

# Knowledge-Based Strategies in Canadian Workplaces: Is there a Role for Continuing Education?

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## ABSTRACT

A faculty researcher and six graduate students from the Master of Continuing Education program at the University of Calgary completed a small study of knowledge practices within government, postsecondary, and corporate workplaces across Canada. Interview results include an overview of findings and three narrative descriptions. Analysis produced a focused context for knowledge with less emphasis on organizational or systems contexts. Knowledge strategies, types, and factors are discussed with implications provided for knowledge in workplaces, continuing education, and workplace graduate research programs.

## RÉSUMÉ

Un chercheur-professeur et six étudiants diplômés du programme de Maîtrise en formation continue à l'Université de Calgary ont complété une petite étude sur les pratiques en connaissances dans les milieux de travail gouvernementaux, postsecondaires, et publics au Canada. Un survol des constatations et trois descriptions narratives font partie des résultats d'entrevues. Par l'analyse, on a pu élaborer un contexte cible par les connaissances, tout en diminuant l'emphase sur les milieux organisationnels et systématiques. Dans cet article, on examine les stratégies de produits, les types et les facteurs de connaissances, ainsi que les conséquences pour ces connaissances dans les milieux de travail, en formation continue et dans des programmes de recherches graduées en milieu de travail.

## INTRODUCTION

Over the last decade, the Faculty of Continuing Education, University of Calgary, has offered the Master of Continuing Education (M.C.E.) to mid-career employees seeking a graduate program in workplace learning and organizational development. The program explores different types of work and offers courses in qualitative research within the workplace and workplace issues, models, and analyses, as well as the completion of a research project within a workplace setting. One result of teaching in this program has been the realization that changes within and across workplaces develop in interesting and unique ways. Thus, we begin to “understand organizations differently” (Wheatley, 2000, p. 3).

It was from this perspective that the research team, composed of this faculty member and six learners, developed a study of knowledge management practices in workplaces. Our underlying assumption was that knowledge management strategies might very well develop according to the climate, factors, and situations within each workplace. To investigate this idea, a small, purposeful study was conducted, focusing on three settings: government, post-secondary, and corporate workplaces. Three research questions were explored: (1) how was knowledge management perceived in each workplace; (2) what benefits and challenges were identified in the way that knowledge management practices were used in the workplace; (3) what, if anything, could be done to encourage the future development of knowledge management strategies in the workplace?

This paper begins with a brief summary of knowledge management literature, followed by a description of the pilot study. Results and analysis are presented, followed by a discussion of the ways in which knowledge applies in the workplace and the role of continuing education services.

## LITERATURE REVIEW

### *Perspectives on Knowledge Management*

The field of knowledge management continues to elude simple definitions. For example, Davenport and Prusak (2000) describe knowledge in the following way:

Knowledge is a fluid mix of framed experiences, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories, but also in the organizational routines, processes, practices, and norms. (p. 5)

Despite such definitions, organizations continue to experience profound difficulties with the concept. Implicit is the naïve assumption that the introduction of knowledge management will yield a more efficient level of workplace productivity. Is the inability to realize the organizational goals cited by Davenport and Prusak (2000) simply a failure to adjust to knowledge developments in the workplace, or are there more systemic problems that require changes in organizational behaviour to implement these changes?

Often, workers may not, in fact, either understand how knowledge can be used within an organization or feel committed to the need for the development of new knowledge, information, or experiences within their workplaces. One way to implement an organizational transition and change process within such a workplace is to recognize the interplay among socio-technical factors (Benson, Johnson, & Kuchinke, 2002; Davis, 2001; McDermott, 1999; Nidumolu, Subramani, & Aldrich, 2001). If workplace employees understand how they can utilize knowledge sources in the workplace, then opportunities are forged for positive, proactive, healthy, and innovative discussions and decision-making within the culture and environment of the workplace.

This important interplay among people, work, and technology establishes and offers new ways of managing knowledge in the workplace (Davenport & Prusak, 2000; Gallupe, 2001; Mack, Ravin, & Byrd, 2001; Marwick, 2001; Thomas & Kellogg, 2001). Organizational knowledge becomes an outgrowth of the day-to-day work of employees within the organization if and when employees understand the benefits for themselves and their workplaces.

### ***Knowledge Strategies in Organizations***

Although the literature on knowledge management is extensive, this study focused on three ways that knowledge management strategies might exist within workplaces. These are outlined below.

#### ***Focused Context***

Frappaolo and Capshaw (1999) argued that knowledge is essentially a “commodity” that can be used, gathered, recombined, or leveraged for competitive gain. Marwick (2001) indicated that this was currently happening in those organizations able to perform a wide range of tasks, from capturing and searching data (i.e., document categorization, knowledge portals, text search functions) through to using collaborative tools that support the sharing of knowledge among people within an organization (i.e., groupware, synchronous collaboration, online chat functions). Nonetheless, although these benefits are part of the competitive advantage promoted by workplaces, they are often limited to specific departments within an organization.

### *Organizational Context*

This approach suggests that knowledge creation is an evolving, dynamic, and constantly changing entity. It is a social construct influenced by the context and the environment in which it emerges (Nidumolu et al., 2001). Within this perspective, knowledge processes are situated within an organizational context. Time must be taken to understand and map the knowledge processes within the organization (Cross & Baird, 2000; Davis, 2001; Gheradi, Nicolin, & Odella, 1998; Nidumolu et al., 2001) before new technology is introduced. By offering a broader meaning, knowledge becomes a more complex dynamic, affecting organizational structure and culture.

### *System Context*

This perspective suggests that knowledge can be created, used, developed, and transformed in ways that will benefit all workers within an organization. Working with these resources suggests that knowledge is not only linked to the essence of work and the social nature of learning at work but also offers profound implications for work (Wenger, McDermott, & Snyder, 2002). Knowledge workers become committed to sharing what they know, can learn from one another, and can come together in “community of practice” discourse (Gheradi et al., 1998; Wenger et al., 2002). Within these types of organizations, McDermott (1999) has suggested that there are four key challenges to establishing these communities and knowledge:

1. a technical challenge to design human and information systems that not only make information available but also help community members think together;
2. a social challenge to develop communities that share knowledge but maintain sufficient diversity of thought to encourage independent thinking;
3. a management challenge to create an environment that truly values the sharing of knowledge; and
4. a personal challenge to be open to the ideas of others and a willingness to share ideas and maintain a new thirst for knowledge.

These three perspectives represent different approaches to the way in which knowledge is understood, shared, and used within workplace environments.

## METHOD

### *Study Participants*

Researchers identified 44 potential interviewees for the study. These included CEOs; knowledge managers at various levels within workplaces; and deans, chairs, and managers with expertise in knowledge and organizations. With approval received from the conjoint ethics committee, each potential interviewee was sent an e-mail with the following attachments: a recruitment letter introducing the purpose of the study; a consent letter requiring a signature prior to the interview; instructions for arranging the date and time for a 30- to 40-minute telephone interview if the potential interviewee wished to participate in the study; and a copy of the semi-structured interview protocol, including questions related to examples of "best practice" knowledge strategies used in their workplaces, benefits and challenges of their current knowledge strategies, and future knowledge strategy needs.

## RESULTS & ANALYSIS

All interviews were audio-taped, transcribed, and entered into a database with a number code to prevent personal identification. A summary of results was created across the three workplace groups, and a case was selected from each workplace sector for presentation. The analysis provided a comparison of the study results with the knowledge literature outlined at the outset of this article.

### *Results*

#### *Participation Rates*

Of the 44 potential participants identified by the researchers, 17 (38%) participated in the study. Four participants (2.3%) represented the federal government, five (2.9%) were involved in post-secondary education, and eight (4.7%) were from the corporate/business sector. Inaccurate e-mail addresses and decisions not to participate in the study accounted for high non-response rates.

The nature of the work performed by participants varied across workplace settings. Government and post-secondary respondents were unionized, and both types of workplaces received federal and provincial funds, respectively. Three corporate/business workplaces were unionized within the private sector. Table 1 provides a summary of three questions from each of the workplace respondent groups. Although all workplaces provided examples of best practices, the government and post-secondary workplaces cited

a need for increased funding and a continuing problem of little reward for collaborative work activity. The corporate/business workplaces expressed the need to integrate personal, departmental, and organizational performance objectives.

**Table 1:** Responses from Three Workplace Settings

	<b>Government Workplaces</b>	<b>Post-secondary Workplaces</b>	<b>Corporate/ Business Workplaces</b>
Best Practices	<ul style="list-style-type: none"> <li>• Coaching/mentoring of employees</li> <li>• Team-approach management</li> <li>• More sharing of information across departments</li> <li>• Increased use of technologies for information storage &amp; retrieval</li> </ul>	<ul style="list-style-type: none"> <li>• Development &amp; access to databases for staff, faculty &amp; management</li> <li>• Sharing information between people &amp; departments</li> <li>• Curriculum placed on the web for others to access &amp; utilize</li> </ul>	<ul style="list-style-type: none"> <li>• Databases to store &amp; retrieve information</li> <li>• Use of electronic communication tools</li> <li>• Coaching/mentoring of new employees</li> <li>• Establishment of intranet, chat &amp; whiteboards</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Lack of understanding about the need for greater knowledge use in government</li> <li>• Lack of current technologies to support knowledge management</li> <li>• No rewards for collaboration amongst workers</li> </ul>	<ul style="list-style-type: none"> <li>• Funding to enable knowledge management to expand in the workplace</li> <li>• Few rewards for collaboration amongst workers</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of understanding about the use of knowledge in organizations</li> <li>• Lack of systems to support knowledge management in corporate/business settings</li> </ul>

<p>Future Needs</p>	<ul style="list-style-type: none"> <li>• Need for greater sharing of knowledge/ information across departments</li> <li>• Junior workers need to learn from experienced employees to prepare for retirements</li> <li>• Need to move forward in KM planning</li> </ul>	<ul style="list-style-type: none"> <li>• More web-tools are required</li> <li>• Developing staff skills to use new technologies</li> <li>• Continued funding to sustain knowledge management growth &amp; expansion</li> </ul>	<ul style="list-style-type: none"> <li>• Need to integrate personal, departmental and organizational performance with best practices of knowledge management systems</li> </ul>
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**Case Studies**

The data was reviewed and three interviewees were profiled to glean a portrait of each of the three workplaces. These narratives offer insight into the value placed upon knowledge and the ways in which knowledge was viewed in the various workplaces.

**Case One: Senior Government Manager**

Susan serves as a regional manager of a training and learning facility in a federal government office. Although she believes strongly in the sharing of knowledge, there is very little understanding of this process in her workplace. For her, continuous learning opportunities and the development of a learning culture are key indicators of healthy and progressive growth among workers and workplaces.

Presently, her department is examining a potential partnership with a centre for management development. This represents a significant departure for the department, as it would transfer the needs for training and skill development from a very traditional internal government provider to an innovative dual-provider system. By providing a cost-effective system with current technologies, this model would include mechanisms to track, record, plan, and initiate new forms of learning and knowledge development for this workplace.

Susan works in a bureaucratic organizational culture that has traditional approaches to change within the workplace. Many departments continue to exist as independent “silos” where knowledge innovation is not apparent.

Time, support, innovative leadership, and commitment will be needed to understand how and why knowledge can be useful to this workplace.

### **Case Two: Senior College Officer**

Paul is a senior college official responsible for the academic services within a large, urban community college environment. He defines knowledge management as the strategic use of information and knowledge to support the responses of the organization. An example of this is the fact that all senior staff use technology that extends beyond laptops to include Palm Pilots, Blackberries, and other technological tools. These resources have changed the type and level of knowledge that are available, communicated, used, managed, and shared across the workplace environment. For managers, these resources enable rapid decision-making processes to be based on live, real-time workplace data.

Faculties must also decide the extent to which they wish to embrace these opportunities. Presently, a solo mentality often exists within academic departments, creating a limited knowledge distribution. Often, this leads to feelings of competition rather than co-operation between departments.

Future needs include the development of new frameworks for transferring knowledge between experienced and new faculty and between seasoned and junior administrators. This will help in developing knowledge succession planning over the following three-year period.

### **Case Three: Senior Corporate Officer**

Use of teleconferences, virtual team rooms, and online communication technologies enable Dennis to reside in Canada but to be a member of the senior management team located in a large American city. He feels his workplace has developed mechanisms to capture and use the explicit knowledge that resides in the organization's processes and operations. The workplace has been able to develop systems that promote the internal or tacit knowledge that has traditionally resided with workers.

All employees complete an ongoing individual learning development plan to learn how communication tools are used. Workers are expected to use, contribute, share, and collaborate in their work to ensure knowledge is shared, utilized, and developed in new ways. The CEO is committed to communication strategies that build on the principles of knowledge management in achieving effective workplace communication.

Dennis believes the success of the knowledge management strategies used in his workplace has occurred due to the marriage of supportive technology and the cultural awareness and recognition of the value of tacit knowledge and intellectual capital. The organization is advanced in knowledge management practices compared to other business organizations, and Dennis

believes his firm has a culture that supports knowledge management and collaborative practices.

The firm's future needs are twofold: (1) the continued research and new development of technologies to support the management of knowledge; (2) a culture that continues to recognize the critical importance of tacit knowledge for organizational expansion and growth.

### *Summary of Cases*

Each of these narratives illustrates a different focus in terms of how knowledge management is used in the workplace. For Susan, the meaning of knowledge is perceived as a personal belief system in which learning, decision-making, and outcomes become the key components of the way that knowledge is realized within the workplace. In the second case, Paul believes that in order to use knowledge, organizations must develop new collaborative approaches to working with others in creating new program developments. The use of technology serves to strengthen the financial, administrative, and programmatic knowledge that underlie these innovations. Finally, Dennis's story illustrates that knowledge is a function of communication technology and that an open system approach must continue if this is to be fully realized. The organizational culture and motivational factors of workers and administrators will ultimately determine the way that knowledge is, or is not, managed within the organization.

## *Analysis*

The research team examined the data and compared the study results to the literature reviewed.

### *Knowledge Strategies*

Several of the "best practices" noted in Table 1 indicate an understanding about the value of knowledge and the need to gather and share this knowledge with others in the workplace. For example, knowledge strategies that include the development of new mechanisms (i.e., databases, sharing information across departments) enable knowledge to be transferred and used among workers. This knowledge transfer offers potential innovative approaches to traditional problems. Both funding and resources were cited as necessary to ensuring that these and other strategies continue to be developed within workplaces.

### *Types of Knowledge*

Examples of how different government and post-secondary departments use knowledge are cited in Table 1. These include coaching/mentoring of employees offered by human resource departments; development of curriculum databases and expertise used by professional development offices with interested faculty; and technical services providing Web-based opportunities

for faculty, departments, and others. All of these represent a focused context for knowledge. Only one or two corporate/business respondents described a type of knowledge that reflects a systems-context approach, and they noted that this has changed the way in which their workplace functions as an organizational entity. These respondents are managing knowledge with the intent of developing an integrated knowledge system approach within their organization.

### *Knowledge Factors*

McDermott's (1999) four factors for communities and knowledge are clearly apparent in this study. Technical factors include the use of databases or the acquisition of Web-based tools. Social factors designed to encourage community building and diversity are represented by greater collaboration and team work, while team management approaches or coaching and/or mentoring programs promote development of management factors. Personal factors are reflected through the provision of personal training needs and the ability to obtain experience through departmental transfers.

These examples indicate that all respondents were moving toward an increased knowledge presence within their workplace settings. The extent to which these workplaces will develop into full-fledged knowledge organizations will depend on other variables such as leadership, appropriate change management strategies, financial resources, and the willingness to move toward greater collaborative employee relationships within the workplace.

## CONCLUSIONS

### *The Role of Knowledge in the Workplace*

This pilot study suggested that the concepts of knowledge and knowledge management are not well understood. One explanation for this is that every workplace has both a formal and informal culture that must be addressed in order to develop new approaches within the organization. To attempt to depart from these cultural realities is to risk organizational failure. If knowledge is to be understood and utilized in new ways, then formal and informal cultures must be addressed and consulted in a collaborative manner. The implementation and best practices cited in this study provide examples and indications of how knowledge can be presented to workplaces. These might be shared with others who are interested in learning more about these concepts within the context of three different workplaces.

Workplaces also need to examine the concept of knowledge management more closely in order to understand exactly what it means. Is it about knowledge or is it about related areas, including, for example, learning, communication, or organizational culture? Workers are able to define concepts

through examples, engaging in discussions, and/or understanding how a concept benefits them in their jobs. This must be undertaken in an open, transparent, systematic, and logical manner at all levels of the organization.

### ***The Role of Continuing Education***

Although this study was limited in scope, respondents, and focus, it did provide some direction. Continuing education offices should consider offering courses in three areas:

1. an overview of knowledge management within workplaces;
2. strategies, types, and structures of knowledge within workplaces; and/or
3. customized courses with practical scenarios, case studies, and possibly a panel of speakers who would relate their experiences with knowledge management within the workplace.

This study also demonstrated that continuing education services can provide a rich laboratory for graduate research teams interested in conducting research activities. Although this present research was conducted by graduate learners within the Faculty of Continuing Education, competent graduate learners also exist within other faculties. As well, this type of research offers tremendous potential benefit to graduate programs with workplace interests. Under the supervision of an experienced faculty member, learners-as-researchers have a "hands-on" opportunity to participate in the research design, to learn how to conduct research interviews, to present at conferences, and to publish research studies in appropriate journals. At the same time, continuing education offices benefit from tailored research studies, and workplaces have access to workplace research reports that might be used for further development.

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## BIOGRAPHY

Jo-Anne Willment is an associate professor at the University of Calgary. Her research is in the fields of workplace learning and distance education. Graduate collaborative research teams have enabled this faculty researcher to use virtual communication tools to work with keen learners-as-researchers on large research projects. The preceding two-year research project was completed with the financial assistance of a Social Sciences Humanities Research Council–University of Calgary Starter Grant.

Jo-Anne Willment est professeur agrégé à l'Université de Calgary. Sa recherche se fait dans les domaines d'apprentissage en milieu de travail et de formation à distance. Des unités de recherche collaborative au niveau des études graduées ont permis à cette chercheuse d'utiliser des outils de communication virtuelle dans son travail sur de grands projets de recherche avec des apprenants-comme-chercheurs enthousiastes. Le projet de recherche sur deux ans, déjà mentionné ci-haut, fut complété avec l'aide financière du Conseil de recherches en sciences humaines-Octroi de démarrage de l'Université de Calgary.

Patti Graham, Heather Mahoney, Andre Mamprin, Bryan Martinuzzi, Susan McDonald, and Ruth Rodgers have completed, or are completing, the Master of Continuing Education degree through the Faculty of Continuing Education, University of Calgary. They are employed in government, post-secondary, health, technology, and senior leadership workplaces and reside across Canada. Their interest in knowledge management in the workplace has led to presentations of their findings to both national and international conferences in the workplace learning field.

Patti Graham, Heather Mahoney, Andre Mamprin, Bryan Martinuzzi, Susan McDonald, et Ruth Rodgers ont complété ou sont en train de compléter la Maîtrise en Éducation permanente offerte par le Faculté d'Éducation permanente à l'Université de Calgary. Ils travaillent partout au Canada dans les secteurs gouvernementaux, postsecondaires, de santé, de technologie et comme cadres supérieurs. Leur intérêt pour la gestion du savoir dans le milieu du travail les a menés à des conférences nationales et internationales où ils ont présenté leurs résultats.