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KNOWLEDGE MANAGEMENT: EMERGING ROLES AND CHALLENGES OF LIBRARY AND INFORMATION PROFESSIONALS

Oleh / By

Professor Dato' Dr. Raja Abdullah Yaacob
Faculty of Information Management
UiTM Campus Puncak Perdana

Transformasi Perpustakaan Melalui Teknologi Maklumat

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Knowledge Management (KM) has given library a new lease of life.
Library is not going to be closed but have come
up with a new vision and quite quickly become very much appreciated
and it is a leading player in the KM field.

(Maryam Sarrafzadeh)

Abstract:

With globalization the credibility of the workforce is determined by how best they can accommodate themselves in the growing challenges of k-economy. Knowledge Management (KM) has been in operation for quite some time. Its close affinity to library and information management is undeniable. Library has not relinquished its role and interest as information and knowledge providers. It is fitting then to recognise that a well planned strategy, involving the library and the management of the institution could provide significant influence to achieve the KM objectives. Librarians and information professionals (IPs) should be dedicated to fulfilling the varied information needs of the users, amidst the k-economy by providing accurate and relevant bibliographic and physical access and offer referral to the multidimensional range of information within the library premise and outside. KM is a challenge to the information professionals and for the fields of librarianship and information science and needs to be taken seriously to leverage the intellectual assets and to facilitate knowledge utilization and creation.

Keywords: *K-economy, knowledge management, globalization, library management, information management, information professionals, librarians, information services, knowledge workers..*

Introduction

In the present k economy, knowledge dominates the society in all types of business pursuits as well as in their everyday lives.   Knowledge-driven economy has been defined as the rapid development and convergence of communications, computing and digital content to enable the globalization of production and stimulating enterprise and creativity. "Libraries of all sizes and types are embracing digital collections, although most libraries will continue to offer both print and digital collections for many years to come." (Tenopir, 2003). It is not about limiting the frontiers of knowledge, but more importantly effective use and exploitation of all types of knowledge to fulfil the business and economic activities. In the educational sector, the library management and services have increasingly applied ICT and utilized the electronic information resources to complement the conventional materials. Librarians have played key roles in the collecting, storing, organizing and disseminating of knowledge to society. Although the advent of Internet has brought predictions of the demise of the libraries, it has proven that libraries are, not only crucial but librarians' role as knowledge providers have become even more significant. In universities, for example the head librarians continue to become important partner in decision-makings while administrators, professors, and students see the library as the nerve of the campus.   Libraries have indeed changed radically from their custodial role and emerged as dynamic partners in knowledge management programmes.

Transformasi Perpustakaan Melalui Teknologi Maklumat

Knowledge Management

In the information age, knowledge rather than physical assets or resources is the key to competitiveness. Knowledge about customers, how to improve services is becoming more crucial. It is therefore inevitable for companies and other organizations to harness and use knowledge effectively. It is recognized that knowledge is still underused or even misused resource. Hence, the need for systematic knowledge management system to help the staff know what they should know, store, organize and exploit effectively. Malhotra defines KM in the following terms: "Knowledge Management caters to the critical issues of organizational adaption, survival and competence in face of increasingly 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" (Malhotra 1997). Other authors define KM as the processes. Jan Duffy, for example defines it as "a process that drives innovation by capitalizing on organizational intellect and experience." (Duffy, Jan 1999). Gartner Group defines it as "a discipline that promotes an integrated and collaborative approach to the process of information asset creation, capture, organization, access and use." (Bair, Jim 1999).

Shift towards Knowledge Management in Organizations

Organizations, especially in the private sector have to change in the ways they manage, using a number of strategies, including knowledge management. It is imperative that knowledge management has to be applied because of the following reasons:

- The emergence of knowledge age
- Globalization
- Dynamic labour market
- Rapid technological development
- Knowledge as the only corporate non-diminishing asset.

Some of the knowledge resources are not fully utilized or completely wasted. There is a growing awareness that know-how adds significantly to the value of a business and in some cases, represents almost the entire value base." (Guthrie, James, 2010). This occurs when assets, capabilities, products are unique, valuable, difficult to imitate, having few competitors leading it to become a leading edge. Knowledge management application allows the organization to continually change in the way it functions and enables it to predict and keep up with future trends. Knowledge management was treated as a formal management activity way back in 1965 and is now prevalent in most large companies and also in public sector. Peter Drucker, Paul Strassman, Ikujiro Nonaka and Peter Senge were some of the management theorists who have contributed to the evaluation of KM. They emphasised on the significance of information and knowledge as organizational resources. Figure 1 shows the conceptual framework of KM process, from the identification of knowledge needs stage of the organization to the utilization that knowledge. By middle of 1980s, the importance of knowledge as a competitive asset was recognized. However, most of organizations failed to address the strategies and methods for managing and utilization of the knowledge assets.
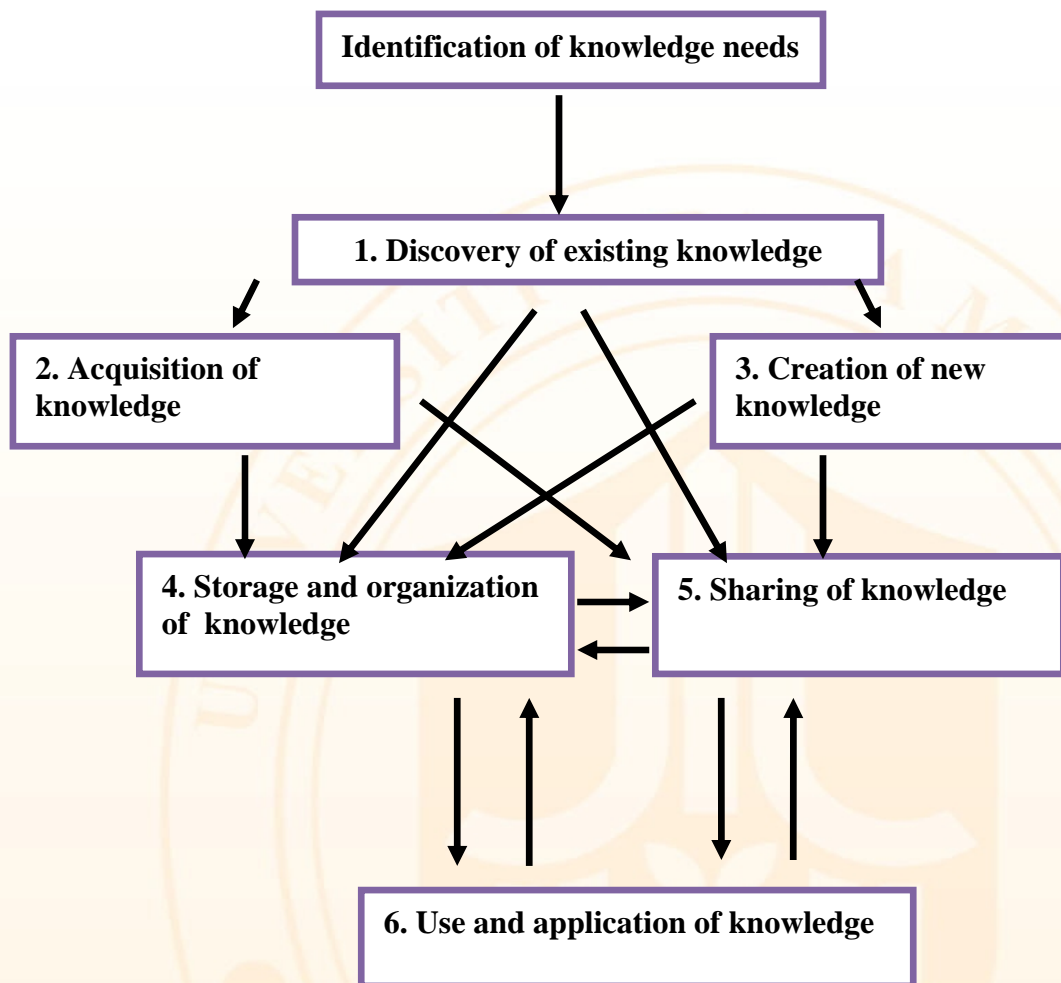
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┌─────────────────────────────────────┐
│   Identification of knowledge needs  │
└─────────────────────────────────────┘
                    │
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┌─────────────────────────────────────┐
│   1. Discovery of existing knowledge │
└─────────────────────────────────────┘

┌──────────────────┐        ┌──────────────────┐
│ 2. Acquisition of│        │ 3. Creation of new│
│    knowledge     │        │    knowledge      │
└──────────────────┘        └──────────────────┘

┌──────────────────────┐    ┌──────────────────────┐
│ 4. Storage and       │ →  │ 5. Sharing of        │
│ organization of      │ ←  │    knowledge         │
│    knowledge         │    │                      │
└──────────────────────┘    └──────────────────────┘

        ┌────────────────────────────────────┐
        │ 6. Use and application of knowledge │
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Figure 1: The Conceptual Framework of Knowledge Management Process
Source: Bouthiller & Shearer (2002**)**

Roles and Functions of a Knowledge Manager

Generally, the initiatives towards managing knowledge requires specific planning and alignment of organizational objectives with the knowledge objectives. Chief Knowledge Officer (CKO) or a Knowledge Manager should spearhead and be responsible in the overall implementation of the knowledge initiatives. Among the roles of a CKO are:

- Championing
- Educating users
- Educating management team
- Measuring impacts of KM
- Mapping existing knowledge
- Defragmenting scattered knowledge
- Creating technology channels

In addition to that, a CKO should embark on the tasks of, supporting ICT and eliminating knowledge flow gaps, creating knowledge sharing culture, identifying knowledge gaps, developing and expanding community of practices (CoPs), supporting group or team work, and diffusing best practices. Davenport et al (1998) categorized KM into four broad types of perspectives:

i.   To create knowledge repositories,
ii. To improve knowledge access and transfer.
iii. To enhance the knowledge environment
iv. To manage knowledge as an asset and to recognize the value of knowledge to an organization.

Galagan (1997) suggested a set of knowledge management processes as, generating new knowledge as accessing knowledge from external sources., representing knowledge in documents, databases, softwares and so forth, embedding knowledge in processes, products, or services, transferring existing knowledge around an organization, using accessible knowledge in decision-making, facilitating knowledge growth through culture and incentives, and measuring the value of knowledge assets and the impact of knowledge management.

Knowledge Management: Librarians' Perceptions

Librarians' growing interest in knowledge management led to a number of issues regarding the difference between information and knowledge, and between information management and knowledge management. Questions raised include on the person who should be in charge of information and knowledge management in the organization, given librarians and information professionals have had appropriate education and training in library and information science. Within the same context, another point raised was, who should be the most suitable candidate for the position of "Chief Knowledge Officer" (CKO) in the organizations, and what aspect of KM can be implemented in libraries?

Library and information professionals have shown great interest in KM as it is regarded to have considerable similarity on the concept of coding, storing and transmitting knowledge, a the primary focus of libraries. (Townley, 2001). For many, KM is perceived as a re-branding of librarianship or information management. KM is not regarded as a new phenomenon as librarians have always operated as intermediaries between people who have knowledge and those who need to know. (Sarrafzadeh, Maryam, 2009). However, the business community does not view the essential identity that knowledge management is little more than librarianship (Koenig, 996, p. 299). Bender's (1999) on the other hand, reiterated that knowledge-dependent organizations would be wise to integrate their own libraries into their knowledge management programme.

Global Knowledge: a Challenge for Librarians

Information and communication technologies have created the knowledge society, which will impact upon developing economies as well as on developed nations. Librarians have important role to play in overcoming the digital divide, and making reference and sharing global knowledge. Information and knowledge are expanding in quantity and accessibility. In many fields future decision-makers will be presented with unprecedented new tools for development. In such fields as agriculture, health, education, human resources and environmental management, or transport and business development, the consequences could be revolutionary. Communication and information technology has enormous potential, especially for developing countries and in furthering sustainable development. (Annan, Kofi 1997). With the vision 2020, the Malaysian government hopes to create within the next twenty years a developed nation with an information and knowledge-rich society.

In terms of collection development, libraries have begun to reduce the traditional materials and have instead increased the purchase of network services and digital resources (Bertrot et al., 2004). Many libraries in Malaysia have devoted most part of their expenditures to library automation and ICT facilities. Network-based services and resources offered by libraries today, including digital references, digital collections, online databases, e-journals, and e-books, enable libraries to operate anywhere, allowing patrons with internet access to access content, services, and resources any time. (Bertrot et al., 2004). Librarians and IPs need to realign their service in line with the knowledge demand of the users in the workplace. Users require repackaged or analyzed information that is needed for productive use. The issue for companies, seeking to capitalize on knowledge reflects the need for the information centers to provide the right information, at the right time to the right people. (Financial Times 28 April 1999). KM is recognised as a key factor in organizational success in both profit and not-for-profit organizations. It would be interesting to see the potential benefits in its application within libraries, and their relationship with the parent organizations and with the communities they served.

Librarians and IPs are trained to be experts in information searching, selecting, acquiring, organizing, preserving, repackaging, disseminating, and serving. However, professionals in information technology and systems have also regarded information management as their domain because of the recent advances in ICT and systems. The freely accessible information on the web, in conjunction with the escalating costs of library materials, threatens the traditional mission of libraries to create and sustain large, self-sufficient collections for their patrons (Troll, 2002). Libraries need to reposition or enhance themselves to act as KM centres for small businesses, providing both KM and competitive intelligence (CI) services.

Potential of KM for Libraries: Contributions of Librarians

An increasing number of corporate libraries are managing their knowledge by archiving information in document form, maintaining dynamic databases and data warehouses of corporate knowledge, and mapping human knowledge within the organization. Recording the tacit knowledge and converting it into explicit knowledge becomes a new challenge for librarians involved with KM. As a learning organization, libraries should provide a strong leadership in KM which involves both managing tacit and explicit knowledge as shown in table1.

The library's challenge in managing and digitizing the knowledge can be undertaken by providing a repository of all of those knowledge resources, both internal and external Libraries' new role as a learning and knowledge centres as well as the knowledge commons for their specific users is a reality. It is a centre for learning and intellectual discourse and facilitate knowledge creation. Unlike those business organizations whose goal for knowledge management is for competitive advantage, most public, academic, and research libraries, with the exception of company libraries (which may be known or called corporate libraries, special libraries, or knowledge centres), have a different orientation and value. Instead of limiting to internal use only, the most important mission of public, academic, and research libraries is to expand the access of knowledge for their users and promote the sharing of knowledge within the organization and outside .

Table I : KM- tools and knowledge conversion process: summary table

	To Tacit	To Explicit
	Socialization	Externalization
From Tacit	▪ Knowledge Maps	▪ Groupware ▪ Artificial Intelligence
	Internalization	Combination
From Explicit	▪ Innovative Support Tools	▪ Electronic Document Management ▪ Intranet

Hwa-Wei Lee, (2005) suggested that libraries can participate in enhancing their knowledge management functions in some critical areas and services, such as, knowledge resources management; resources sharing and networking; information technology development; user services; and human resources management (tacit knowledge). Librarians need to move forward in line with the new shifts toward KM, if they do not want to become obsolete. With the involvement with KM, librarians should have got higher profile. In companies for example, the realization of the value of KM realize leads to increased realization of the need for libraries to be involved directly in the KM. There seems to be a correlation between the progress of KM and the importance of libraries, especially the corporate libraries. In reality all businesses need to be competitive if they want to stay in business. There is now urgent competition for knowledge other then funding within their own organization. KM helps libraries to survive in their competitions. Librarians can contribute in their traditional ways, such as by: -

- *Providing access*
- *Working in partnership*
- *Structuring knowledge*
- *Imparting skills*
- *Preserving heritage, and*
- *Inspiring trust*

The above aspects are crucial in the knowledge society. Providing access to information has traditionally been about buildings, based around institutions offering services to on-site users. For example, a librarian in a large corporation is likely to be more familiar with explicit, recorded (print or online) and externally produced information sources than with databases produced by diverse departments. With this regards, librarians and IPs can further be associated with the KM programme through the following activities:

- *Identification of information sources*
- *Acquisition of information sources*
- *Categorisation of information sources*
- *Storage of information sources*
- *Transfer and dissemination of information sources*
- *Retrieval of information sources*
- *Use of information sources*

Librarians are used to sharing information to their respective communities. They are competent in disseminating of information, especially in terms of reprocessing materials and minimising information overload of their clients. This fits in well with the practice of knowledge-based enterprises, striving to continually change their products and services to meet customers' changing needs. They are also central players in the organisation, and are well-versed with ICT and computer systems for knowledge sharing. They are also closely associated with wide range of staff and familiar with the information and knowledge needs of the organization.

Librarians as Knowledge Managers

Some commentators argue that librarians and IPs are/will be the knowledge managers of the future. "Librarians in new millennium organizations will be knowledge managers and information analysts. They will perform a range of business roles. They will work as integral members of the business teams that need these roles, and many will work with those teams rather than in the library." (Klobas, p. 39). Librarians who take on strong KM roles have strong political positioning in their organization and expertise unconfined by the tradition boundaries of maintaining collections of formally published textual sources. Their key role often focuses on supporting KM processes as intermediaries, for example in the selection of information sources, alleviation of information overload, training in the use of sources and intranet development.

In addition to those aspects that are specifically focused on knowledge management, other challenges common to the very existence of the library profession and services should be addressed so that it will have the enduring trust as the custodian of knowledge as well as the most conducive centre for library and information services to the customers.

Prerequisite for KM Implementation

Knowledge management can be achieved with serious consideration of the culture and management style of the individuals, groups and the organizations. Every organization owns information and records it creates and receives in the course of the daily business transactions. Crucial element of any KM programme is the information management in the organization. It is therefore necessary for the organization to identify its information and knowledge assets, their recording and storing, sharing and protecting, which constitute the heart of the knowledge management system. Additional knowledge needs to be shared across the organisation by the staff who should also work collaboratively and build a common knowledge management system. Knowledge management therefore affects all parts of the organizational development and needs to be led top down in the management infra-structure. An effective KM system needs, not only enthusiasm but also the commitment of the leadership. Knowledge management initiatives can support a change in organisational culture. There are some prerequisites to the success of KM implementation in any organization. Some of the factors are listed below.

i.   *Knowledge Management Culture*

Inculcating the new organizational culture is regarded as one of the most vital elements. The existing culture can amplify or inhibit knowledge management projects. A knowledge-oriented culture is often considered as a basic infrastructure for successful knowledge management implementation.

ii.   Knowledge Sharing

Sharing of knowledge is a new culture in Malaysian organizations, but it is one of the essential requirements in the KM programme. The main obstacles to all current work in knowledge-sharing involve difficulties in achieving consensus regarding what knowledge to be given and received within the organization. A challenge in realizing the knowledge management programme is in getting people to share their knowledge. Knowledge management is the process of capturing a company's collective expertise wherever it resides in databases, on papers, or in the people's head and distributing it to wherever it can help produce the biggest payoff. (Wulff and Suomi, 2003).   The most effective way to create a knowledge-sharing culture is first to start to practice it at an individual level.

Sharing is more than access as it helps others make meaning and obtain understanding.   Formerly, a library was viewed as a place for information storage and dissemination. In view of the librarian's changing profession, it has also become clear that they are now being charged with the mission to explore and implement new and innovative methods to encourage sharing and to better manage information.

iii.   KM Training of Knowledge Workers

Changes to national philosophy of learning and education have to be made in order to accomplish the goal of creating knowledge workers. These include the promotion of information literacy and reading in the curriculum of education and the role of knowledge in the economy. At the workplace, dedicated and continuous training programmes of workers and potential knowledge workers have to be provided within the context of the learning organization in consonance with the attributes required of a knowledge worker. Mark Disney and Nina Adlan, believe that all workers should have the suitable skills and mindset to fit in an economy where things happen faster than before and where talents such as communication, creativity and critical thinking will improve efficiency and effectiveness. (Disney and Adlan, 2001) The CKO is responsible for the overall planning and implementation of the whole knowledge initiatives in educational institution. Training of knowledge workers may include learning and the relearning and unlearning process that may include the following aspects:

- *Structuring process*
- *Removing knowledge sharing barriers*
- *Aligning local knowledge*
- *Creating process triggers*
- *Provide platform for collaboration*
- *Building knowledge repositories*
- *Introducing cross functional tools*
- *Infusing external knowledge*
- *Enabling tacit knowledge transfer*

At the professional level, most library schools have made concerted effort to add new KM elements in the curriculum. In fact, the Faculty of Information Management, UiTM has initiated a programme in KM at the Masters level, while elements of KM are incorporated in all its undergraduate programmes. The objectives of this course are to teach students the:

- concept of knowledge management, creation cycle and the factors involved in the process
- factors involved in the process of knowledge creation and the knowledge available in their organization and develop a system to manage them

- practical knowledge on how to identify, develop and manage the whole knowledge management system by looking at examples on how major organizations in the world manage their knowledge and at the same time discover why knowledge and it's management is so important to these organizations
- development of a suitable knowledge management program for their organization and more importantly to benefit from this program strategically and monetarily

iv.   Best Practice

Also called community of knowledge, or the community of practice, it is a group of people   who share information, insight, experience, and technology in an area of common interest.   Community of practice may operate at a workgroup, departmental, or corporate level and allow contributors and users of knowledge to set their own ground rules for their exchanges.

v.   Right Perceptions on KM

Librarians and IPs need to have the right perceptions in the area where their common interest have shifted from the traditional library services to the much-sought after knowledge management. Their perceptions of KM must, not only be in line with the demand of the communities, but they must also draw the distinctions between the library and information services and the KM services. Librarians are at a critical juncture as more often than not they are good candidates to assist the company or organization's attempt to implement of KM systems.

vi.   Sustaining Services ICT

The new breed of librarians and IPs should not only have high information literacy, research skills, but also appropriate ICT skills.   As far as ICT infrastructures are concerned, there are some grounds for optimism as ICT has been regarded as the state-of-the arts in most organizations and funding on IC is allocated in the annual budget.

vii.   Records Management

Economic growth leads to records explosion which, if not systematically managed, will   impact on the efficiency of services. Records constitute the bulk of the organization's knowledge both traditional and electronic forms, and it is therefore imperative that this corporate memory be systematically organized and preserved.   An organization or any governmental body can only be effective and efficient if its:

- records management is considered a business process, designed to support business objectives;

- records are considered a resource and are utilized fully and cost effectively to realize business objectives;

Governmental body or organization should create and maintain a culture which will promote effective and efficient records management in compliance with the legislations, to facilitate efficient and timely decision-making. Knowledge on records management and its systematic records/knowledge management is inevitable

Conclusion

KM enables an organization to compete better while retaining the knowledge acquisition, knowledge documentation, knowledge transfer, knowledge creation, and knowledge application even in case experience personnel happen to leave the organization. It is crucial to design and implement knowledge management systems and this calls for a new set of roles and skills among librarians, so that the business transactions and services could be undertaken innovatively. Knowledge management presents a major shift in focus regarding the development and use of knowledge and information in increasing the effectiveness of any organisation. It offers an opportunity for IPs to make themselves relevant to their parent organisations in a much more significant way. It also presents a major challenge to information professionals to engage with issues that have not generally been regarded as their task, either by themselves, or by those with whom they work.

Libraries have had a long and rich experience in the management of information. Many of such knowledge and skills of librarianship can be applied to knowledge management. For any library to succeed in implementing knowledge management, it will require a strong leadership and vision from the top administration, which can influence the organization's knowledge sharing efforts in a positive way. With the phenomenal changes in ICT, librarians have also directed themselves towards providing a wide range of information available within and outside the libraries to users and potential users. Librarians should work together with ICT professionals and others to develop the appropriate knowledge management systems.

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