Establishment of Malawi Institute of Procurement and Supply Library and Learning Resources Center: Challenges and Opportunities

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Abstract

The objectives of the project of establishing the library and learning resources center at Malawi Institute of Procurement and Supply (MIPS) were to draft recommendations on the kind of infrastructure in terms of hardware, software, and networking required to establish the library systems; Koha and DSpace, to develop user training manual for e-library systems, to develop a user manual for a recommendation for additional training resources for the library, to install e-library systems, link the e-library systems to Members Management Information System (MMIS), to create catalog records for information resources and to conduct training on the functionality of the e-library system. The study was a descriptive account of the processes of establishing a library and learning resources center in an organization. Monitoring and reporting of the project activities were done which led to the development of reports, library manuals, and deliverables for the project. The scope of the work involved the establishment of the library currently operational. The period for the entire project was 6 months. Some of the major achievements for the project were the installation of Closed Circuit Television (CCTV) system for the resource center, installation of e-library systems, purchase of new textbooks and subscription to electronic journals, training of MIPS management and users on the functionalities of e-library systems, and recruitment of a qualified Librarian to manage the resource center.

Keywords

Malawi Institute of Procurement and Supply, information and communication technology, libraries, information science, social sciences, digital library system, information

Introduction

Libraries are the major contributor to the socio-economic development of individuals and society, thereby, creating a knowledge society and social capital. Therefore, libraries are “essential” or “very important” in the lives of people (Museums, Libraries and Archives Council, 2010). A library is a spiritual home for its users, their safe haven, and a perfect channel of hospitality, especially in the context of an inclusive setting (Bodaghi et al., 2017, p. 229). Libraries stock and make available vital information that supports personal and social needs. The goal of libraries is to help users access information—not just information itself, but the processes involved in finding the needed information (Gould & Gomez, 2010, p. 167). Enabling access to knowledge through libraries in developing countries has been the focus of Electronic Information for Libraries (EIFL), an international not-for-profit organization that recently launched a Public Library Innovation Program (PLIP) to create innovative services to support access to information for the underprivileged people in the society (Fuegi et al., 2011). Besides this role, libraries also provide facilities for studying, internet access, and discussions and therefore contributing to knowledge generation for the greater good of society. Such facilities are provided in a safe and all-inclusive environment regardless of gender, ethnic group, religious, or professional affiliations.

Reformulation of how such services are provided has therefore naturally taken place following the development of ICT, including database access and Internet access services (Andrews, 2017). ICTs provide important tools for satisfying the information needs of users (Gould & Gomez, 2010, p. 167). Libraries make available vital information in electronic or digital formats and accessible on computers over a network or offline mode. Open source platforms such as DSpace

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and Koha have become popular in supporting library and archive functions in the 21st Century. Librarians have been able to extend their services beyond the walls of the libraries to their users in a unique but satisfying fashion. This wave of change has called for libraries and general information centers to adopt and use library technologies and systems in discharging their daily services. The role of libraries in the provision of information in a variety of formats is important in serving the information needs of users. Such information helps the library membership to advance their academic and professional career among others. Therefore, this paper offers a useful first-hand account of the process of setting up a special library in an organization. Useful insights have been highlighted and lessons learned in the establishment of a modern library and learning resources center in an organization.

Background

Malawi Institute of Procurement and Supply (MIPS) is a membership-based organization established by an Act of Parliament No. 3 of 2016 (Malawi Institute of Procurement and Supply, 2020). The organization was officially incorporated on 20th November 2008 as a limited company by guarantee (Malawi Institute of Procurement and Supply, 2020). The vision of MIPS is to promote procurement and supply in Malawi by enforcing high standards of efficiency and professionalism while its mission is to regulate and develop the interest of the procurement profession in all sectors in Malawi (Malawi Institute of Procurement and Supply, 2020). Besides, the Institute is responsible for accrediting local training programs, scrutinizing, and approving international certifications for use by different stakeholders in the country (Malawi Institute of Procurement and Supply, 2019). MIPS is also mandated to develop standards for measuring the performance of procurement professionals in Malawi. The values of MIPS are professionalism through transparency, integrity, fairness, impartiality, being socially responsible, and encouraging continuous development (Malawi Institute of Procurement and Supply, 2019). MIPS is managed under the leadership of elected board members comprising paid up, qualified, and experienced procurement and supply chain management professionals from the public, private, and non-governmental sectors (Malawi Institute of Procurement and Supply, 2020). The membership of the institute is drawn from all individuals in the procurement field and organizations to adopt and sustain rigorous procurement policies, processes, and procedures. Therefore, MIPS has been established as the voice for procurement professionalism in Malawi with the active lobby of the government on behalf of its members. Some of the advantages of being a member of the institute are the opportunity of attending workshops/seminars, business breakfasts, and others at a lower rate; networking opportunities and purchasing of Chartered Institute of Procurement and Supply (CIPS) books locally at a reasonable price (Malawi Institute of Procurement and Supply, 2019, p. 5). To achieve its goals and objectives, MIPS partnered with its African Development Bank in 2017 through the Ministry of Finance under the Public Finance Management Institutional Support Project (PFM-ISP) to establish a library and learning resources center. The library will provide access to information on procurement and supply chain management that will enhance and improve the procurement and supply chain environment in Malawi to attain good governance and economic development in Malawi. The process of establishing the library started in March 2018 at MIPS headquarters in Blantyre, Malawi.

Problem Statement

Libraries are a cornerstone for personal and professional development in any organization. They are a source of current and professional related content for their members. They also provide other related services such as a reading space and reference desk. Libraries contribute significantly whether directly or indirectly to the strategic frameworks of a country such as the Malawi Poverty Reduction Strategy, Vision 2020, and Malawi Growth Development Strategy in the creation and sharing of knowledge through research (Malawi Government, 2017). Despite the numerous benefits of the library, members, and staff alike at MIPS faced numerous challenges with the absence of the modern library such as lack of internet connectivity, lack of reading space, lack of qualified library staff, lack of access to information materials, and limited library funding. To address some of these challenges, MIPS with funding from the African Development Bank through the Ministry of Finance of Malawi embarked on a project to establish a library and learning resources center at the MIPS headquarters in Blantyre, Malawi. To fulfill this activity, the author was consulted to establish both the physical and e-library for the procurement and supply professionals in Malawi. The library will provide an opportunity for MIPS members across the country and beyond to access electronic and physical information resources available in the library. Therefore, the article aimed to offer a useful first-hand account of the process of setting up a special library at MIPS. The challenges and opportunities related to the establishment of the library have equally been discussed.

Project Objectives

To achieve the aim of the project; the following objectives were formulated;

- To draft recommendations on the kind of infrastructure in terms of hardware, software, and networking required to establish the library systems; Koha and DSpace
- To develop a user training manual for e-library systems
To develop a user manual for a recommendation for
additional training resources for the library
To install e-library systems; Koha and DSpace, for use
by users in effectively using the library by making
library reservations, searching the available resources
of the library through the Online Public Access Catalog
(OPAC) and accessing the electronic content.
To create catalog records of both the physical and the
electronic resources to facilitate access to such
resources.

Literature Review

It is evident in the literature that special libraries have existed
since the 19th Century to support formal education and mis-
sionary work among others. Some special libraries existed in
South Africa as industrial and research institutions (Kalugho,
2018). In Ghana, the libraries of the Education Department,
Agriculture Department and the Secretary for Native Affairs
were set up in the latter part of the 19th Century while in
Nyasaaland (now Malawi), the first agriculture library in trop-
cal Africa was set up in 1899 (Ranasinghe, 2007).

Library resources are the foundation of library services
and strive toward meeting the needs of users. The focus of
libraries is to acquire relevant and interesting materials that
support the needs of users (Krolak, 2006). Examples of library
resources are electronic databases, books, newspa-
pers, pamphlets, and video and audio recordings (Segaetscho
&Mnjama, 2012). One way of realizing maximum benefits
from the use and access of library services and resources by
users is through library automation. Therefore, libraries need
to concentrate their efforts and funds allocation on automat-
ing their services and ensuring they are running efficiently
(Kalugho, 2018). Such automation can utilise open source
technologies such as Koha, Evergreen, and DSpace and
over-the-counter products such as Millennium, Library
Solutions, and Bibliotheca. Studies by Candela et al. (2007)
and Lam and Chan (2007) have argued that digital library
implementation requires user-friendly architecture as a core
concept of its implementation. Digital repositories should
have a robust technological infrastructure such as hardware,
software, and networking (Lagzian et al., 2015), for its
proper implementation. Effective technology implementa-
tion can offer new avenues for the provision of library ser-
dices using modern facilities such as social media as noticed
in other libraries in Sub-Saharan Africa and other developing
countries (Chisenga & Chande-Mallya, 2012; Makori, 2012).

A study by Wangila (2016) reported on the conditions
necessary for the adoption and use of library technology such
as training, digitization of information, and policies. Similar
findings by Abdul Rahman et al., (2020) incorporating
Delone and McLean’s model and organizational support per-
spective found training and education, digital library envi-
ronment and communication support, desire to use digital
library services, net benefits, and user satisfaction as some of
the critical success factors in the proper implementation and
adoption of the use of digital library technologies by users.
Besides, the content has been identified as an important com-
ponent in implementing a digital library (Rasuli et al., 2019).
In addition, Harinarayana and Raju (2010), Hart and Zinn
(2007), and Kulenovic (2011) also argue that library person-
nel also needs proper and adequate training to empower its
citizens with skills for active participation in society.

Several studies have explored the factors related to the
establishment of libraries in various institutions. These fac-
tors are related to the challenges and possible solutions to
establishing the libraries. Studies have highlighted major
challenges facing libraries such as employment of unquali-
ified staff, insufficient funding, low level of information tech-
nology development, and high cost of computer accessories
(Abba & Dawha, 2009; Dasgupta & Satpathi, 2006; Harvey
&Sayers, 2009; Mbagwu & Akanwa, 2012). Studies by
Mbagwu and Akanwa (2012) and Dike (2005) revealed
irregular payment of salaries and lack of library awareness as
other challenges facing libraries. Several authors in the
reviewed literature (Cobblah & Van der Walt, 2017; Fritts
& Casey, 2010; Kisby & Holler, 2009; Weaver et al., 2009)
stressed the need for effective library staff training to support
the provision of information resources to the users. Another
option is the recruitment of well-trained library staff (Otike
& Omboi, 2010). On insufficient funding, Kavulya (2007)
and Mojapelo (2018) argued that libraries should establish
strategic partnerships between local institutions, funding
agencies, and government agencies for extra funding for the
libraries. The funds would also be spent on staff salaries, pro-
curing library equipment and materials. Ani et al., (2005)
further argued that government should be committed to pro-
viding adequate funding to libraries and sustained provision
of financial grants from government agencies, international
organizations, private sectors, and individuals. Adoption of
current or new digital technologies in libraries would allevi-
ate the challenge of a low level of information technology
development in libraries (Kavulya, 2007). Lastly, users
should be informed about the library collections and services
available through library marketing and be empowered with
information literacy skills to use the resources (Otike &
Omboi, 2010).

Methodology

The study was a descriptive account of the processes in the
establishment of the MIPS Library and Learning Resources
Center. The project fulfilled the goals of MIPS by establish-
ing an efficient and effective library that will facilitate access
to print and electronic content beyond the walls of the library.
Data were collected through observation and interview
guides. A digital audio recorder was used to record the
responses from MIPS staff and others. The interview guide
was divided into two sections. Section A included the demo-
graphic details of participants including gender, institution,
and position (Table 1). Section B included library-related information such as types of information resources, user training, access needs, and policies. The observation guide included themes such as library space and equipment requirements, IT infrastructure, and library resources. Activities conducted during the project period of 6 months (March 2018–August 2018) followed the findings from data collection instruments and other requirements such as the legal and regulatory framework of MIPS and Malawi to establish the library. The author performed monitoring and evaluation of project activities weekly and corresponding adjustments were proposed and implemented to the project. Information was reported regularly in the form of reports according to the agreed time frame. The inception report (preliminary report for the project) was submitted after 3 weeks of contract signing on 20th March 2018 while draft and final reports were submitted after 12 weeks of project implementation on 28th May 2018 and 22nd June 2018 respectively. The reports were submitted to the Chief Executive Officer of MIPS as specified in the Terms of References for the consultancy. Besides reports, other deliverables such as library catalog system, shelving system and library issue system, e-library system, and library-related manuals and policies were equally submitted to the Chief Executive Officer for approval.

| No. | Gender | Position                  | Institution          |
|-----|--------|---------------------------|----------------------|
| 1   | Male   | Procurement specialist    | Ministry of Finance  |
| 2   | Female | Chief executive officer   | MIPS                 |
| 3   | Male   | Education qualification officer | MIPS               |
| 4   | Male   | Accounts officer          | MIPS                 |
| 5   | Female | Administrative assistant  | MIPS                 |
| 6   | Female | Office assistant          | MIPS                 |
| 7   | Male   | MIPS MIM developer        | Consultant           |
| 8   | Male   | MIPS ICT officer (outsourced) | Consultant          |

Table 1. Demographic Profile of Participants.

Preliminary Results

The results of establishing the MIPS library and learning resources center follow the objectives of the project. The results are displayed in Table 3 below. The first activity was cleaning and arranging the furniture in the room for the new library. African Development Bank through Public Finance Management Institutional Support Project (PFM-ISP) financed the purchase of all library furniture including computers, heavy-duty printers, security systems, air conditioners, network installation equipment, and power surges. It is interesting to report also that the PFM-ISP also financed the renovation of the resource center to make it a conducive environment for studying.

The first task was the drafting of the manuals for the effective running of the library such as recommendations on the kind of infrastructure in terms of hardware, software, and networking required to establish the library systems, a user manual for a recommendation for additional training resources for the library, and user training manual for e-library systems. Recommendations on the kind of infrastructure in terms of hardware, software, and networking were developed and submitted to MIPS management for consideration in preparation for the installation of the library systems. A total of 115 different titles of textbooks and 23 journal titles were recommended for addition to the new collection. There was also a need for additional equipment such as laptops, projectors, flip chart stand, Liquid Crystal Display (LCD) projector screen, barcode reader, and presenters. Besides developing the manual for additional training resources, there was a need to draft a user training manual for the e-library systems. Subsequently, a
Table 2. Major Deliverables and Timeframe for the Project.

| No. | Knowledge area/deliverables | Process group/activities | Time frame          |
|-----|-----------------------------|--------------------------|---------------------|
| D1  | Inception report            | • Data collection        | 4th Week of March 2018 |
|     |                             | • Drafting               |                     |
|     |                             | • Submission to the client |                 |
| D2  | Creating a library catalog system for library resources | • Describing library resources | 2nd Week of April 2018 |
|     |                             | • Assigning subject headings |                   |
|     |                             | • Creating authority files for the information resources |                     |
| D3  | Recommendation on the kind of infrastructure in terms of hardware, software, and networking required to establish the system | • Creating a draft of the recommendations based on the system requirements | 2nd Week of May 2018 |
|     |                             | • Sharing the recommendations to the management for decision making in setting up the e-library. |                     |
| D4  | Draft report                | • Incorporating comments from the client | 2nd Week of July 2018 |
|     |                             | • Revising the report based on data collected from the activities performed |                     |
| D5  | User manual: recommendation for additional training resources | • Drafting the manual | 1st Week of July 2018 |
|     |                             | • Making revisions based on new user needs |                     |
|     |                             | • Delivery of the final manual to the client |                     |
| D6  | Final report                | • Submission of the final report to the client | 4th Week of August 2018 |
| D7  | Library brochure/information handbook for library users | • Drafting the library brochure | 1st Week of August 2018 |
|     |                             | • Revising the brochure |                     |
|     |                             | • Seeking approval from MIPS management for the use of the brochure |                     |
| D8  | e-library system            | • Creating access code on the MMIS for the e-library. | 3rd Week of August 2018 |
|     |                             | • Connecting the e-library IP address to the Members Management Information System (MMIS) database. |                     |
|     |                             | • Creation of databases for users and login details |                     |
|     |                             | • Cataloging and classifying electronic resources |                     |
|     |                             | • Configuring, launching, and implementing e-library |                     |
|     |                             | • Training of users and administration |                     |
| D9  | ICT use policy              | • Planning for meetings with lecturers on the type of resources required for various courses including consulting curriculum documents for relevant information to be acquired by the library | 2nd to 4th Week of August 2018 |
|     |                             | • Developing a resource list for the materials to be added to the library’s collection. |                     |
|     |                             | • Developing a collection developing policy for managing the library resources. Seeking approval for the user manual from the MIPS management. |                     |
| D10 | Collection developing policy |                                                                       |                     |

Note. D: Deliverable.

user training manual was developed and approved by MIPS management and the first training was conducted on 15 March 2018 with five MIPS management staff including the Chief Executive Officer. All the functionality of the e-library systems was explored and participants were allowed to access the resources of the library available on Koha and DSpace systems. Lastly, we recommended the recruitment of a qualified librarian to manage the library so that the investment made in the establishment of the library is worthwhile.

Decisions were made in the selection of library automation systems. The first step in the selection of the library automation and digital content management systems was a wild search for the systems in use. Based on this search, several open-source and over-the-counter library automation systems and digital content management systems were listed. Examples of over-the-counter library automation systems listed were Millennium, Library Solution, Bibliotheca, RIBERO, and Mandarin while examples of open source library automation systems listed were Koha, Evergreen, Biblioteq, and Openbiblio. Examples of over-the-counter digital content management systems were One Drive and Canto while the open-source products were DSpace and Greenstone. The second step in the choice of the systems was the development of the selection criteria. The elements in the section criteria were purchasing cost, ease of installation, interoperability on existing ICT infrastructure and systems, troubleshooting support, training support, system update support, and evidence of wide adoption and use in similar
settings. Based on this criteria, only open-source software namely Koha and DSpace were selected for installation at MIPS mostly due to budgetary constraints. This activity was followed by the installation of Koha and DSpace for use by users in effectively using the library by making library reservations, searching the available resources of the library through the Online Public Access Catalog (OPAC) and accessing the electronic content. The Koha version of 3.0.0.11 was preferred while DSpace 3.0 was also installed for the MIPS library and learning resources center. The installation was done at the Domain Name System (DNS) server of the institution. Later, the e-library systems were linked to the database for MIPS Members Management Information System (MMIS) through links on the MMIS webpage. This was meant to enhance access to MIPS systems and resources through a single interface. Having set up the system, the consultant started creating catalog records of both the physical and the electronic resources to facilitate their access.

Having achieved this task, the consultant started processing the physical books such as stamping, spine labeling, accessioning, and providing book pockets. This took 4 weeks from 3 January to 31 January 2018. A total of 200 physical books and more than 100 physical and electronic journals were processed in readiness for cataloging, classification, and indexing. The catalog process was done through Koha integrated library management system and a total of 300 catalog records were created in a period of 2 months from February to March 2018. These records were meant to be accessible through a wide area network (WAN).

Based on the activities that were fulfilled, it is evident that there are a series of achievements that can be drawn from the establishment of the MIPS library. The results are presented in Table 4 below. The major achievements were the painting of the walls of the new library walls, installation of new security windows, installation of the additional lighting system, installation of Closed Circuit Television (CCTV) system, installation of air conditioners, installation of e-library systems; Koha and DSpace, purchase of new textbooks and subscription to electronic journals, purchase of new library furniture; chairs, office desks and reading carrels, purchase of library equipment; computers, heavy-duty copier, library trolleys, and movable shelves, training in the use of e-library systems, development of additional training resources, design of library user manual, and employment of a qualified librarian. Several challenges were faced in the process of establishment of the MIPS library and learning resources centers such as late delivery of library resources and equipment, high cost of library materials, high cost of technologies, intermittent power supply and unreliable internet connection.

**Discussion**

The process of establishing a digital library calls for huge investment in equipment, materials, space, and others. This investment is worth it based on huge returns in the establishment of the digital library as it provides access and support, and fosters the spread of vital new technological skills among the users (Kalugho, 2018). To realize this goal, a conducive
environment library is vital which involves cleaning and proper arrangement of the furniture. This highlights the reason for undertaking the cleaning of the library as it provides a conducive studying environment for users. This aspect also attracts users to the library and enforces positive decision making in utilizing the library resources. Lack of a pleasant library environment has negative consequences such as diminishing library attendance and lack of library awareness as few users patronize library services. Similar findings are reported in the studies by Mbagwu and Akanwa (2012) and Dike (2005) on irregular lack of library awareness in libraries as a result of a lack of conducive library environment among others. Access to technologies is key to the effective utilization of library services (Kalugho, 2018). Studies by Candela et al. (2007), Lam and Chan (2007), and Lagzian et al. (2015) have argued the need for user-friendly and robust technological infrastructure for its proper implementation. To improve access to technologies and library resources, we installed e-library systems; Koha and DSpace to enable remote access to the library services. To improve access to library resources, we processed all library materials; print and electronic, using Koha and DSpace and enable their access through a public Internet Protocol (IP) address on a Wide Area Network. This means that library users globally can access library resources and be supported in their professional careers. This functionality can improve the utilization of the library materials beyond the walls of the library as well as a justification for the existence of the library to stakeholders. The use of technologies in the provision of library services can further be strengthened through the use of Social Networking Sites (SNS) such as WhatsApp and Facebook which are underutilized in most academic libraries in the developing world (Chisenga & Chande-Mallya, 2012; Makori, 2012). It is, therefore, recommended that the MIPS library improve its presence on Social Media to attract a diverse group of clients. Besides technology, training is also an important aspect of library management and we managed to conduct library training programs with library users and management of MIPS. Such training programs can equip both library users with information literacy skills for utilization in their society and career development (Abdul Rahman et al., 2020; Cobblah & Van der Walt, 2017; Fritts & Casey, 2010; Kisby & Holler, 2009; Weaver et al., 2009). Similar views are expressed in the studies by Harinarayana and Raju (2010), Hart and Zinn (2007), and Kulenovic (2011) that libraries and librarians empower citizens with skills for active participation in society and a need for proper and adequate training targeting librarians and users. Several challenges were faced in the process of establishing the MIPS library and learning resources center. Notable challenges were the high cost of library materials, high cost of technologies, intermittent power supply and unreliable internet connection. These factors affected the efforts and planning of establishing the resource center. As such, the project of establishing the library and resource center took longer than 6 months with an extension of 3 months. This negatively affected library user in accessing information and launching the resource center by the Ministry of Finance and Economic Planning and MIPS. Challenges in accessing technologies and library materials can have a detrimental effect on the access and use of the library by users as highlighted by the studies by Mbagwu and Akanwa (2012), Abba and Dawha (2009), and Harvey and Sayers (2009) showed that low level of information technology development negatively impacts on the users’ ability to access and use the library services and resources. Besides challenges registered in the process of establishing the library at MIPS, several opportunities exist such as installation of new security windows, installation of Closed Circuit Television (CCTV) system, installation of air conditioners, installation of e-library systems; Koha and DSpace, purchase of new textbooks and subscription to electronic journals, purchase of new library furniture; chairs, office desks and reading carrels, purchase of library equipment; computers, heavy-duty copier, library trolleys, movable shelves, training in the use of e-library systems, development of additional training resources, and employment of a qualified librarian.

**Table 4. Achievements at MIPS Library and Learning Resources Center.**

| No. | Milestones                                                                 |
|-----|---------------------------------------------------------------------------|
| 1   | Painting of library walls                                                 |
| 2   | Installation of new security windows                                      |
| 3   | Installation of the additional lighting system                            |
| 4   | Installation of Closed Circuit Television (CCTV) system                   |
| 5   | Installation of air conditioners                                          |
| 6   | Installation of e-library systems; Koha and DSpace                        |
| 7   | Purchase of new textbooks and subscription to electronic journals         |
| 8   | Purchase of new library furniture; chairs, office desks, and reading carrels |
| 9   | Purchase of library equipment; computers, heavy-duty copier, library trolleys, and movable shelves |
| 10  | Training in the use of e-library systems                                  |
| 11  | Development of additional training resources                              |
| 12  | Design of library user manual                                             |
| 13  | Recruitment of a qualified librarian                                      |

**Conclusion**

A series of activities were performed in a bid to establish the MIPS library and learning resources center. This report highlights project-related activities implemented such as the renovation of the library room through painting, installation of new security windows, installation of the additional lighting system, and installation of air conditioners. Other major activities conducted were the installation of e-library systems, acquisition of new library resources such as textbooks and journals, cataloging, classification, and indexing of...
library resources, purchase of new library furniture and equipment, and recruitment of a qualified librarian to manage the resource center. Despite the major milestones registered for the project, some of the challenges faced were late delivery of library resources and equipment, high cost of library materials, high cost of technologies, intermittent power supply, and unreliable internet connection. These challenges negatively impacted the implementation of the project. Overall, the project was successfully implemented and remains a model for processes and activities of establishing a library and information center in developing countries.

Limitations of the Report

The following were some of the major limitations of the report;

1. The report is case-based hence the findings may not be generalizable to other settings. However, the report offers useful insights into the establishment of the library and learning resource centers in developing countries.
2. The reports and other deliverables have not been included to substantiate the claims in the discussions due to nondisclosure of project data requirement.
3. The project methodology was task scheduling through a time frame and not phased one. This might have limited sharing of knowledge and expertise in the application of the phased methodology in similar projects.

Future Implications

1. The role of development partners in supporting institutions in Malawi cannot be underestimated and this is exemplified in the establishment of the MIPS library with support from African Development Bank. We hope that the library and learning resources center project at MIPS can serve as a model of leveraging local and international engagement and support for fostering the goals and objectives of organizations in Malawi, Africa, and globally.
2. Our involvement in this initiative has also demonstrated that collaboration and teamwork are paramount to the realization of an equitable information society, even in a developing country like Malawi. Therefore, information professionals should vigorously work together in providing the much-needed information resources through innovative means such as establishing libraries and information centers.
3. Library and Information Science (LIS) education in Africa and beyond should deliberately impart project management skills to LIS graduates through project management courses, seminars, and training. This will create the capacity for the graduates to undertake similar projects.
4. In addition, this project has demonstrated the ability of LIS professionals to execute library and information projects. Therefore, LIS Associations and Forums should support its members to apply and compete in such consultancy projects.
5. Free source library systems such as Koha and Dspace have the required functionalities to improve access and use of library resources by remote users in special libraries such as MIPS Library and Learning Resources Center.
6. The minimum IT infrastructure for library systems such as Random Access Memory of 2 Gigabyte, Hard drive of 80 Gigabyte, DVD Drive or USB Drive, Linux server, Apache, MySQL, Perl, knowledge and skills in Linux programing, Apache, MySQL tools, and a high speed dedicated Internet connection can be shared with other systems such as procurement and accounting to reduce overall IT costs and increase efficiency and effectiveness in the organization.
7. Social Networking Sites (SNS) such as WhatsApp and Facebook are powerful tools for improving the library experience of users through interaction and access to information resources.
8. Anglo American Cataloging Rules Second Edition Revised (AACR2R) and Library of Congress Subject Headings (LCSH) tools are still relevant in the 21st century for creating library catalog and index systems.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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