic libraries face unique hurdles shaped by economic, infrastructural, and cultural factors. Studies from AfLIA (2020) indicate that while institutions in countries like Kenya and South Africa have invested in digitization, many African universities struggle with fragmented information systems, resulting in poor service delivery. Recent reviews highlight that digital literacy and capacity building remain uneven across African libraries, with gaps in infrastructure and staff competencies. Similarly, emphasize that digitization projects in African universities often face challenges of funding, technical expertise, and sustainability.

In Tanzania, frameworks like the Tanzania Commission for Universities (TCU) guidelines, which mandate efficient information management to support higher education, govern academic libraries. Yet, issues such as inconsistent cataloging

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standards, limited digital integration, and low user awareness hinder optimal service delivery (URT, 2021). Recent studies show that Tanzanian university libraries are experimenting with advanced tools such as Big Data analytics to improve decision-making and service delivery, but adoption remains limited due to infrastructural and training challenges (Ponera & Kyumana, 2024)

The Dar es Salaam Institute of Technology (DIT), established in 1997, is one of Tanzanians leading public institutions specializing in engineering, science, and technology. Its library plays a central role in supporting academic programs by providing access to textbooks, journals, online databases, and technical resources. However, preliminary observations suggest challenges in information management, such as outdated cataloging systems, insufficient digital resources, and barriers to equitable access, which may impede service delivery. Mbwambo and Mtega (2019) note that Tanzanian academic libraries, including those in public institutions, often face technological gaps, with many still using manual processes that delay information retrieval and reduce user satisfaction.

Urbanization and digital transformation add complexity. In Dar es Salaam, a rapidly growing city with increasing access to ICT, students and faculty may prefer digital tools, yet the library's information management must balance traditional and modern resources. Public initiatives like Tanzania's National ICT Policy (URT, 2020) encourage digitization, but implementation varies. Evidence from the UNESCO Institute for Statistics (2020) shows that effective information management in academic libraries correlates with improved research output and student performance. At DIT library, assessing these practices is vital for identifying gaps and enhancing service delivery, contributing to the institution's mission of advancing science and technology education in Tanzania.

In summary, while library information management is foundational to academic excellence, Tanzanian institutions like DIT library encounter barriers that affect service delivery. Understanding these issues through a case study lens can inform strategies for

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modernization, ensuring libraries remain relevant in an era of rapid technological change.

1.2 Statement of the Problem

Despite the role of academic libraries, many institutions in Tanzania, including DIT library, face inefficiencies in their information management systems. Outdated cataloging methods, fragmented databases, and limited integration of digital tools hinder timely access to resources and reduce user satisfaction. At DIT library, anecdotal evidence suggests that students and faculty struggle with retrieving information quickly, which undermines teaching, learning, and research. This gap not only affects academic performance but also limits the institution's contribution to national development goals, such as those outlined in the Tanzania Development Vision 2025. Therefore, there is a pressing need to assess DIT's library information management systems, identify barriers, and propose strategies for improvement.

1.3 General Objective

To assess library information management systems in academic libraries.

1.3.1 Specific Objectives

i. To find out types of library management system available at DIT library.
ii. To examine the usage of library management system available at DIT library
iii. To find out challenge facing DIT library to use library management system.
iv. To find out strategies to overcome challenges facing DIT library in using library management system.

1.4 Research Questions

i. What types of library management systems are currently available at DIT library?
ii. How are the library management systems at DIT library being used to support library operations and services?
iii. What challenges does DIT library face in the implementation and usage of its library management systems?

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iv. What strategies can be adopted to overcome the challenges faced by DIT library in using library management systems?

1.5 Significance of the Study

This study will generate actionable insights to enhance service delivery at DIT library, aligning with national priorities such as the Tanzania Development Vision 2025, which emphasizes ICT integration in education. For library management, the findings will inform system upgrades, staff training, and resource allocation, thereby improving operational efficiency and user satisfaction. For educators and students, improved access to information will foster research productivity and academic success. Academically, the study contributes to the growing body of literature on library science in African contexts, offering a model for similar institutions.

For DIT library management and librarians, the findings will inform upgrades to systems, training programs, and resource allocation, potentially improving user satisfaction and operational efficiency. Educators and students will benefit from recommendations that promote better access to information, fostering research and academic success. Academically, the study contributes to the literature on library science in African contexts, offering a model for assessments in similar institutions. Ultimately, it supports the development of robust information management practices that enable lifelong learning and institutional progress.

1.6 Scope of the Study

The study focuses on assessing library information management systems at DIT library, targeting students, faculty, and staff. It will examine current systems, influencing factors, and effectiveness through surveys, interviews, and system audits. The scope is limited to DIT's library and does not extend to other academic or public libraries in Tanzania.

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1.7 Limitations of the Study

1.7.1 Technical access constraints

Some aspects of DIT library systems may not be fully accessible to the researcher due to institutional restrictions.

1.7.2 Data reliability

Survey and interview responses may be influenced by recall bias or social desirability.

1.7.3 Sampling scope

The study is confined to DIT library, limiting generalizability to other institutions.

1.7.3 Financial limitations

Restricted resources may constrain data collection methods.

1.7.4 Researcher experience

As a novice researcher, challenges may arise in analyzing technical aspects of library systems.

1.8 Definitions of Key Terms

1.8.1 Library Information Management Systems.

Are technological and procedural frameworks such as Integrated Library Systems (ILS), databases, and digitization tools designed to organize, store, retrieve, and disseminate information resources. They serve as the backbone of modern libraries, enabling efficient cataloging, circulation, acquisitions, and access to both physical and digital collections (Gyau., 2021). In this study, Library Information Management Systems refer to systems such as Koha, Digital Repository and Electronic Resource Management Systems used at DIT Library to facilitate the storage, retrieval and dissemination of information resources.

1.8.2 Information management.

Refers to the systematic processes of cataloging, classifying, digitizing, and maintaining library records. Its purpose is to ensure accuracy, consistency, and efficient retrieval of

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resources. In academic libraries, effective information management supports teaching and research by making resources more accessible and reliable (Azib, 2025).

1.8.3 Academic libraries.

Institutions affiliated with universities and colleges, established to support teaching, learning, and research. They provide access to scholarly resources, both physical and digital, and play a critical role in knowledge dissemination and academic success (LIS Academy, 2024).

1.8.4 System efficiency.

Is the ability of library information management systems to deliver timely, accurate, and user-friendly access to resources? It is measured by factors such as search speed, database reliability, and integration with external research platforms. High system efficiency reduces user frustration and enhances engagement with library services (Gyau., 2021). In this study, system efficiency refers to the ability of Library Information Management Systems at DIT Library to provide timely, accurate and reliable information services to users.

1.8.5 Digitization.

Is the process of converting physical resources such as books, journals, and archival materials into digital formats. This process improves accessibility, enables remote use, and preserves fragile materials by reducing physical handling. Digitization also enhances search ability, allowing users to locate information quickly through keyword searches (Azib, 2025). In this study, digitization refers to the conversion of library resources into electronic formats to improve accessibility and retrieval of information at DIT Library.

1.8.6 User satisfaction.

Refers to the degree to which students, faculty, and staff perceive library information management systems as effective in meeting their academic and research needs. Satisfaction is influenced by ease of navigation, availability of resources, and responsiveness of library staff. Studies show that digitization and system efficiency strongly correlate with higher user satisfaction in academic libraries (Gyau, 2025). In

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this study, user satisfaction refers to the extent to which students and library staff are satisfied with the effectiveness of Library Information Management Systems at DIT Library.

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CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews existing literature on Library Information Management Systems (LIMS) with a particular emphasis on their role in academic libraries. It explores their conceptual foundations, importance, types, benefits, and challenges, while situating the case of the Dar es Salaam Institute of Technology (DIT library) within global and regional contexts. The review also identifies gaps in current scholarship that justify the present study and provide direction for the research objectives.

2.1 Types of Library Information Management Systems

Library Information Management Systems (LIMS) are software applications designed to manage core library functions such as cataloguing, circulation, acquisitions, and user services (Breeding, 2015). Globally, Integrated Library Systems (ILS) such as Koha, Evergreen, and Millennium has been widely adopted. These systems provide comprehensive solutions for managing both print and electronic resources.

In addition to ILS, academic libraries employ digital repositories to store institutional research outputs, including theses, dissertations, and scholarly publications (Pinfield, 2005). Electronic Resource Management Systems (ERMS) are also used to manage subscriptions to electronic journals and databases (Crawford, 2006). Hybrid systems, which combine print and digital management, reflect the transitional nature of many libraries.

In Africa, open-source systems such as Koha have gained popularity due to their cost-effectiveness, adaptability, and community support (Okello-Obura, 2010). In Tanzania, institutions such as DIT library have pioneered the use of Koha , though documentation of the specific systems in use remains limited. This gap underscores the need to identify and assess the systems currently available at DIT library.

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2.2 Usage of Library Information Management Systems In Academic Libraries

Academic libraries increasingly rely on Library Information Management Systems (LIMS) to support their core functions of teaching, learning, and research. Koohang and Harman (2015) argue that these systems are essential for organizing resources efficiently and facilitating information retrieval, noting that Online Public Access Catalogs (OPACs) enhance user experience by providing remote access, mobile compatibility, and advanced search tools. Their view emphasizes the user-centered design of LIMS as a critical factor in academic success.

Breeding (2015) expands this discussion by highlighting the global impact of LIMS, particularly their role in improving cataloguing accuracy and enabling collaboration among institutions. He points out that integrated systems allow libraries to share metadata and resources across networks, thereby strengthening inter-library cooperation and resource sharing. This perspective underscores the systemic benefits of LIMS beyond individual institutions.

Beskaravaynaya and Kharybina (2024) focus on the automation of library services, stressing that while LIMS streamline workflows and reduce duplication of effort, challenges of usability and adaptability persist. They argue that academic libraries must balance technological innovation with practical implementation, ensuring that systems remain responsive to diverse user needs. Similarly, Umap and Jani (2025) examine Electronic Resource Management Systems (ERMS) in Indian academic libraries, finding that these systems significantly improve access to digital resources but often face integration challenges with existing platforms. Their study highlights the importance of continuous adaptation in the digital transformation of libraries.

In the African context, Ntullo (2026) emphasizes that LIMS are crucial for promoting efficiency and access in Tanzanian higher learning institutions. However, he notes limited funding, inadequate training, and infrastructural constraints hinder that implementation. This reveals a gap between the potential of LIMS and their practical usage in Tanzania, making localized studies such as those focusing on the Dar es Salaam

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Institute of Technology (DIT library) essential for understanding usage patterns, user satisfaction, and integration with teaching and research.

Taken together, these authors illustrate that while LIMS have transformed academic libraries globally by improving efficiency, access, and collaboration, their effectiveness depends on contextual factors such as infrastructure, funding, and user training. This study therefore seeks to explore how DIT utilizes LIMS in practice, addressing questions of system usability, user satisfaction, and alignment with academic goals.

2.3 Challenges Facing Library Information Management Systems

Library Information Management Systems (LIMS) have become essential tools for modern libraries, enabling efficient organization, storage, and dissemination of information. Despite their advantages, however, LIMS face numerous challenges that hinder their effective implementation and sustainability. Scholars across different contexts have identified several recurring issues that highlight the complexity of managing these systems.

One of the most pressing challenges is financial constraints**.** Breeding (2015) notes that limited budgets restrict libraries from investing in essential hardware, software customization, and staff training. Without adequate funding, institutions struggle to maintain and upgrade their systems, resulting in inefficiencies and outdated technologies. This financial limitation is particularly acute in developing countries, where libraries often compete with other pressing institutional priorities.

Closely linked to financial issues are ICT infrastructure challenges. Rosenberg (2017) emphasizes that unreliable internet connectivity and inadequate technical facilities undermine system performance. In many African contexts, intermittent electricity supply and poor network coverage further exacerbate these problems, making it difficult for libraries to provide consistent digital services. Such infrastructural weaknesses limit the potential of LIMS to deliver seamless access to information.

Another significant barrier **is** human resource capacity**.** Okello-Obura (2018) observes

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that many librarians lack the necessary technical skills to operate and manage LIMS effectively. Resistance to change from traditional manual systems also slows adoption. These skills gap not only affects system efficiency but also reduces user confidence in digital platforms. Continuous training and professional development are therefore essential to bridge this divide.

Beyond these operational issues, sustainability and cyber security risks pose long-term threats. Breeding (2015) highlights that maintaining LIMS requires ongoing investment in system upgrades, data protection, and secure storage. Cybersecurity concerns, including risks of hacking and data breaches, jeopardize the integrity of library collections. Without robust security measures, libraries risk losing valuable digital resources and compromising user privacy.

In addition to these well-documented challenges, scholars have identified further concerns. Information overload is one such issue. Taylor and Francis Group (2025) argue that the exponential growth of digital resources overwhelms library systems, making retrieval and organization increasingly complex. Without advanced metadata and search tools, users struggle to locate relevant materials, reducing the effectiveness of LIMS.

Legal and policy compliance also complicates system management. Ghosh (2016) points out that copyright laws, intellectual property rights, and legal deposit obligations often restrict libraries from digitizing and sharing resources freely. Navigating these legal frameworks requires careful policy alignment, which many institutions find difficult to achieve.

Another challenge lies in performance measurement and evaluation**.** Ghosh (2016) further observes that libraries often lack standardized indicators to assess system effectiveness. Without clear benchmarks, it becomes difficult to evaluate user satisfaction, efficiency, and reliability, leading to poor accountability and limited opportunities for improvement.

Finally, digital preservation and evolving user expectations add further complexity.

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Fang, Li, and Chen (2023) stress that ensuring long-term storage and backup of digital resources is a major challenge, especially given risks of data corruption and technological obsolescence. Meanwhile, Zhu and Zhao (2024) highlight that modern users demand mobile compatibility, personalized services, and faster access features that many LIMS are not yet equipped to deliver.

2.4 Strategies to Overcome Challenges in Lims Implementation.

The successful implementation of LIMS requires deliberate strategies to address financial, infrastructural, human resource, and sustainability challenges. Literature from both global and regional contexts provides useful insights into approaches that can be adapted to Tanzanian institutions such as the Dar es Salaam Institute of Technology (DIT) library.

Financial; One of the most effective ways to overcome financial constraints is through the adoption of open-source systems such as Koha*, which* reduces licensing costs and allows customization to local needs (Okello-Obura, 2018). Collaborative resource sharing through library consortia can also pool resources for system acquisition, maintenance, and training. Furthermore, institutional budget prioritization for ICT and library automation ensures long-term sustainability by embedding LIMS into core financial planning.

ICT Infrastructure; Reliable infrastructure is critical for system performance. Investment in stable internet connectivity, upgrading hardware and software, and leveraging cloud-based solutions enhances scalability and resilience. Rosenberg (2017) emphasizes that addressing infrastructural weaknesses is essential for libraries in Africa to deliver consistent digital services. Cloud-based platforms, in particular, reduce dependence on local servers and provide flexible access to resources.

Human Resource and Capacity Building; Continuous professional development for librarians and ICT staff builds institutional capacity and ensures effective system management. Change management programs reduce resistance to automation, while user education enhances system utilization. Okello-Obura (2018) highlights that bridging

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skills gaps is crucial for successful adoption, as technical competence directly influences user confidence and system efficiency.

Sustainability and Customization; Local adaptation of systems to reflect curricula and user needs ensures relevance and usability. Institutional policy support provides a framework for long-term sustainability, while partnerships with vendors and developers guarantee timely updates and technical support. Breeding (2015) underscores that sustainability requires ongoing investment in system upgrades and policy alignment to maintain relevance in dynamic information environments.

Cyber security and Data Protection; Safeguarding user data is essential for trust and system integrity. Implementation of firewalls, encryption, and regular backups protects against cyber threats. Compliance with data protection regulations ensures ethical handling of information, while regular audits strengthen resilience against breaches. Fang, Li, and Chen (2023) argue that robust preservation and security measures are indispensable for protecting digital collections.

Regional and Global Collaboration; Benchmarking best practices from successful implementations in Kenya, Uganda, and Nigeria provides models for adaptation. International partnerships can provide technical expertise, training, and funding support. Zhu and Zhao (2024) note that collaboration not only enhances technical capacity but also helps libraries align with evolving user expectations, such as mobile access and personalized services.

2.6 Research Gap

Although there is a substantial body of literature on Library Information Management Systems (LIMS) in academic libraries worldwide, the Tanzanian context remains underexplored. Most studies have concentrated on global trends or regional experiences in countries such as Kenya, Uganda, and Nigeria, leaving institutions like the Dar es Salaam Institute of Technology (DIT library) insufficiently studied.

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Firstly, while existing research highlights the widespread adoption of open-source systems such as Koha in African universities, there is little empirical evidence documenting the specific types of LIMS currently in use at DIT library. This lack of localized information limits understanding of the institution's technological environment.

Secondly, although scholars emphasize the benefits of LIMS in enhancing cataloguing, circulation, and user services, there is minimal research on how these systems are actually utilized in Tanzanian academic libraries. Key aspects such as user satisfaction, system usability, and integration with teaching and research remain largely unexamined.

Thirdly, challenges such as financial constraints, inadequate ICT infrastructure, and human resource limitations are well-documented in African contexts. However, there is insufficient evidence on the particular challenges faced by DIT library in implementing and sustaining LIMS. Without such institution-specific insights, it is difficult to design effective interventions.

Finally, while global and regional literature suggests strategies such as capacity building, open-source adoption, and policy support, there is a lack of context-specific recommendations tailored to Tanzanian institutions. This gap underscores the need for research that proposes practical and sustainable strategies for overcoming challenges at DIT library.

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CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the methodology used in providing the study. The first part of the section provides research design used in the study. The second part of the section provides the study area, the third section provides data collection methods while the last section explains how the collected data was analyzed and processed.

3.1 Research Design

According to Kumar (2020), research design refers to the plan, structure and strategy used in conducting a research study. This study employed a descriptive survey design. The design was considered appropriate because it enabled the researcher to collect information from respondents regarding the effectiveness of Library Information Management Systems at Dar es Salaam Institute of Technology (DIT) Library. The design also allowed the use of different data collection methods including questionnaires and interviews.

3.2 Research Approach

The study employed a mixed-methods approach involving both quantitative and qualitative methods. Quantitative data were collected through questionnaires administered to students, while qualitative data were collected through interviews conducted with key informants. The mixed-methods approach enabled the researcher to obtain comprehensive information concerning Library Information Management Systems at DIT Library.

3.3 Area of the Study

Area of the study simply refers to the actual place within which the research was conducted (Creswell, 2018). The study was conducted at Dar es Salaam Institute of Technology (DIT) Library located in Dar es Salaam, Tanzania. The institution was selected because it uses Library Information Management Systems to facilitate library operations and information services for users.

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3.4 Population of the Study

Population refers to the entire group of individuals from whom the researcher obtains information related to the study (Kothari, 2020). In this study, the population consisted of approximately 350 respondents, including students and library staff at Dar es Salaam Institute of Technology (DIT) Library. These respondents were selected because they are the main users and managers of Library Information Management Systems.

3.5 Sample Size

Sample size refers to the selected size of respondents from a large population representing the whole population within the study area (Kothari, 2019). The sample size was 35 respondents representing the whole population. This included 30 students and 5 Library staff from the study area.

3.6 Sampling Techniques

A Sampling is the process of drawing a sample from a larger population (Kromrey, 2016). The researcher used both probability and non-probability sampling technique for selecting the sample of this study.

3.6.1 Simple Random Technique

Simple Random Technique is a method of selecting a sample from a population where each individual has an equal chance of being chosen, and the selection of one individual does not affect the selection of others (Liu, 2016). This technique was selected because it gave every student an equal chance of participating in the study and minimized researcher bias.

This method was used to select 30 students from the study area. Simple random Sampling technique is so crucial since it provide equal chance for every individual in the population of being selected.

3.6.2 Purposive Sampling Technique

Purposive sampling Technique is a non-probability sampling method where researchers select specific individuals or groups based on certain characteristics or qualities that are relevant to the research objectives (Hargittai, 2019). This technique was used to select 5

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library staff from the study area because they possess relevant knowledge and experience regarding the implementation and usage of Library Information Management Systems at DIT Library.

3.7 Data Collection Methods

For the purposes of this study, a variety of methods was used to collect data. These include primary and secondary sources as follows:

3.7.1 Primary Data

According to Mugenda (2019) the primary data are those which are collected a fresh and for the first time and this happen to be original in character.

3.7.2 Secondary Data

According to Kothari (2019) this method involves the use of documentary review such as publications, bulletins and other recorded information such as meetings' minutes, and Internet information. This were appropriate method, as it enables the researcher to gain more information about the research problem

3.8 Data Collection Tools

Are instruments or strategies used to gather data from research participants, and can include surveys, interviews, observational methods, and document analysis (Arenas-Gaitán , 2017).

3.8.1 Questionnaire Method

According to Patton (2022) questionnaire is a form, set of forms consisted of number of printed, or typed questions in which the respondents were required to answer them and return to the researcher within the specified period. A questionnaire was used to collect data from 30 students.

3.8.1.1 Advantages of questionnaires

Questionnaires were preferred because they allowed respondents to answer questions freely without fear since the researcher was not physically present. They also enabled

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the researcher to reach many respondents at low cost and provided enough time for respondents to complete the questions.

3.8.2 Interview Method

Babbie (2015) defines interview as a method of obtaining data by talking directly to the subject. The researcher used the interview to get information from 5 Library staff from the study area. The interview conducted through face to face interaction so that more information was soughed out. This instrument contains structured questions which was carefully applied to respondents.

3.8.2.1 Advantages of Interview

Interviews were preferred because they provided a high response rate and enabled the researcher to obtain detailed information directly from respondents. In addition, interviews were flexible and allowed respondents to explain their views in depth.

3.9 Ethical issues

The researcher ensured that respondents participated voluntarily in the study. The information collected was treated confidentially and used strictly for academic purposes. Permission to conduct the study was obtained from the relevant authorities, and respondents were informed about the purpose of the study before participating.

3.10 Data Analysis Plan and Presentation

Data collected from the field were coded, processed and analyzed using Microsoft Excel software. Frequencies and percentages were generated through descriptive analysis. The findings were presented in tables and percentages.

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CHAPTER FOUR

DATA ANALYSIS, PRESENTATIONANDDISCUSSION

4.0 Introduction

This chapter analyses the data that were collected in the field of the study. The interpretations made gives picture of what was studied in the field. Explanations are presented in tables and figure in terms of percentage. The study examines the assessment of Library Information Management Systems in Academic Libraries: A Case Study of Dar es Salaam Institute of Technology (DIT) Library.

In order to meet its objectives, the researcher formulated hypothetical questions, which supported to get relevant information related to the topic of the study. The instrumentation used to collect data were questionnaires and interviews

4.1. Distribution of Questionnaires and Interview Response

Students answered the questionnaires, and Library staff was face to face interviewed, some questions were needed to be answered shortly by using open ended or closed ended. Findings are shown on the Table 4.1 below:

Table 4.1: Distribution of Questionnaires and interview response

(N=35)

Categories of Respondents	**Questionnaires Respondents (N=30)**		**Interview Respondents N=(5)**	
Students	**Frequency**	**Percentage**	**Frequency**	**Percentage**
	30	100%		
Library staff			5	100%
Total	**30**	**100%**	**5**	**100%**

Source: Field Study (2026)

The findings from Table 4:1 above shows 30(100%) questionnaire distributed to students were returned and 5 (100%) Library staffs were successfully interviewed.

The findings indicate that the study was successful because all questionnaires distributed to students were returned and all library staff participated in the interviews. This high

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response rate provided sufficient information for assessing Library Information Management systems at DIT Library.

4.2 Gender of Respondents

The respondents were asked to indicate their gender. Information on gender of respondents was needed by researcher so as to identify their participation of respondents depending to their gender. More details seen in Table 4.2

Table 4.1.2: Gender of Respondents (N=35)

Gender	Students N=(30)		Academic Staff N =(5)	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Male	18	60%	2	40%
Female	12	40%	3	60%
Total	**30**	**100%**	**5**	**100%**

Source: Field Study (2026*)*

The findings from Table 4.1.2 above shows that for students, 18(60%) were male while 12 (40%) were female. For Library staff, 2 (40%) were male while 3(60%) were female.

The study revealed that students from both genders exhibited similar patterns in their library information management systems in academic libraries, displaying a shared interest in utilizing various sources and strategies to gather information. It was observed that both male and female students utilized library information management systems in academic libraries, such as primary sources for information acquisition. Additionally, both genders demonstrated a preference for peer interactions and discussions, as well as consulting Library Staff to enhance their understanding of a given topic.

4.1.3 Education Level of Respondents

The respondents were asked to indicate their level of education; Information on education of respondents was needed by researcher to identify the participation of respondents depending to their level of education. Table 4.3 summarizes the findings:

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Table 4.1.3: Education Level for Respondents (N=35)

Education level		Frequency	Percentages
Students(N=30)	Undergraduate student	22	73%
	Postgraduate student	8	27%
Total	**30**		**100%**
Library Staff(N=5)	Bachelor Degree	3	60%
	Masters Degree	2	40%
Total		**5**	**100%**

Source: Field Study (2026)

The findings from Table 4.1.3 above shows that for students 22 (73%) had Undergraduate student level of education, 8 (27%) had Postgraduate student and in other side for Library staff, 3(60%) had Bachelor degree level of education and 2(40%) had Master degree level of education.

The distribution of educational levels highlights the diversity in the educational backgrounds of the participants and suggests the need to consider these variations when students utilized Library Information Management Systems in Academic Libraries.

4.1.4 Distribution of Respondents by Age

The respondents were requested to mention their respective age. The aim was to see the response rate from each age and passiveness of respondents according to their age groups. The Table 4.1.4 summarized the results:

Table 4.1.4: Distribution of Respondents by Age (N=35)

	Age	Frequency	Percentage
Students N= (30)	20-28	20	67%
	29-34	10	33%
Total		**30**	**100%**
Library Staff N=(5)	35- 44	3	60%
	45 above	2	40%
Total		**5**	**100%**

Source: Field Study (2026)

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The findings from Table 4.1.4 above show that for students 20(67%) were with age range of 20-28, 10(33%) were with age between 29-34 years, while for Library staff 3(60%) were with age range of 35- 44years and 2 (40%) were with age of 45 and above years.

The findings indicate that the assessment of library information management systems in academic libraries. Involved a diverse age range. Among the participants, 67% fell within the age range of 20-28, 33% were between 29-34 years old, 60% were in the age range of 35-44 years, and 40% were 45 years old and above. This distribution suggests a varied demographic representation of university students, allowing for a more comprehensive understanding of library information management systems in academic libraries across different age groups.

4.2 The Types of Library Information Management Systems are currently available at DIT Library.

Researcher wanted to know the mechanisms of the library information management systems in academic libraries processes in academic library. This question was distributed for students. The findings are indicated in Table 4.5:

Table 4.2: The Types of Library Information Management Systems in Academic Libraries at DIT (N=30)

Types	**Frequency**	**Percentage**
Koha	19	64%
Digital Repository	6	20%
Electronic Resource Management System (ERMS)	5	16%
Total	**30**	**100%**

Source: Field Study (2026)

The findings from Table 4.2 above indicate that 19(64%) respondents said that Koha, 6(20%) respondents said that Digital Repository and 5(16%) respondents said that Electronic Resource Management System (ERMS).

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Interview responses say that many students based on using Koha and Digital Repository. But high number of students prefer using Koha.

"The several types used by students to get information and other resources needed. Many students at this university preferring using Koha because its familiar with their level of understanding on using library information management systems in academic libraries to get relevant required information and content related to the topic" (Respondents, 2026)

In conclusion, mastering these types Koha, Digital and Electronic Resource Management System (ERMS) – is essential for university students seeking accurate and relevant information through used to apply library information management systems effectively and efficiently. by employing these types systematically during their research process at Dar es Salaam Institute of Technology (DIT) Library enable students not only save time but also enhance their overall learning experience significantly.

4.3 The Usage of Library Information Management Systems at DIT Library.

The researchers needed to know the library information management systems used to support library operations and service. This question asked to students. The findings indicated in Table4.6below:

Table 4.3: The Usage of Library Information Management Systems at DIT Library at DIT Library. (N =30)

Usage	Frequency	Percentages
Cataloguing library materials	5	17%
Circulation (borrowing and returning)	10	33%
Accessing electronic resources	8	27%
User registration and record management	3	10%
Information retrieval (OPAC)	4	13%
Total	**30**	**100%**

Source: Field Study (2026)

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Findings from Table 4.3 above indicate that 5(17%) respondents said that User Cataloguing library materials, 10(33%) respondents said that Circulation (borrowing and returning), 8(20%) respondents said that Accessing electronic resources, 3(10%) respondents said that User registration and record management, and 4(13%) respondents said that Information retrieval (OPAC).

Interview response reveled that usage of circulation (borrowing and returning) to students to help in get information in the library.

"The students were use circulation (borrowing and returning) in library information management systems in academic library. Also students use accessing electronic resources processes on boosting academic issues" (Respondents, 2026)

From the findings show that Circulation (borrowing and returning) and *accessing electronic resources* allocation were key determinants of successful library information management systems.

4.4 The challenges do DIT Library face in implementing and using Library Information Management Systems.

The respondents were asked to reveal the challenges do DIT library face in implementing and using library information management systems in academic library. This question was asked to students. A researcher needs to know if there is challenges to find out its solutions concerned the problem. The findings indicated in Table 4.7 below:

Table 4.4: The challenges do DIT Library face in implementing and using Library Information Management Systems (N=30)

Challenges	Frequency	Percentage
Poor internet connectivity	10	33%
Inadequate ICT infrastructure	7	23%
Insufficient technical skills	5	17%
System breakdowns/failures	5	17%
Inadequate financial support	3	10%
Total	**30**	**100%**

Source: Field Study (2026)

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The findings from Table 4.4 above reveals that 10(33%) respondents indicate that Poor internet connectivity, 7 (23%) respondents indicate that Inadequate ICT infrastructure, 5(17%) respondents indicate that Insufficient technical skills, 5(17%) respondents indicate that System breakdowns/failures and 3(10%) respondents indicate that Inadequate financial support.

Interview response said that among of the challenge hindering during face when you want to optimize book acquisition are Poor internet connectivity and Inadequate ICT infrastructure. This led students to west time and does not get clear information.

" Actually challenges are inseparable; we face many challenges in the process of library information management systems in academic library. The major challenge we encounter is poor internet connectivity were the major obstacles affecting library information management systems. Also we have problem of inadequate ICT infrastructure that cause to affecting library information management systems" (Respondents, 2026)

4.5 The Strategies for Overcoming Challenges Facing Library Information Management Systems at DIT Library.

Students were required to indicate the strategies for overcoming challenges facing library information management systems in academic library. This question was distributed for students. A researcher aimed to know does respondents had any means to overcome challenges facing when using library information management systems. The findings indicated in Table 4.8 below:

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Table 4.5 Strategies for Overcoming Challenges Facing Library Information Management Systems at DIT Library (N=30)

Strategies	Frequency	Percentage
Improve ICT infrastructure	9	30%
Provide regular training	8	27%
Upgrade library systems/software	6	20%
Increase budget allocation	3	10%
Strengthen technical support	4	13%
Total	**30**	**100%**

Source: Field study (2026)

The findings from Table 4.5 above reveals that 9(30%) respondents indicate that Improve ICT infrastructure, 8(27%) respondents indicate that Provide regular training, 6(20%) respondents indicate that Upgrade library systems/software, 3(10%) respondents indicate that Increase budget allocation and 4(13%) respondents indicate that Strengthen technical support.

Interview response suggested the strategies that can be applied to overcome challenges on library information management systems. Many responses said that Improve ICT infrastructure and Provide regular training to ensure more competence.

" As management, we are in the strategies to ensure that those challenges related to library information management systems *in academic library are eradicated effectively. We have already planned to increase library budget in academic library." (Respondents, 2026)*

Addressing these challenges requires a multifaceted approach that includes Improve ICT infrastructure, Provide regular training, Upgrade library systems/software, Increase budget allocation and Strengthen technical support.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the study, the summary of the major findings organized according to the specific objectives, the conclusions drawn from the findings, the recommendations arising from the study, and suggested areas for further study. The chapter brings together the discussion presented in the previous chapter and relates it back to the objectives that guided the assessment of Library Information Management Systems in Academic Libraries, with particular reference to Dar es Salaam Institute of Technology (DIT) Library.

5.1 Summary of the Study

The study assessed Library Information Management Systems in academic libraries, using DIT Library as a case study. The general objective was to assess library information management systems in academic libraries, guided by four specific objectives: to find out the types of library management systems available at DIT Library, to examine the usage of the library management systems available at DIT Library, to find out the challenges facing DIT Library in using library management systems, and to find out strategies to overcome the challenges facing DIT Library in using library management systems.

A descriptive survey research design supported by a mixed methods approach was adopted. The study engaged students, who responded to questionnaires, and library staff, who were interviewed. Both quantitative and qualitative data collection methods were employed, and the information gathered was analyzed and presented in the preceding chapter according to the objectives of the study.

5.2 Summary of Major Findings

5.2.1 Types of Library Information Management Systems Available at DIT Library

The study found that DIT Library makes use of several Library Information Management Systems to support its operations. Koha, including its Online Public

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Access Catalogue (OPAC) module, was identified as the system most widely known and used among respondents. The Digital Repository and the Electronic Resource Management System (ERMS) were also recognized as important systems in place at the library. These systems were generally regarded by respondents as essential for organizing, storing, and providing access to the library's information resources.

5.2.2 Usage of Library Information Management Systems at DIT

The found that study Library Information Management Systems at DIT Library are applied across a range of library functions. Circulation, encompassing the borrowing and returning of materials, emerged as the function most commonly supported by the systems. Accessing electronic resources was also a prominent use, followed by cataloguing of library materials, information retrieval through the OPAC, and user registration and record management. Interview responses corroborated this pattern, with library staff confirming that circulation and access to electronic resources were the areas where the systems were most heavily relied upon to assist students in obtaining information.

5.2.3 Challenges Facing DIT Library in Using Library Information Management Systems

The study revealed that the use of Library Information Management Systems at DIT Library is affected by a number of challenges. Poor internet connectivity stood out as the most significant challenge undermining effective use of the systems. Other notable challenges included inadequate ICT infrastructure, insufficient technical skills among users and staff, occasional system breakdowns or failures, and inadequate financial support for maintaining and upgrading the systems. Insights from the interviews with library staff confirmed that unreliable connectivity and weak ICT infrastructure were the most pressing obstacles, often resulting in delays and difficulties in accessing the required information.

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5.2.4 Strategies for Overcoming Challenges Facing Library Information Management Systems at DIT Library

Regarding strategies for overcoming these challenges, the study found that improving ICT infrastructure was viewed as the most important measure needed to strengthen the performance of Library Information Management Systems at DIT Library. Providing regular training for library staff and users, upgrading library systems and software, strengthening technical support, and increasing budget allocation for the library were also identified as important strategies. Library management, through the interviews conducted, indicated an awareness of these challenges and expressed intentions to pursue measures such as increased budgetary support to address them.

5.2 Conclusion

Library Information Management Systems play an important role in improving academic library operations and services. The study concludes that systems such as Koha, OPAC, Digital Repository and Electronic Resource Management System (ERMS) are important in supporting access, storage and management of information resources at DIT Library.

The study further concludes that Library Information Management Systems are mainly used in circulation services, accessing electronic resources, cataloguing, information retrieval and user record management. These systems help library users to access required information easily and improve the quality of library services.

However, the study concludes that challenges such as poor internet connectivity, inadequate ICT infrastructure, insufficient technical skills, system failures and inadequate financial support affect effective implementation and usage of Library Information Management Systems. Therefore, academic libraries should develop appropriate strategies to overcome these challenges and ensure sustainable use of library systems.

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5.3 Recommendations

Based on the assessment conducted on Library Information Management Systems at Dar es Salaam Institute of Technology (DIT) Library, several recommendations can be made:

- Improve ICT Infrastructure: It is recommended that DIT Library should improve ICT infrastructure by investing in reliable internet connectivity, computers and other technological facilities to support effective use of Library Information Management Systems.
- Provide Regular Training: The library should provide regular training to library staff and users on how to effectively use Library Information Management Systems to improve technical skills and confidence.
- Upgrade Library Systems/Software: The library should regularly update and maintain existing systems such as Koha, OPAC and other digital platforms to ensure they meet users' information needs.
- Increase Budget Allocation: The institution management should increase financial support for the library to enable maintenance, improvement and sustainability of Library Information Management Systems.
- Strengthen Technical Support: The library should ensure availability of technical support services to solve system failures and other technical problems affecting the performance of Library Information Management Systems.

5.4 Areas for Further Study

Although this study provides valuable information about Library Information Management Systems at DIT Library, further studies can be conducted in the following areas:

- "Conducting a comparative study on Library Information Management Systems in different academic libraries." This can provide information on how different academic institutions implement and manage library systems.
- "Investigating the impact of digital library systems on students' academic performance." This can help to understand how technology-based library services contribute to students' learning and academic success.

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APPENDIX I

QUESTIONNAIRE FOR STUDENTS.

Dear Respondent,

My name is Habiba Said Yusuph, I am Diploma student from School of Library, Archives and Documentation Studies (SLADS), is conducting a research titled **"*An assessment of Library Information Management Systems in Academic Libraries*".**

Kindly assist by filling this form by putting a tick in the bracket or comments in the space provided to the best of your knowledge.

After filling in the form please hand it over to the academic use or researcher after filling it.

Please you're kindly requested to answers these questions.

Thank you in advance

A. DEMOGRAPHIC INFORMATION

1. What is your gender?
   a) Male ( )
   b) Female ( )
2. What is your highest level of education?
   a) Undergraduate student ( )
   b) Postgraduate student ( )
3. Which age categories describe your age?
   a) 20-28 ( )
   b) 29-34 ( )
   c) 35-44 ( )
   d) 45 and above ( )

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What types of Library Information Management Systems are currently available at DIT Library?

a) Koha ( )
b) Digital Repository ( )
c) Electronic Resource Management System (ERMS) ( )

2. How are the Library Information Management Systems used to support library operations and services at DIT Library?

a) Cataloguing library materials ( )
b) Circulation (borrowing and returning) ( )
c) Accessing electronic resources ( )
d) User registration and record management ( )
e) Information retrieval (OPAC)

3. What challenges does DIT Library face in implementing and using Library Information Management Systems?

a) Poor internet connectivity ( )
b) Inadequate ICT infrastructure ( )
c) Insufficient technical skills ( )
d) System breakdowns/failures ( )
e) Inadequate financial support ( )

4. Which strategy can best overcome the challenges facing Library Information Management Systems at DIT Library?

a) Improve ICT infrastructure ( )
b) Provide regular training ( )
c) Upgrade library systems/software ( )
d) Increase budget allocation ( )
e) Strengthen technical support ( )

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APPENDEX II

INTERVIEW GUIDE FOR LIBRARY STAFF.

Dear Respondent,

My name is Habiba Said Yusuph, I am Diploma student from School of Library, Archives and Documentation Studies (SLADS), is conducting a research titled **"*An assessment of Library Information Management Systems in Academic Libraries*".**

Kindly assist by providing relevant answers.

a) What types of Library Information Management Systems are currently available and used at DIT Library?

……

……

……

a) How are these Library Information Management Systems used to support library operations and services at DIT Library?

……

……

……

b) What challenges does DIT Library face in implementing and using Library Information Management Systems?

……

……

……...

c) Which strategy can best overcome the challenges facing Library Information Management Systems at DIT Library?

……

……

…

Thank you in advance

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APPENDEX III

TIME SCHEDULE SHOWING.

DURING RESEARCH WORK

Activities	**March 2026**	**April 2026**	**May 2026**	**May 2026**	**June 2026**	**July 2026**
Writing of proposal						
Submission of proposal						
Collection of data from the field through questionnaires						
Data processing and interpretation ready for report drafting						
Preparation of the first draft report						
Submission of the report at SLADS						

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APPENDIX IV

RESEARCH BUDGETING

ACTIVITIES	COST ANALYSIS	TOTAL COT
i. TRANSPORT		
College-Field Area	5000 X 10	50,000
ii. Breakfast and meal allowance	5000 x10	50,000
iii. STATIONARY 1. Ruled paper 2 reams	8000 x 2	16,000
2. Typing paper 2 reams	10,000 x2	20,000
iv. SECTRETARIAL SERVICES 3. Computer typing 150 pages.	1000 x50	50,000
4. Photocopying services 4 copies	50 x50=2500x4 copies	10,000
5. Binding 4 copies	25000x2	50,000
6. Telephone and internet service	2500 x2	5,000
	TOTAL	**251,000/=**

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APPENDIX V

INTRODUCTION LETTER

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF
EDUCATION, SCIENCE AND TECHNOLOGY
DAR ES SALAAM INSTITUTE OF
TECHNOLOGY

Our Ref. No: AB.83/284/01/123

11th March 2026

Habiba Said Yusuph,
School of Library, Archives and Documentation Studies (SLADS),
Ukuni, Block S, Plot No.96,
P. O. BOX 227, **BAGAMOYO.**

RE: AUTHORISATION FOR DATA COLLECTION AT DIT

I acknowledge receipt of SLADS request for you to conduct data collection at the Dar es Salaam Institute of Technology (DIT) for your Project titled "Assessment of library Information Sytems" as part of your Diploma Studies in Library and Information Management.

2. I am pleased to inform you that you have been granted permission to conduct data collection at DIT for your project from 23rd to 26th April 2026 as requested.

3. Kindly note that all the data that will be collected from DIT will have to be treated with the highest level of confidentiality and used exclusively for academic purposes.

5. If the results are to be published on any online platform, any text in which our Institute is mentioned must first be reviewed and approved by our Institute prior to publication.

6. Please present this letter to any Department Heads or respondents as proof of authorization while on campus.

7. If you have any questions or require further assistance during your time at DIT, please contact Dr. Ahab Ndabigaye, the Coordinator for Research, Publication and Innovation. He can be reached through his email ahab.ndabigaye@dit.ac.tz or mobile phone number 0775294539.

8. Thank you.

Dr. Ahab Ndabigaye
FOR RECTOR

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