

# Role of Information Professionals in Knowledge Management Programs: Empirical Evidence from Canada

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## Abstract

The implementation of a knowledge management program in an organization has the potential of improving customer services, quickly bringing new products to market, and reducing cost of business operations. Information technologies are often used in knowledge management 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 information professionals also have a role to play as they are traditionally known as good managers of explicit knowledge. Hence, the aim of this study is to provide empirical evidence of the role of information professionals in knowledge management programs. 386 information professionals working in Canadian organizations were selected from the Special Libraries Association's **Who's Who in Special Libraries 2001/2002**, and a questionnaire with a stamped self-addressed envelope for its return was sent to each one of them. 63 questionnaires were completed and returned, and 8 in-depth interviews conducted. About 59% of the information professionals surveyed are working in organizations that have knowledge management programs with about 86% of these professionals being involved in the programs. Factors such as gender, age, and educational background (i.e. highest educational qualifications and discipline) did not seem to have any relationship with involvement in knowledge management programs. Many of those involved in the programs are playing key roles, such as the design of the information architecture, development of taxonomy, or content management of the organization's intranet. Others play lesser roles, such as providing information for the intranet, gathering competitive intelligence, or providing research services as requested by the knowledge management team.

**Keywords:** Knowledge management, information professionals, Canada, business organizations

## Introduction

Knowledge management (KM) is a collection of processes that govern the creation, dissemination, and utilization of knowledge in an organization (Newman, 1991). It involves the management of explicit knowledge (i.e. knowledge that has been codified in documents, databases, web pages, etc.) and the provision of an enabling environment for the development, nurturing, utilization and sharing of employees'

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tacit knowledge (i.e. know-how, skills, or expertise). Information technologies, such as intranets, web portals, and groupware, are often used to facilitate the sharing of knowledge among a group of workers (commonly referred to as a community of practice) in an organization because of their capabilities in extending the reach as well as enhancing the speed of knowledge transfer. The implementation of an appropriate knowledge man-

agement program in a business organization has the potential of improving customer services, continually improving business processes, quickly bringing new products to markets, and bringing innovative new ideas to commercialization (Heisig & Vorbeck, 2001).

In most organizations, the key professionals involved in knowledge management activities are human resource managers, process & product developers, and information technologists (Taylor, 2001). This assertion was partly corroborated by a bibliometric analysis of the field of knowledge management that showed that the field's popularity was largely due to the dominance of information technology applications (Wolfe, 2003). However, of late, there has been increased interest in knowledge management activities by information professionals. To demonstrate the relevance of the profession to knowledge management, various articles have discussed the roles of information professionals in the knowledge management process (Albert, 1998; Balcombe, 1999; Broadbent, 1998; Duffy, 2000; Marshall, 1997; Milne, 2000; Ponelis & Fairer-Wessels, 1998; Schwarwalder, 1999; Yeh, 2000); special issues of professional journals have been devoted to knowledge management issues; a book on knowledge management for the information professional has been published (Srikantaiah & Koenig, 2000); special sessions on knowledge management have been held at professional conferences; seminars on knowledge management are being organized regularly; some library and information science schools now offer courses on knowledge management, such as "Knowledge Management in Organizations" at the School of Communication, Information and Library Studies at Rutgers University; and a few schools have even gone a step further by offering specialization in knowledge management, such as the Innovative Master of Science in Information Architecture and Knowledge Management at Kent State University, United States of America, or the Master of Science in Knowledge Management at the School of Communication and Information, Nanyang Technological University, Singapore.

Despite the activities listed above, there is little evidence of the involvement of information professionals in an organization's knowledge management programs (Abell, 2000). Hence, the general objective of this study is to obtain empirical evidence of information professionals' involvement in knowledge management activities in Canada. Specifically, the objectives are to determine the:

- degree of involvement of information professionals in KM activities in Canadian business organizations;
- specific roles being performed by the information professionals;
- skills required by the information professionals to participate effectively in KM activities;
- and factors inhibiting the participation of information professionals in KM activities.

## Previous Research

There have been various empirical studies conducted on knowledge management practices but these have been from the business or information technology perspective. For example, Ruggles (1999) conducted a survey of 431 organizations in the U.S. and Europe but the focus was on what the organizations were doing to manage knowledge and the software being used, as well as the obstacles encountered in implementing knowledge management programs. In another study, Heisig & Vorbeck (2001) conducted a comprehensive survey of the German TOP 1000 and European TOP 200 companies. The survey questions focused on the status of knowledge management activities in the business processes. Also, Kautz (2002) investigated the use of an IT-supported knowledge management system (KMS) that is embedded in knowledge management framework in a large, global IT consulting company. The study found that the majority of the respondents were using the KMS to search for general information but not as the primary repository and communication media for knowledge assets.

At the national level in Canada, a couple of surveys have also been conducted on knowledge management practices. Stivers, Covin, Hall and Smalt (1997) conducted a study to provide a broad-based em-

empirical overview of some of the key issues in knowledge management. Questionnaires were sent to the top executives of 300 of the Financial Post 500 firms in Canada and all of the Fortune firms in the U.S. The results of the study showed that knowledge management practices (e.g. putting mechanisms in place to ensure that intellectual assets are retained by the company) were perceived to be fairly common in Canadian and U.S. firms. Statistics Canada conducted a pilot survey (Earl, 2002) on knowledge management practices in the fall of 2001 as part of an international initiative headed by the Organization for Economic Cooperation and Development. Questionnaires were sent to 407 firms in five sub-sectors of the North American Industrial Classification System: forestry and logging; chemical manufacturing; transportation equipment manufacturing; machinery, equipment and supplies wholesaler-distributors; and management, scientific and technical consulting services. The study found that a majority of the firms were engaged in at least one of 23 business practices related to knowledge management. On the issue of who was responsible for knowledge management practices in the firms, the study found that the executive management team was responsible in 68% of the firms, information technology unit in 7%, human resources unit in 6%, 6% of the respondents didn't know, and the remaining 12% chose knowledge management unit, library/documentation centre or multiple responses. This result is not totally surprising, as we don't expect the library/documentation centre to have direct responsibility for knowledge management practices in an organization. However, our contention is that information professionals do have a role to play, and the aim of this study is to determine what this role is.

## Methodology

This study employed the survey research methodology, and potential subjects for the study were obtained from the Special Libraries Association's **Who's Who in Special Libraries 2001/2002** (Special Libraries Association, 2002). The directory listed 564 information professionals belonging to the Toronto chapter, 253 from Eastern Canada chapter, and 243 from Western Canada chapter. After eliminating duplicates (i.e. those belonging to more than one chapter), 231 members were purposively selected from the Toronto chapter, 81 from Western chapter, and 74 from Eastern chapter. Those not selected included student members, retired members, university professors, those working in public or academic libraries, those with only a residential addresses (which made it impossible to determine the type of organization they were working in), and those based outside Canada (e.g. France and United Arab Emirates). A questionnaire with a stamped self-addressed envelope for its return was sent to each of the 386 selected members. Some of the questionnaires were returned because the respondents had moved, one respondent from Quebec requested that the questionnaire should be translated into French for her (this was not done since she was the only one making such a request whereas about 11 other respondents from Quebec completed and returned the questionnaire), and a few others indicated that they would not be able to participate in the study either because they were not working in an environment where KM was being practiced or they were not familiar with the concept. In all, 63 completed questionnaires were returned. This represents a response rate of about 16%.

In order to obtain in-depth information about the experience of the information professionals in knowledge management programs, 20 professionals belonging to the knowledge management section of the Special Libraries Association from the Toronto chapter were selected for interviews. These people were selected because of their perceived interest in knowledge management, Toronto's proximity to the researcher's base, and the fact that many industrial/business organizations are located in the city. In addition, an alumnus of the Faculty of Information and Media Studies, University of Western Ontario, who works as a director of knowledge management in a public relations/public affairs consulting firm in Toronto, provided names of some other information professionals involved in knowledge management in Toronto. Initial contact was made with each of the potential interviewees but a few did not respond while four indicated that, though knowledge management was being practiced in their organization, they were not directly involved in the program. Eventually, only 8 agreed to sit down for the interview. Each interviewed lasted for about 45 - 90 minutes.

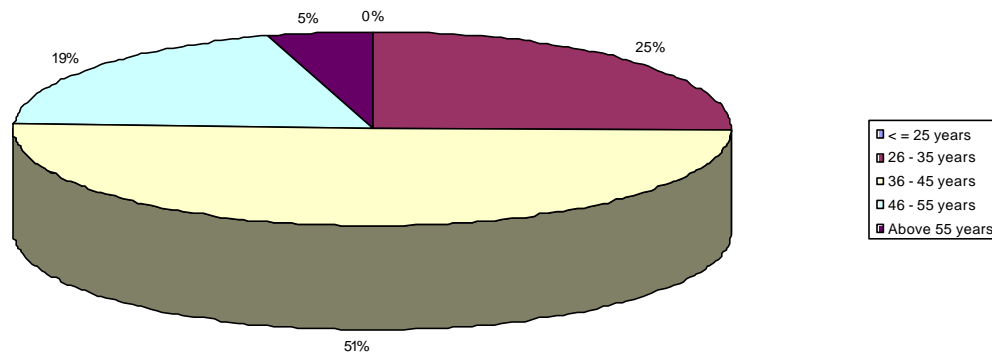
The data collected by questionnaires were subjected to quantitative analysis using SPSS software while the interview sessions were recorded on tape, transcribed and analyzed qualitatively.

## Results and Discussions

### Background of Respondents

The respondents work in various organizational settings with the three major ones being Business & Finance, Consulting, and Insurance and Employee Benefits. It was encouraging to see that many of the respondents come from these types of organizations, which are known to be heavily involved in knowledge management (Earl, 2002). According to Earl, the main reason is that these service industries depend to a great extent upon marketing the application of the knowledge of their workers. A large major-

Figure 1 : Age of respondents



ity (82.5%) of the respondents are female, which is not surprising as the profession is dominated by women. Almost half of the respondents are between 36 and 45 years old (see Figure 1) with the remain-

Figure 2 : Highest Educational Level

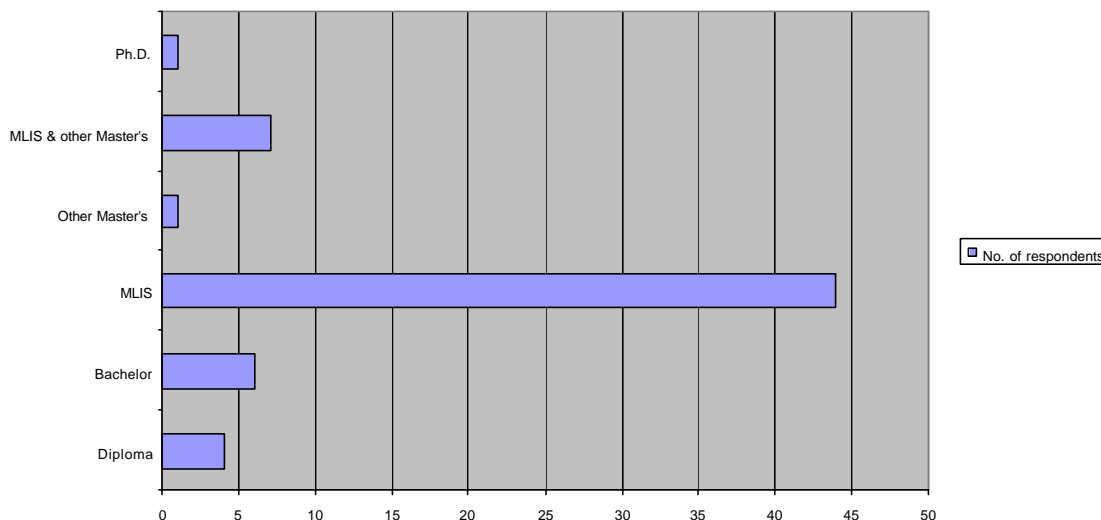
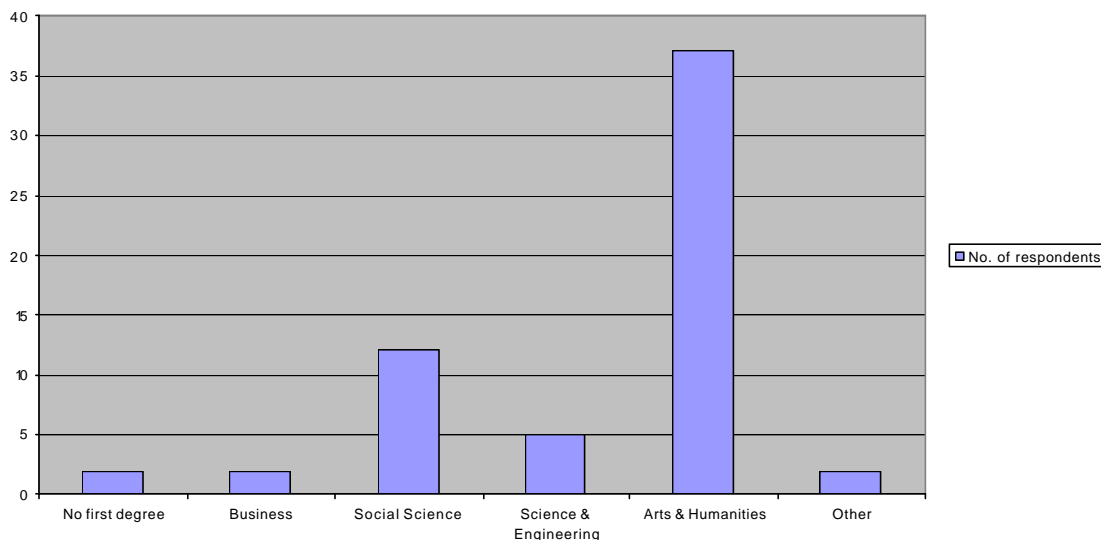


Figure 3 : First Degree's Subject Discipline



ing ones almost evenly split between the age brackets 26-35 years and 46-55 years.

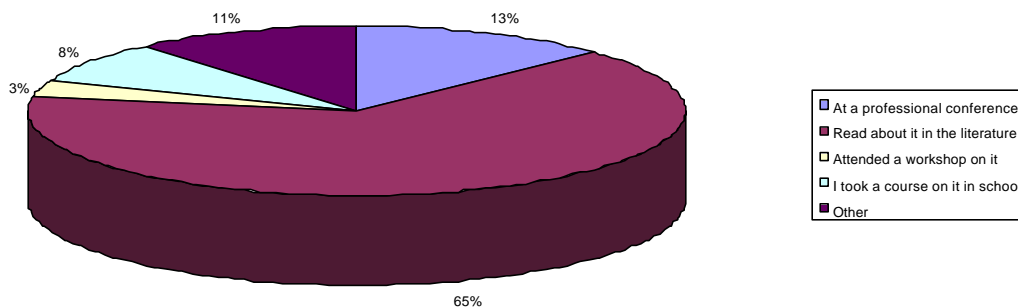
In terms of educational qualifications, most of the respondents have a master’s degree in library and information science (this includes master’s degree in library science, master’s degree in information management, master’s degree in information technology, and master’s degree in archival studies) in addition to a first degree in either Social Sciences or Arts & Humanities (see Figures 2 & 3). This is in line with the general practice in the profession. In addition to the degrees, some have also attended workshops or continuing education courses in order to update their knowledge. For example, one of the information professionals interviewed mentioned that he’s had to take a course in web design that was not available when he was in school.

**Perceptions of Knowledge Management**

Most of the respondents first read about knowledge management in the literature but very few had taken a course on it (see Figure 4). This is understandable as knowledge management is now a hot topic in the literature of the profession but only a few schools are offering a course in knowledge management.

Most of the professionals disagreed that knowledge management is just another fad like total quality management (see Table 1), which corroborates the findings by Ponzi & Koenig (2002) that knowledge

Figure 4 : Source of Knowledge about KM



## Role of Information Professionals

management is at least lasting longer than typical fads and, perhaps, is in the process of establishing itself as a new aspect of management. However, the respondents were equally divided on whether knowledge management is a new term for what information professionals used to do. Also, a majority of them agree that information management is just an aspect of knowledge management, which is in line with the thinking that information management involves management of explicit knowledge (e.g. documents) while knowledge management involves the management of both explicit knowledge and tacit knowledge. Not surprisingly, there was almost a unanimous agreement that information professionals have important roles to play in knowledge management programs.

|  | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Not Sure</b> | <b>Agree</b>  | <b>Strongly Agree</b> |
|--|--------------------------|-----------------|-----------------|---------------|-----------------------|
| KM is just another fad like Total Quality Management                   | 10<br>(15.9%)            | 38 (60.3%)      | 8<br>(12.7%)    | 6<br>(9.5%)   | 1<br>(1.6%)           |
| KM is a new term for what information professionals were already doing | 3<br>(4.8%)              | 26 (41.3%)      | 5<br>(7.9%)     | 24<br>(38.1%) | 4<br>(6.3%)           |
| Information management is just another aspect of KM                    | 1<br>(1.6%)              | 13 (20.6%)      | 3<br>(4.8%)     | 36<br>(57.1%) | 9<br>(14.3%)          |
| Information professionals have important roles to play in KM programs  | 0<br>(0.0%)              | 0<br>(0.0%)     | 2<br>(3.2%)     | 30<br>(47.6%) | 31<br>(49.2%)         |

**Table 1: Perceptions of knowledge management**

## ***Role in Knowledge Management Programs***

Thirty seven (59%) of the information professionals are working in organizations which have knowledge management programs. Most of these organizations are in the process of integrating knowledge management principles into their daily activities (see Figure 5) while the majority of the programs (about 86.1%) are less than 5 years old (see Figure 6). In fact, the information professionals interviewed mentioned that most organizations practicing knowledge management are still trying to fiddle their way

**Figure 5 : Status of KM Program**

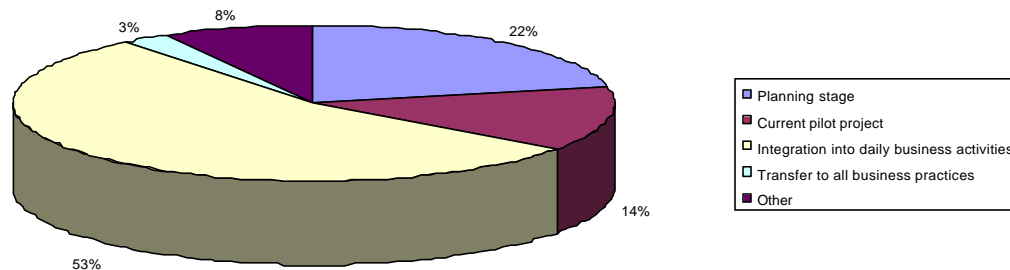
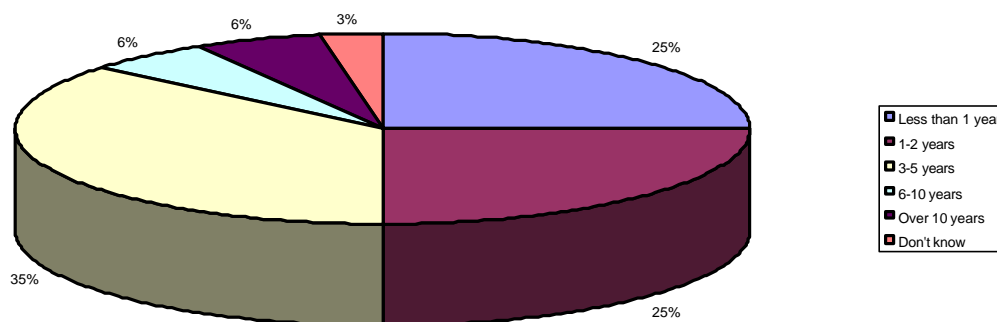


Figure 6 : When KM Program was launched

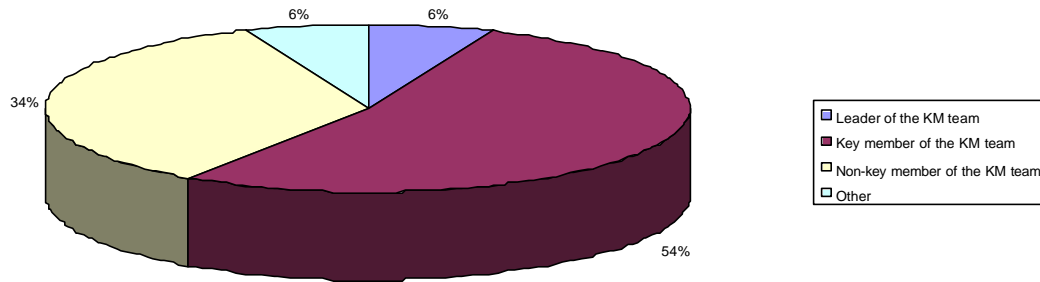


round and that the main concrete activity seems to be the sharing of knowledge especially through the aid of the organization's intranet. This view is buttressed by the fact that one can reasonably argue that some of the 23 knowledge management practices (categorized under "policy and strategies", "leadership", "incentives", "training and mentoring", and "communications") identified in the Statistics Canada pilot survey on knowledge management practices (Earl, 2002) are normal business practices.

Thirty-two (about 86%) out of the information professionals working in organizations with knowledge management programs are involved in such programs. Factors such as gender, age, and educational background did not seem to have any relationship with involvement in knowledge management programs (each of the tested hypotheses of a relationship between involvement in knowledge management program and gender, age or educational background turned out to be non-significant). In fact, the key reason given by the few for non-involvement is the lack of management's recognition of the role of information professionals in knowledge management.

In terms of the degree of involvement, about half of the information professionals regarded themselves as key members of the knowledge management team, about 30% regarded themselves as non-key members of the team, while a very few number are playing leadership roles (see Figure 7). Some of the key roles being played by information professionals include the design of the information architecture, development of taxonomy, and content management (one of the professionals interviewed, who had taken a course in Lotus Notes Development, trains the content managers) of the organization's intranet. In support of these roles, more and more job adverts seeking portal content managers now list a master's degree in library and information science as one of the required qualifications. The non-key roles being played by information professionals include provision of information for the intranet (includes internal information as well as external information gathered through Internet and online database searching), distribution of electronic information, gathering competitive intelligence, and provision of research services as requested by the knowledge management team. One of the two respondents playing leadership roles claimed to have introduced the program to the organization, while the other one is responsible for developing the process for knowledge generation, capture and exchange within the organization. Also, one of the professionals interviewed is the director of knowledge management services for a branch office of a consulting firm. She is part of the knowledge management team for the firm but the main leadership direction emanates from the headquarters.

Figure 7 : Degree of Involvement in KM Program



Based on their experience, the respondents identified team working, communication and networking skills as the key organizational skills required by information professionals (see Table 2) in order to be able to participate in knowledge management programs. This result validates some of the skills earlier identified by Abell (2000). Team working and communication skills are required for collaboration within an organization while communication and team networking skills are required for the sharing and transfer of knowledge.

| Skills                    | Number of Respondents |
|---------------------------|-----------------------|
| Communication skills      | 31 (96.9%)            |
| Leadership skills         | 25 (78.1%)            |
| Facilitation skills       | 24 (75.0%)            |
| Networking skills         | 27 (84.4%)            |
| Negotiating skills        | 22 (68.8%)            |
| Consensus building skills | 24 (75.0%)            |
| Persuasion skills         | 21 (65.6%)            |
| Team working              | 32 (100.0%)           |
| Coaching skills           | 21 (65.6%)            |
| Mentoring skills          | 18 (56.3%)            |

**Table 2: Organizational Skills and Competencies Required in KM Programs**  
 (percentage given with regard to the number of respondents involved in knowledge management programs)

The respondents also identified the ability to analyze business processes, understanding of the knowledge process within the business process, ability to use information technologies, and document management skills (see Table 3) as the core competencies required of information professionals in knowledge management programs. The ability to analyze business processes and understanding of the knowledge process within the business process are required for knowledge generation/creation. Even if information professionals don't create knowledge, it would be necessary for them to have these skills so as to be able to collaborate with colleagues on a knowledge management team. In fact, one of the professionals interviewed mentioned that she had to take a correspondence course from the Canadian Securities



Institute in order to have a better understanding of the business process (accounting, auditing, stock brokering, etc.) that her organization is involved in. The ability to use technology is necessary for the information professionals to perform some of the roles that have been identified above (i.e. content management of an intranet, database searching, etc.). Document management skills, which information professionals are well known for, are definitely required for managing explicit knowledge.

| Skills   | Number of Respondents |
|--|-----------------------|
| Ability to identify and analyse business processes                 | 32 (100.0%)           |
| Understanding of the knowledge process within the business process | 31 (96.9%)            |
| Ability to use information technologies                            | 27 (84.4%)            |
| Change management skills   | 21 (65.6%)            |
| Project management skills  | 27 (84.4%)            |
| Document and information management skills                         | 30 (93.8%)            |

**Table 3: Core Competencies Required in KM Programs**

(percentage given with regard to the number of respondents involved in knowledge management programs)

Finally, the respondents appreciated the efforts being made by organizations such as the American Society for Information Science & Technology which organizes regular seminars at its annual meeting, and Special Libraries Association which features regular articles on knowledge management in its publication "Information Outlook". However, they would like the professional bodies to develop a program of awareness activities that target corporate sector organizations to demonstrate the potential roles that information professionals can play in knowledge management programs. Hopefully, these awareness activities would go a long way in convincing business executives of the need to include information professionals on their knowledge management teams. Some of the respondents would also like the professional bodies to organize courses to educate the professionals on knowledge management concepts and principles. One of the interviewees also suggested that information professionals might want to enrol for a knowledge certification program that would certify their competencies in knowledge management. There are at least two of such programs, Certified Knowledge and Innovation Management-Commercial (CKIM-C) Program, and Knowledge Economics and Management Certification Training Program. However, such programs are expensive and one is not sure how well these programs are recognized by commercial organizations.

The respondents also would like the library and information science schools to develop and offer a course in knowledge management for their students. A few of the respondents disagreed and suggested that it would be better for the schools to collaborate with business schools in offering the course. However, according to Koenig (1999), the emphasis and perspective taken by the business school might be different. At present, at least four of the library and information science schools in Canada are offering courses in knowledge management while one of them, which has a joint MLIS/LLB programme, collaborates with the business school to offer the course. Students in the remaining schools without a knowledge management course would be well advised to take online information retrieval, cataloguing and classification, and web design & management courses as well as read the literature to familiarize themselves with the concepts of knowledge management if they intend to apply for knowledge management-related jobs in the future. It is interesting to note that none of the respondents suggested that Canadian library and information science schools should emulate some of their United States counterparts (e.g. Kent State University, Dominican University, and University of Oklahoma-Tulsa) by offering

a master's degree program in knowledge management. It is the assumption that they probably felt it is not necessary at this time. This assertion is supported by Alycia Tulloch (2002), who questioned the relevance of formalized academic KM instruction based on the results of her survey which showed that "successful KM practitioners come from a wide variety of academic and professional backgrounds without any apparent common denominator."

## Conclusion

This paper provides empirical evidence that most of the information professionals working in Canadian organizations with knowledge management programs are involved in such programs. The key reason for non-involvement of a few of them is lack of management's recognition of the role of information professionals in knowledge management. The major roles being performed by information professionals in knowledge management programs include the design of the information architecture, development of the taxonomy, and content management of the organization's intranet while the minor roles include the provision of information for the intranet, gathering competitive intelligence, or providing research services as requested by the knowledge management team. Also, team working, communication, networking and analytical skills were identified as the most important organizational skills required by information professionals to function in knowledge management programs while understanding of the knowledge process within the business process, ability to use information technologies, and document management skills were identified as the most important required competencies.

In conclusion, even though the recent global economic downturn has prompted many companies to scrap knowledge management posts or to reduce the scope of their knowledge management programs (Pringle, 2003), information professionals should continue to strive to be relevant in the field of knowledge management in anticipation of its resurgence in the near future.

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## Biography



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