

Challenges and Opportunities of Knowledge Management in University Library: A Case Study of Dhaka University Library in Bangladesh

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ABSTRACT

Knowledge Management (KM) has become a fundamental process for all types of institutions in society. Academic libraries are also an integral part of the knowledge system, these institutions being one of the forms that contribute to knowledge development. This study aims to find out the challenges and opportunities associated with KM practices in Dhaka University Library (DUL). The specific objectives were to ascertain the understanding of KM concepts among library professionals of DUL, to explore an overview of KM and its role, and to identify the rationale behind not practicing KM properly at DUL. Appropriate methods were employed. The findings indicate that limited expertise and lack of clear guidelines are the major challenges for the implementation of KM in DUL.

Keywords: Knowledge Management (KM), Dhaka University Library (DUL), Knowledge, Academic Library, Bangladesh

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1. INTRODUCTION

Academic libraries have transformed significantly from Machine Readable Catalogue (MARC) and circulation desks to metadata, from interlibrary loans to online databases, from bibliographic instruction to information literacy, from information management to Knowledge Management (KM), and so on. KM is a viable means by which academic libraries can improve their services in the knowledge economy. This can be achieved through creating an organizational culture of sharing knowledge and expertise within the library. However, organizations face innumerable challenges in nurturing and managing knowledge. The challenges occur because only a part of knowledge is internalized by the organization; the other is internalized by individuals (Bhatt, 2002). Organizations, including academic libraries, can create and leverage their knowledge base through initiation of appropriate KM practices. TFPL (1999) argued that “for organizations to compete effectively in the knowledge economy they need to change their values and establish a new focus on creating and using intellectual assets.” The success of academic libraries depends on their ability to utilize information and staff knowledge to better serve the needs of the academic community. Academic libraries as constituents of the parent university should rethink and explore ways to improve their services and become learning organizations in which to discover how to capture and share tacit and explicit knowledge within the library. The changing role of academic librarians as knowledge managers emphasizes the need to constantly update or acquire new skills and knowledge to remain relevant with today’s library environment. Academic libraries may need to restructure their functions, expanding their roles and responsibilities to effectively contribute and meet the needs of a large and diverse university community.

The Dhaka University Library (DUL) started as a part of the DU on the first of July, 1921 with 18,000 books. At present the DUL has 6 lacs and 80 thousand books and magazines. Besides that the library has 30,000 rare manuscript: 20,000 old and rare books and large numbers of tracts (booklets, leaflets, pamphlets, and folklore puthi poems). Some rare books and documents have also been preserved in microform. In the same way, rare books and reports, puthis, Bengali tracts, and private collection of Buchanan on Bengal have been ac-

quired from the British Museum (Nowrin & Mostofa, 2015). However, the rest of the paper is structured as follows: Section 2 presents aims and objectives; Section 3 reviews the related literature; Section 4 discusses research methodology; Section 5 interprets and analyses data; Section 6 proposes the KM model; Section 7 provides recommendations for the implementation of KM in DUL; and the final section concludes the paper with a brief summary.

2. OBJECTIVES OF THE STUDY

The aim of the study was to explore an overview of KM and its role in DUL. The specific objectives were to:

- i. determine the understanding of the KM concept among library professionals at DUL
- ii. find out the reasons for practicing KM
- iii. discover the challenges associated with KM practice
- iv. identify the rationale behind not practicing KM properly at DUL
- v. give recommendations and propose a model for better implementing KM at DUL.

3. LITERATURE REVIEW

3.1. Definition of KM

Malhotra (2006) reported that “KM refers to the critical issues of organizational adaptation, survival, and competence against discontinuous environmental change. Essentially it embodies organizational processes that seek synergistic combination of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings.”

According to Drucker (1989), “Knowledge is information that changes something or somebody – either by becoming grounds for action, or by making an individual (or an institution) capable of different or more effective action.” There are two types of knowledge: explicit and tacit knowledge. Explicit knowledge is documented and articulated into a formal language. It is rule-based, stored in certain media, and easily communicable and shared; examples are organizational databases, web-pages, subject-portals, policies, and

manuals. Tacit knowledge is personal, hard to document, and it is knowledge in action used by people to perform their tasks every day. Tacit knowledge has a personal quality, which makes it hard to formalize and communicate. Tacit knowledge is deeply rooted in action, commitment, and involvement in a specific context (Nonaka, 1994). KM is the management of knowledge that is critical for a person to work more efficiently, inclusive of both tacit and explicit knowledge.

3.2. Barriers to Implementing KM in Academic Libraries

Every library professional who works in an academic, public, or any special library wants to use the techniques of KM to achieve organizational goals and provide better service to its users, but due to some of the following barriers they are not able to use them: Raja and Sinha (2009) reported the barriers of academic libraries are: i) There is no co-operation between senior and junior staff; ii) Generally, the junior staff cannot share their knowledge and ideas when they feel there is no benefit to this in terms of salary increases; (iii) Not every library can participate in terms of modern technology and its management; (iv) Lack of communication skills; (v) Lack of staff training; (vi) Lack of sufficient budgets / funds; (vii) Lack of tools and technologies; and (viii) Lack of centralized library policies.

A literature review provides a systematic review of existing knowledge in the field and provides a necessary guide for the successfulness of this study. We tried hard to collect documents from journals articles and conference papers to enrich this paper. The related literature includes the following:

A study was carried out by Nazim and Mukherjee (2011) based on a literature review and the results of a web-based survey of sixty-four library professionals of thirty academic libraries in India. Their findings suggest that the term 'KM' is familiar to most of the professionals but the ways of knowing and degrees of their understanding are varied. They focused primarily on management of explicit knowledge and their roles were perceived as basic information management activities. Professional education and training programs, community of practices, information technology, and knowledge sharing were identified as the important tools of KM in academic libraries. Misunderstanding of KM concepts and lack of a knowledge sharing cul-

ture, top management commitment, incentives and rewards, financial resources, and IT infrastructure are the major challenges faced by library professionals in incorporating KM into library practices.

Jain (2012) identified the main reasons for KM adoption as: to improve library services and productivity, to produce more with less due to financial constraints, to leverage already existing knowledge, to manage information explosion, to manage rapid knowledge decay, to make informed decisions, to establish best practices, and to avoid duplication of efforts. This study also identified the major challenges in practicing KM as: constant budget decline, lack of incentives, inadequate staff training, limited expertise, lack of clearly defined guidelines on KM implementation, insufficient technology, and a lack of a knowledge sharing culture. A lack of cooperation among juniors and seniors and of tracking the materials from departments did not appear to be major challenges.

Now the main challenges faced by the knowledge practicing university libraries are discussed. Raja, Zubair, and Sinha (2009) reported how information technology and related automated systems can support librarians' endeavors toward better implementation of KM. Provision of adequate budgetary support, professional training, and a pro-active outlook are key factors for an effective KM strategy.

Maponya (2004) mentioned that the success of academic libraries depends on their ability to utilize information and staff knowledge to better serve the needs of the academic community. This requires academic librarians to reappraise their functions, and to expand their roles and responsibilities to effectively contribute and meet the needs of a large and diverse university community. KM is a viable means by which academic libraries may improve their services in the present knowledge era. This is a report of the results of a case study conducted to establish the ways in which the academic librarians of the University of Natal, Pietermaritzburg Libraries could add value to their services by engaging with KM.

Judith and Patrick (2011) presented the results of a study to find out how knowledge is identified, captured, shared, and retained in order to enhance performance and improve the quality of service in the Metropolitan College of New York (MCNY) library. The findings indicate that the MCNY library practices

are not deliberately informed by KM principles, but are amenable to KM principles. The study also recommended that KM, with its potential to turn individual knowledge into organizational knowledge, should be used in positioning the MCNY library in a changing information environment.

Agarwal and Islam (2014) revealed that at the moment technology is an enabler for KM and the technology tools are not adequate. A combination of physical environment and technology-enabled tools is essential. They also suggest that the more tools that a library espouses, the more would be the learning required for all employees.

Hamid, Nayan, Bakar, and Norman (2007) did a KM adoption and implementation readiness case study of the National Library of Malaysia (NLM). The study investigated the status of KM at the NLM, with the objective of discovering how the organization went about creating, disseminating, and applying knowledge internally. It revealed the importance of capturing tacit knowledge that resides in employees' heads. The recommendations that resulted from the study included the need to define and document the organization's policy for KM, documenting best practices and the expertise required for KM practice, and a system that allows for the easy location of specific knowledge and expertise.

According to Sinotte (2004) and Wen (2005) KM has been seen as a survival factor for libraries to overcome the challenges that library professionals face in the changing and competitive environment.

Teng and Al-Hawamdeh (2002) believed that libraries can also improve their knowledge-based services for internal and external users through creating an organizational culture of sharing knowledge and expertise within the library.

Sarrafzadeh (2005) found that KM has also been seen as a threat for library professionals to survive in a competitive and complex academic and professional environment. If library professionals remain reluctant to gaining new skills they will become irrelevant to their organization and will probably lose out in competition for employment to people from other fields.

The role of library professionals and their involvement in KM programs has been widely discussed in the Library and Information Science (LIS) literature. Most of the professionals involved in KM programs are playing key roles such as design of information

infrastructure, development of taxonomy, or content management, development of Intranet and institutional repositories, embedding information literacy instruction in curriculum, and applying Web 2 tools for knowledge sharing (Ajiferuke, 2003; Branin, 2003; Clarke, 2004; Roknuzzaman et al., 2009).

Sarrafzadeh, Martin, and Hazeri (2010), and Roknuzzaman and Umemoto (2009) in their respective studies have focused on the relationship between KM and libraries. Wen (2005) demonstrated the need for KM in libraries and Maponya (2004) expressed the necessity of KM in academic libraries. Siddike and Islam (2011) also illustrated librarians' awareness or perceptions of KM.

The review of related literature shows that there are many challenges for library professionals in implementing KM in academic libraries. The major challenges are lack of skills and competencies, reluctance of library professionals to accept the change, misunderstanding of KM concepts, lack of a knowledge sharing culture and top management commitment, and lack of collaboration. The review of literature indicates that there is a gap of literature on KM in academic libraries of Bangladesh.

4. METHODOLOGY

The study employed a descriptive research design utilizing a case study approach. A Deputy Librarian, Assistant Librarian, Junior Librarian, Research Officer, and Senior Cataloguer of DUL were selected as participants for the study. These information professionals were selected because of their key roles and functions in the library. Initial contact was made with each of the potential interviewees and each interview lasted for about 15-20 minutes. The study used questionnaires and interviews to collect data. The questionnaires were also sent to 25 respondents and among them 22 completed questionnaires were returned. The quantitative data were analyzed using SPSS version 16.

5. RESULTS

The following sections premeditated the results of the survey conducted as part of this research and data analysis has been conducted on responses to the questionnaire.

Gender plays a vital role in all research. This study also tried to show the percentage of male and female professionals who took part in this study. In total 22 respondents responded to the questionnaire, of whom 13 (59.1%) were male and 9 (40.9%) were female (Fig. 1). So, this is an indication that males largely dominate the profession.

In terms of educational background the figure shows that a large proportion of respondents (77.27%)

completed their M.A. degree from the Department of Information Science and Library Management at University of Dhaka and the rest (22.73%) completed B.A. (Hon's) and M.A. degrees from the same department and the same university (Fig. 2). This show the demands of the profession in terms of keeping skills in progress. Also some of the professionals replied that they keep updating their skills, especially when new library software is installed in the library.

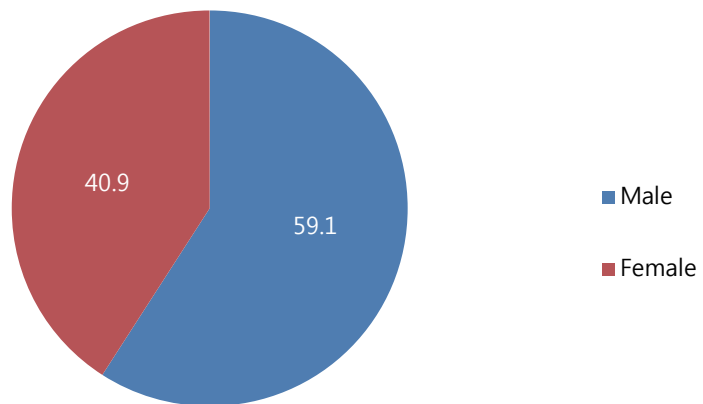


Fig. 1 Respondents' gender

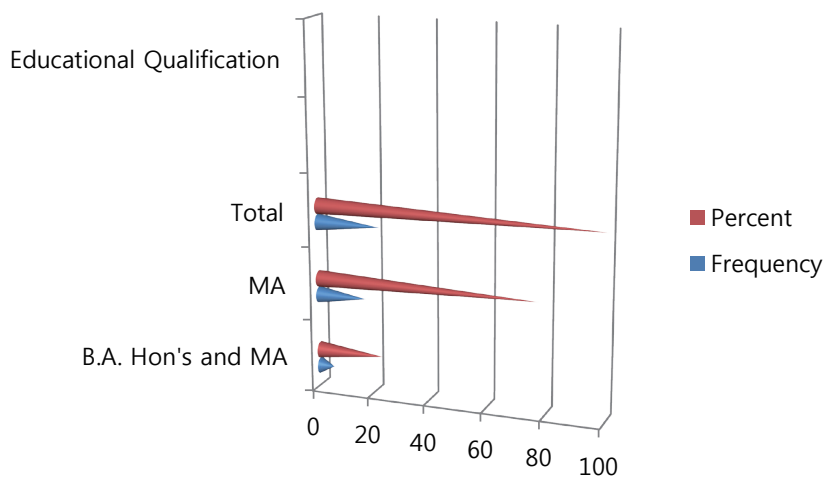


Fig. 2 Educational qualifications

Knowledge and experience of library staff are the intellectual assets of any library and should be shared between employees of the library (Lee, 2000).The respondents were asked to indicate their working experience. The results indicate that most of the respondents, i.e. 59.09%, have working experience at an academic library of 1-5 years, while 27.27% have 11-15 years, and the rest (13.64%) have 6-10 years of working experience at an academic library.

Sharing knowledge with each other assists professionals in creating new knowledge and ideas. In this regard respondents were asked to comment about their thinking as to how knowledge sharing can benefit them. Data presented in Fig. 4 reveals that the respondents share their knowledge with their colleagues, and it was formal sharing for 54.5%, followed by 27.3% informal, while the rest (18.2%) do not share their knowledge.

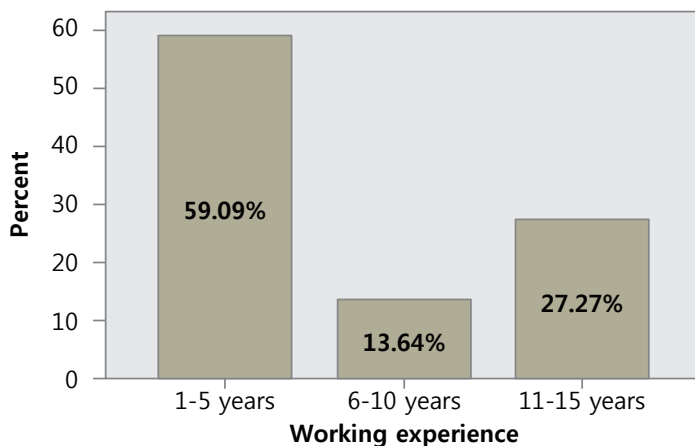


Fig. 3 Experience of the respondents

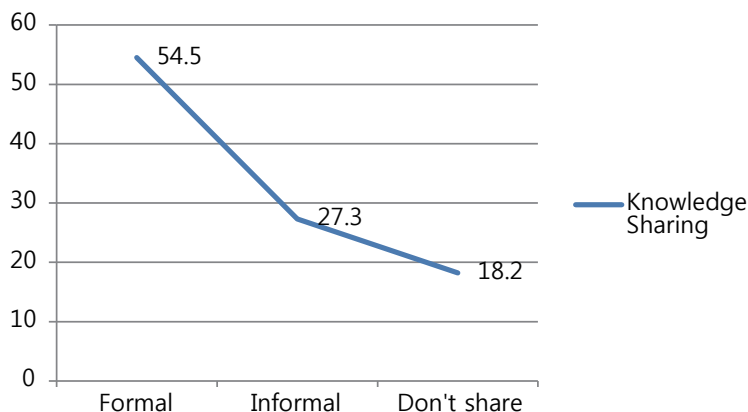


Fig. 4 Sharing knowledge with colleagues

5.1. Understanding the Concept of KM by the Library Professionals of DUL

The majority of the participants seemed to understand the concept of KM, and the KM concept was well-defined by the participants. In general comments, one respondent mentioned, "KM is a system of managing knowledge and it's better to provide." Others mentioned that "KM is the process of capturing, developing sharing, and effectively using organizational knowledge"; "KM is the systematic process that manages the conception, dissemination, and consumption of knowledge." It refers to multi-closely controlled approaches to achieving executive objectives by making the best use of knowledge that proliferates within the organization. It includes economics and philosophy librarians, and so on: "KM is the process of generating, maintaining and utilizing knowledge for the development of the organization and the service to the users."

5.2. Current Status of KM in DUL

The library professionals were asked to indicate the present status of KM in the DUL and they replied that it is in the introductory age.

5.3. Rationale for Not Properly Practicing KM in DUL

From Table 1 it can be seen that more than 31% of library professionals agreed that lack of organizational initiatives in the organization is the main factor for not practicing KM in the DUL properly, while 27.3% of professionals reported that poor technological infrastructure is the other reason for not practicing KM in the DUL properly; the rest (18.2%, 13.6%, and 9.1%, respectively) said that lack of awareness, lack of qualified professionals, and inadequate budget are another factor for other rationales for not practicing KM in the DUL properly.

5.4. Problems Related to Knowledge Retention

From Table 2, it can be seen that more than 63% of library professionals agreed that poor sharing of knowledge in the organization is the main problem related to knowledge retention, followed by 27.27% of professionals who reported that information overload is the main problem related to knowledge retention; the rest (9.09%) said that lack of information is another factor for knowledge retention.

Table 1. Rationale for Not Properly Practicing KM in DUL

| Rationale for not properly practicing KM in DUL | Frequency | Valid Percent |
|-------------------------------------------------|-----------|---------------|
| Lack of awareness | 4 | 18.2 |
| Inadequate budget | 2 | 9.1 |
| Lack of qualified professionals | 3 | 13.6 |
| Poor technological infrastructure | 6 | 27.3 |
| Lack of initiatives by the authority | 7 | 31.8 |
| Total | 22 | 100.0 |

Table 2. Problems Related to Knowledge Retention

| Knowledge retention | Frequency | Valid Percent |
|-----------------------------------------------|-----------|---------------|
| Lack of information | 2 | 9.09 |
| Information overload | 6 | 27.27 |
| Poor sharing of knowledge in the organization | 14 | 63.64 |
| Total | 22 | 100.0 |

5.5. Reasons for Practicing KM

The respondents were asked to indicate the reasons for practicing KM in the academic library. The results indicate that the largest group of library professionals, i.e. 36.4%, replied that improving library services and managing information explosion are the reasons for practicing KM in the library, while 22.7% indicated to improve library productivity, and the rest (4.5%) reported that managing rapid knowledge decay is the reason for practicing KM in an academic library (see Table 3).

5.6. Challenges in KM Practices

The study identified the major challenges in practicing KM as limited expertise (31.8%) and lack of clear guide lines (31.8%). Inadequate staff training (9.1%), lack of a knowledge sharing culture (9.1%), constant

budget decline (9.1%), insufficient technology (4.5%), and lack of cooperation among juniors and seniors (4.5%) did not appear to be major challenges. In addition, the findings indicate that there is a lack of awareness of KM in the library. In most of the cases academic libraries do not systematically or formally manage their KM activities (see Table 4).

5.7. Improving Performance of Library Professionals

From Table 5, it can be seen that 90.9% of the library professionals agreed that KM practices in the library can improve the performance of library professionals. Only 9.1% said that KM practices in the library cannot improve the performance of library professionals.

Table 3. Reasons for Practicing KM

| Reasons for practicing KM | Frequency | Valid Percent |
|---------------------------------|-----------|---------------|
| To improve library services | 8 | 36.4 |
| To improve library productivity | 5 | 22.7 |
| To manage information explosion | 8 | 36.4 |
| To manage rapid knowledge decay | 1 | 4.5 |
| Total | 22 | 100.0 |

Table 4. Challenges in KM Practice

| Challenges of KM | Frequency | Valid Percent |
|-----------------------------------------------|-----------|---------------|
| Constant budget decline | 2 | 9.1 |
| Inadequate staff training | 2 | 9.1 |
| Limited expertise | 7 | 31.8 |
| Lack of clear guide lines | 7 | 31.8 |
| Insufficient technology | 1 | 4.55 |
| Lack of knowledge sharing culture | 2 | 9.1 |
| Lack of cooperation among juniors and seniors | 1 | 4.55 |
| Total | 22 | 100.0 |

5.8. Relation Between Working Experience and Perception of Satisfaction

The findings showed that working experience is not closely associated with perceptions of satisfaction and the differences were statistically insignificant (X^2 - 8.125 (4); $p > .087$) (see Table 6).

5.9. Relation Between Sex and Sharing Knowledge with Others

The findings revealed that gender is not closely associated with sharing knowledge and the differences were statistically insignificant (X^2 - 2.006 (2); $p > .367$) (see Table 7).

5.10. Proposed KM Model for DUL

The five basic statements underlying our model (Fig. 5) for the implementation of KM at DUL and also for other academic libraries are:

Table 5. Improving Performances of Library Professionals

| Improve performances | Frequency | Valid Percent |
|----------------------|-----------|---------------|
| Yes | 20 | 90.9 |
| No | 2 | 9.1 |
| Total | 22 | 100.0 |

Table 6. Relation Between Working Experience and Perception of Satisfaction

| Working experience | Perception on Satisfaction | | | Total |
|--------------------|----------------------------|-----------|--------------|-----------|
| | Suitable | Medium | Not suitable | |
| 1-5 years | 0 | 5 | 8 | 13 |
| 6-10 years | 0 | 2 | 1 | 3 |
| 11-15 years | 1 | 5 | 0 | 6 |
| Total | 1 | 12 | 9 | 22 |

Pearson Chi-Square X^2 - 8.125 (4); $p > .087$
Fisher's Exact Test 8.365

Table 7. Relation Between Sex and Sharing Knowledge with Others

| Sex | Sharing knowledge with others | | | Total |
|--------------|-------------------------------|----------|-------------|-----------|
| | Formal | Informal | Don't Share | |
| Male | 6 | 5 | 2 | 13 |
| Female | 6 | 1 | 2 | 9 |
| Total | 12 | 6 | 4 | 22 |

Pearson Chi-Square X^2 -2.006 (2); $p > .367$
Fisher's Exact Test 2.002

- **Processes of Knowledge Creation, Organization, Dissemination, Use, and Sharing:** The knowledge and expertise on which activities such as knowledge organization and preservation, information search, retrieval, and dissemination and development of value-added information products and services are based are essential organizational assets for libraries and information services.
- **Human Resources:** Human resource management (including here a number of elements such as communication, organizational learning, knowledge sharing, communities of practice, and organizational culture) is a fundamental element for the process of KM.
- **Technological Infrastructure:** Technology plays a

key role in creating a culture and an infrastructure for promoting and supporting access to and sharing of knowledge.

- **Networks and Partnerships:** Networks and partnerships with other public libraries are a solution for creating extended access to knowledge, for a more creative use of knowledge and for increasing the quality of products and services which libraries and information services make available for users.

- **Knowledge Manager:** The creation of a knowledge manager position of the CKO (Chief Knowledge Officer) type considerably increases the chances of successful implementation of this new feature in academic libraries.

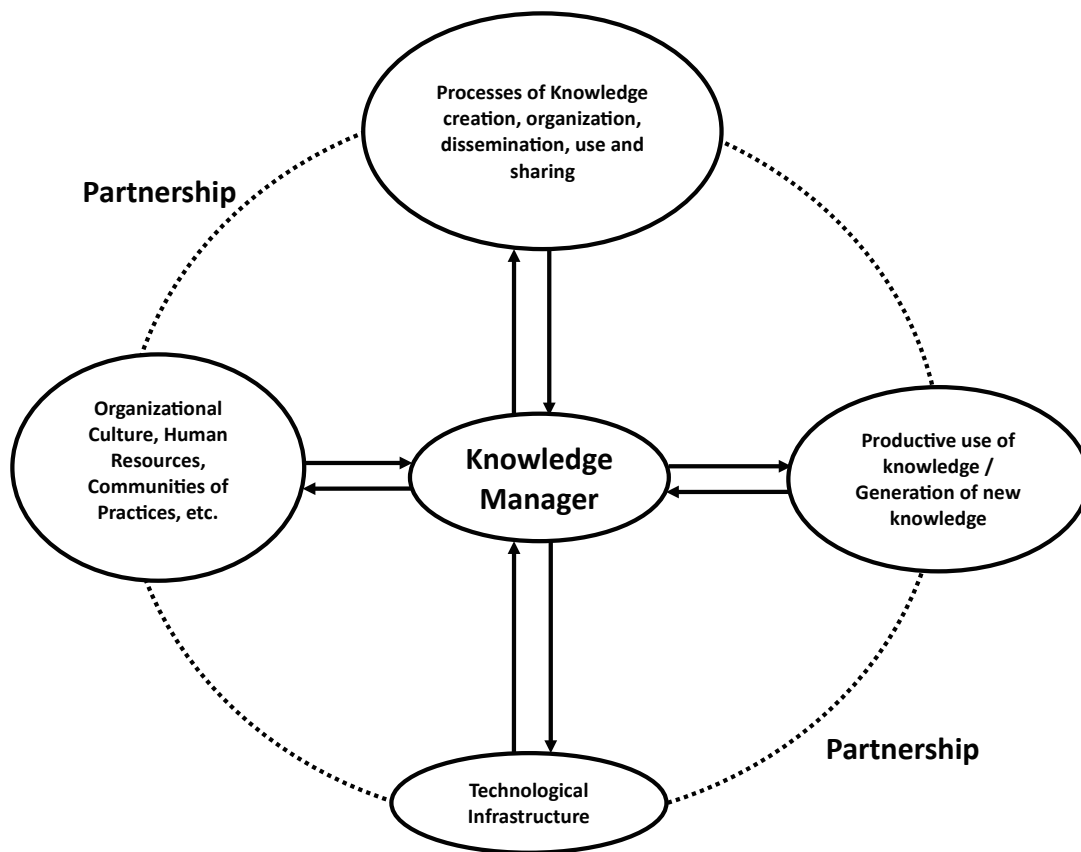


Fig. 5 Proposed KM model for DUL (Source: Porumbeanu, 2009)

The model of implementation of KM in DUL allows:

- Identification of the most important processes, products, and services of libraries and information services and their evaluation;
- Identification of knowledge resources and skills in the organization in order to exploit these resources; and
- Identification of potential external partners for collaboration.

To implement the proposed KM model in DUL there should be:

- Achievement of a more extensive collaboration in order to use knowledge in the most effective and creative way;
- Achievement of a joint or common database with all sections regardless of type, which would allow a permanent and full access to the stock of knowledge stored; and
- Establishment of partnerships for KM with each section.

6. DISCUSSION

The results on experience of library staff in this study authenticate the statement of Lee (2000) that knowledge and experience of library staff are the intellectual assets of any library and should be shared with others in the library. Respondents were asked to indicate their working experience and how sharing knowledge with their colleagues benefits them. The results indicate that most of the respondents, i.e. 59.09%, have working experience at an academic library and they also share their knowledge with their colleagues, with both formal and informal shares. Gender based analysis also validates the statement of Islam and Hossain (2012) that more males compared with females dominate the profession. From the data received from the library professionals at DUL, it was clear that they understood KM concepts but degrees of their understanding of the concepts are varied, and they focused primarily on management of explicit knowledge, which they have been doing for a long time. According to the respondents this study shows that KM practices in the library can improve the performance of library professionals. The respondents

were asked to indicate the reasons for practicing KM in the academic library. The results indicate that the largest group of library professionals, i.e. 36.4%, agreed that improving library services and managing information explosion are the reasons for practicing KM in the library. Library professionals pointed out that poor sharing of knowledge in the organization is the main problem related to knowledge retention and they also indicated that limited expertise and lack of clear guidelines are the major challenges for the implementation of KM in academic libraries in Bangladesh. Finally, the authors suggest that further studies should consider respondents from numerous universities inside Dhaka Division, possibly including those at both the apex and bottom staff levels of the library, to ensure more generality of the findings.

7. RECOMMENDATIONS

This study provides the following recommendations for better implement of KM in DUL:

- i. **Patronization:** Patronization is essential for any type of organization for its development. So, parent organizations should take KM seriously and allocate sufficient financial resources in order to provide needed KM infrastructures.
- ii. **Training:** To understand and adapt KM effectively, rigorous training is essential for library professionals of DUL. Therefore, a training program should be carried out as this will enhance the quality of library services.
- iii. **Incentives:** The higher authorities should be aware of the value of KM practice in the library. There should be adequate incentives for academic librarians to motivate them for KM practice and to create a knowledge sharing culture.
- iv. **Infrastructure:** The library should strengthen the existing KM environment and information technologies to maximize the use of information and knowledge at the DUL. Declared alternatively, the library should enhance the value and use of organizational knowledge. Recognizing knowledge and information as organizational assets requires the involvement of the library; in this way, the service value of the latter will be enhanced.

- v. **Use of ICT tools:** Librarians have to find ways to use new technologies to their best advantage, as advised by Anderson (2007). The library should use collaborative and interactive work spaces such as the wikis that are available for locating and sharing specific knowledge and expertise. Internet communication technologies can provide a collaborative learning environment that can encourage the teaching and learning community to make more vigorous use of the DUL.

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