

## EMPLOYING A KNOWLEDGE MANAGEMENT PROCESS IN ACADEMIC AND RESEARCH LIBRARIES

H. Mottaghi-far

Department of LIS, Faculty of Education,  
University of Isfahan,  
Isfahan, I.R. of Iran  
e-mail: [h.mottaghifar@libs.ui.ac.ir](mailto:h.mottaghifar@libs.ui.ac.ir)  
tele: 03116686546

**Abstract:** *In the 21<sup>st</sup> century knowledge management is increasing becoming a crucial tool. It has already been successfully implemented in academic libraries. They are the treasure house of knowledge which caters to the needs of scholars, scientists, students and others who are in the mainstream of higher education. Academic libraries are making the transition from traditional centers to modern information ones. These libraries, regarding their necessities, needs and their special conditions should be designed in such a way that they meet the needs and realize the expectations of their patrons best. KM as a managerial task is a process that smooths away and paves the way to this transition and supports a dramatic transformation occurring through operating a thoughtful policy, and with an information technology planning, jointly, brings about a newly-networked and an agreeable environment in academic libraries.*

**Keywords:** *Academic Libraries, KM, Management Change, Information Technology Planning, Learning Organization, Organizational Learning.*

### INTRODUCTION

We are at the beginning of the 21th century, and beyond it lies an evolving technological environment that will continue to influence our collections, services, users staff and organizations. So the application of KM process is inevitable in academic libraries. In a speech given in 1997, Walt (1997) provides a continuum from Galbraith's comments from 1967 to the present and the future: "*Moving beyond the millennium, you will continue to work with change just you always have. If you could go to the library of 2027, such change might look revolutionary but think back to 1967, and consider how much your library has changed since then. You'll be building new maps for that revolutionary library as you proceed. Maintain flexibility; regard futurists with healthy skepticism; understand your users and your partners; and you should find the new millennium challenging but rewarding as well.*" What has affected the academic environment is the great pool of information and knowledge available through the wires connecting them to the cloudy network.

In this complicated new world, competition is essential to survival in a changing environment and survival depends on coping with change. A growing or dynamic library is a library that should constantly cope with any changes in the environment and in its institution. It is a responsive entity. The academic libraries have grown at the present age. In general, information professionals and librarians have been coping well and addressing the many changes brought about by the electronic information revolution.

They are places for storing information and developing platforms for information technology. Libraries in the 21<sup>th</sup> century are often expected to initiate change which is not an easy task. But, since change in organizations is inevitable, library managers require new tools to cope with change. Km can be a tool to make this challenging task easy.

Barber (1996) believes that the wise use of paraprofessional and the assumption of new roles and librarians will help to manage the transition to the digital library. In addition, constant attention to workflow and procedures analysis will be necessary to accommodate the new technology to the routines in the various work units of the academic libraries. In other words, the judicious use of all of the academic libraries' staff is essential to the development of these libraries.

The paper explores the employment of KM in the management of the academic libraries as well as the basic necessities for achievement and the process is firstly explained by posing some key questions such as what, why and how. They are discussed in length and then some discussion necessary to support the idea is presented.

## **KNOWLEDGE MANAGEMENT**

In general, knowledge management (KM) is a process of creating, storing, sharing and re-using organizational knowledge (know-how) to enable an organization to achieve its goals and objectives of creating knowledgeable professionals and workforce. The advent of the "e-revolution", through the growth of global networks has accelerated the use of knowledge management (KM) especially in academic libraries. In the 21<sup>st</sup> Century KM is increasingly becoming a crucial tool in providing a dynamic and effective service to library users. Koeing (2000) believes that KM was caused by disorderliness and confusion of the great and almost unbounded volume of information.

Management gurus, such as Drucker (1999) asserted that for industries and institutions *"the most valuable assets of a 21st century institution, whether business or non-business, will be its knowledge workers and their productivity"*. This affirmation was duly taken up by many academic libraries. Knowledge management has already been successfully implemented in academic libraries and the policy makers, administrators, scientists and researchers have been actively involved in ensuring knowledge management through academic libraries.

Although KM seems to have been defined differently by different authors, these definitions are basically similar. Bailey and Clarke (2005), lecturers in management development, point to KM as a managerial task and believe that KM shows how managers can generate, communicate and exploit knowledge for personal and organizational benefits. The definition by (St. Clair, 2003) in the Encyclopedia of Library and Information Science also takes into consideration the organizational benefit. He acknowledges KM as a management practice that uses an organization's intellectual capital to enable the enterprise to achieve its organizational mission. Similarly, Malhotra (2005), from the School of Management, Syracuse University, emphasizes KM more as a process. He pointed out to the definition published in Oracle Magazine, 1998, which

refers to KM as a task which promotes an integrated approach to identifying, capturing, retrieving, sharing, and evaluating an enterprise's information assets. Application of KM should bring about real benefits for the organization and staff (Balley & Clarke., 2005).

Managers need to employ knowledge management in libraries. As mentioned earlier, KM work in libraries is integrated with information and information technology, which from quantitative and qualitative points of view change rapidly. Library management, therefore, is the management of change. Since KM can facilitate change, it is reasonable to make use of it in management practice. The incorporation of KM is crucial for those managers who are supposed to manage change.

### **KNOWLEDGE MANAGEMENT IN ACADEMIC LIBRARIES**

According to the definitions mentioned above, the basic concept in KM is how to deal with information in an organization. In management practice, internal information (that is, information about mission, vision, policies, facilities, opportunities and shortcomings in an organization) and external information (that is, the society's needs, expectations and environmental changes) must be identified, retrieved, evaluated and analyzed. The result will reveal whether the mission and activities of an organization are aligned with society's expectation. The outcome in this process is the acquisition of knowledge. This knowledge results in the "organization's management philosophy" (Clair, 2003).

This philosophy underpins the direction of the organization's policies, approaches and plans. The KM approach in management turns the philosophy into practice. That is, it is a source of information for decision; it shows the direction for planning and dictates how to implement the plans. It identifies challenges and how to overcome them. Since KM takes into consideration external needs and the expectations of an organization, the management that incorporates KM into its practice strengthens organizational development. In this practice, as all of the staff and the manger face with challenges in order to cope with and to respond to the society's expectations, personal growth will be another outcome. According to Clair's idea, innovation, collaboration, enthusiasm, and insight into the value of information are some of the attributes of KM practice

With regards to the value of KM in management practice, this paper attempts to explore the usefulness of KM and tries a more subtle process for personal and organizational benefit. Personal benefit refers to how the managers as well as the staff can form their beliefs and values and develop their knowledge and skills. To change the situation and to adjust the goals and practices of libraries to the universities's expectations, strategic management and strategic planning seems to be the best method for the management of such libraries. Strategic management is long term planning which studies the state of the organization, focuses on its future goals and objectives, takes into consideration problems and shortcomings and tries to solve them in the light of opportunities.

As with any strategic planning, the key is to understand the mission and objectives of the organization. A careful analysis of the needs of the user community is also vital to the

development of a technology plan. In addition to this basic needs analysis, an understanding of the local environment is critical, especially in terms of computing resources. What equipment is available and affordable? How robust is the network? The answers to these and other questions will determine to some extent the strategies that can be immediately employed as well as identify those of which additional resources and planning are required (Tebbetts, 1999). Using KM as a tool or process, strategic planning can be designed and implemented as a suitable platform for incorporating KM into the management of libraries and supporting change. The following discussion illustrates what happens in the light of this kind of management, i.e. translating theories into practice. The organization of the discussion which has been mostly extracted from (Bhatt, 2001), is as follows:

- i. Creation of knowledge
- ii. Knowledge presentation
- iii. Access, authentication and authorization
- iv. Knowledge employment
- v. Cultivation of KM culture
- vi. Organizational learning and learning organization

### **CREATION OF KNOWLEDGE**

Knowledge creation deals with novel and useful ideas and solutions. Novel ideas depend on information, the knowledge base and a creative mind. According to Plessis (2007): the combination of KM with innovation of knowledge is a necessity on the base of a strategic management planning. Innovations that are supported by the enthusiastic and energetic staff as well as collaboration and knowledge development/ knowledge sharing, provides the information necessary for the creation of the following kinds of knowledge needed the guarantee change:

- i. How to turn the traditional libraries into modern ones.
- ii. How to empower librarians to be able to cope with change?
- iii. How to upgrade the academic libraries and librarians.
- iv. How to develop informed university members? and
- v. How to contribute to the creation of critical thinkers and independent users.

### **KNOWLEDGE PRESENTATION**

The above list should be converted into action and implemented be step. The creation of knowledge for libraries and its implementation is an endless task. However, along with the progress with these tasks, the related activities and their usefulness for information seekers should be presented. Libraries, like other service- based businesses, should market their services and available information. Then, they will find their customers and their value can be acknowledged. Presentation of knowledge is a kind of marketing the goods in academic libraries. Among the different channels for presentation of knowledge, it is preferred to be installed a new version of an electronic library system that is a distributed client/ server one.

This system can be a means for knowledge presentation in academic libraries. All printed materials available in academic libraries as well as available electronic materials can be

accessed through this integrated system. Also, as computer systems have proliferated and become easier and easier for more and more people to reach through the global Internet, the need for sophisticated security- including authentication, authorization, and access control- has grown. If the authentication is based on Internet protocol (IP) address, the vendor's computer assumes any workstation with that IP address is an authentic user and has the authority to access the database. New methods for authentication and authorization are being developed to verify users for access to restricted databases. For example, proxy servers that take incoming IPs and change them to other IPs are being used by commercial Internet providers to authenticate users for vendor databases. Clifford A. Lynch (1997) emphasizes that it is important to have a balance between the rights of commercial systems and public access and suggests that authentication and authorization systems should take this balance into account:

It is important at this time to think carefully about functional requirements, about roles and responsibilities, and about issues such as the balance between individual privacy and individual accountability (and to whom individuals are accountable) in structuring the authentication and authorization mechanisms that will support the networked information environment. Libraries and the higher- education community can and must provide an important counterbalancing voice to ensure that these mechanisms effectively and responsibly support a networked information environment that fully mirrors the wealth of options available today in the print world for obtaining access to information, rather than just pure provider- consumer interactions.

## **KNOWLEDGE EMPLOYMENT**

Knowledge employment deals with the applying of knowledge and converting it into practice. According to (Bhatt, 2001) it means making knowledge more active and relevant for the firm in creating values.

- i) Turning traditional libraries into electronic ones. Libraries are concerned with how users seek information in networked environments. Pursuit of this concern plays an important role in attempts to provide better services for their users. According to Line (1990): If a library doesn't build a good collection or if a collection is of limited usefulness, it is inefficient.

An automated library calls for an electronic platform that provides appropriate facilities such as extending services to visible and invisible users; saving time in acquisitions and cataloging; disseminating easily and quickly the values and knowledge of information in research and education.

- ii) Empowering librarians to be able to cope with change. It is common that in a time of transition, librarians who have been working in traditional libraries are reluctant to change their work methods. The role of human resources in KM is emphasized by (Soliman, F. and Spooner, K. 2000): They believe that one of the great responsibilities of the librarian is control and evaluation of the knowledge as well as their contributions to its dissemination, because when knowledge is distributed, it can be analyzed and evaluated against its usefulness by others.

Some of the endeavors that can help librarians cope with change are as follows:

- Annual conferences for catering librarians.
  - Special committees.
  - Regular training courses and education.
  - The encouragement of librarians to publish, to market their services, to organize educational program, to prepare research tools, etc.
- iii) Trying to upgrade the status of the academic libraries and librarians' in the university. In order to change the scene of academic libraries, some issues should be considered.
- a) Redesign library services, increase access to local, national and international information by establishing the library network and by designing the Library Website.
  - b) Initiate outreach services and interlibrary loan programs, especially national interlibrary loan.
  - c) Improve reference services and materials and establish a virtual reference desk.
  - d) Provide services for electronic materials.
  - e) Hold regular skills development workshops for librarians, and brainstorm new ideas, focusing on search retrieval skills, working skills in networked libraries and training user education skills including teaching methods.
- iv) Developing informed university members: According to Buckland (1988) information deals with the process of getting informed. However in his book, *Information and information systems* (1991), he also pointed to information as knowledge. This conversion of information into knowledge can happen if it becomes a part of our thinking process or influences our ideas and beliefs. Making users informed about available information and information services is a part of library service. If this kind of service is provided on a regular basis, it not only fulfills information needs but it also increases the knowledge of the university members about information, knowledge and the library and their importance for their professional success. It also proves that the library is a dynamic institution and a support for teaching, learning and research. The library should have several channels for communication such as electronic newsletter, Journal, different information sheets, manuals and instructional booklets and also organizes book fairs, and conduct seminars.
- v) Contributing to the creation of critical thinkers and independent users:  
Survival in an information- based and ever- changing society depends on how far students are capable of learning independently and aligning their knowledge and skills with the changes in society. We should organize ourselves and run our libraries to respond to the challenges of change (Buckland, 1992). Preparing independent learners must be the focus of educational systems (Rogers and Smith, 1983). Academic libraries as a part of the educational system can play their role in the regard.

Palmer (1984) and Harris (1983) stress that a close involvement of librarians with course planning teams is important and provides them with an improved knowledge of curriculum content and learning styles, which aids more effective provision of

learning materials and user education. Harrison (1985) believes that academic librarians should be supporting this total experience, and in order to refine the library's services and effective support, they should play a full part in the planning and decision making stages of course creation, and should develop user education programs. According to Dougherty (1993): the Ultimate responsibility rests with librarians for policy decisions. They should be well- informed and knowledgeable in order to they themselves can outline their vision for future. Preparing independent learners must be the focus of educational systems (Rogers, 2005). Academic libraries as a part of the educational system can play their role in this regard. Lester (1984) believes that the users should be taught how to be as adept as a good librarian at handling and retrieving information.

## **CULTIVATION OF A KNOWLEDGE MANAGEMENT CULTURE**

The most rewarding in the process of KM, is the creation of KM culture in the organization. Bhatt calls it "collective knowledge" of an organization (Bhatt, 2005)- In the process, strategic management mentioned earlier is the method that can be employed for the management of libraries. It is a good tool applied in practice to create knowledge and keeps the library a growing organization.

The value of thinking strategically, sharing knowledge, modifying and up- dating knowledge can be achieved through the KM process. The emerging culture of creating knowledge and using it is the main attribute for supporting and cultivating change and preventing a return to the traditional way of thinking and acting. The process of KM also changes the academic staff and university authorities' attitude towards the library profession. They put value of the educational role of libraries and believe that librarians can be a good support for teaching, learning and research.

## **ORGANIZATIONAL LEARNING**

According to McGill et al. quoted in (Malhorta, 2005), organizational learning is "the ability of an organization to gain insight and understanding from experience through experimentation, observation, analysis, and a willingness to examine both success and failure.".From this point of view, the library community should know that if they increase their knowledge base and employ it in practice, their achievement will be higher. Also, it shows a clear understanding of the situation and gives us flashes of great insights into management process in academic libraries and helps us in increase our experience, understanding and realize the reasons and failure.

## **LEARNING ORGANIZATION**

It is a kind of culture that should be created in an organization and it is our ideal achievement. When this culture takes roots, it can hardly be removed. Malhotra (2005) defines learning organization as an "organization with an ingrained philosophy for anticipating, reacting and responding to change, complexity and uncertainty". I think creating a learning organization is the main reward that one gains form employing KM. The strategic approach to the management of the libraries provides a relevant context

for employing KM. These approaches have provided an insight for most people in the university community about the role and capabilities of libraries in enhancing teaching, learning and research and about the value of information in their academic life.

## CONCLUSION

The academic libraries are called upon to play a crucial and leading role over other types of libraries by transforming their information management skills, techniques, practices and recourses. Such transformations at the present age create new functions for professional librarians, and if they do their best, it will promote the quality of library services. The strategic approach to the management of libraries, creating a learning organization and gaining the ability of organizational learning as well as information technology planning provide a relevant context for employing KM. These approaches have provided an insight for most people in the university community about the role and capabilities of libraries in enhancing teaching, learning and research and about the value of information in their academic life. Redefining roles and responsibilities, positive involvement of information personnel in delivery system and constant evaluation of goods and services will make the academic libraries highly appropriate and resourceful in future.

## REFERENCES

- Bailey, C. and Clarke, M. (2005). How do managers use knowledge about knowledge management. *Journal of Knowledge Management*, 4 (3): 235-243.
- Barber, David. (1996). Building a digital library. *Library Technology Reports*: 573-736.
- Bhatt, G. D. (2001). Knowledge management in organizations: examining the interaction between technologies, techniques, and people. *Journal of Knowledge Management*, 5 (1): 68-75.
- Buckland, M. K. (1988). *Library services in theory and context*. 2<sup>nd</sup> ed. London: Pergamon.
- Buckland, M. K. (1992). *Redesigning library services: a manifesto*. Chicago, IL: ALA.
- Dougherty, Richard M.; Dougherty, Ann P. (1993). The academic Library: A time of crisis, change, and opportunity. *Journal of Academic Librarianship*, 18 (6): 342-345.
- Harris, C. (1983). User education and user studies. In: L. J. Taylor, ed. *British librarianship and information work 1970-1980. special libraries, materials, and processes*. London Library Association, 2: 145-164
- Harrison, C. (1985). The librarian and the curriculum. *Education Libraries Bulletin*, 28 (2): 5-10.
- Koenig, M. (2000). *Knowledge Management. in library and information work worldwide 2000*. General editor Maurice Line. London: Bowker Saur, 193-221.



- Lester, R. (1984). User education in the online age. *Aslib Proceedings*, 36 (2): 96-112
- Line, M. B. (1990). *The concept of library goodness: user and library perception of quality and values*. In *academic library management*, edited by Maurice B. Line. London: library association.
- Lynch, C. A. (1997). Authentication and authorization, part 1: the changing role in Networked Environment. *Library Hi Tech*. 15: 30-38.
- Malhotra, Y. (2005). Organizational learning and learning organizations: an overview. Retrieved on 28th August 2005, from <http://www.kmbook.com/orglrng.htm>
- Martin, Susan K. (1981). The changing role of library director: fund raising and the academic library. *Journal of Academic Librarianship*, 24 (1): 3-8.
- Palmer, M. (1984). Learning resources for BFC and TEC. In: Tim Lomas, ed. *Libraries and BTEC; cases papers and notes*. London: library association, colleges of further and higher education group: 1-6.
- Plessis, M. (2007). Knowledge management successes? *Journal of Knowledge Management*: 11 (2): 91-92
- Rogers, C. (1983). *Freedom to learn for the 80*. London: Merrill.
- Smith, H. (1955). *The purpose of higher education*. New York : Harper & Brothers.
- Soliman, F. and Spooner, K. (2000). Strategies for implementing KM:rololfvhuman resources management. *Journal of KM*, 4 (4): 337-345
- St. Clair, G. (2003). Knowledge management. In *Encyclopedia of Library and Information Science*. 2<sup>nd</sup> ed., New York : Marcel Dekker, 1486-1494.
- Tebbetts, D. R. (1999). *Building the digital library infrastructure: A primer in: Information Technology Planning*. New York, London: The Haworth Press, Inc.
- Walt, C. F. (1997). Tomorrow's Librarians: Thriving on complexity paper presented at the 73th annual meeting of the Potomac Technical Processing Librarians, Washington, DC, October 17, 11.