# KM Practices in Academic Libraries of Malaysia: A Conceptual Framework

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## ABSTRACT

*Knowledge Management (KM) has been used by many other profits driven organizations. But, it is still in an infant concept applied in the non-profit organizations especially academic libraries (AL). The article proposed Binney's KM Spectrum to map the KM Practices in the AL. The librarian's roles and skills are influential to the success of KM applications, when used with KM Spectrum will constitute a suitable model to map KM Practices in today's university libraries.*

**Keywords**

*Academic libraries, KM Practice, Malaysia*

## 1.0 INTRODUCTION

Faced with competition and increasingly dynamic environments, organizations are beginning to realize that there is a vast and largely under utilized asset scattered around the organization – knowledge (Gupta, Iyer & Aronson, 2000). This realization not only occurs in business organizations but also in non-profit organizations such as academic libraries. Nonaka and Takeuchi's (1995) conclude that the source of Japanese success is continuous knowledge creation within an organization, which in turn leads to competitive lead and consequently, success. Zack (1999) shares this view, stating that organizational competitiveness is recognized as coming from the creation, location and sharing of organizational knowledge, and the use of such knowledge in problem solving and realization of business opportunities. Clarke and Cooper (2000) suggest that growing interest in KM comes from the contribution that KM can potentially offer to an organization's key business objectives. Hence, AL can use KM to improve performance, drive innovation or refine products and services.

## 2.0 LITERATURE REVIEW

### 2.1 The librarian roles

The conventional role of AL is to collect, process, disseminate, store and utilize information to provide service to the university community. But that role is changing to provide the competitive advantage for the parent university – a factor that is crucial to both staff and students (Foo, Chaudhry, Majid, & Logan, 2002). This view is shared by Lee (2000). He indicated that the knowledge and experiences of library staff are the intellectual assets of any library and should be valued and shared. As KM is always related to success of many companies, so KM is a viable means in which AL could improve their services in the knowledge economy. This can be achieved through creating an organizational culture of sharing knowledge and expertise within the library. In addition, the library and information press has suggested for a number of years that it is a burgeoning field of great interest to information professionals, since they possess the necessary skills to work in the field (Broadbent, 1997; Oxbrow & Abell, 2002). Ajiferuke (2003) defined knowledge management practices as putting mechanisms in place to ensure that intellectual assets are retained by the company. KM requires a mix of technical, organizational and interpersonal skills: the mix and emphasis varies according to responsibilities, but everyone involved needs to be able to understand the business, communicate effectively and have at least basic competence in handling information and using information technologies (IT) (Corral, 1998). She further stated that, although IPs is not always prominently involved at the outset of KM initiatives, many organizations have brought them in at a later stage, when the ongoing management of *content* usually emerges as the *major technical challenge*. The need to structure and codify information, to have a common language, and to manage selective dissemination of information, has highlighted information specialists' skills in indexing systems, thesaurus construction, and user profiling for customized alerting. However Abell (2000) mentioned that, there is little evidence of the involvement of AL in KM. Ajiferuke (2003) in his study to provide empirical evidence of the role of IPs in KM programs, found that the implementation of a

KM program in library has the potential of improving customer services, expedites services to users, and reducing cost of business operations. He further mentioned that IT is often used in KM programs in informing clients and employees of latest innovation/development in the business sector as well as sharing knowledge among the employees. The key professionals involved in knowledge management programs are information technologists and human resource managers but the IPs also have a role to play as they are traditionally known as good managers of explicit knowledge. At earlier stages of KM, and in most organizations, key professionals involved in KM are staff in the HR, process and product developers or IT (Taylor, 2001). Maponya (2002) found that the difficulty in capturing staff's undocumented knowledge; loss of key personnel and their knowledge; to contribute to knowledge creation of knowledge to the parent university; and to increase knowledge sharing and to increase staff productivity could challenge the library implementing KM practices.. But nevertheless, a study by Suraya and Jamilah (2007) revealed that the National Library of Malaysia has clearly demonstrated their commitment in the adopting KM. It has managed to identify, create, represent and distribute knowledge for reuse, create awareness, and learning across organizations. Kim (1999) postulated that librarian's roles should not be limited to being the custodians or gatekeepers of information. She asserted that knowledge professionals will have to move from the background to the center of the organizational stage, to jointly hold the reins of knowledge management with users and the technology experts, to help steer and shape the knowledge policies, structures, processes, and systems that will nurture organizational learning. She pointed out that KM practices aim to draw out the tacit knowledge librarians have, what they carry around with them, what they observe and learn from experience, rather than what is explicitly stated. KM process involves the creation, capturing, sharing and utilization of knowledge. Tang (1998) pointed out that the librarians' roles is in knowledge creation, which implies participating more in user's reading and studying by identifying information needs. Capturing and acquiring knowledge is crucial to the success and development of a knowledge-based organization. Another role is as the builder for knowledge bases and repositories, a crucial area of KM for managing organizational memory (Foo et.al., 2002).

## 2.2 The Librarians' skills

Libraries are human organizations, so they are subject to the same sort of influences that many other organizations must deal with (Budd, 1998). Ajiferuke (2003) found that, the ability to analyze business processes, understanding of the knowledge process within the business process, ability to use information technologies, and document management skills as the core competencies required of information professionals in knowledge management programs. According to Suraya et al. (2007) libraries should be doing the research and development of knowledge, creation of knowledge bases, exchange the sharing of knowledge bases. Thus, when knowledge innovation becomes the core of the knowledge society, libraries will then be an essential link in the scientific system chain. It will act as bridges for turning the results of innovation into realistic productive forces, and thus strengthen knowledge flow Lee (2006). The changing environment of academic life demands new competencies in academic librarians (Mahmood, 2003). As a result, the knowledge and expertise of academic librarians needs to be seen as the library's greatest asset. KM can help change the library into a more competent, knowledge sharing organization (Jantz, 2001). Bishop (2001) pointed out that the challenge for the information professional lies in applying competencies used in 'managing information' to the broader picture of 'managing knowledge'. He argued that managing knowledge requires a mix of technical, organizational and interpersonal skills. In making knowledge more accessible, it is useful to have knowledge of the organization, customer service orientation and training skills (Koina, 2002). Teng & Al-Hawamdeh (2002) suggested that the skills needed by the professionals in a knowledge-based environment are inclusive but not limited to IT literacy; that is knowing how to use the appropriate technology to capture, catalogue and disseminate information and knowledge to the target audience and knowing how to translate that knowledge into a central database for employees of the organization to access. All this skills will need a sharp and analytical mind; Innovation and inquiring; which will enables knowledge creation, flow and communication within the organization and between staff and public. Thus, it is important for AL to encourage librarians to constantly update and upgrade their skills and competencies.

Librarians have been building and searching online databases for a decade or more, which conforms that knowledge acquisition is the starting point of KM in libraries (Shanhong, 2000). Jantz (2001) had pointed out that in many library settings; there is no systematic approach to organizing the knowledge of the enterprise, and making it available to other librarians and staff in order to improve the operation of the library. Academic librarians need to prepare themselves for using and sharing knowledge.

## 2.3 KM Spectrum

We will focus on Binney (2001) as we will be using Binney's six (6) spectrum as the foundation of the framework. The KM Spectrum, may help AL make sense of the large diversity of applications appearing under the heading of KM, and to help them evaluate where they are in KM terms. Binney (2001),grouped KM applications into six categories. For each of these

categories of KM, Binney (2001) lists several examples of KM Systems or approaches that support them (see Table 1)

**Table 1: KM Spectrum and Applications (Binney, 2001)**

| Spectrum | Application |
|---|---|
| Transactional | 1.Case Based Reasoning (CBR)<br>2.Help Desk Applications<br>3.Customer Service Applications<br>4.Order Entry Applications<br>5.Service Agent Support Applications |
| Analytical | 1.Data Warehousing<br>2.Data Mining<br>3.Business Intelligence<br>4.Management Information Systems<br>5.Decision Support Systems<br>6.Customer Relationship Mgt. (CRM)<br>7.Competitive Intelligence |
| Asset Management | 1.Intellectual Property<br>2.Document Management<br>3.Knowledge 4.Valuation<br>5.Knowledge Repositories<br>6.Co ntent Management |
| Process | 1.TQM<br>2.Benchmarking<br>3.Best Practices<br>4.Quality Management<br>5.Business Process (Re) Engineering<br>6.Process Automation<br>7.Lessons Learned<br>8.Methodology<br>9.SIE/CMM, ISO9xxx, Six Sigma |
| Developmental | 1.Skills Development<br>2.Staff Competencies<br>3.Learning<br>4.Teaching<br>5.Training |
| Innovation and Creation | 1.Communities<br>2.Collaboration<br>3.Discussion Forums<br>4.Networking<br>5.Virtual Teams<br>6.Research and Development<br>7.Multi-Disciplined Teams |

### 2.31 Analytical KM

According to Binney (2001) analytical KM provides interpretations of, or creates new knowledge from, enormous amounts of material. In analytical KM applications, large amounts of data or information are used to derive trends and patterns, that is making apparent that which is hidden due to the hugeness of the source material and turning data into information, which, if acted on, can become knowledge. Traditional analytical KM applications such as management information systems and data warehousing have analyzed the data or information that is generated internally in companies (often by transactional systems). These analytical KM applications have focused on customer-related information to assist marketing development functions (Yoon, 1999). They are being joined by a range of competitive or business intelligence applications which incorporate external sources of knowledge or information. In the perspective of academic libraries, there is a need for academic librarians to extend their expertise.

### 2.32 Asset Management KM

As proposed by Binney (2001), asset management KM focuses on processes associated with the management of knowledge assets. Which includes, the management of explicit knowledge assets which have been codified in some way (Guthrie & Petty, 1999); and the management of intellectual property (IP) and the processes surrounding the identification, exploitation and protection of IP (Teece, 1998). Teece (1998) mentioned that, IP has been included in the asset management category rather than the innovation and creation category as most of the literature around IP tends to discuss the assets as a product of some other business process. Once created in this way, the assets then need to be managed. Once captured, the assets are made available to people to use as they see fit. This element of the spectrum is directly corresponding to a library, with the knowledge assets being catalogued in various ways and made available for unstructured access and use. These knowledge assets are often created as a by-product of ``doing business'' and are kept for future uses, often unknown at the time of creation, capture and/or storage.

### 2.33 Process-based KM

The process-based KM element covers the codification and improvement of process, also referred to as work-practices, procedures or methodology. Process-based KM is often an outgrowth of other disciplines such as the TQM and process reengineering. The knowledge assets produced in this category are also known as ``engineered assets'' in that they often involve third parties or specialists working with practitioners or subject matter experts (SMEs) to document these best practices in standard formats. Process knowledge assets are often improved through internal lessons, learned sessions, formal engineering of process by internal best practice selection, and codification and external benchmarking (Feltus, 1995; Hill, 1999; O'Dell & Grayson, 1999; Powers, 1995). AL may understand if they were told that they will not survive in the modern Knowledge Era unless they have a strategy for managing and leveraging value from the librarian intellectual assets. The purpose of KM Practice is to deliver value to organization, to harness the knowledge resources and knowledge capabilities of the organization, in order to enable the organization to leam and adapt to its changing environment (Auster

& Choo, 1995). Therefore, KM Practices aim to draw out the tacit knowledge that people have, what they carry around with them, what they observe, learn and apply from experience, rather than what is usually explicitly stated. Managing knowledge, unlike managing information, goes much further than capturing and manipulating data to obtain result. This is supported by Davenport (1993), as he explains that KM process is about acquisition, creation, packaging, and application or reuse of knowledge.

**2.34 Developmental KM in University**

The growth of KM applications focus on increasing the competencies or capabilities of an organization's knowledge workers. This is also referred to as investing in human capital (Edvinsson & Malone, 1997). The applications cover the transfer of explicit knowledge via training, or the planned development of tacit knowledge through developmental interventions such as experiential assignments or membership in a community of interest. Investing in developing the knowledge and capabilities of a company's workforce is becoming a measure of the value of an organization because this investment is now seen as increasing the knowledge content and capability of an organization. There is a substantial feeling that , KM is a significant trend affecting everything and everyone with which it comes into contact (Bouthillier & Shearer, 2002). Why is there escalating interest in KM? Why is knowledge itself considered a new source of assets? Why is the economic handling and monitor of knowledge considered so vital today? All these questions relate to a global perception that knowledge is the new currency of a rising economic order. This paradigm had its roots in the work of Drucker (1959), who personified the knowledge worker as an individual who spends much of his/her time processing symbols with the intellect, not manufacturing anything with the hands.

**2.35 Innovation/creation KM**

Innovation or creation-based KM applications focus on providing a setting in which knowledge workers, often from differing disciplines, can come mutually to team up in the creation of new knowledge. Innovations are ever more coming from the combination of disciplines and teamwork, even if there is still a role for individual innovation; however, innovation KM is outlined by Nonaka (Nonaka & Konno, 1999) as, "Knowledge is manageable only in so far as leaders embrace and foster the dynamism of knowledge creation. The role of top management is as the providers of `ba' for knowledge creation. Their duty is to manage knowledge emergence. So, chief librarians must be the champion of KM Practices in libraries before KM can be applied in library activities. This suggestion is supported by Maponya (1999). According to Binney (2001), the innovation/creation of new knowledge is the most popular topic in today's management literature. The focus of the business and KM applications in this element is on providing an environment in which knowledge workers can move together toward creating new knowledge. The most common application referenced in the literature is the creation of new products or company capabilities. The KM applications found in the literature have been mapped to the elements of the KM Spectrum, as shown in Figure 1. Binney's (2001) KM applications to the spectrum elements were done based on their occurrence in the literature not the number of occurrences in each piece of literature. This resulted in a number of KM applications appearing in more than one grouping. The final placement was then resolved by assigning the item to the grouping in which it occurred most frequently. For example, communities appeared in both developmental and innovation/creation applications but was pre-extremely argued in the context of innovation/creation (Binney, 2001).

**2.4 The Proposed Framework**

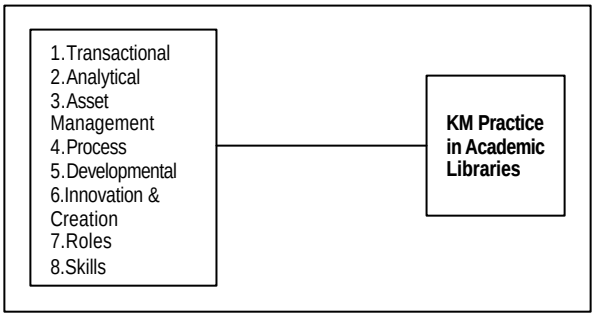


*Figure 1: Dimensions of KM Practice in Academic Libraries*

In this framework, the current roles and skills of AL may be applied to all the spectrums of KM thus enhanced the already structured nature of librarians at work. As proposed by many studies, AL should be doing the research and development of knowledge, creation of knowledge bases, exchange the sharing of knowledge bases. Thus, when knowledge innovation becomes the heart of the knowledge society, libraries will then be an indispensable link in the scientific system procession. It will act as bridges for turning the results of innovation into pragmatic dynamic forces, and thus strengthen the knowledge flow. Thus, we may see more roles in knowledge creation, which means participating more in user's reading and studying by recognizing information needs. Capturing and acquiring knowledge is fundamental to the success and development of a knowledge-based organization. There should be more developments on methodical approach to organizing the knowledge of the enterprise, and making it available to other librarians and library staff in order to improve the operation of the library. With the existing skills,

academic librarians purported to be the best for using and sharing knowledge to enhance their roles for the benefits of the university.

## 3.0 CONCLUSION

AL need to respond to the changing environment in order to better serve the needs of the entire university population. One way of doing that is engaging in KM activities, which are, creating, capturing, sharing and utilising knowledge to achieve the library goals. KM is a possible means in which AL could help enhance their services and become more responsive to the needs of the university users. Librarians gain skills from their experiences and their peers' expertise. AL need to recognise this knowledge and create an environment in which librarian's knowledge can be valued and shared. Thus, AL need to gear up to equip academic librarians with more competencies and the know-how in which they need, to cope with the rapid changes of the 21st century, which is more information driven and knowledge-generated than any other era. At the same time, organizations also need to increase investment and put more effort into ensuring that the information and knowledge available in databases, patents, trade secrets or in the minds of people is fully utilized and translated into products and services that give value to the organization.

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