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## EDUCATING FUTURE KNOWLEDGE-LITERATE LIBRARY AND INFORMATION SCIENCE PROFESSIONALS

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**Abstract.** This paper reports the core findings of an international study that examined the perceptions of LIS<sup>1</sup> community towards knowledge management inclusion in the LIS education. Taking the perspectives of members of international LIS communities, we try to identify the rationale for a paradigm shift in library education towards knowledge management. We also explore the perceptions of LIS community towards the nature and content of knowledge management program in the LIS education which best meets the challenges of the knowledge management work environment.

### Introduction

Librarians have always operated as intermediaries between people who have knowledge and those who need to know. This intimacy with knowledge is so pronounced that to many observers knowledge management has always been integral to the work of librarians. Allowing for potentially different interpretations of knowledge management, for example between librarians and other professions, there is ample support in the literature for a history of library involvement. It is also the case that the distinctive information and knowledge handling skills of LIS professionals have not been lost in recent years on knowledge management employers. However, to help LIS people engage more successfully in the knowledge management arena and to maximize their prospects for success in what is a very competitive field, the acquisition of a number of additional competencies should be considered.

This recommendation is relevant to the relatively recent attention being paid by LIS educators to the subject of knowledge management. Obvious reasons for this development include a desire to improve the job prospects of LIS graduates and the nurturing of knowledge-aware professionals. More generally there is a survival element to such developments and the research reported in this paper indicates that in recent decades LIS schools have responded in a variety of ways to the need to educate professionals in aspects of knowledge management and also to provide them with the appropriate knowledge-related skills and capabilities. Research findings suggest that if the academic campus has a library and information science school, the knowledge management program will typically start at that school with some form of interdisciplinary arrangement. Otherwise, the knowledge management program will be absorbed by the business schools and, in special cases, by engineering schools. (Koenig 2004). Sutton claims that the LIS sector is leading the drive towards knowledge management education with the largest range of course offerings (37%) emerging from graduate schools of library and information science (Sutton 2002). However, there are challenges to the provision of knowledge management education within LIS schools. The multifaceted nature of knowledge management, along with the different perspectives of the various groups involved, has militated against any broad consensus on either curriculum content or vehicles for provision. The recruitment of knowledge management graduates from different backgrounds, by various educational providers with quite distinct pedagogical patterns and the entrance of these professionals, with their diverse range of knowledge and skills, into the market has also caused problems. Not only has the promotion of knowledge management as a source of value provided by these graduates raised the expectations of employers of new recruits but also it has helped to create competition for graduates among employers that in the absence of an overall standard in program design and content is likely to lead to employer disillusionment. Recognition of these and other real and potential problems in the marketplace for knowledge workers prompted the current researchers to conduct a comprehensive research on not only perceptions of international LIS communities toward knowledge management inclusion and its rationale but also on the problems and the implications for course design and the skills and characteristics required in graduating students. Although some researches have recently been done on the issue of knowledge management education for LIS professionals (Todd and Southon 2001; Sutton 2002; Chaudhry and Higgins 2003; Lai 2005;

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<sup>1</sup> Library and Information Science

Rehman and Chaudhry 2005), but we investigate the matter from the view points of the LIS communities themselves in all over the world. This paper reports the core findings of first stage of our research on these perceptions as we assess future potential developments in the design and implementation of knowledge management programs for LIS professionals.

### Methodology

In order to explore the phenomenon of knowledge management from the viewpoints of various LIS communities, a web-based questionnaire was designed. To gain an international dimension on the views of LIS professionals, the questionnaire was released through a range of national and international LIS mailing lists and discussion groups (including IFLA-L, KMDG-L, ALIA, SLA, MELA) during May to July 2005. There were three close and open-ended questions in the education section of the questionnaire providing respondents with the opportunity both to respond to specific questions and to add additional information as they desired. It was intended that the findings would not only explore the perceptions of LIS communities toward knowledge management inclusion in the LIS education but also clarify the rationale for this and would identify the nature and content of a knowledge management program which would best meet the challenges of knowledge management work environment. It is worth noting that the present paper is a dissemination of the result of education section of the survey questionnaire.

### Findings

A total of 371 valid questionnaires were returned and subsequently analyzed.

The majority of respondents (80.6%) were from Australia and New Zealand, USA, UK, South Africa and Canada respectively. 80% of respondents were between 36-55 years old. In terms of gender, the majority (81%) of respondents were female. A descriptive analysis of the findings of the education section follows.

#### *Perceptions on the knowledge management inclusion within the LIS education*

To understand the opinions of various LIS communities on the need for knowledge management educational programs respondents were asked if they agreed that education for LIS must change to accommodate developments in KM:

As shown in Table 1 below, 81.9% (a high majority) of respondents replied "Yes" to this question which means that there is a strong interest in including knowledge management education programs in the LIS curricula within the LIS community. Rehman and Chaudhry (2005) reached the same conclusion. Among the dissenting opinion on this issue was one respondent who observed: "LIS curricula should change even without the factor of KM. Cataloging and classification for example occupies so much of LIS and learners time and energies but contributes minimally to managing information in the libraries."

**Table 1. Do you agree that education for LIS must change to accommodate developments in KM?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	304	81.9	81.9	81.9
no	45	12.1	12.1	94.1
	22	5.9	5.9	100.0
Total	371	100.0	100.0	

#### *Rational for a paradigm shift in library education towards knowledge management*

Respondents, who answered yes to previous question, were asked to indicate their level of agreement with the following statements as rationales for proposed changes in the LIS education.

- **Mainstream LIS curricula are outdated**

It emerged that about half of the respondents (52%) agreed with this statement, (combining both

“agree” and “strongly agree”) and 21.9% disagreed (combining both “disagree” and “strongly disagree”). There was a high percentage of “missing” and “don’t know” responses to this question. 35% of respondents either refused to answer or chose don’t know.

**Table 2. Mainstream LIS curricula are outdated**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	.8	.9	.9
	disagree	70	18.9	21.9	22.9
	don't know	79	21.3	24.8	47.6
	agree	124	33.4	38.9	86.5
	strongly agree	43	11.6	13.5	100.0
	Total	319	86.0	100.0	
Missing	System	52	14.0		
Total		371	100.0		

- ***A more business-oriented curriculum is needed***

Combining both “agree” and “strongly agree” responses, it was found that 66% of respondents agreed that a more business oriented curriculum was needed. Despite this rate of agreement, some LIS professionals showed a negative point of view toward the development of business-oriented curricula and added further comment in the open-ended space provided. One respondent said: *“unlike the business world, libraries work on a basis of cooperation not competition.”*

Another mentioned: *“I have been in KM classes where LIS students dropped out because it was “too business oriented”.*

Another respondent noted: *“I am currently studying but chose not to attend one unit due to the very “business” nature of the course.”*

Another respondent suggested: *“There needs to be a change in terms of focusing on the social and cultural aspects of information and its use and links to development whether organizations or social groups, nations. This doesn’t necessarily come with a more “business-oriented” curriculum.”*

There is ample support within the professional literature for the introduction of more business elements to the LIS curriculum. Koenig has noted that KM professionals should possess sufficient understanding of business and economic concepts. (Koenig 1999)

Lai (2005) emphasized the importance of a business element in LIS education *“to prepare students with proper understandings and expectations of corporate culture and its environment, the professional should have a proper background in business as well, so that she/he can communicate proficiently using the same language that the business community speaks.”* [(Lai 2005), p.352]

**Table 3. A more business-oriented curriculum is needed**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	8	2.2	2.5	2.5
	disagree	53	14.3	16.7	19.2
	don't know	47	12.7	14.8	34.0
	agree	161	43.4	50.6	84.6
	strongly agree	49	13.2	15.4	100.0
	Total	318	85.7	100.0	
Missing	System	53	14.3		
Total		371	100.0		

- ***Without curriculum change LIS graduates will lose out in the job market***

As shown in the table 4, 68.8% (combining both “agree” and “strongly agree” responses) agreed with the above statement.

**Table 4**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	2	.5	.6	.6
disagree	35	9.4	11.0	11.6
don't know	62	16.7	19.5	31.1
agree	161	43.4	50.6	81.8
strongly agree	58	15.6	18.2	100.0
Total	318	85.7	100.0	
Missing System	53	14.3		
Total	371	100.0		

- ***Mainstream LIS curricula do not equip people with the competencies demanded by knowledge management***

Table 5 shows that again 68.2% agreed with the above statement.

**Table 5**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	3	.8	.9	.9
disagree	34	9.2	10.7	11.7
don't know	64	17.3	20.2	31.9
agree	158	42.6	49.8	81.7
strongly agree	58	15.6	18.3	100.0
Total	317	85.4	100.0	
Missing System	54	14.6		
Total	371	100.0		

- ***Prospective students will demand change***

As shown in table 6, 59.7% of respondents agreed with the statement

**Table 6**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	2	.5	.6	.6
disagree	22	5.9	6.9	7.5
don't know	104	28.0	32.7	40.3
agree	159	42.9	50.0	90.3
strongly agree	31	8.4	9.7	100.0
Total	318	85.7	100.0	
Missing System	53	14.3		
Total	371	100.0		

- **Employers will demand such changes**

Table 7 shows that 68.4% of respondents are agreed with the above statement.

**Table 7**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	5	1.3	1.6	1.6
disagree	20	5.4	6.4	8.0
don't know	74	19.9	23.6	31.6
agree	160	43.1	51.1	82.7
strongly agree	54	14.6	17.3	100.0
Total	313	84.4	100.0	
Missing System	58	15.6		
Total	371	100.0		

***The nature and content of knowledge management program for the LIS professionals:***

In order to determine the main focus of knowledge management education, respondents were asked to choose from a list provided, an approach to knowledge management curricula which in their opinion would best meets the needs of LIS professionals. Some 62.8% of respondents selected “A curriculum that embodies core elements of LIS, management and information systems.” This can be interpreted as a belief that respondents saw a multidisciplinary approach as being the best basis for a KM program for LIS professionals.

The results of an empirical study conducted by Rehman & Chaudhry surveying a selected population of LIS educators (2005) reached the same results suggesting that “*collaboration seems to be the most important strategy in making KM courses successful.*”

Of the remainder, 12.4% chose “A curriculum based largely in LIS and supplemented with modules on organizational behavior, knowledge and knowledge-based economy.”

3.5% voted for a “curriculum based largely in the management domain (human resources, strategy, marketing, etc) supplemented with modules on information and knowledge and the knowledge-based economy.”

**Discussion**

The findings clearly demonstrate that the importance of knowledge management has been recognized by LIS professionals. There is strong interest for the inclusion of knowledge management in the LIS educational programs, in order to expand the skills of LIS professionals and facilitate their entry into the KM job market. However, owing to the multidisciplinary nature of knowledge management, there remain serious difficulties to do with the proposed nature and content of these programs. The results of this study lend support to the idea of multidisciplinary approach in any knowledge management educational program. Clearly this is a view from within the LIS profession and would not be expected to be one that is universally held. In an LIS context, however, our findings reinforce those of earlier researchers. This includes suggestions that KM programs should “*provide theoretical frameworks and also professional skills required for the effective management of information in the context of knowledge management initiatives*”(Southon and Todd 1999). It also acknowledges the difficulties to be expected in attempting to make such provision in a situation where “*professional schools tend to educate for the skills needed for entry level positions, whereas knowledge management jobs are senior level jobs that require a deep understanding of the organizational context and culture.*”(Koenig 1999, p.1).

**Table 8. Which approach to knowledge management curricula in your opinion would best meet the needs of LIS professionals?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		49	13.2	13.2	13.2
a	A curriculum based largely in LIS (information dissemination, retrieval, etc) and supplemented with modules on organizational behavior, knowledge and the knowledge-based economy.	46	12.4	12.4	25.6
b	A curriculum based largely in the management domain (human resources, strategy, marketing, etc) supplemented with modules on information and knowledge and the knowledge-based economy.	13	3.5	3.5	29.1
c	A curriculum largely based on the information systems domain (databases, advanced and web-based systems) supplemented with elements of natural language processing, artificial intelligence and the design and use of web technologies	11	3.0	3.0	32.1
d	A curriculum that embodies core elements of all three examples	233	62.8	62.8	94.9
e	Other (Please specify)	19	5.1	5.1	100.0
f	Total	371	100.0	100.0	

## Conclusion

Results from our research to date suggest that library schools and the profession at large need to seize the opportunities offered by knowledge management in terms both of individual career development and the overall advancement of LIS. However any such response to its perceived opportunities and threats needs to be more reasoned, thorough and effective than has been the case to date. Specifically there is a need to clarify the roles that LIS professionals can play within the spectrum of knowledge management activities and amend or expand educational curricula to meet these requirements.

Undoubtedly, the current LIS program has already included some core elements of KM (Lai 2005), but there is also a need to equip graduates with competencies in management and business. Further results from these two doctoral research projects at RMIT University will be presented at future conferences and in relevant publications.

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