Knowledge management and its potential applicability for libraries

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Abstract

Purpose – This paper aims to discuss the applications of knowledge management (KM) for library practice.

Design/methodology/approach – The paper starts by reviewing the relevant literature and then the results of an empirical study which investigated the perceptions of LIS community on the relevance of KM to libraries. The involvement of libraries in KM programs is also presented.

Findings – The results show that the LIS community exhibits a positive attitude towards introducing KM to libraries, and not only because this could bring libraries closer to their parent organization, but also because it might help them to survive in an increasingly challenging environment.

Practical implications – Although there are some indicators of involvement of libraries in KM in published case studies (through activities such as development of intranets and institutional repositories of content management and embedding information literacy instruction in the curriculum and employing web 2.0 technologies for knowledge sharing), libraries are still in the early stage of understanding the potential implications of KM.

Originality/value – The paper focuses on KM in the library community.

Keywords Knowledge management, Libraries, Information exchange, Professional services

Paper type Case study

Introduction

The library and information science discipline has undergone enormous changes within the last three decades. Some of these are dictated by developments in information technologies and others by social and economic changes. The development of the internet, the world wide web, the availability of user-friendly databases, search engines and the impact of such phenomenon as Amazoogle have challenged the status of the library as the only provider of information. Recent Online Computer Library Centre (OCLC)'s (2005)[1] research shows that libraries are in danger of being left behind in competition with other information suppliers.

The pressures for survival in the face of competition from emerging groups of information providers and an ever-higher level of user expectations, have forced the LIS profession to find unceasingly innovative ways of operation. Libraries have been encouraged to adopt, utilise and develop principles that have proved successful in

other contexts in insuring their future funding, relevance and existence (Von Retzlaff, 2006). Accordingly, libraries are looking outside their professional boundaries for new insights, models and benchmarks as guidelines in making new strategies for their current operation as well as for their future development. Although there are always potential complications arising from the application of commercial concepts and principles in a public service environment (Wang, 2006), the importance of applying business-oriented solutions to library and information environments has been widely recognized in the LIS literature. Examples include: developing best practices based on commercial standards, applying business marketing trends in library management, adopting corporate culture, treating library services as knowledge-based business, and investigating the relevance of competitive intelligence to the LIS profession (Correia, 2006; Panda and Mandal, 2006; Von Retzlaff, 2006; Wang, 2006).

Yang and Lynch (2006) maintain that many of the new business management trends, emerging first in the for-profit sector and then entering into the non-profit sector, have found their way into the thinking and writing about library management. The LIS literature confirms this statement. There are at least three examples of applying business management trends in libraries confirming the above statement. For instance, applications of total quality management, learning organizations and knowledge management in libraries have all been discussed in the literature of LIS extensively. Wang (2006) discusses the application of total quality management (TQM) in academic libraries. According to him TQM caught the attention of the library world mainly in the early 1990s. Wang suggests that TQM provides a model and benchmark as guidelines in making new strategies in libraries facing today's great changes and therefore, that it is worthwhile to introduce it to academic libraries. The process of implementing TQM in libraries involves a conceptual change in library professionals and a cultural transformation in organizational operations. The application of the learning organization as another management theory for libraries has been discussed by Rowley (1997) and Tan and Higgins (2002). They suggest that libraries need to become learning organizations to survive.

In recent decades, knowledge management (KM) has been perceived as another potential viable response to the challenges that the LIS profession is facing in a continuously changing environment. In the economic and commercial sector, ICTs, as one of the main driving forces, have helped to create a borderless world, a feature of which is global competition among organizations. To survive in the face of such global competitions, organizations increasingly depend on their ability to transform information into knowledge as the basis of competitiveness, decision-making and the production of new products and services. In this global and increasingly knowledge-based economy, the principal asset for organizations in both the private and public sectors is knowledge. As a consequence, organizations and large firms in particular have invested heavily in activities designed to acquire, control, leverage and account for this intangible resource. In other words, they have invested in knowledge management. KM is now widely recognized as a key factor in organizational success.

The ultimate aim of KM is to increase the effectiveness and the sustainability of growth of an organization. Therefore, although KM originally developed to fit the needs of for-profit companies, its practice has spread to the non-profit sector including LIS, as there are general benefits that can be derived from KM in every kind of organization. Shanhong (2000) suggests that the objective of knowledge management

in libraries is to promote knowledge innovation, closer relationships in and between libraries, and between a library and its users, to strengthen knowledge internetworking and to quicken knowledge flow.

KM has attracted substantial attention in the literature since the early 1990s. It has even been described as the biggest thing to hit the information profession since the internet (Infield, 1997). Reviewing the literature, LIS professionals can testify to the fact that the LIS community has by and large welcomed the challenges and opportunities that knowledge management presents.

LIS professionals' interest in KM mainly focused on increasing the role and status of library and information professionals through engaging in KM (Ferguson, 2006). Given LIS professionals' expertise in knowledge organization, information professionals have been encouraged to make a serious contribution to the practice of KM in their organizations. However, the practical application of KM to management practices within the LIS profession itself has not been featured prominently in LIS literature. Ferguson (2004) raised this issue by questioning whether LIS managers are following what are now reasonably well-established KM practices within their own organizations. His research-based answer to the question is "No" in his subsequently published paper (Ferguson *et al.*, 2008). Consequently, there appears to be no clear indications about how KM relates to libraries.

KM and librarianship: perceptions of LIS community
There is a widespread recognition within the LIS literature that KM is relevant to, and has considerable overlapping with, the interests of the library and information professions. However, there are differences within the LIS community as to the extent to which knowledge management represents something new. To some, it comprises a completely new discipline, while to others it involves simply a re-branding of librarianship or information management.

The concept of coding, storing and transmitting knowledge is nothing new for the library profession, as traditionally the organization of knowledge has been the primary focus of libraries. Librarians have developed and applied many KM principles in reference, cataloguing and other library services to encourage the use of knowledge (Townley, 2001). Therefore, for many, KM is not a new phenomenon so far as librarians are concerned. Librarians have always operated as intermediaries between people who have knowledge and those who need to know. More than 50 years ago, Butler (1951) observed that librarians had a responsibility for the promotion of wisdom in the individual and in the community. Writing little more than a decade later, Jesse Shera (1965) defined librarianship in terms of the management of human knowledge. In 1993, at a time when KM was not so popular, Davenport and Prusak (1993) called on librarians to extend their activities to the management of knowledge:

> The librarians or information managers in tomorrow's organization must realize that people, not printed or electronic resources, are the most valuable information asset in any organization. Legions of annual reports say that the experience and knowledge of our people are our most valuable asset, yet firms do little or nothing to capitalize on them to provide access to this asset. The modern librarians will catalogue not only printed materials or even knowledgeable information professionals, but also that Jane Smith is working on a sales force competition project, and that Joe Bloggs knows a lot about the metallurgical properties of wheel bearings (Davenport and Prusak, 1993).

This intimacy with knowledge is so pronounced that to many observers, knowledge management has always been integral to the work of librarians. For some in the LIS community, KM is simply a case of "new wine in old bottles" or of "librarianship in new clothes", and more controversially, as nothing more than information management (Koenig, 1997; Rowley, 2003; Schwarzwalder, 1999; Wilson, 2002).

Koenig is a prominent supporter of the view that knowledge management is little more than librarianship:

> We would of course recognize KM as librarianship or at least as an extension of librarianship, but unfortunately the business community does not recognize that essential identity (Koenig, 1996, p. 299).

Koenig argues that much of the terminologies and techniques used in knowledge management, for example, knowledge mapping, seem to have been borrowed from both information management and librarianship (Koenig, 1997).

The library literature embraces calls for libraries to take a leadership role in knowledge management. Dillon (2002) maintains that because libraries have been knowledge managers for decades and for centuries in a paper world, they are obvious candidates for leadership in this area. In Bender's (1999) words:

> Knowledge-dependent organizations would be wise to integrate their own library into their knowledge management programs, but we as librarians cannot wait and hope for that to happen (Bender, 1999).

Treating people as knowledge resources

> Management may need to be aware that information resources of a library are their collection and materials, however, the knowledge resources of a library are its staff (Middleton, 2002, p. 433).

Debate continues as to whether knowledge management is librarianship or information management under another name (Koenig, 1997; Wilson, 2002).

However, Within the LIS literature there is a strong element that, while accepting that information management is an essential component of KM, would regard the latter as both broader in scope and different from library and information management This is owing to its concern with management and with organizational issues, including an emphasis on less tangible and elusive resources like human expertise (Broadbent, 1998; Gandhi, 2004; Kakabadse *et al.*, 2001; Loughridge, 1999). In a similar view, KM is seen as distinct from both librarianship and IM, as it includes knowledge creation and knowledge sharing, and the interplay of tacit and explicit, individual and collective knowledge (Davenport, 2004; Martin, 2008). Acknowledging KM as a broader concept than librarianship in the LIS literature would suggest that to apply KM, there are some aspects which need to change or to be expanded in library settings.

The theme of knowledge sharing is discussed extensively in the KM literature. It has recently been proposed as a distinctive feature of KM (and even as an alternative label for KM (Davenport, 2004). Knowledge sharing is a means to achieve business goals through transferring knowledge between employees, customers and other stakeholders. The development of a knowledge sharing culture that encourages the creation and transfer of knowledge is thus a major priority in formulating a library KM strategy, even though it is not something that can be achieved overnight.

Knowledge sharing however is not an unfamiliar issue for librarians. KM authors sometimes see librarians as key brokers of knowledge sharing. Davenport and Prusak (1998 cited in Cox *et al.*, 2003) for example, recognize the possibility that librarians' knowledge of who is researching what enables them to connect people in different parts of the organization, often in unexpected ways. There are also important values or commitments unique to librarianship, such as that of promoting access to information, the freedom to read and most importantly to knowledge management and to knowledge sharing. Bishop (2001) states that:

> A value learned by information service professionals in "information studies" is the belief that the key to empowering people is sharing expertise and information, and collaborating across organisational boundaries and functional units. This belief has become part of the information professional's "culture." part of our value system - the normal and accepted way we expect people to behave towards one other. In a knowledge-based organisation, we would be seen to have the all-important attribute of being "knowledge-aware" (Bishop, 2001).

However, formal knowledge sharing initiatives would seem to be relatively scarce in libraries. Librarians are experts in information management, yet frequently libraries lack the infrastructure to foster effective knowledge sharing within their own walls (Levinge, 2005). In the LIS literature, approaches to knowledge sharing in libraries are general in nature and are therefore, unlikely to show how knowledge sharing really works in a library setting. Gandhi (2004) discusses the value of capturing the tacit knowledge of reference librarians and describes the early efforts of reference librarians in capturing tacit knowledge through old information tools like card-files of frequently asked questions. Parirokh *et al.*'s (2006) paper is one of the few papers specifically focused on the discussion of knowledge sharing requirements in academic libraries. They conducted research to identify the knowledge sharing requirements of reference librarians in university libraries. The results of their survey taken mostly from American university reference librarians showed that while the majority of libraries investigated were quite positive about knowledge sharing and that the majority of librarians valued the importance of knowledge sharing; KM and knowledge sharing initiatives had not been institutionalised in the majority of those academic libraries that participated in the study. University librarians were actually quite interested in consulting their colleagues, but most of them did not consider academics as a source for knowledge acquisition. On the other hand, they relied on the internet more than on the information that resided in other libraries, and which could be acquired through communication with them. The researchers suggested that providing a variety of communication channels for librarians might enhance both the efficiency and effectiveness of their communication and of any subsequent knowledge sharing activities. The development of Web 2.0 technologies has provided an excellent platform to meet this need. Increasingly libraries are employing blogs, wikis and other applications for knowledge sharing purposes.

KM practices in libraries: empirical experimentations of the LIS community
To gain insights in the potentials of KM for libraries, a portion of an empirical doctoral dissertation[2] was devoted to this topic by the first author. That research not only reports the perceptions of LIS community on relationships between KM and libraries, including potential benefits for libraries and the contribution of libraries to KM

practice but also provides evidence for the involvement of libraries in KM practice, and for the outcomes of such involvement. It identifies the principles and practices commonly associated with KM in so far as they seemed to be of potential importance or relevance to library and information services.

The methodology employed was a combination of qualitative and quantitative approaches through open and close-ended questions in the research questionnaire. The web-based questionnaire consisted of several sections. In this research only results relevant to the practice of KM in libraries have been presented. The main research population for the research initially comprised subscribers to two international LIS mailing lists, namely: IFLA-L (International Federation of Library Associations general mailing list) and KMDG-L (IFLA's Knowledge Management Section Mailing List). IFLA is the best-known international association in the LIS field, and the IFLA-L mailing list is the most general and the third largest (with nearly 2,000 subscribers at the time of the survey) of all IFLA mailing lists. The link of the web-based questionnaire was sent to the mailing lists inviting the community to participate in the research. In all the survey attracted 371 responses. The majority of survey's respondents (62.5 per cent) were from Australia, USA and UK. They were followed by South Africa (9.2 per cent), New Zealand (5.7 per cent), Canada (3.2 per cent), Mexico (1.9 per cent) and India (1.3 per cent) respectively. The response from other countries ranged between one to three responses.

The benefits of library involvement with KM
In the wider world, knowledge management is now gaining recognition as a key factor in organizational success. As this applies to organizations of many kinds, profit and not-for-profit, there would be potential benefits in the application of knowledge management within libraries, and their parent organizations and in the communities they serve. To identify the perceptions of the LIS community on potential benefits for libraries through their involvement in knowledge management, the topic was investigated in the research.

Survival factor
As discussed before, there is a view in the LIS literature that libraries are in danger of being left behind in competition with other information suppliers. Knowledge management has been seen as a survival factor for libraries, helping them to respond to challenges the LIS profession faces in a discontinuously changing environment (Shanhong, 2000; Teng and Hawamdeh, 2002; Wen, 2005). There is support for these views in the literature, where one researcher found that for 88 per cent of libraries in legal firms, the share of internal budget was rising due to the introduction of knowledge management (Valera, 2004).

To see whether LIS professionals regarded KM as a survival factor for libraries, respondents to the survey were asked to respond to a statement using a five-point Likert scale ranging from "Strongly agrees" to "Strongly disagree". As is clear from Table I, 82.2 per cent of LIS participants in the research survey "Agreed" and "Strongly agreed" with the statement that KM can contribute to an improvement in the future prospects of libraries. This finding is supported here by comments drawn from the questionnaire which has been summarized below.

Potential benefits of KM for libraries: relevant comments

KM came just in time. It has given libraries a new lease of life.

I can think of one department where the library was going to be closed and the library came up with a new vision and quite quickly the library became very much appreciated and it is a leading player in the KM field.

One of the things that we have discovered is we are actually able to show more of a return on investment for the library because of their involvement with KM, they have got higher profile.

I have seen companies who grasp the value of KM realize the need for their libraries to be involved in the process. Thus given value back to the corporate libraries. So while public school and academic libraries are closing, corporate libraries due to KM are progressing.

Our library is expanding, as a result of having become involved in knowledge management. Other places, the library's downsizing.

If librarians do not move, they are going to become obsolete, because there is not a huge demand for libraries any more in business, so if you do not change with the times, then you are going to be left behind, and I think that those who have realised that have made an attempt to move themselves into the next area, which is KM.

We are all in business and to stay in business, we have to be competitive and to say that you are not in business and that you are not in competition is actually denying the reality. Certainly librarians are not in competition with each other, but they would certainly be in competition to get funding within their own organization. KM would help libraries to survive in competitions.

Increasing visibility of libraries
As was mentioned earlier, libraries have frequently been accused of being insufficiently aligned with the goals of their organizations. The ultimate aim of knowledge management is that of achieving the organization's mission. Therefore, all parts of an organization (including libraries) must participate in ensuring that the contribution of knowledge management to the realization of the organizational mission is supported. Adoption of this knowledge management perspective could assist LIS professionals in meeting user needs in the light of ultimate organizational goals. Furthermore, KM gives libraries an opportunity to collaborate with other units in their organizations and hence, to become more integrated into corporate operations and enhance their overall visibility within the organization. To test if LIS professionals believed that KM can enhance the visibility of libraries, they were asked to show their level of agreement with the statement below. Their answers have been summarized in

Strongly disagree (%)	Disagree (%)	Do not know (%)	Agree (%)	Strongly agree (%)	Overall[a] (mean)
0.5	3.8	13.4	59.9	22.3	Agree

Table I.
KM can contribute to an improvement in the future prospects of libraries

Notes: [a] The researcher has designed the following scoring for the purpose of providing an overall selection for the statements in sections 2: Mean: 1 to 1.44 = Strongly disagree; Mean: 1.45 to 2.44 = Disagree; Mean: 2.45 to 3.44 = Do not know; Mean 3.45 to 4.44 = Agree; Mean 4.55 to 5 = Strongly agree

Table II. A clear 82.2 per cent (a high majority) of respondents to the survey "Agreed" and "Strongly agreed" with the statement.

Further support for this view came from comments to the questionnaire which has been summarized below.

KM and enhancing visibility of libraries: relevant comments

I see a lot of libraries that in one way or another, have managed to become the fifth wheel on the wagon of the organization. It means that being unnecessary or in a very loose functional side to the core organization. That is a problematic situation and I see KM as a way out of that situation.

KM made librarians aware of the need to look outside the realm of public books and think in terms of bigger picture about working with individuals within the organization.

I definitely think that it can be beneficial within the profession. I would like to see us do more knowledge management within the library and I think it offers us opportunities outside the library to be accepted. We are providing knowledge management services for the university and coming from a position where I was a knowledge manager. I certainly saw it as a valuable role, and a valuable service for a library to be providing.

An understanding of KM may help library and information professionals to see the libraries and information departments in an organization in a broader framework.

A small minority of participants in the present research regarded knowledge management as being solely a business phenomenon and, therefore, of no direct relevance to libraries. As one of the respondents observed:

As we're seeing in the global economy, competition tends to end up with a few very large businesses eliminating the competition. Libraries work on the basis of cooperation. No single library can own or provide everything, especially when services need to be delivered locally. It is essential for libraries to cooperate among themselves.

Evidence for the involvement of libraries in knowledge management

In search of evidence for the involvement of libraries in knowledge management, respondents to the questionnaire were asked if they were aware of either the successful implementation of KM in a library, or of a KM project in which a library was a participant (see Tables III and IV). Those who answered "Yes" to the question then were asked to provide basic information about that library or project. Responses to this question are shown in the comments below. Almost 11 per cent of respondents were

Strongly disagree (%)	Disagree (%)	Do not know (%)	Agree (%)	Strongly agree (%)	Overall[a] (mean)
1.1	3.8	12.8	55.7	26.5	Agree

Notes: [a] The researcher has designed the following scoring for the purpose of providing an overall selection for the statements in sections 2: Mean: 1 to 1.44 = Strongly disagree; Mean: 1.45 to 2.44 = Disagree; Mean: 2.45 to 3.44 = Do not know; Mean 3.45 to 4.44 = Agree; Mean 4.55 to 5 = Strongly agree

Table II.
KM can help make libraries more relevant to their parent organizations and users

aware of the successful implementation of KM in a library context. As regards the second choice, nearly 23 per cent of professionals know of a KM project in which a library was a participant.

Can KM happen in a library alone?

As is clear from Tables III and IV, most of the evidence for KM projects was for those in which libraries were involved with other players, rather than for projects operating within libraries themselves. This, however, is not an unexpected outcome in that KM requires a holistic approach and should involve the library as an element of the organization. This point is reflected in comments to the questionnaire shown below.

KM in a library alone: relevant comments

> KM does not happen in the library. It happens in the organization. The library or information professionals may implement or be part of the KM project but it cannot (by definition I would have thought) be isolated from the rest of the organization.

> KM should embrace libraries. Libraries are a tool for KM. KM is not necessarily a tool for libraries because it is a broader concept than access to peer reviewed high quality literature. KM and library professions need to understand how much or little libraries can really take responsibility for KM.

> I think that libraries are an integral part of the KM structure of an organization. Sometimes, people make mistakes – libraries make the mistake to think that is the be-all and end-all of KM, but it is only a part of KM. You do have people beyond the library, outside the library and so some will be out to organize all of that, outside the library. Staff are doing this in our organization, getting into that, up and running and got the detailed look at how to organize all of that, within the organization. It is only a part of a larger picture of an organizational operation.

The contribution of libraries to KM in their organizations

Respondents to the questionnaire were aware of KM projects in which libraries were a participant. As shown in Table IV, in all 22.4 per cent (83 people) answered "Yes" to this question and reported evidence of such involvement, although some of these

			Frequency	Per cent
Valid	No		330	88.9
	Yes		40	10.8
	Total		370	99.7
Missing	System		1	0.3
Total			371	100

Table III. Are you aware of the successful implementation of KM in a library?

			Frequency	Per cent
Valid	No		287	77.4
	Yes		83	22.4
	Total		370	99.7
Missing	System		1	0.3
Total			371	100

Table IV. Are you aware of a KM project in which a library is a participant?

respondents perceived basic information management activities as being KM. Some of the comments have been summarized below.

Basic information management activities perceived as KM, reported by some questionnaire respondents

Project which allows access through the library catalogue to other information resources, e.g. patient leaflets, guidelines etc. Is that what KM is?

Not sure about the practical aspect of KM but very familiar with uses of databases and virtual libraries but doubt very much if that is the meaning of KM.

I guess there are lots of projects but they are not necessarily labeled as KM. I am involved in setting up and maintaining a database of topics being proposed for publication and some being selected for publication in my organization. The database acts as a place to store all the topics and it is possible to search and retrieve topics as well as acting as a planning tool for the organization.

Our internal archive purports to be a KM project.

Building of a database of author publications of the organization.

Our library is about to embark on a project involving corporate blogs. With regard to the collaborative aspect of blogs and engaging users in the blogs this would be a KM initiative in our organization.

However, in some other evidence of libraries' involvement in KM reported by respondents to the questionnaire, libraries were mostly involved in an information management role within KM through developing institutional repositories, intranets, and database of FAQs. Some of the comments have been summarized below.

Libraries on the information management side of KM, some direct quotes from the questionnaire respondents

We are doing the record management for the group in the library.

In our organization the library is part of the KM division. Librarians are internal consultants in taxonomy creation management of best practices and lessons learned repositories and organizers of special collections supporting communities of practice.

We led the creation of a knowledge base that contains the answers to questions frequently asked by staff or the public. It classified information for browsing and searching and pushes information to our intranet or to our public web site.

After considerable initial resistance intranet has been widely adopted to distribute corporate news media coverage share documents and provide access to information tools.

As a library manager, I worked as part of a small team to develop an intranet as a knowledge sharing tool.

Our public library has staff involved in managing the council's intranet project and participating in the development of the knowledge management strategy.

In the law firm where I am information resources manager, KM is integrated with library services.

Discussion and conclusion

Analysing the findings of the questionnaire, a number of themes have clearly emerged. The LIS community exhibits a positive attitude towards introducing KM to libraries, and not only because this could bring libraries closer to their parent organization, but also because it might help them to survive in an increasingly challenging environment.

LIS professionals tended to view knowledge management as a holistic organization-wide phenomenon, and hence take the view that it should not operate in isolation within the library. Indeed, the consensus on this matter would be that for knowledge management to be successful, the objectives and operations of the library ought to be in alignment with the business goals of the parent organization.

The results of the present research suggest that libraries have mostly been involved in KM through the first and second type of KM projects. However, there is evidence of involvement in less traditional activities, or at least in more advanced forms of traditional pursuits. The development of intranets and content management, and the development of institutional repositories have been pervasive activities in corporate libraries.

In general, libraries have mostly been involved in KM through the implementation of their skills in organizing and retrieving information. As interest in knowledge management has increased, this library involvement has expanded to include the development of intranets, of institutional repositories of content management, and the training of users in the effective use of databases and other resources. The results emerging from the present research project confirm those obtained earlier by Marouf (2004) who in investigating the contribution of KM at library and information centres found that their KM practice went little beyond traditional information management activities.

For many librarians, KM is not a new phenomenon as far as library operation is concerned. In their view knowledge management has always been integral to the work of librarians. This perspective has had both positive and negative connotations; positive in that it has led to some necessary re-thinking on the part of the proponents of knowledge management, negative in that it has on occasion fostered a kind of them and us attitude. KM is seen as a threat to professional purity. Even where, the concept of knowledge management has been embraced by the library profession, efforts to acquire a more commercial or business like competitive edge have sometimes resulted only in a nomenclature (for example from library to knowledge management centre) that have been at best cosmetic and at worst misleading.

The differences between librarianship and KM reside in matters of emphasis and approach, particularly where people are at the core of operation. KM is a people-centred concept. In KM, people (their skills and expertise) are the most important asset of an organization. Organizations need to capture the tacit intuitions and know-how that knowledge workers acquire through years of experience and practice, so that their knowledge can be leveraged at the organizational level. This will avoid risking a loss of knowledge when people leave organizations. In other words, in KM, people are not only knowledge users but also knowledge resources and knowledge generators. However, the primary focus of libraries has been on information objects. Libraries have been involved with collecting, organizing and disseminating recorded information, which the KM literature refers it today as explicit knowledge. Arguably, libraries have always involved the human element,

but it is at different levels in comparison with that of KM. The approach toward people in libraries has mostly been one of seeing people as knowledge users. Traditionally, libraries have functioned as an intermediary between information objects and people (end-users). A different approach to people has led to focus on a different kind of knowledge. The focus of libraries has been largely on explicit knowledge, which is defined as knowledge that can be codified and therefore, more easily communicated and shared, notably through IT systems. Nonaka and Takeuchi (1995) for example, describe explicit knowledge as:

> Knowledge that can be expressed in words and numbers and can be easily communicated and shared in the form of hard data, scientific formulae, codified procedures or universal principles (Nonaka and Takeuchi, 1995).

However, the ethos of KM is to make knowledge accessible in whatever format (Webster, 2007), including the tacit unrecorded knowledge of people.

This is not to say that managing tacit knowledge has been a totally unfamiliar task for LIS professionals. The reference interview itself is, or can be, a classic example of the elicitation of tacit knowledge.

The approaches that deal with the application of knowledge management in the LIS environment are relatively new, and are mainly perceptual and general in nature, rather than being research-based. Although there is recognition that knowledge is a key business asset, libraries are still in the early stage of understanding the potential implications of KM. There has been little impact of KM on the library operation as reflected neither in the LIS literature nor in the result of our present study.

Notes

1. In November 2005, OCLC collected over 20,000 responses through an international survey of users' perceptions, thoughts and attitudes about libraries and electronic resources. This "Perceptions of libraries and information resources" study concluded that the library is not the first or only stop for many information seekers. Search engines are the favourite place to begin a search, and respondents indicated that Google was the search engine that most of them had recently used to begin their searches. Of the respondents, 69 per cent believed that information from a search engine was as reliable as that from a library source; 90 per cent of college students stated that they believed information that was free was as reliable as that which had to be paid for. One-third of respondents reported that their level of library use had decreased in the previous three to five years. Most of respondents, while generally satisfied with libraries and librarians, did not plan to increase their use of libraries.

2. The research presented here is part of a comprehensive PhD research by the first author entitled "The implications of knowledge management for library and information professions" completed in 2008 which investigated the multiple perspectives on knowledge management within the LIS sector. This included: examining assessments of knowledge management among library and information science professionals in terms of its potential value, benefits, opportunities and threats to the profession; identifying the contribution that LIS professionals/libraries could make to KM practice; understanding the capabilities (and lack of them) in knowledge management practice among LIS professionals, and the broad implications of KM for library education.

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