Knowledge Management in Academic Libraries and Information Centres: A Case of University Libraries

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Abstract. In today’s knowledge-based economies, appropriate Knowledge Management (KM) has proved a strategic management tool to survive and thrive in the ever-changing global market. Therefore, increasingly, all types of organisations including tertiary institutions are adopting KM. This paper focuses on university libraries and presents the partial findings of a study carried out to investigate and explore KM practices in Southern African Development Community (SADC) university libraries. A structured questionnaire was used to carry out the study. The study revealed the main reasons for practicing KM to improve library services: to improve library services and productivity, produce more with less, avoid duplication of efforts and leverage existing knowledge. The major challenges were identified as constant budget decline, lack of incentives, inadequate staff training and expertise, a lack KM strategy, insufficient information and communication technology (ICT) infrastructure and a lack of knowledge sharing culture. Finally, the paper puts forward some recommendations and a framework for KM implementation in university/academic libraries.

Keywords: Knowledge management; information management; library management; African libraries; university libraries; academic libraries; SADC libraries.

1. Introduction

Like all types of organisations, universities are going through fundamental changes and consequently, their mission, vision and functions are pragmatic in order to keep pace with the current knowledge economy. The success of an organisation depends on its effectiveness in managing both its tacit and explicit knowledge resources. The contemporary world calls for tertiary institutions to have appropriate Knowledge Management (KM) because producing, sharing and utilising knowledge is their central raison d’être and academic libraries are supposed play a key role in managing knowledge of their parent organisations. Academic libraries exist to support their academic community; their development is tied with the development of their academic institutions’ in this case universities. Today, students and academia are expecting enhanced access and support to information services. “Academic research now has become much more endogenous and integrated into the economic cycle of innovation and growth. On the one hand, business looks upon academia as a source of scientific novelty and technological breakthroughs to fuel its innovation process. On the other hand, an ever increasing number of academic institutions are becoming fully aware of the economic potential of their research efforts.” (Oosterlinck, 2001, p. 4). The changes in the academic environment can be attributed to the evolution in education system, advancement in Information and Communication Technology (ICT), changing user needs, social media, changes in scholarly communication, and information and knowledge explosion. As appropriately observed by Loh et al. (2003, p. 2), this change can be attributed to various factors — “the heterogeneity of knowledge production, massification and democratisation of higher education, and the integration and assimilation of information technology into the academic environment”.

More and more “universities are looking into the possibility of applying corporate KM systems” (Loh et al., 2003, p. 6). Academic libraries are established in “support of the mission of their parent institutions to generate knowledge, and people equipped with knowledge in order to serve the society and advance the well-being of mankind” (Raja et al., 2009, p. 701). Hence, whatever is important to the university must be important to its library and all planning activity needs to be geared towards this (Rydberg-Cox, 2010). Academic libraries are to support three main institutional activities — teaching, learning and research of their academic community; they need to
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Incorporating networked knowledge networks, librarians can create, manage and share tacit knowledge. Also, librarians have inbuilt capabilities and desire to be knowledge managers. For example, librarians have been long collaborating by sharing catalogues through OCLC, books and other articles through inter-library loan, and their reference services through digital reference. Maury (2012) views a library as a living force because of its continuously evolving services to accommodate ever changing user needs; a catalyst for innovations; and as a learning and social place, where information and knowledge transmit for teaching and learning.

2.3. Requirements on KM implementation in academic libraries

KM literature reveals the following requirements for KM implementation in academic libraries:

2.3.1. Types of knowledge important for information professionals

In order to initiate and practice KM, academic librarians require certain types of knowledge. According to Raja et al. (2009) the following types of knowledge are important:

- Knowledge about library’s information sources for assets, products and services.
- Knowledge about where these sources are stored and their usage.
- Knowledge about users including teaching staff, researchers, students and any other stakeholders.
- What is the current usage of these sources and how to increase their usage?
- Creativity and ability to learn and adapt the new technologies to provide better services and ability to create, share, harness and utilise knowledge.
- Understanding of the knowledge creation process and impact of knowledge.
- Information literacy skills, creating, finding, sharing and using information and knowledge.
- Understanding of the principles of “Organisation of Knowledge” (Raja et al., 2009) and manage it for better flow and utilisation.

2.3.2. Important steps in KM implementation in academic libraries

To meet universities’ mission, vision and goals, Tutu (2012) suggested the following five steps for academic libraries for managing KM in Universities:

- Establish the knowledge needs of the University:
  As mentioned earlier, academic libraries exist to support
the mission and vision of their parent universities; so, first and foremost libraries should establish the knowledge needs of their parent universities, which are defined by all activities conducted, and services offered by the university, such as teaching, learning and research.

- **Ascertain the relevant sources of the knowledge:** After the library has established the knowledge needs of the university, the library should ascertain the relevant sources of the knowledge ranging from print materials, non-print materials to knowledge workers within and outside the university.

- **Acquire the knowledge sources:** After ascertaining the relevant sources, they should be acquired.

- **Organise the knowledge sources:** Acquired knowledge sources should be organised to facilitate easy accessibility of the knowledge sources.

- **Disseminate/share knowledge:** Finally, organised sources should be disseminated using library catalogues and social media.

### 2.3.3. Knowledge management process

Based on KM processes that exist in a Library and Information Sciences (LIS) environment, Che Rusuli et al. (2012) suggested a six-step conceptual framework for knowledge implementation in academic libraries: Knowledge Creation, knowledge acquisition, knowledge capture, knowledge sharing, knowledge record and knowledge preservation. The strength of this conceptual model is the addition of two KM gaps found in the current KM Practice, “Knowledge Record” and “Knowledge Preserving”, which are vital to complete the whole KM cycle.

Mottaghi-Far (2012) suggested five ways to apply knowledge and add value for parent organisations: Turning traditional libraries into electronic ones; empowering librarians to be able to cope with change; upgrade the status of the academic libraries and librarians’ in the university; developing informed university members; and, contributing to the creation of critical thinkers and independent users. Using a subject-user-centred library KM approach, Xin Qu (2011) provided a knowledge service management framework and recommended four strategies:

- **Strengthen academic library collections:** Using “book the best use” principle, university libraries should reinforce the collection by choosing the most relevant knowledge resources for the library customers.

- **Construct a high-quality team of subject librarians:** There should be a subject librarian and the subject librarian assistant to work closely with subject teachers and students in order to provide subject knowledge services.

- **Share subject knowledge services and protect the academic quality of service:** University library’s subject knowledge services should be rationally arranged based on a unified standardized service mechanism of discipline and knowledge. There should also be a unified standard of a network information input, data organization, information retrieval and standardization of search results.

- **Establish the concept of personalized service innovation:** Libraries should adopt a personalized service innovative concept by providing user-centric personalized services.

Nazim and Mukherjee (2011) established the major tools of KM as: professional education and training programs, communities of practice, information technology and knowledge sharing. Focusing mainly on the knowledge about, from and for Faculty recently, Daneshgar and Parirokh (2012) suggested a conceptual Customer Knowledge Management (CKM) model as an analytical tool for improving current services and creating innovative services through appropriate management of client knowledge in academic libraries. An initial integrated CKM model had three main components: KAC (knowledge about customers); KRC (knowledge from customers); and, KFC (knowledge for customers). According to this model, librarians collect information “about” and “from” their faculty customers, particularly during interviews (also referred to as outreach librarian interviews with academics). The captured customer knowledge is shared and disseminated to all librarians and library decision makers for understanding their customers and applied to the current services in order to create new and updated services. This knowledge is made available to customers for their utilisation and generates new customer feedback to be used by the librarians for the evaluation of library services. Results of this evaluation together with the customers’ feedback are then used as new KAC and KRC, and the cycle continues. The first stage in organising customer knowledge was categorisation of customer knowledge taxonomy to provide a formal and explicit shared conceptualisation of customer knowledge. After several direct interviews with customers, surveys and data mining, staff meetings and discussions, the authors designed a final version of the CKM model with some modifications. In the final integrated CKM model, major knowledge capture phase is renamed as “the communication phase”. There is explicit incorporation of the term “technology” as the major enabler of the knowledge acquisition and application phase, and, explicit incorporation of the term “strategies” as the major directive for knowledge utilisation and evaluation.
Thus, the model has four main phases, (i) Communication, (ii) Utilisation and Evaluation, (iii) Knowledge Sharing and Dissemination, and, (iv) Knowledge Acquisition and Application (Daneshgar and Parirokh, 2012, pp. 15–18).

2.4. Latest trends in KM in academic libraries

The most common recent trends towards KM implementation in academic libraries are:

2.4.1. Adoption of web 2.0 and social media

With the dawn of web 2.0, libraries have completely transformed their ways of interaction with the library users. Today, instead of users physically coming to the library, the library delivers services to users via the university library website. Blogging, wikis and Twitter can be used as knowledge creation tools by both users and librarians (Kim and Abbas, 2010). Librarians can use all of these web 2.0 applications and tools for dissemination and exchange of knowledge and current awareness services. Web 2.0 provides interactive collaboration tools to improve knowledge exchange and productivity. KM practitioners use them to bring people together in order to share and develop ideas. Communities of Practices (CoPs) can benefit from these kinds of tools to stimulate interest and encourage collaboration. Blogs are commonly used in academic libraries. There are several services where one can set up a blog for free or for a small fee, or specialised applications can be acquired for these purposes. A blog allows a person or a group of people to post information and receive feedback. For example, libraries can set up a blog restricted to library staff replacing previous notebook or bulletin board systems for conveying information. Libraries can also use a public-facing blog to communicate with their patrons and keep everyone involved and informed with library activities. Wikis can be employed to store and edit frequently used and updated university documents such as policy and procedure manuals and can be used as project-management tools as a work space for asynchronous communication. Tagging is a popular, user-centred subject tool, that enables web searchers to add tags that operate in the same way as subject headings. The librarians can find relevant websites’ tag them and save the information. When another librarian is asked that same question he/she will have access to the shared work. In a large library, this might include the subject specialist or material selector in that subject area, and others who consider themselves experts in that subject matter. If a person searches for a topic, the results will include not only sites that have been tagged with the topic, but also people in the organisation who have tagged themselves with it (Nelson, 2008). Thus, there are powerful web applications for academic libraries for knowledge sharing and content management. All academic librarians need to appreciate the value of social media for connecting people to information and knowledge as well as connecting people to people. That is why (Koina, 2002) emphasised, “we need to promote ourselves and our skills more to our lay management. We do have a lot to offer in the changing world — we just need to make sure other people can see that too”. Together with KM system to improve information and knowledge usability, the application of social media is improving the effectiveness and the adoption of KM in academic research environment.

2.4.2. Use of virtual/online reference services

Academic libraries serve hundreds of users every week, accumulating tacit and explicit knowledge. It is not possible to remember and recall everything when answering a reference query. It is quite challenging to serve customers when information is available in multi-formats and comes from different sources. To facilitate the capture and storage of this reference knowledge, to be shared and re-used several times and to provide 24 hour services, KM tools such as virtual/online reference services are designed and used in academic libraries. There are numerous virtual/online reference services, for example KnowItNow24/7, an online reference service, Ask A Librarian offers help 24 hours a day, seven days a week, by phone, email and using a live online reference service. Question Point, is a virtual reference service, generally in real-time, where patrons employ computers or other Internet technology to communicate with reference staff without being physically present. This is how today reference librarians have become more effective as information mediators in academic libraries.

2.4.3. Digitisation of library collection

To manage library information and knowledge that could be shared and re-used, almost all academic libraries have initiated digitisation of library collection to disseminate the right knowledge at the right time and in the appropriate format. The University of Toledo has initiated numerous digitisation projects, such as digitising special collections, developing virtual exhibits and converting tacit to explicit knowledge and an in-house digital library to house university-specific collections including photographs of university administrators, the faculty and facilities (Sabharwal, 2010). Today, Toledo libraries have a Digital Resource Commons (DRC), Ohio DRC, which is an initiative of OhioLINK and its member libraries. The DRC is a service that collects, preserves and distributes...
digital material (The University of Toledo, 2012). Building a personal digital library through the digitisation of library collections is an important KM system that allows “the hyper textual linking of related texts, full text searching of holdings and the integration of KM, data visualisation and geographic information tools with the texts in the digital library” (Rydberg-Cox et al., 2000, p. 1).

2.4.4. Institutional repositories

Institutional repositories (IRs) are other fast growing tools to manage institutional knowledge at university libraries. An institutional repository is a digital repository maintained by an institution, a tool for collecting, storing and disseminating scholarly outputs within and without an institution. Because of their inherent scholarly nature, IRs are also considered a benchmark of digital scholarship (Jain et al., 2009). Being knowledge-intensive institutions, most academic institutions have recognised the importance of IRs to preserve scholarly knowledge and improve scholarly communication. “Digital Repositories, one of the components of KM systems hold content-explicit knowledge and are concerned with managing, maintaining and distributing this content” (Doctor and Ramachandran, 2007, p. 1). Certainly, IRs are part of KM focusing on one aspect of institutional knowledge, which is scholarly research outputs of its academia (Jain, 2011). In this way, “repository managers truly become knowledge managers, presenting a picture of the role of repositories in the institutional knowledge-processes” (White, 2009, p. 8). In most cases, IRs are managed by librarians or at least they play key roles in IR management. These are some KM initiatives, most academic libraries have initiated towards KM implementation.

3. Research Findings

The following section presents the scope, methodology and the major findings of the study.

3.1. Scope and context of the research

SADC was established in April 1980 by the governments of nine Southern African countries. Currently, SADC has a membership of 15 Member States, namely: Angola, Botswana, Democratic Republic of Congo (DRC), Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe (SADC, 2012). The study was aimed at all SADC university libraries. However, it was not possible to determine the total number of libraries.

3.2. Limitation to the research

This study had the following two major limitations:

1) In the absence of availability of information on the Internet, it was very difficult to establish the total number of university libraries in the SADC region. This had a serious impact on collection of data because contact details for potential participants were difficult to trace. Using the e-mail address from the net several questionnaires were posted to potential participants through e-mail, most of them bounced. Only some contact details were correct on the internet. Other participants were contacted using personal network. A total of 50 questionnaires were sent via e-mail.

2) The second limitation was that no theoretical framework was used to carry out the study. The questionnaire was designed based on the general literature in the field of KM contextualising in library situation.

3.3. Research purpose and objectives

As mentioned in the introduction, the main purpose of this study was to explore KM practices in university libraries in SADC countries. To fulfilling this purpose, the study pursued the following objectives:

- Ascertain the reasons for practicing KM;
- Identify the activities undertaken to practice KM in libraries; and,
- Determine the challenges associated with KM practice.

3.4. Methodology

A structured questionnaire was used to carry out the study, including largely quantitative questions except two qualitative questions. In one, the participants were asked to define KM. In the second qualitative question, participants were requested to list the activities undertaken by them to practice KM in their libraries. The qualitative (open-ended) questions were analysed separately, by identifying and grouping key responses into themes, after which related/associated themes were further grouped into variables for frequency counts. A total of 50 questionnaires were sent via e-mail, of which only 25 were completed and returned (at 50% response rate).

The purpose of any sampling is to secure a sample which will represent the characteristics of the entire population. In this study, purposive sampling was used because the aim of the study was to explore KM practices by collecting data from each University Library Director of SADC university libraries. It was assumed that one questionnaire from each library would represent the whole
library and therefore there was no need to repeat the survey with other library staff members.

As it was largely quantitative data and it was not a large amount of data, data analysis was done by simple frequency counts and cross tabulation, and, comparing responses across demographic variables.

3.5. Ethical issues

Anonymity was guaranteed to all the participating libraries and librarians, hence, no library names are disclosed in the paper.

3.6. Results

Out of 25 participating libraries, only 15 (60%) claimed to be practicing KM and considered themselves knowledge managers. Of the 15 KM practicing university libraries, in 8 of them KM is owned by libraries; in 3 jointly by library and the information and technology (IT) unit; in 1 by library and the human resource management, while in 1 KM responsibility lay with the IT unit and 2 did not answer the question. From the participants’ definitions of KM, it was apparent that they understood the concept of KM. Some of the participants defined KM as, “A systematic way of gathering, organising, managing, disseminating and use of information and knowledge”, “sharing and retaining knowledge and expertise in the organisation”, “a systematic retrieval, storage and dissemination of relevant information to the strategic advantage of an organisation”. Table 1 presents the number of participating libraries countrywise.

Participants were asked to indicate the reasons for initiating KM in their libraries; Table 2 presents the responses:

Participants were asked to list the activities undertaken by them to practice KM in their libraries; Table 3 reports the responses:

Participants were asked to list any challenge, they encountered in KM practice within their libraries. Table 4 lists the identified challenges:

4. Discussion

Of 25 participating libraries, only 15 (60%) claimed to be practicing KM and preferred to be called knowledge managers. Not all libraries were practicing KM, still they participated in the survey. This indicates that all information professionals were conversant with KM concept and its benefits and volunteered to participate in the survey to appreciate the concept of KM. Also, they defined the concept of KM appropriately. This finding seems to corroborate with Roknuzzaman and Umemoto (2009) findings, studying the perceptions of library practitioners the authors noted that although all libraries were not practicing KM, the majority of them appreciated the importance of KM, agreeing that a well-planned and visionary KM project can promote decent library practices in a digital environment.

Of the 15 KM practicing university libraries, only in 8

Table 1. Participating libraries N = 25.

<table>
<thead>
<tr>
<th>SADC countries</th>
<th>No. of participating libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>1</td>
</tr>
<tr>
<td>Lesotho</td>
<td>1</td>
</tr>
<tr>
<td>Malawi</td>
<td>1</td>
</tr>
<tr>
<td>Namibia</td>
<td>1</td>
</tr>
<tr>
<td>South Africa</td>
<td>14</td>
</tr>
<tr>
<td>Swaziland</td>
<td>1</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2</td>
</tr>
<tr>
<td>Zambia</td>
<td>3</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2. Reasons for practising KM N = 25.

<table>
<thead>
<tr>
<th>Reasons</th>
<th>% Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>To improve library services and productivity</td>
<td>96</td>
<td>24</td>
</tr>
<tr>
<td>To produce more with less due to financial constraints</td>
<td>88</td>
<td>22</td>
</tr>
<tr>
<td>To leverage the existing knowledge</td>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td>To make informed decisions</td>
<td>76</td>
<td>19</td>
</tr>
<tr>
<td>To manage information explosion</td>
<td>72</td>
<td>18</td>
</tr>
<tr>
<td>To establish best practices</td>
<td>68</td>
<td>17</td>
</tr>
<tr>
<td>To manage rapid knowledge decay</td>
<td>64</td>
<td>16</td>
</tr>
<tr>
<td>To avoid duplication of efforts</td>
<td>52</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 3. KM initiatives undertaken in SADC university libraries N = 25.

<table>
<thead>
<tr>
<th>Activities</th>
<th>% a</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong partnership with other libraries, e.g. joint</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>research projects, library consortia and inter-library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adoption of Web 2.0 &amp; Social Media, e.g. wikis, twitter,</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>blogs, tagging, Facebook</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digitization of library collection</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>Use of virtual/online reference services</td>
<td>52</td>
<td>13</td>
</tr>
<tr>
<td>Central knowledge repositories for the whole university</td>
<td>48</td>
<td>12</td>
</tr>
<tr>
<td>Identification of the expertise in libraries</td>
<td>44</td>
<td>11</td>
</tr>
<tr>
<td>Internal knowledge capture systems in place</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>Staff training in knowledge management</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Communities of Practice</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Identification of knowledge gap</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Existence of written knowledge management strategy/policy</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>
Customer-focused 24 hour library services in a consistent manner. By managing KM systems, each customer can receive the same answers for similar queries; which would be impossible to monitor without KM systems. Definitely, KM is a good solution to produce more with less by utilising the scarce finance resource in managing only the most relevant information. As Wen (2005) succinctly observed that during early and mid 2000s, budgets in academic libraries were stagnant at best and declining in general. Academic libraries have felt the pinch from both sides with less budget and more demand. Thus, librarians are threatened of being marginalised by internet-based information services as well as students’ and faculties’ own information gathering efforts. It is critical for academic libraries to operate more efficiently with reduced financial and human resources and produce more with less.

Often organisations do not know what knowledge they already have. Because of this, even the large global corporations are spending money on training and development to gain knowledge that they already have (Goodman and Schieman, 2010). KM leverages the existing knowledge within an organisation. Through needs assessment, knowledge mapping and knowledge auditing, hidden organisational knowledge are visible and usable. With too much information to digest, a person is unable to locate and make use of the information one needs, and this information overload can hinder information usefulness to the individual (Israel, 2010). Today there is information explosion and consequently, evolution of knowledge. New information and knowledge is generating faster than ever before. In such a fluid situation it is imperative to keep update in skills and knowledge at both individual and organisational levels in order to make informed decisions. As academic libraries support the mission, vision and objectives of their parent institutions, they need to continuously develop in order to manage changing needs of their parent institutions and support teaching, learning and research activities by managing the valuable knowledge.

KM is one such tool that can help in managing information explosion by providing tools and technologies to manage the information that is most critical and essential for an organisation. Information explosion also has negative impact on knowledge sharing. Thus, academic librarians need to “renovate the existing library environment and promote a knowledge-sharing culture by initiating communities of practice, management of best practices, change management, organisational learning, and use of appropriate knowledge-sharing technologies” (Roknuzzaman and Umemoto, 2009, p. 654). KM would equip each person with informed decision making capabilities by providing the right information and knowledge. KM emphasises the identification of best practices because tried and tested solutions and

<table>
<thead>
<tr>
<th>Challenge</th>
<th>% Yes</th>
<th>% No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant budget decline</td>
<td>88</td>
<td>22</td>
</tr>
<tr>
<td>Inadequate staff training</td>
<td>76</td>
<td>19</td>
</tr>
<tr>
<td>Lack of KM strategy</td>
<td>72</td>
<td>18</td>
</tr>
<tr>
<td>Insufficient Technology</td>
<td>68</td>
<td>17</td>
</tr>
<tr>
<td>Lack of incentives</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>Limited expertise in KM</td>
<td>56</td>
<td>14</td>
</tr>
<tr>
<td>A lack of knowledge sharing culture</td>
<td>56</td>
<td>14</td>
</tr>
<tr>
<td>A lack of cooperation among juniors and seniors</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>To track the materials from departments is time consuming</td>
<td>24</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 4. Challenges in KM N = 25.
practices are always superior to newly-introduced ones. Because of long-term experience, best practices are time and cost-effective, they provide operational excellence, enhance performance capabilities and reduce training needs. Academic libraries should continuously look for best practices.

Knowledge sharing is one of the most critical components of KM. Often, academic library practitioners are doing similar things in their own isolated silos and continue doing their personal research on how to serve their customers. Using KM applications, duplication of efforts can reduced, best practices can be shared, training needs can be minimised, and all information services can be provided time and cost-effectively. An integrated CKM approach proposed by Daneshgar and Farrokh (2012, p. 17), is vital for improving library services through appropriate management of library customers.

4.2. KM activities initiated in SADC universities

Several questions were asked to investigate the current KM practices in SADC university libraries. The findings revealed 60% (15) libraries had strong partnerships with other libraries. Most common partnerships are joint research projects, library consortia and inter-library loans for resource sharing. Through these partnerships and collaboration, libraries build strong relationships with other libraries where ideas, processes, work flows, and mutual training are shared, investigated and documented.

In terms of new technology, only 52% (13) of the libraries acknowledged themselves as well-equipped with knowledge-enabling technologies. Other libraries lacked adequate technologies, e-textbooks, laptops, tablets, PCs, e-Readers, mobile based websites, and smart phone applications. One participant noted, “The intranet of the library is not functioning as it should. The library needs a proper Intranet as well as a document management system”. ICT is key facilitator to KM, adequate ICT infrastructure is vital.

Only 48% (12) universities had a central knowledge repository for the whole university, while 40% (10) of the libraries had a system in place to capture the internal knowledge of their staff and some of the mechanisms to capture knowledge were identified as LibStats system, intranet, DSpace and IRs. In a few libraries it was mandatory for academic staff to submit copies of their research publications to the library. A few libraries also recorded workshop proceedings on DSpace. Identification of the expertise was exercised in 44% (11) participating libraries and 40% (10) libraries had a system in place to capture internal knowledge of their staff members. Only 20% (5) of the libraries had a provision for training in KM, and incentives were provided in four libraries. According to the participants incentives could be modest honorarium, promotions and opportunities to attend conferences for professional development. In some libraries, incentives were built into the performance evaluation systems and top achievers received a financial bonus. A knowledge gap exercise was conducted only in three libraries, and the knowledge gaps were identified as: lack of ICT, management and leadership skills. Training opportunities are provided based on the identified skills gaps under the personal development plan of each staff member. Only two libraries had written KM strategies, which basically entailed what knowledge should be collected aligned with the library management’s vision and strategy. KM strategy is the first and foremost condition for KM implementation, which describes how an institution will
4.3. Challenges associated with knowledge management practice

The study identified the major challenges in practicing KM as: constant budget decline 88% (22), inadequate staff training 76% (19), lack of clearly defined guidelines/KM strategy 72% (18), insufficient technology 68% (17), lack of incentives 60% (15), limited KM expertise 56% (14) and a lack of knowledge sharing culture 56% (14). Budget decline challenge is similar to Nazim and Mukherjee (2011) study, who described budget decline a two-way problem first, a reason not to adopt and initiate KM, and second, due to lack of adequate resources it is a challenge to practice KM. Budget has an impact on everything, including insufficient tools and technologies, a lack of reward system, poor training plans and a lack of expertise in KM. With a stagnant or dwindling library budget, it is more crucial for academic libraries to increase their operational efficiency in order to come over this challenge. When libraries face tight budgets or budget reductions, it is only too natural for the library administration to hesitate to invest in a KM system (Wen, 2005). Hence, sufficient budget is central to successful KM implementation.

It is evident from the study that only 20% participating libraries had training facilities and 76% identified a lack of training as one of the major challenge in KM practice. Townley (2001) points out that training and support for the adoption of new knowledge and behaviors are perhaps the most important and costly part of any KM application. As learning organisations, libraries should be allocated annual funding to provide continuing education and staff training to all staff members (Lee, 2005). Knowledge must be renewed and expanded to prevent it from becoming stagnant. As university libraries play a leading role in today’s changing world in generating ideas and advancing societies, they need to be knowledgeable enough in order to cope with the rapid changes and strong competitive environments (Daneshgar and Parirokh, 2007). A lack of training leads to limited expertise and consequently poor performance and poor library services. Sufficient training is important for KM implementation and adequate expertise.

A lack of clearly defined guidelines on KM implementation was recognised as a challenge by the participants as only two libraries had a KM strategy in place. This seems to be a problem world-wide. In UK only 12 UK universities had a KM strategy (McKnight, 2007). Establishing principles for KM implementation are fundamental to KM success. A KM strategy is an overall plan to implement KM, which is based on the real needs and problems in a particular organisation. It describes how an organisation will manage its knowledge better for the benefit of the organisation, employees and other stakeholders. A KM strategy should stipulate the overall KM vision aligned with organisational strategic plans. It should also consist specific objectives, action plans, budget, mentoring and training plans, associated challenges, and, an evaluation plan to measure the expected outcomes of KM initiatives.

ICT enables KM initiatives in two ways: by connecting people with information/knowledge contents and by connecting people with people. It connects people with contents by providing the means to capture, discover, organise, store, retrieve and disseminate information/knowledge. People are connected with people using web 2.0 and other collaborative software such as, electronic communication tools, electronic conferencing tools, collaborative management tools and work flow management systems. That is why, “a good IT infrastructure is not a sufficient condition for the success of KM but a necessary condition for it” (Arora, 2002, p. 248). Insufficient technology cripples the successful implementation of KM in academic libraries.

Lack of incentives was identified yet another critical issue and a challenge by the participants. Rewards are good motivators to KM adoption and building organisational trust among librarians. Research indicates that the more staff received rewards, the more they trusted the organisation and were ready to collaborate, and had a more positive attitude towards KM (Constant et al., 1994; Aharony, 2011). Organisations need to put in place appropriate incentives and training plans in order to motivate library staff for knowledge sharing. A lack of knowledge sharing was yet another challenge in the study, which is the first cultural roadblock in KM implementation. Only a few libraries shared knowledge through communities of practices (CoPs), SDIs and SubjectPlus. A number of libraries use Quarterly Library Newsletter, Face book, Intranet
LibStats (statistics programme), Roadshows on best practice, IRs, Faculty Newsletters and a few use web 2.0 applications such as, wikis, twitter and blogs. The findings of this study support Parirokh, Daneshgar and Fattahi (2008) study, who had established that KM and knowledge sharing issues had not been institutionalised in the majority of academic libraries. The above authors foresee that knowledge-sharing capabilities of academic libraries will eventually become one of the major critical success factors. However, a knowledge sharing culture involves both organisation and library staff. Organisation can support by providing appropriate KM enablers such as, organisational procedures, culture and technological infrastructures. On an individual basis it refers to librarians’ personal interests and the degree of enthusiasm for sharing knowledge (Parirokh et al., 2008). Web 2.0 has transformed the entire landscape of KM and sharing, unfortunately, many libraries are still not exploiting the benefits of web development. The social media applications have improved the effectiveness and increased the adoption of KM in an academic research environment. Twitter can be used to create knowledge by both users and librarians (Kim and Abbas, 2010; Silk, 2010). Virtual libraries are other powerful tools to share knowledge. Libraries have abundance of opportunities to create a knowledge-sharing culture using various venues and by providing sufficient incentives and training opportunities to library staff. Often librarians fail in locating and managing the knowledge potential in the heads of their own people (Selhorst, 2009). This needs to be changed. It is important to locate and manage tacit knowledge of employees, as tacit knowledge adds more value than explicit knowledge in gaining and sustaining an edge over its competitors. Parirokh, Daneshgar and Fattahi (2008) suggested numerous activities and strategies that can encourage knowledge sharing among librarians including research projects, training programs, online newsletters, teaching methods, knowledge-sharing policies and strategies, leadership and dedication of time, group discussions, communication channels, formal procedures including publication of manuals for staff and documenting experiences. Thus, academic librarians can adopt a new model knowledge network model as opposed to a book ware house model. Incorporating networked knowledge, librarians can move away from explicit knowledge to both explicit and tacit KM and sharing (Kuhlen, 2004). This necessitates that librarians fully exploit the benefits of web applications and other new technologies to develop a conducive knowledge creating and sharing environment within and outside libraries.

Most of this study’s challenges substantiate a recent study carried out in India by Nazim and Mukherjee (2011), who had identified some of challenges as: lack of knowledge sharing culture, top management commitment, incentives and rewards, financial resources and IT infrastructure. This shows that most academic libraries in developing countries are confronted with similar challenges which impede the successful KM implementation.

5. Conclusion

The overall purpose of this study was to investigate and explore KM practices in SADC university libraries. The study identified and discussed the main reasons to KM implementation and associated challenges. From the foregoing debate it can be concluded that KM is no more an option, but a survival kit for university/academic librarians. Empowered with modern ICTs, web applications and social networking interactive tools, academic librarians can build on their inherent expertise. By establishing connections and collaborations within and outside their parent organisations they can come out of their internal silos, integrate internal and external information and deliver value added services to university community and other stakeholders.

University library services are important guarantees in improving the competitiveness of universities’ libraries (Xin Qu, 2011). Being part and parcel of learning institutions, university libraries can play a key role in human, economic and national development. Therefore, library services need to be revamped and enhanced. In this competitive information environment when internet search engines are readily available and accessible 24 hours, KM is a way forward, a way to survive and thrive for academic libraries/librarians. With KM, academic librarians contribute to the improvement of employees’ capacity in knowledge creation; it promotes and strengthens relationships and inter-networking between librarians, librarians and users (Asogwa, 2012). Due to the development of mobile and Web 2.0 technology, knowledge creation, storage, retrieval and sharing have become much more efficient. Librarians can take leadership roles in planning, establishing, organising, facilitating, archiving and evaluating social knowledge exchanges as well as assume an entirely new role as academic librarians and still remain relevant in this new information environment Stranack (2012). Information professionals and librarians need to buy into KM more seriously to increase their operational efficiency, prove their relevance and value to their parent institutions in realising their overall mission and vision and consequently, contribute towards knowledge economy by providing the right information to the right customer at the right time and in the right format.
6. Recommendations

To win over the challenges and institute a successful KM implementation in university/academic libraries, the author puts forward the following recommendations and a framework for KM implementation in university/academic libraries:

- Formulation of a KM strategy: In order to initiate KM in academic libraries, first and foremost, it is vital to formulate a KM strategy mapping out a clear vision, expected outcomes, an action plan, necessary resources, and an evaluation plan. A KM strategy should be based on the real needs of the university and aligned with university’s overall strategic plan.
- Strong leadership: Being experts in information management and user-centred service provision, librarians should take a lead in KM projects.
- KM priority for the parent university: Parent universities should consider KM as one of their top priorities and allocate all necessary KM infrastructure including sufficient budget and technological infrastructure.
- An integrated CKM approach: Since customers are paramount in libraries, librarians should embrace an integrated CKM approach for improved and innovative customer services.
- Training: All librarians and information professionals should be adequately trained to fully appreciate and adopt KM.
- Specific unit for KM: There should be a specific unit to coordinate and promote shared understanding of KM and its successful implementation.
- Rewards and incentives: There should be appropriate rewards and incentives to motivate librarians and information professionals to successfully implement KM and create a collaborative and knowledge sharing culture.
- Change of mind-set and set-minds: Finally, to revitalise the library undertakings and fit into the modern information environment, university librarians should change their traditional mindsets and rigid mindsets (set minds). They should be proactive, self-confident, self-promoting, customer focused, well-researched, well-prepared, and above all, persistent learners.

References


