

# AN INCREASING INFLUENCE OF KNOWLEDGE MANAGEMENT FOR LIBRARY AND INFORMATION SCIENCE (LIS) PROFESSIONALS

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**Abstract** Librarians have also been recognized as having substantial influence on the development of knowledge, friendly environment in organizations. The potential role of LIS professionals in promoting information literacy for example, is widely acknowledged throughout the works.

*As can be seen from an online search of LIS databases, there is already an emerging works on the knowledge management dimension to LIS education. However, much of this works is descriptive rather than research-based, depicting different approaches to knowledge management education in practical situations. This paper has reviewed current developments in KM education for the LIS profession, and has sought to identify those areas which need further consideration.*

*It provides a detailed discussion on different aspects of the issue, including the philosophical assumptions underpinning the research, and the approaches adopted for data collection and analysis.*

*On the matter of the perceived longevity or otherwise, of the KM concept, a majority of the participants believed that KM would continue to be important, but that the term KM would disappear entirely. However, they argued that its core concepts and constituent elements (albeit in a different form) will evolve, and will always be required. For some respondents, the need to learn about KM mirrors an earlier need to learn about information literacy. If this should turn out to be the case then the future for KM, for KM education and for knowledge professionals could well be a rosy one.*

**Keyword:** Knowledge Management, Libraries, Information Professionals, Librarians, Library And information Science/Services (LIS)

## INTRODUCTION

The traditional role of librarians as intermediaries should make them more valuable in KM environments, and facilitate their potential contribution to the development of such environments, for example through the encouragement of knowledge sharing. Librarians were generally driven by a desire to provide access to information sources, and they matched this desire with values that assumed information sharing is a good thing, which are critical for the practice of knowledge management the context of a changing library profession and in line with increased recognition of the value of the shared collective knowledge of organizations, it is becoming clear that corporate librarians are now being charged with the mission to explore and implement new and innovative methods to encourage sharing and to better manage information. Referring to a number of cases of successful KM implementation involving a significant contribution from libraries, The Library Association (LA) pointed out the common ground among a new crop of knowledge management programmers.

This was based on the central role of information professionals in mapping organizational knowledge resources, and in

encouraging a culture shift in knowledge-sharing practice in business centers to provide empirical evidence of the role of information professionals in KM Programs. Information professionals in knowledge management programs played a key role in a number of areas, including the design of the information architecture, development of the taxonomy, and content management of the organization's intranet. Other roles included the provision of information for the intranet, gathering competitive intelligence, and providing research services as requested by the knowledge management team.

The reasons behind the failure of KM initiatives, realized that many of these failures could be attributed to inadequate user training and education, and recommended that companies employ librarians to resolve the problem the urgent need for organizations to outfit their knowledge workers with information literacy capabilities, and highlights this as an opportunity for LIS professionals to implement their expertise in this area. And they also considers information literacy to cover a wide range of skills and competencies normally catered for by library and information science, and sees this as a natural explanation for the fact that many of the KM programs around the world are in LIS departments

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| Category | Range of Literacy                                                                                                                      |
|----------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Traditional Literacy- the ability to read and write                                                                                    |
| 2        | Visual Literacy- the ability to understand, use and express using images                                                               |
| 3        | Computer Literacy- the ability to understand and operate computer those are interfaces between information and end users               |
| 4        | Network Literacy- the ability to locate access and use information in a networked environment like World Wide Web                      |
| 5        | Media Literacy- the ability to access, analyze and produce knowledge in television, motion picture, radio, newspaper and magazines and |
| 6        | Traditional Information Literacy- to locate, select, evaluate and use information effectively.                                         |

## KNOWLEDGE MANAGEMENT AND TECHNOLOGY

As knowledge management (KM) and information technology (IT) have developed and grown, they have evolved numerous technical terms and phrases that those not intimately involved in these disciplines may find difficult to understand. These terms are useful in efficiently communicating among professionals. Information is the meaning that a human assigns to data by means of conventions used in their presentation, data that has given shape. It may be considered as processed data, data plus the meaning, which has to be a result of human action.

The challenge of Knowledge Management is to determine what information within an organization measuring and reporting intellectual capital (a way of making explicit knowledge for companies)

- knowledge brokers (some organizational members take on responsibility for a specific “field” and act as first reference on whom to talk about a specific subject)
- Social software (wikis, social bookmarking, blogs, etc.)

### The Need For Collaboration In Knowledge Management Education In LIS

“The predictabilities ‘unity is strength’, ‘two heads are better than one and ‘divided we fall, united we stand’ suggest the need for cooperation [in library education] ” The levels of interaction or involvement between cooperating parties will differ and for example can be perceived variously as cooperation, coordination or collaboration. Although these three concepts have largely been treated as synonymous within the literature it involves information sharing, serving on committees together, and yet allowing the participants to fundamentally stay separate, and to continue to function in a completely autonomous manner. Coordination denotes a more mutual level of commitment, and involves actual resource sharing, filling in the gaps that the participants would not be able to accommodate individually, and adapting and accommodating differences in order to achieve a goal.

Finally, collaboration involves a synergistic - not a preservative – solution. This collaborative model requires the actual commitment and investment of resources, based on a shared vision. Collaboration in this sense is not competitive, but emphasizes that it is precisely this level of interaction that institutions of higher education need to adopt if they are to be viable in the future, and reiterates that it should be used in addressing some of the critical problems facing libraries.

The shared vision and community support that distinguish this collaborative model is actually what knowledge management requires. Indeed, the emergence of ‘communities and collaboration’ as a KM theme within the business community has been clearly recognized by Koenig (1999), and one which has implications for knowledge management education as well. Recognition of the need for collaborative efforts in LIS education is not altogether new and Cooperation in Library and Information education has been a topical issue of concern for quite a long time among the policy makers, educators, researchers, students and users.

In the area of Information Management education (which embraces KM in many cases), they have perceived many opportunities for cooperation and networking within LIS.

They outlined subjects and topics for cooperation as follows:

1. LIS and business academies (common research projects, patenting – intellectual capital, intellectual property management, and competitive intelligence)
2. LIS academies and government (knowledge-based society, learning society, intellectual property management);
3. LIS academies and government and business (e.g. industrial technological clusters, R&D activities for industrial spheres, competitive advantage strategies and tactics);
4. LIS academies and professional organizations (Special Libraries Association–European Chapter, IFLA, SCIP – Society of Competitive Intelligence Professionals, ASIS&T, etc.);
5. Exchange programmers in LIS (collaboration with other LIS schools);
6. Didactics of teaching Information Management;

7. Coordination with national/ international practical projects (practice in companies and institutions with interests in IM areas);
8. Comparison of the prospectus of LIS schools, business schools and industry oriented schools.

As for the benefits of cooperation and the increase in efficiency and effectiveness of programs. He describes cooperation initiatives in LIS schools as economy measures against duplication of resources-financial, physical, material and human.

More specifically for KM education, the importance of collaboration within the LIS education system, and between KM educational providers has been emphasized throughout the literature. Clearly, for a broad multi-faceted area such as KM, it is absolutely imperative for its educational programs to be actively endorsed and supported by other academic groups and Industry/organizations. Collaboration between university departments to develop interdisciplinary certificates in KM has been recommended by many researchers. In a study of different approaches to knowledge management education in various academic disciplines,

Information systems departments gave more emphasis to the IT component of the program, while information studies departments were more focused on information organization and retrieval. Business schools, not surprisingly, were found to put more emphasis on business strategies. Hence, the authors suggested the need for a collaborative approach to knowledge management education, in order to avoid the danger of unevenness in content, and to provide learners with symmetrical coverage of different courses. Hence,

“We feel that the diversified skills ...require a multidisciplinary approach to impart education in support of KM roles...Our recommendation is to introduce collaboration in the design and conduct of KM programs to balance the various components in the KM curriculum. If knowledge management education programs continue to run in single departments or schools

### **Information Technology skills in Knowledge management**

Although knowledge management involves much more than the use of technology, it relies on the use of IT as an enabler. Consequently, while knowledge workers do not need formal qualifications or deep expertise in IT, they do need to have sufficient understanding and skill- a basic level of literacy- to be able to use these enablers effectively for their own purposes.

To interact with IT staff and managers (e.g. in managing the Intranet), information professionals require a basic

understanding of computing and network architectures. The high value of techno-literacy for knowledge management practitioners has been mentioned in other sources including.

However since the pace of technology development continues unabated, LIS professionals need to keep abreast of broad trends because:

The knowledge manager should be able to serve as a facilitator between technology and people; between users and corporate intranets. The nature of a librarian's work is at advantage in this regard because it is indeed a blend of people and technology the skills and understandings perceived to be central for effective KM fell into specific categories including knowledge, information, people, cognitive issues, organisation and business, management and technology. Five specific categories of understandings were identified, underlying the significance of people and organizational factors over technology:

- Understanding of human knowing ( knowledge about knowledge)
- Understanding the knowledge dynamics of people
- Understanding the organization as a knowledge generating and using entity
- Understanding of the fundamental principles of information management
- Understanding technology on the skills side, six categories were identified, once again clearly emphasising the importance of people and cognitive skills and organizational factors over technology.
- People-centred skills, such as negotiation, sharing, team-working and
- communication
- Skills associated with aspects of management of the organization as a whole,
- (management skills)
- Information processing skills
- Cognitive skills
- Organization and business skills
- Information technology skills.

Reporting on the proceedings of 1999 ALA Congress on Professional Education, Prentice (1999), from a long list, highlighted the following as values that need be acknowledged in courses:

- Ability to deal with IT
- Communication skills
- Management skills
- The ability to deal with change

## Communication Skills in Knowledge Management

Communication skills have long been a requirement for LIS. The advent of virtual environments might at first have suggested the emergence of a backroom, supportive type of role for librarians, one involving less interaction with users. However, this has not happened because, the forces shaping today's new knowledge age, have made the communication of information a must for all organizations and their employees, particularly with the emergence of knowledge management (Materska 2004). In this knowledge management context, calls for attention to the management of tacit knowledge reinforce the importance of the human dimension with its implied focus on relationships and collaboration where communication is the means to connect human minds through interaction.

## RESEARCH PURPOSE

To identify an appropriate research methodology, the researcher first needs to consider the dominant perseverance of the education. According to the persistence, social research can be classified into four different categories: to explore a new phenomenon (exploratory), to describe a phenomenon as it exists (descriptive), to explain why or how something is happening (analytical or explanatory), or to predict certain phenomena (predictive research).

## METHODOLOGY

The methodological implements employed in this investigation include works evaluation and document analysis, followed by web-based surveys of LIS professionals.

LIS have long played a leading role in education for information science, and since then have been a model and pathfinder for development of the LIS profession.

## RESEARCH QUESTIONS AND THE STUDY FINDINGS

1. Are LIS institutions emerging as major providers of knowledge management education?
2. What are the different perspectives on KM education displayed by LIS professionals?
3. What are likely to be the most effective means of providing education programs in knowledge management for the LIS professions?
4. What is future to be the most appropriate course content for knowledge management programs in library and information science institutes?

5. Can existing LIS prospectuses meet the needs for knowledge management education or is input from other disciplines needed?
6. What are the core competencies for LIS people operating in knowledge management environments and how many current prospectuses can support them?
7. What are the main roles and responsibilities of LIS educational providers with regard to KM?
8. What are the gaps between current levels of provision and those needed within the next five to ten years?

Since knowledge management courses are offered by various educational providers, the professionals first sought to find out if LIS institutes were emerging as major providers of KM education.

The LIS sector is leading the motivation towards knowledge management education has been displayed in the results of previous LIS professionals. The dominant position of LIS institutes in this area has also been reported widely in the professional works. There are also indications of the growth of educational certification programs outside academic. However, such programs are still very much in the minority.

The second question sought to identify different perspectives on KM education within the LIS sector. Key to this was the issue of whether or not KM was likely to prove to be a durable phenomenon, and if so ought the LIS sector to be involved in it and how LIS institutes might respond. It emerged that KM was seen as likely to remain important, and that the LIS sector should seek to be more proactive in the matter of KM education.

The willingness of the profession to learn more about knowledge management and to seek involvement with KM initiatives at strategic levels, often in non-traditional workplace environments, is reflected in the significant response to proposals for the expansion of a KM element in LIS prospectuses elevated in this project.

The next question addressed in the research was about the most effective means of providing educational programs in knowledge management for the LIS professions. If the LIS community saw the need for KM education at the academic level then, how did it think these should be offered. The research findings indicate that elements of KM are very much relevant to LIS education, both at an everyday library-oriented level, and in terms of the future, and the need to look beyond the limitations of libraries.

LIS schools not only need to offer separate KM programs, but also KM concepts should be a pervasive presence in current curricula. In the search for a wider focus however, it is important, not only that relevant concepts are retained and developed, but also that these developments take place within the broad ethos and value framework of the LIS professions.

The fourth question is about the most appropriate course content for KM programs in library institutes. Because of the multidisciplinary nature of the prospectus, the LIS professional's sought to find what and where, the emphasis should be in different components of these programs. KM encompasses a wide range of subject areas more than this, the need for and the context of KM programs, different from one place to another, may influence the flavour of KM studies in each particular case. However, there is recognition within the works that "While KM approaches must be organization-specific, there is some common ground in overall approaches, The research findings in this part of the study revealed that LIS prospectuses need to put more focus on the knowledge end of the information-knowledge continuum. The need for LIS institutes to take an integrative approach to KM education, while also considering the suitability of these programs for their emerging markets, has also been highlighted in the research results. Whereas the importance of various elements in KM curricula has been indicated, it is worth qualifying this acceptance with regard to level and context.

It is important to bear in mind the key elements of resource management and the sources of (frequently intangible) value common to attempts at managing knowledge in all kinds of organizations.

The purpose of the fifth question is to investigate whether LIS schools need a contribution from other disciplines in designing and conducting KM education programs and to develop a symmetrical, appropriate curriculum, it is worth noting that KM is a collaborative and cooperative field, which demands contributions from people from a range of field disciplines

The study results as the necessity of taking a spectrum approach to KM education, and emphasized the urgent need to take collaborative approaches, particularly with the business schools and the industrial sector.

To help the development of an appropriate KM prospectus, the researcher sought to identify the core competencies of LIS people operating in knowledge management environments, and the extent to which current LIS curricula could support the development of these competencies.

The works continues to highlight a shortage of business skills among LIS professionals, a shortfall reflected in high demand for such skills in the workplace.

This view was endorsed by a third of the respondents surveyed in the research, who were of the view that LIS prospectuses were making little contribution to increasing the business acumen of students.

The evidence from this research and elsewhere suggests that, while LIS prospectuses to an extent, support the

promotion of KM competencies among graduates, in order for the LIS professions to operate more effectively in a KM environment, additional competencies will be required. Particular emphasis has been given in the literature, and in responses to the survey, to the need for LIS courses to contain much more in the way of business and management content in order to equip future professionals for work outside the more traditional LIS environments. LIS professionals are already equipped with a range of IT and communication skills, which should stand them in good stead as they seek to embrace change in both curricula and practice.

Finally, the growth of interest in KM within the LIS community, and the ongoing debate about competencies, will continue to impinge as matters of urgency on the work of librarians and library educators. This includes the challenges of identifying those competencies that exist or are needed and working out ways of embodying coverage of such elements in future curricula.

Learning about the above issues, the LIS professional's then sought to figure out the major challenges associated with KM education for the LIS discipline, and to identify the main roles and responsibilities of LIS educational providers with regard to KM.

The final question that guided this research was to do with any gaps between current levels of provision and those needed within the next five to ten years.

The LIS prospectus as indicated in findings, has incorporated some of the elements of KM, and more recently to some extent, it has been responsive to the future needs of KM education. However, the entire LIS prospectus is still in need of revision including in its treatment of fundamental concepts and of ongoing developments in the field.

## Web-Based Survey

The web survey was designed to obtain access to participants from a wide cross section of the LIS profession around the world. As KM and its education systems are still relatively new, in order to gain the perceptions of people who were actually knowledgeable in this area, the target population for the online-questionnaire was selected purposefully. Selection was based on the membership of international and national LIS list serves and discussion groups specifically related to KM, or to the educational issues it raised for the profession. This method of data collection has been identified in the literature of online surveys as the most likely tool to obtain insights from targeted individuals in a range of LIS related studies. The link to a web-based questionnaire was sent to the LIS LINK Education Librarians group discussion list.

**Table 1. Percentage of Agreement/Disagreement with Statements on General Attitudes Toward LIS Engagement with KM.**

| S.No | General Attitudes Toward Lis Engagement With Km.                                                                            | Strongly Disagree | Disagree | Don't Know | Agree | Strongly Agree | Overall (Mean) |
|------|-----------------------------------------------------------------------------------------------------------------------------|-------------------|----------|------------|-------|----------------|----------------|
| 1    | The LIS profession should engage more fully with KM                                                                         | 1.1               | 2.0      | nil        | 49.1  | 50.1           | Agree          |
| 2    | It is better that LIS professionals focus on information management and leave other dimensions of KM with other disciplines | 32.2              | 32.4     | 11.2       | 9.9   | 1.0            | Disagree       |
| 3    | The management of explicit knowledge is something which librarians do well                                                  | 3.0               | 10.5     | 10.9       | 50.2  | 26             | Agree          |
| 4    | Librarians have the potential to manage tacit knowledge as well as explicit knowledge                                       | 2.0               | 10.9     | 6.9        | 41.2  | 39.1           | Agree          |

## GENERAL ATTITUDES OF LIS PROFESSIONS

Over the last few years, the relevance of KM to the interests of the LIS professions, and the growing enthusiasm for KM within the library and information sector has been apparent. However there are those who question whether the profession needs to engage with KM, lest in doing so it might lose its identity or put major components at risk. To clarify perceptions on KM, respondents were asked to indicate their level of agreement with the following statements:

## LIS PROFESSIONS UNDERSTANDING OF KNOWLEDGE MANAGEMENT

With the emergence of KM to prominence, considerable debate occurred within the literature, not only as to its real value, but also as to whether it had a future or was simply another management fad. Subsequent discussions as to the nature of knowledge, and as to whether or not it was possible to actually manage knowledge,

The broad nature of KM, and the range of potential applications have also led to the emergence of different viewpoints on the scope of KM and of its constituent elements. Within the LIS field for example, divergent perspectives appeared as a number of people perceived KM as in effect, representing the appearance of *Old wine in new bottles* and regarding it essentially as resulting from a renaming of information management, a field in which librarians have always engaged. Others however, perceived KM to represent some kind of movement away from information management, and regarded it as a source of opportunity for the profession. These divergent opinions are acknowledged in the course of the present research, where from the outset an effort was made to clarify what KM might mean for the LIS sector and

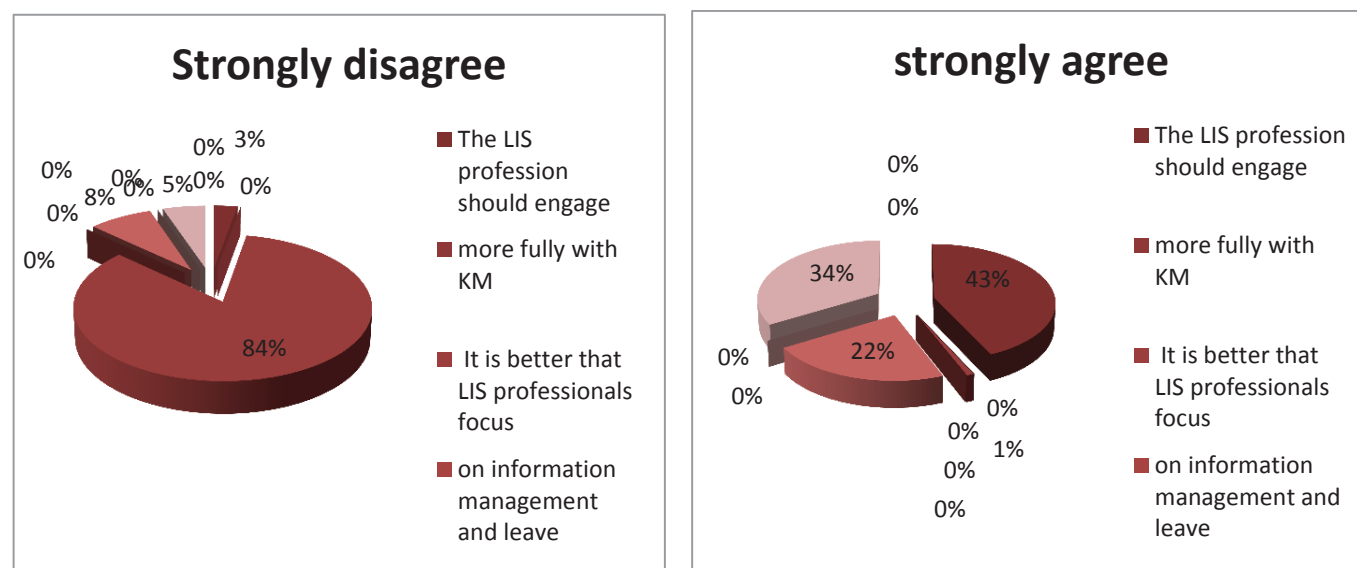
in particular, for library education. Accordingly, specific questions relating to the meaning of KM were included in both the online questionnaire and invited to comment on what they saw as the future of KM.

This section first provides some quantitative findings from the survey on the most accepted definition of KM. In addition, a number of themes emerged as being significant in respondents' perception of the nature of knowledge management and how it is perceived in the LIS sector.

## Knowledge Management Definitions

- "The acquisition, sharing and use of knowledge within organizations, including learning processes and management information systems"
- "The creation and subsequent management of an environment which encourages knowledge to be created, shared, learnt, enhanced, organized for the benefit of the organization and its customers"
- The process of capturing value, knowledge and understanding of corporate information using IT systems in order to maintain, re-use and re-deploy that knowledge"
- "The capability of an organization to create new knowledge, disseminate it and embody it in products, services and systems."
- "The use of individual and external knowledge to produce outputs characterized by information content and by the acquisition, creation, packaging or application and reuse of knowledge"

It is noticeable that everybody answered this question, either by choosing one of the definitions provided, or by providing an alternative definition. This kind of response, and the



**Figure 1 Percentage of Agreement/Disagreement with Statements on General Attitudes Toward LIS Engagement with KM**

implied awareness that goes with it, has also emerged in related research in the KM field.

- a. The LIS profession should engage more fully with Knowledge Management

In Table it is interesting that 98.1% (a high majority) of respondents showed their agreement with this statement (combining agree and strongly agree). Just as interesting, however, is the fact that there was so much interest among respondents in answering this. The manifestation of interest in KM is in keeping with the tenor of the prose on this topic. Indeed most LIS professional comment in the prose indicates confidence in the ability of the profession to make the most of opportunities in KM and to engage effectively with the full spectrum of knowledge management concepts.

- b. It is better that LIS professionals focus on information management and leave the other dimensions of Knowledge Management to other disciplines

There is a view expressed within the works that the main contribution that LIS professionals can make to KM is by engagement in information management with the corollary that it would be difficult or even impossible for them to engage in its other, more sophisticated aspects.

They would suggest that the intellectual capital that knowledge managers are meant to be leveraging (or giving value to) goes far beyond the documentary forms to which the LIS profession has been accustomed". To test this assertion in a wider context, respondents to the survey were asked if they agreed that the profession should focus on IM, and leave the other dimensions of KM to other disciplines. As is clear from Table only a small portion of respondents

(10.7%) agreed with this argument, with a clear majority (77.7%) recording their disagreement. The message coming from these respondents is that members of the LIS community participating in this project saw the value of seeking to engage in KM in its entirety and in the process, of expanding the parameters of the LIS profession.

- c. The management of explicit knowledge is something which librarians do well

It came as something of a surprise to the LIS profession that, while the works confirms that explicit knowledge is an area of expertise for information professionals some 16.4% of respondents did not agree or were hesitant about this statement. This result could, of course, be viewed in two different ways. It might be a sign that elements within the LIS community lack confidence in their own abilities. Alternatively it might be an indication that the profession seeks to enhance its expertise even in areas where such expertise has already been demonstrated and acknowledged.

- d. Librarians have the potential to manage tacit knowledge as well as explicit

## Knowledge

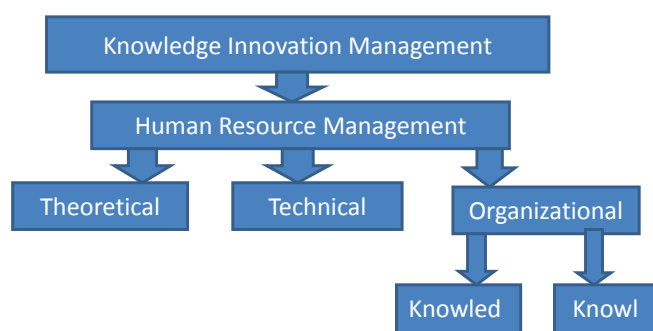
It has been argued widely in the literature that, in order to make a major contribution to KM, LIS professionals need to have the capability of managing all forms of corporate capital this includes reports that information specialists are moving into the area of tacit knowledge management

To identify current perceptions in this regard, participants were asked to show their level of agreement with the statement

that librarians have the potential to manage tacit knowledge as well as explicit knowledge. It emerged that a great number of respondents (70.2%) agreed with this statement. Clearly agreement with such statements is one thing, and having the ability to perform the necessary functions is another, but the trend in perceptions is an interesting one. Respondents to the survey raised a number of issues which also appeared or were included in the interviews. These themes included: the fit with LIS, the LIS contribution to KM, the need for KM education, and the benefits and outcomes of KM education. There follows a report on these qualitative results mixed with relevant quantitative findings.

## CONTENTS OF KNOWLEDGE MANAGEMENT IN LIBRARIES

In my opinion, Knowledge Management in libraries should include such aspects as follows:



## CONCLUSION

The effects of KM on the career options and prospects for LIS have led to the need for a higher profile for information specialists. This is a further indicator of the relevance of KM to LIS education. In other words, the evolving roles of librarians imply that LIS graduates need to be outfitted with extra capabilities through the application of new educational paradigms and procedures. As organizations across industrial sectors are creating roles for knowledge work,

Debate continues within and outside the LIS profession, on the status of knowledge management in all academic fields, and whether it constitutes a real movement, or, is just a new label invented by business consultants, a form of semantic drift or a real conceptual shift. Results from this part of the study have revealed the existence of a considerable degree of understanding among LIS professionals as to the true nature of knowledge management. This takes the subject beyond information management to include, not just information, but also knowledge in both tangible and intangible formats, and to embrace the concepts of knowledge sharing and

the learning organization. While a review of the literature indicates certain reservations concerning the implications of domain-specific perceptions of KM education the generic nature of KM was confirmed in the current research thesis. A majority of participants endorsed KM in its broader sense, and acknowledged the need for inclusion of different dimensions of KM in LIS education.

Hence, although there are still some people who define KM simply as IM, and who do not see other dimensions to the subject, there is at least recognition emerging among the research community of the need for a proper understanding of knowledge management, of what it is, and of the importance of looking at KM from different perspectives. Furthermore, participants in the present research recognized the importance of KM for organizations, and the need for the LIS profession to acknowledge this feature of KM in order to align their professional missions better with the goals of the organization.

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