Developing E-resources Utilisation Strategies for Tanzanian Higher Learning Institutions: A Case of Mzumbe University

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Abstract

This paper aims to examine the development of e-resources utilisation strategies for Higher Learning Institutions in Tanzania taking the case of Mzumbe University. Data for this study were collected from three major sources: five Higher Learning Institutions (HLIs) in Tanzania (UDSM, SUA, MUHAS, CBE, & NM-AIST), e-resources usage statistics from COTUL subscribed databases for the MU library and views from the MU library users. Usage statistics from COTUL subscribed e-databases provided quantitative data which were supplemented with experiences from five visited HLIs and views from MU internal stakeholder forums. The study outlined the roles and functions of all Mzumbe University organs in promoting and advocating the use of subscribed e-resources. The MU organs ranged from the university management, schools, faculties, and directorates including the library, institutes and the MU students' organization. Specifically, MU Library was assigned the role of training users, creating online e-resource discussion forums, improving library websites, acquiring e-resources remote access software, promoting and advocating e-resources use, and employing knowledge ambassadors. The study identified challenges encountered in implementing the strategies which include poor ICT infrastructure, shortage of librarians with e-resources skills and interest, the meagre budget allocated to the library, insufficient specialized subject contents from subscribed databases, and poor cooperation between academic staff and the librarians. Since the library renders cross-cutting functions to the University, the task of promoting e-resources usage was recommended to be played by every organ at the University. The University is urged to speed up subscription /acquisition of e-resources remote access tools which will be enhancing e-resources utilisation. Additionally, the maximum utilisation of e-resources will be fully achieved by changing the mindset of lecturers and students from relying solely on print to e-resources. This study was not able to extract all usage statistics from the 24 databases at Mzumbe University because some database vendors particularly free databases do not release COUNTER statistics. Based on the findings of this study, Mzumbe University Library may: decide and inform COTUL on which e-resource databases to renew; propose measures to improve the usage of e-resources and lay down University-wide e-resource strategies to improve utilisation strategies. This paper is based on original usage statistics provided by the e-resource vendors in the COUNTER format and interviews administered to some selected respondents. Related literature has been reviewed and used, and appropriate citations and references have been acknowledged. The paper has been checked through Turnitin plagiarism detecting software.

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1. Introduction

Electronic resources (e-resources) are currently becoming major resources for forming teaching materials, research and writing papers for publication. On the side of students, particularly postgraduates, they use e-resources in attempting their assignments, writing research proposals and term papers. E-resources are also major informational assets as compared to print resources. Bentil (2020) recommends that university libraries should strategise on how to manage and maximize the usage of e-resources. Heterick (2002) highlights various categories of e-resources which include among others e-books, e-journals, databases, internet gateways and search engines. Most of the HLIs in Tanzania depend on e-resources subscribed through COTUL which include EBSCO host, JSTOR, SAGE, Taylor and Francis, Wiley, Emerald, Research4Life, and other databases available under *Electronic Information for Libraries* (*EIFL*), among others. Such resources enable academic staff, researchers, and students to improve their ways of teaching, learning as well as research and scholarly outputs in the Higher Learning Institutions in Tanzania.

Despite the associated benefits accrued from e-resources, the challenges in accessing and using them range from selection, acquisition, content, ease, speed and effectiveness of use, the volume of use and networked access for remote locations, license restrictions on access and copyright restriction in the use, as well as maintenance of hardware and software as stipulated by White & Crawford, 1997; and Coutts, 1998 as cited in Kiondo, 2004. As academic and research libraries in Tanzania are not working in isolation, they face the above challenges in the utilisation of e-resources. This subsequently resulted in the establishment of the Consortium of Tanzanian Research and Academic Libraries (COTUL) in 2009. One of the main objectives of COTUL is to share electronic resources in terms of subscription, access, and usage. The consortium also trains librarians and researchers in information search skills to access and use the resources to support teaching, learning, and research in their respective institutions.

The introduction of e-resources, which was initiated by COTUL, has shown the need for academic and research libraries to re-strategise services such as training and marketing of subscribed e-resources. Therefore, monitoring and evaluating the impact of such services on e-resources is vital as noted by the DLTS that culminated in coming out with this written strategy. An investigation conducted by the Directorate of Library & Technical Services (DLTS) at Mzumbe University indicated that both contextual and environmental factors have been influencing e-resources usage at the University. Such factors include students and academic staff personal characteristics that range from the slowness of access to database contents, mainly caused by low bandwidth, lack of awareness of available e-resources, unfriendly databases' interfaces, inadequate marketing and advocacy strategies, a limited number of ICT facilities not matching with the number of users in the library, and lack of skills to make productive searches. Mzumbe University library has been actively collecting and reporting statistics for its subscribed e-resource databases since approximately 2015.

The statistics are normally reported on a monthly basis. The databases in which those statistics have been reported are Emerald, SAGE, Research4Life, JSTOR, Taylor and Francis, Cambridge University Journals, Wiley Journals, Royal Society, and currently EBSCOhost.

Despite the fact that subscribed e-resources provide specific, exhaustive, and efficient dissemination of information to the community of users in the HLIs which is used by students, teaching staff and researchers in a bid to accomplish their learning, teaching and research activities (Mwantimwa et al., 2017), there has been less frequent usage of these resources as indicated by the DLTS Weekly Reports, 2019.

Table 1: *MU E-resources Usage Statistics 2017-18*

Taylor & Francis Journals Usage Statistics 2017-2018

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	127	79	160	134	215	170	121	78	112	74	85	137	**1492**
2018	196	56	70	299	318	181	208	183	203	125	100	170	**2109**

Wiley Usage Statistics 2017 – 2018

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	102	65	67	135	152	82	60	35	91	75	56	60	**980**
2018	112	26	36	147	165	144	115	74	68	102	114	88	**1191**

Cambridge University Press Journals Usage Statistics 2017-2018

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	16	4	7	9	13	7	3	2	15	2	2	6	**86**
2018	5	1	10	5	9	10	15	3	7	6	8	9	**88**

JSTOR Usage Statistics 2017-2018

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	611	273	227	329	399	674	139	213	258	89	332	409	**3953**
2018	251	226	170	500	714	371	398	375	309	329	461	788	**4892**

SAGE Journals 2017-2018

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2017	0	1	26	34	89	34	30	36	32	37	25	51	**395**
2018	144	29	27	76	122	112	48	91	47	63	34	42	**835**

Source: DLTS Weekly Report 2019

The probable reasons for such underutilisation are associated with inadequate ICT facilities in the library, difficulties in using subscribed e-resources, limited information literacy skills, poor internet connectivity, lack of University-wide e-resources' use strategies and poor marketing of e-resources. Developing an e-resources utilisation strategy will promote e-resources usage at Mzumbe University and hence facilitate the realisation of the value for money provided by the government for subscribing to the said e-resources. This study, therefore, aims at establishing e-resources utilisation strategies at Mzumbe University.

Specifically, this study aims to:

i. Establish a rationale for developing e-resources utilisation strategy at Mzumbe University;

ii. Assess the status of e-resources utilisation at Mzumbe University;

iii. Demonstrate/Outline procedures used by Mzumbe University Library in developing e-resources utilisation strategic document;

iv. State application of the e-resources utilisation strategy document at Mzumbe University; and

v. Report challenges encountered in developing and implementing electronic resources strategy at Mzumbe University.

2. Review of the Literature

2.1 History of Usage of E-resources in Tanzania

The history of e-resources access and use in the Tanzania HLIs can be traced back to the early 1990s' (Manda, 2005). The initial stages involved the use of CD-ROM facilities by the University of Dar es Salaam Library. The late 1990s was associated with the emergence and use of the internet in HLIs which spearheaded the use of e-resources. The University of Dar es Salaam has been very instrumental in assisting the availability of such resources to other universities in Tanzania. Some of the freely available e-resources that Tanzania has been using for years include Research4Life with the following databases: HINARI, OARE, AGORA, GOALI, and ARDI. Others are TEEAL and AJOL. In 2001, the International Network for the Availability of Scientific Publications (INASP) through the Programme for the Enhancement of Research Information (PERI) introduced the use of full-text e-journal articles in the HLIs (Manda 2005; Katabalwa & Underwood, 2017).

2.2 The Rationale for Developing E-Resources Utilisation Strategy

The advent of Information Communication Technologies (ICTs) has changed how information resources are accessed and utilised. Furthermore, it has offered new and exciting opportunities for students to find information related to their subjects of specialization, as well as research areas (Isibika & Kavishe, 2018). Ani et al. (2015) believe that with ICT, access to information is relatively enhanced, as information is made available and accessible to the scholarly community electronically. APIAR (2017) postulates that e-resources are the aftermath of these advancements in ICT and they are credible as they offer clarity and research options, provide case studies, give a wide range of information to work with, come in many forms, provide freedom to download including graphs, tables, and images, and allow to access information even in the absence of the Internet. E-resources are also vital for driving any academic or research institution as they provide timely and reliable means for accessing scholarly information (Ani et al., 2015; Nazir & Wani, 2015 as cited in Lwoga & Sukums, 2018). Despite being advantageous to scholars, e-resources consume an increasing percentage of library budgets, and they are underused when users are unaware, ignorant and fail to get relevant resources pertaining to their areas of specialization (Malabanan & Bayeng, 2019; Mawere & Sai, 2018; Toteng et al., 2013).

The MU Library Operational Internal Audit Report (MULOIAR) (2016) disclosed that e-resources available at MU were underutilised. The reasons for the underutilisation of the e-resources were: inadequate e-resource training programmes, tremendously short orientation time and poor timing of orientation days and hours. Both training and orientation sessions failed to equip library users with practical and theoretical skills necessary for accessing, retrieving and using available e-resources. Additionally, the report examined a sample of sixty (60) course outlines at MU and discovered that only two (2) course outlines had e-resources as required and recommended readings to students. The report called upon the DLTS to devise strategies to enhance the utilisation of the available subscribed e-resources.

Libraries in different parts of the world have designed various mechanisms for e-resources utilisation after realizing that the resources are not used effectively. A study by Makori (2015) identifies the following strategies: consultative or partnership meetings between librarians and users, provision of information literacy and learning skills to users, preparation of promotional tools such as portable brochures, and guides, running seminars and workshop training, and increasing public relations. These, according to Makori (2015), would enhance the effective utilisation of e-resources in universities. Moreover, Manda (2008) also recommends that all academic and research libraries in Tanzania develop policies, standards, strategies, and action plans to promote the effective use of e-resources. Manda (ibid) emphasizes that such strategies should be tailored to address issues of standardising and harmonising resource acquisition, infrastructure development, management and training to promote the skills and competencies required for librarians in the digital age. It is anticipated that all Higher Learning Institutions will have implementable e-resources utilisation strategies, will enhance the effective utilisation of e-resources.

2.3 Status of E-resources Utilisation at Mzumbe University

Mzumbe University library facilitates access to numerous online databases in a form of internet subject gateways and other electronic publications that include e-books, reports, journal articles, and case studies subscribed through the Consortium of Tanzania University and Research Libraries Consortium (COTUL), Electronic Information for Libraries (EIFL) and International Network for the Availability of Scientific Publications (INASP) (Isibika & Kavishe, 2018). Apart from subscribed databases, the library also disseminates various open-access databases to its user community. Subscribed databases usage reports from 2014-2018 extracted from seven (7) databases were as follows: Taylor and Francis (7618), Willey online library (5484), Cambridge University (200), JSTOR (16504), Sage (1265), Research4Life (702) and emerald insight (15261). In the year 2014, a total of 2006 full-text items were downloaded from all databases making an average of seven (7) articles per year assuming that all downloads were made from 274 academic staff. Based on the report, it is evident that the most used databases by users at Mzumbe University were JSTOR, emerald insight and Taylor and Francis respectively.

When usage statistics are high, it is likely an indication that the databases have relevant content and users are well informed and trained on access and use, the opposite is the case. Constant, reliable and evolving statistics from subscribed databases is a very important tool

for managing e-resources. Such statistics can be used by the library in making informed decisions concerning subscribed databases as well as users. Dean and de Jager (2009), and Gallagher, Bauer, & Dollar (2005) are of the view that statistical data extracted from subscribed e-resources databases would enable librarians to see how such library materials are being used compared to the print environment though currently, discovery tools like Panorama from EBSCOHost can gauge both statistics.

2.4 Implications of the E-resources Usage Statistics

The Mzumbe University library requires subscribing e-resources usage statistics to enable the library to: assess the value of subscribed e-resources products/services; make better-informed future acquisition decisions (e.g. whether to renew it or not) by advising the University and COTUL; plan infrastructure and allocation of resources; and support internal marketing and promotion of library services. The usage statistics are also used as justification for value for money.

E-resources usage statistics are essentially useful for tracking the general use of e-resource titles, and for calculating the cost: price/search use (Snyman, 2011). When usage statistics are high, it is likely an indication that the databases have relevant content and users are well informed and trained on access and use. On the other hand, if the usage is low, it can indicate that users require training, the content is supposed to be marketed, the content does not meet collection development criteria, and the database is a candidate for cancellation in the future. Constant, reliable and evolving statistics from subscribed databases is a very important tool for managing e-resources. Such statistics can be used by the library in making informed decisions concerning subscribed databases as well as users.

3. Methodology

Methodologies presented below were used by researchers in formulating the MU E-resources Utilisation Strategy Document (MUEUSD). Data for this study were collected from the MU five (5) purposively selected subscribed e-resources databases for the past four (4) years, 2016-2019 in the COUNTER JR1 report. The selected databases were Taylor & Francis, Wiley Online, Cambridge University, JSTOR, Taylor & Francis, and SAGE Journals. The reason for selecting the databases is their complacency standards for extracting usage statistics.

3.1 Interview Sessions

The interview was carried out with fifteen (15) MU Library staff and 15 postgraduate students. Their views were analysed and formed the strategies which are presented in the findings section of this study. Such information was used to supplement quantitative data from subscribed e-resources database vendors.

3.2 Visits to Selected Higher Learning Institutions

Five electronic resources librarians from the following Higher Learning Institution Libraries (HLILs) were consulted: University of Dar Es Salaam (UDSM), College of Business Education (CBE) Dar es Salaam, Sokoine University of Agriculture (SUA),

Muhimbili University of Health and Allied Sciences (MUHAS), and Nelson Mandela African Institution of Science and Technology (NM-ST). The reason for selecting the said libraries was as follows: UDSM is the oldest university in the country and the pioneer of e-resources. The SNAL, its users depend largely on e-resources and has information discovery tools (libhub kiox) formerly and currently My Library On Finger Tips (MyLOFT) which facilitate remote access to e-resources. The MUHAS library was included because it is very instrumental in marketing and advocating e-resources. CBE in Dar es Salaam was visited because it has a renowned countrywide expert in e-resources. The last institution visited was NM-AIST due to its experience in running a digital library. Inputs obtained from the institutions visited were used in the process of developing the MU E-resources Utilisation Strategy.

3.3 Benchmarking of Strategies from Institutions in other Countries

Researchers reviewed various similar library documents in the course of developing the MU E-resources Utilisation Strategy. The documents reviewed were the institutions' Strategic Plans and their Collection Development Policies. The researchers examined the extent to which the two documents postulated issues related to e-resources utilisation. The institutions benchmarked were Makerere University – Uganda, the Great Zimbabwe University - Zimbabwe, Kisii Nairobi, and Jomo Kenyatta universities from Kenya, and the Pretoria University Library – South Africa.

3.3 Internal Stakeholders

The researchers collected information from internal stakeholders via diverse discussion forums and presentations. The internal stakeholders involved were the MU Library Management, MU staff, and the library users (i.e. students). Focus Group Discussion (FGD) and individual interviews with students were conducted to obtain views regarding e-resources utilisation. Postgraduate students were the focal point for both FGD and individual interviews because they form major users of e-resources. The following three questions guided FDG and one-to-one interviews. First, do you use e-resources to access relevant information in support of your academic work? Secondly, do you encounter any challenges in accessing e-resources? Thirdly, would you suggest any strategies to improve e-resources utilisation at MU? The first and second questions were just for assessing students' knowledge regarding their awareness of the use of e-resources. Responses from postgraduate students were incorporated in the preparation of the e-resources utilisation strategic document.

3.4 Circulating the Document to the MU Community

The first draft of the E-resources Utilisation Strategy was electronically circulated to the MU community to receive their suggestions, views and comments which were incorporated whenever necessary.

4. Analyses of Findings

4.1 Rationale for Establishing E-resources Utilisation Strategies at MU

4.1.1 Mzumbe University Fourth Corporate Strategic Plan 2017/2018 – 2021/2022

The fourth Corporate Strategic Plan of Mzumbe University provides a roadmap toward the accomplishment of the University's objectives. The MU 4th CSP requires the Directorate of Library and Technical Services (DLTS) to initiate and undertake the process of developing an e-resources utilisation strategy by the end of June 2019. The said issue is under the Key Result Area "A1.3" which reads *"Improving learning and ICT enabling and utilisation environment of its strategic plan of 2018/2019"*.

4.1.2 MU Library Operational Internal Audit Report (MULOIAR) of 2016

In the year 2015, Mzumbe University ordered the Directorate of Internal Audit to audit MU Libraries. The MU Internal Audit released a report titled "The MU Library Operational Internal Audit Report (MULOIAR) in 2016. The report disclosed that e-resources available at MU were underutilised. Furthermore, the report divulged the following inadequacies: e-resource training programmes provided to library users were inadequate, tremendously short orientation time, and the timing of orientation day and hours which were used to be scheduled on weekends affected the attendance of fresher students. Both training and orientation sessions failed to equip library users with practical and theoretical skills necessary for accessing, retrieving and using available e-resources. Additionally, the report examined a sample of sixty (60) course outlines at MU and discovered that only two (2) course outlines had e-resources as required and recommended readings to students. The report called upon the DLTS to devise strategies to enhance the utilisation of the available subscribed e-resources.

The idea for developing MU e-resources utilisation strategies has also been borrowed from what was recommended by Manda (2008) that all academic and research libraries in Tanzania should develop policies and standards, strategies and action plans to support access to electronic information. Manda (ibid) emphasised that such strategies should be tailored to address issues of standardising and harmonising resource acquisition, infrastructure development, management and training to promote the skills and competencies required for librarians in the digital age.

4.1.3 The Low Usage Statistics of the MU Subscribed E-resources Databases

The usage statistics were extracted from the following databases: Taylor and Francis, Wiley, Cambridge University Press, JSTOR, SAGE Journals, Emerald and Research4Life. These databases were purposively selected because the content matches MU programmes. The extraction was done using Counting Online Usage of NeTworked Electronic Resources (COUNTER). The usage was noted to be relatively low for the past five (5) years from 2014 to 2018, as summarized in Table 2:

Table 2: *Usage Report Extracted from Selected COTUL Subscribed Databases 2014-2018*

Year	Taylor & Francis	Wiley	Cambridge	JSTOR	SAGE	R4Life	Emerald	Total
2014	1084	692	0	0	0	230	0	**2006**
2015	1759	1357	0	3704	0	163	0	**6983**
2016	1174	1264	26	3953	35	23	5627	**12102**
2017	1492	980	86	3955	395	9	5228	**12145**
2018	2109	1191	88	4892	835	277	4406	**13798**
Total	**7618**	**5484**	**200**	**16504**	**1265**	**702**	**15261**	**47034**

Usage Statistics from COTUL Subscribed Databases 2014-208

Source: *Subscribed Databases COUNTER Reports 2014-2018*

The type of statistics extracted from the above databases is the "Total item requests" which refers to the number of times users viewed, downloaded, emailed, or printed the full content of a journal article, abstract, book chapter, etc. from the databases. Based on the information provided in Table 2, JSTOR, Emerald, Taylor and Frances databases documented the highest usage while Cambridge University, Research4Life and SAGE were the least. Moreover, some of the databases in 2014 & 2015 had never been used, for instance, Wiley, Cambridge University Press, JSTOR, and Emerald. Although there are not any established standards on how many online scholarly papers a student should read in the course of attempting their class assignments if one takes a ratio between usage statistics in Table 2 and the number of students enrolled in Table 4, one can realise a very low ratio. Moreover, the e-resources usage statistics are supposed to validate the University's financial investment and Return on Investment (ROI) for a continual subscription.

4.1.4 MU Academic Staff Disposition 2013/14 – 2018/19

Mzumbe University has a total of 291 academic staff, according to the MU Figures & Facts (2021). Academic staff are supposed to be major users of subscribed e-resources as they provide a platform of information required for the preparation of teaching materials, research, paper writing for publication, seminars, workshops, and conference presentations. In Table 2 above, in the year 2014, a total of 2006 full-text items were downloaded. This shows that in 2006 (articles downloaded ÷ 274) (total number of academic staff) on average every academic staff downloaded 7 items for the whole year. The first assumption is that only academic staff downloaded items from the subscribed databases. The second assumption is based on the same formula, combining academic staff and masters' students produce an average of one (1) item download for the whole year. Since there is no universally agreed standard number of books or articles an academic staff and postgraduate students are supposed to read in a given year, the ratio above seems to be very low.

Table 3: *Academic Staff Disposition 2013/14-2018/19*

#	Years	Male	Female	Total
1	2013/14	203	71	274
2	2014/15	207	88	295
3	2015/16	223	93	316
4	2016/17	204	87	291
5	2017/18	204	91	295
6	2018/19	202	89	291

Source: *MU (2020) Figure & Facts*

4.1.5 Postgraduate Students Enrolment 2014-2019

E-resources are useful to postgraduate students as they help them in achieving diverse purposes including writing their research proposals, term papers, and other class assignments. This is supported by Manda (2005) who reports that postgraduate students are inclined to use e-resources to obtain essential knowledge for their coursework and research.

Table 4: *Number of Master's Degree Graduates 2014-2019*

#	Years	Male	Female	Total
1	2014/15	831	681	1512
2	2015/16	581	512	1093
3	2016/17	529	478	1007
4	2017/18	497	428	925
5	2018/19	351	313	664
6	2019/20	309	253	562

Source*: MU (2020) Figure & Facts*

4.2 Mzumbe University E-resources Utilisation Strategies

Owing to the identification of numerous factors affecting the utilisation of the MU subscribed e-resources, the findings present some agreed strategies that can be used in maximising the utilisation of e-resources at MU. Since the MU library renders cross-cutting functions to the University, the task of promoting e-resources usage was recommended by respondents and researchers to be played by every unit at the University as stipulated hereunder:

4.2.1 Mzumbe University Management Roles

It was agreed that the MU Management should at least perform the following roles: Firstly, it should continue allocating a feasible budget, which will enable DLTS to pay for COTUL annual subscription cost to e-resources and acquire additional e-resources which are not under the COTUL package. Secondly, the University's budgetary allocation to the library should be improved annually. Additionally, the MU Management should continue improving DLTS ICT infrastructure including computers and the internet for easy access to e-resources.

4.2.2 The Directorate of Library & Technical Services Roles

Since the Library and Librarians at MU are the custodians of information organisation and management, they were required to perform the following roles: conducting training aiming at changing users' mindsets towards e-resources, and imparting them with Information literacy skills. To achieve this, the library is required to: run regular e-resources training sessions for all MU staff and students; offer subject-specific training programmes to schools; faculties, directorates, institutes and campus colleges, and provide e-resource training to newly recruited academic staff which will make e-resources usage part of their main routine at MU; and communicate with lecturers to bring their students to the library for training.

Additionally, the library is required to create an online forum for both staff and students to share ideas relating to e-resources. The ideas offered shall be examined for their suitability to improve e-resources access and use and establish "the communication hub" that shall be used as a bridge between DLTS and lecturers during curriculum revision and programmes review process or at the time of introducing new programmes. Contact shall be established between library staff and lecturers on the availability of utilisation of e-resources relevant to programmes/courses in action.

The library was also required to involve lecturers in the acquisition of e-resources trials, renewals and cancellation decisions of e-resources where appropriate. The library should create e-resources branding and marketing which will be used for awareness creation and promotion of available e-resources. In the course of attaining e-resources branding and marketing, the library is required to: prepare more structured and well-organised orientation programmes where freshers will be appropriately introduced to available e-resources; develop and maintain a communicative library website; prepare updated banners, posters, brochures, and flyers that shall be distributed to all library users; prepare Online Information Tutorials guiding library users on how to search, evaluate, cite e-resources; and use such resources ethically and legally.

The library was required to establish or adopt the "Knowledge Ambassadors (KAs)" practice which has shown success in promoting the usage of electronic resources in Kenya. KAs are student volunteers who are passionate about library services and resources and zealous to promote the same to their peers. The library management was required to make sure that the skills of librarians on ICT-based resources are updated to enable them to direct the users on the use of ICT resources for research purposes.

4.2.3 MU Directorate of Information Communication Technology (DICT) Roles

The DICT was assigned two major roles. The first is to provide excellent Free Internet Access (Wi-Fi) points for accessing available e-resources. Secondly, to improve the existing library ICT infrastructure for the effective utilisation of e-resources including a well-furnished library computer laboratory, and excellent Wi-Fi connectivity; the library has to have a large number of LAN internet access points.

4.2.4 The Directorate of Research and Postgraduate Studies (DRPS) Roles

The DRPS was required to perform the following two major roles: to assist in formulating a requirement of having at least 15% of e-resources in the reference list of postgraduate academic works, and assist in encouraging or motivating postgraduate students to attend "e-resources training offered by the DLTS."

4.2.5 The Principals, Deans, and Directors Roles

To increase e-resources usage at MU, the principals, deans, and directors roles are recommended to market and advocate e-resources usage in their areas of jurisdiction by reminding academic staff in their respective campuses, schools, faculties, and institutes of the need of using e-resources in preparation and teaching of their lessons; making sure that all course outlines contain e-resources as both required and recommended readings; ensuring that the newly established and reviewed courses incorporate e-resources as already directed by TCU; supporting the integration of some aspect of e-resources into the courses they teach such as Communication Skills, and or Research Methodology; and making sure that all programmes of study at MU are incorporating high-quality e-resources from reputable publishers/databases in their course outlines as REQUIRED and RECOMMENDED readings.

4.2.6 The Directorate of Undergraduate Studies (DUS) Roles

It was discovered that undergraduate students were among the e-resource users' groups with the least usage of subscribed e-resources. This being the case, the DUS was assigned the following roles to stimulate the usage: One, to emphasise the inclusion of e-resources in all undergraduate course outlines as REQUIRED and RECOMMENDED readings, and two, to make sure that all supervisors of undergraduate students' field research reports and projects contain at least 10% of e-resources in the reference list of their projects. Also, they were required to consider including "Information Literacy" or "Information Retrieval" topics in Communication Skills and Research Methodology courses.

4.2.7 The Directorate of Quality Assurance (DQA) Roles

One of the roles of the MU Directorate of Quality Assurance (DQA) is to provide a framework for ensuring the quality delivery of academic programmes at the University. For the DQA to participate in maximising e-resources use, they were required to perform three major tasks which are: making sure that all programmes of study at MU are incorporating high-quality e-resources from reputable publishers/databases in their course outlines as required and recommended readings, insisting on the use of high-quality scholarly journal articles from subscribed e-resources databases for teaching and learning, and keeping on reminding principals, deans, and directors to include e-resources in the newly established and reviewed programmes and courses as per TCU directives.

4.2.8 Mzumbe University Students Organization (MUSO)

It was suggested and recommended that since students are the major e-resources stakeholders, they should be fully involved in the formulation of strategies for maximising usage. As such,

the MUSO government was required to perform the following roles: **m**otivating students to use e-resources in their academic works; encouraging their fellow students to use Mzumbe University Students' webmail for accessing subscribed e-resources in their gatherings, and assisting in developing software for remote access to e-resources at the university.

5. Monitoring and Evaluation of the E-resources Utilisation Strategy

Monitoring of e-resource utilisation strategies in this document will be done by the Directorate of Library and Technical Services (DLTS) regularly. The DLTS will collect, compile, and analyse reports from all schools, faculties, and campuses and submit them to the Deputy Vice-Chancellor Academic for further action. Some of the main issues to be monitored include:

1. Reporting from subscribed e-resource and free databases. The report will contain total download subject-wise, type of item accessed (e-journals, e-books, cases, etc.) and the faculties and courses utilising e-resources than others,

2. The DLTS will go through new and reviewed programmes to see and report to the DVCA the extent of inclusion of e-resources in their course outlines,

3. The DLTS will be examining both undergraduate field research reports and postgraduate theses and dissertations to see and report the extent of usage of e-resources on an annual basis,

4. The DLTS will be reporting schools, faculties, institutes, and departments that will be sending their students to the library for training on accessing e-resources to the DVCA,

5. The DLTS, through the Department of Library Science & Information Management (DLSIM), will be regularly updating links of available e-resource databases on its website for easy access by users,

6. The DLTS will be regularly reporting challenges affecting e-resources utilisation to the MU DVCA,

7. The DLTS will be reporting the extent of internet connectivity within and outside the library to the DICT,

8. The DLTS will subscribe to an e-resource remote access tool/software which will facilitate access to e-resources, and

9. The DLTS will continue to build the internal capacity of her staff by sending them to both internal and external e-resource workshops, seminars and conferences.

6. Challenges Encountered in Developing E-resource Utilisation Strategies

Challenges encountered in developing and implementing the e-resources utilisation strategy at MU are: Lecturers are not cooperative, and also are not willing to use such resources. Librarians' role at the university has largely been ignored and misplaced, the place and purpose of the profession are not appreciated by the majority of lecturers in the university. As such, researchers experienced poor cooperation in the data collection process. The researchers visited a few Higher Learning Institutions when conducting this

study, thus the generalisation of findings should be taken with great care. Similarly, some of the visited institutions were reluctant to reveal strategies they were using in promoting e-resources usage. The researchers were faced with an acute shortage of detailed literature related to e-resources utilisation strategies.

7. Challenges in Implementing the Strategies

The following are some of the challenges encountered: The university ICT infrastructure is not to the required standards. There is no stable internet connectivity in the library, and difficulty in reaching a large number of students residing in off-campus hostels since most of the subscribed e-resources are available through IP addresses and they are confined to the internet services available to on-campus students only, hence without appropriate ICT infrastructure in place, it is impossible to advocate e-resources utilisation. Also, the library is faced with an acute shortage of computers for training users on how to access e-resources. Despite the calls for training, a good number of students and lecturers do not attend. The shortage of librarians with an interest in instructing/training users on online information search is also another problem. The budget allocated to the MU libraries is not sufficient to subscribe much needed electronic resources which are not under the COTUL package. For instance, the Faculty of Law has not been getting enough resources from COTUL subscribed e-resources, as such; they always request the library to consider subscribing to HeinOnline, Lexis Nexis, and others. Similarly, the delay of the University to pay the COTUL fees (membership fee and subscription fees) has been another major challenge. University teaching timetable is compacted to the extent that it is not easy to slot in time for teaching Information Literacy Skills to the users. Lastly, the MU librarians are not involved in the preparation of course training materials and reading lists, so they cannot suggest to the lecturers about the available subscribed and free e-resources so that they may be included.

8. Conclusion

The current low usage of available e-resources at MU has been a result of slow internet speed, and lack of e-resource policy, shortage of computers for accessing e-resources, frequent power interruptions both within the university and off-campus, poor Information Literacy Skills among library users, and the lack of awareness of the existence of e-resources among the MU scholarly community. All these have acted as a deterrent to the use of available e-resources. This study informs MU Management that in order to enhance or maximise e-resources utilisation, there is a need for regular training on e-resources access and use as well as making Information Literacy Skill training mandatory for all students. The library should be given a workable budget which will among other things be used for training and marketing the available e-resources. There is a need for having a standard website that will act as a getaway to the library e-resources. The acquisition of e-resources remote access tool would also serve as a panacea for enhancing e-resources utilisation. Additionally, the maximum utilisation of e-resources will fully be achieved by changing the mindset of lecturers from relying on print to e-resources. The researchers, therefore, urge the entire MU community to effectively use available e-resources to which the university

is subscribing.

9. Recommendations

Based on the findings, the following recommendations are strongly made: The e-resource remote access tool/software which is discussed in the findings of this study should be subscribed to or procured by MU library. This tool will enable library users to extract available resources remotely, meanwhile enabling the library to extract more meaningful statistics, e.g. who used a certain resource, from which faculty, school, and which journal title, etc. The DICT needs to increase wireless access points in the library and surrounding areas so that users can access e-resources using their smartphones and laptops since the number of computers in the library is not sufficient to serve the number of library users. A reliable and constant supply of electricity within the university is a crucial factor for raising e-resources usage, hence electricity fluctuations discourage the use of e-resources. This study is, therefore, recommending that the library should make sure that the available standby generator is automatically working.

The Mzumbe University Library should adopt a more dynamic method of promoting subscriber e-resources like improving e-resource knowledge ambassadors which work perfectly in Kenya to inform and create awareness of the available e-resources at the university. Additionally, the library should diverge the evaluation of usage of e-resources focusing on the number of full-text downloads of resources from subscribed e-resources databases by moving toward using a number of research articles published as an output indicator of usage of the subscribed e-resources. COTUL should consider increasing the number and relevance of the content of subscribed electronic databases to enhance accessibility and utilisation of such resources in all Higher Learning Institutions in Tanzania. The library should continue providing regular and mandatory information search training which will enable students to seek, locate, evaluate, and use information effectively to fully meet their educational needs.

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