UNIVERSITY OF CALGARY

Interpreting Workplace Learning in Terms of Discourse and Community of Practice

by

J. Adrian Kim-Fat Ho

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

GRADUATE PROGRAM IN COMMUNICATION STUDIES
FACULTY OF COMMUNICATION AND CULTURE

CALGARY, ALBERTA
JULY, 2004

© J. Adrian Kim-Fat Ho 2004
NOTICE: The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author’s permission.

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

AVIS: L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Abstract

Based on the ethnographic data collected from the workplace of an academic library, I argue that workplace learning (WL) is a situated socio-cognitive process. It is expedited by knowledge management (KM), which is a collective effort to generate, share, and institutionalize work-related knowledge. KM is inherent in the face-to-face conversational interactions embedded in planned formal training, planned informal sharing, and spontaneous informal learning. When face-to-face interaction is not possible, KM is accomplished through textualization. It helps the members of the workplace acquire new work-related knowledge and integrate it to their common, contextualized knowledge base. The contents of the knowledge base are manifested in the members' professional practices and explicated by their professional/communal discourse. By virtue of their distinctive practices and discourse, the members form a community of practice (CoP) and gain their professional/communal identity. Whenever they engage in KM, perform their practices, and/or use their discourse, they authenticate their professional/communal identity and enact their CoP.
Acknowledgements

I would like to express my gratitude to my academic supervisor, Dr. Brian Rusted, the members of the Oral Examination Committee, Dr. Barbara Schneider and Professor Timothy Pyrch, as well as the Director and the entire reference staff of the SLS Library (a pseudonym for the academic library where I conducted the ethnographic fieldwork for data collection). Without their guidance, understanding, encouragement, flexibility, and cooperation, I would not have been able to finish a research project that I have grown to embrace.

I am especially indebted to Dr. Tim Kuhn for his valuable advice. Moreover, I am thankful to Dr. Shiv Ganesh, Dr. François Cooren, Dr. Hélène Giroux, Dr. Daniel Robichaud, Professor James R. Taylor, Dr. Joel Iverson, Professor David Mitchell, Dr. Frits Pannekoek, and Ms. Darlene Warren for their support and interest in this study.

Last but not the least, I have to thank my friends and mentors who listened to and rooted for me during the whole research process: Erfan Abu Irhayem, James Anderson, Marika Asimakopulos, Zahra Baird, Gregg Blachford, Jason Breti, Gisela Bruche-Schulz, Benny Chan, Kitt Chanthaboune, Sandy Chu, John D'Amicantonio, François Delisle, Dick Dickerson, Erminio D'Onofrio, Peter Duerr, Richard Foster, Glynn Hunter, Björn Jernudd, Younshin Kim, Laura Koltutski, Noel Laam, Michael Leboldus, John Leide, Jerry Lepp, Constance Man, Dina Matsoukas, Howard Maurer, Gilad Padva, Ricardo Rangel, John Rotondi, Howard Scheiber, Alvin Schrader, Virginia Taffurelli, Paul Tremblay, James Walker, Brian Walter, and Grace Wiersma.
# Table of Contents

Approval Page ........................................................................................................... ii  
Abstract ...................................................................................................................... iii  
Acknowledgements .................................................................................................. iv  
Table of Contents .................................................................................................... v  
List of Tables ............................................................................................................. vii  
List of Examples and Figure ................................................................................... viii

## CHAPTER ONE: INTRODUCTION ................................................................. 1

## CHAPTER TWO: LITERATURE REVIEW ............................................... 6  
2.1 Academic Studies of Organizational Learning and Knowledge Management ... 6  
   2.1.1 Learning in General and Organizational Learning in Particular .......... 6  
      2.1.1.1 Information, Knowledge, and Learning ...................... 6  
      2.1.1.2 Organizational/Workplace Learning ......................... 8  
   2.1.2 Studies of Workplace Learning on Basis of Communication .......... 11  
   2.1.3 Knowledge Management ................................................. 12  
   2.1.4 Studies of Knowledge Management on Basis of Communication .... 15  
   2.1.5 Studies of Workplace Learning and Knowledge Management in Libraries ................................................................. 18  
2.2 Communication, Workplace Learning, and Knowledge Management .... 21  
   2.2.1 Critique of Studies on Workplace Learning and Knowledge Management ................................................................. 21  
   2.2.2 Workplace Learning and Knowledge Management as Human Communication ................................................................. 27

## CHAPTER THREE: METHODOLOGY ....................................................... 30  
3.1 Ethnography as Research Method .............................................................. 30  
3.2 Searching for Ethnographic Site .............................................................. 32  
3.3 Design of Study ......................................................................................... 34  
   3.3.1 Time Frame for Fieldwork ............................................... 34  
   3.3.2 Human Subjects of Study ............................................... 35  
   3.3.3 Data Collection Methods ............................................. 36  
3.4 Ethical Issues ............................................................................................. 41  
3.5 Data Analysis ............................................................................................. 43  
3.6 Limitations of Research Methods .......................................................... 45  
3.7 Description of SLS Library ..................................................................... 46

## CHAPTER FOUR: LEARNING, KNOWLEDGE SHARING, AND COMMUNICATION ................................................................. 49  
4.1 Analytical Units and Methods of Human Communication ..................... 49  
4.2 Interpretation of Knowledge among Reference Staff Members ............. 51  
4.3 Communicative Situations for Learning and Knowledge Sharing .......... 53  
   4.3.1 Planned Formal Training .............................................. 53  
   4.3.2 Planned Informal Sharing Session .................................. 57
4.3.3 Spontaneous Informal Learning ..........................................................59
  4.3.3.1 Eliciting and Acquiring Knowledge by Asking Questions ..........59
  4.3.3.2 Voluntary Storytelling for Knowledge Sharing ......................60
  4.3.3.3 Consultation-oriented Storytelling .......................................62
  4.3.3.4 Sharing Knowledge by Means of Interruption .......................64
  4.3.3.5 Collaboration ......................................................................67
4.4 Communication Channels for Learning and Knowledge Sharing ..........74
  4.4.1 Library’s Internal Document ...................................................76
  4.4.2 Notebook at Reference Desk ...................................................77
  4.4.3 Electronic Mail .........................................................................80
  4.4.4 Library’s Web Site ....................................................................82
  4.4.5 Library’s Intranet .....................................................................84

CHAPTER FIVE: REFERENCE STAFF AS A COMMUNITY .........................88
  5.1 Workplace Language as Professional and Communal Discourse ..........88
  5.2 Community of Reference Staff Members .....................................92
  5.3 Workplace Learning in Terms of Discourse and Community of Practice 95
  5.4 Implications and Directions for Future Studies .........................100

ENDNOTES .........................................................................................105
REFERENCES ......................................................................................118
APPENDIX A: RESEARCH ETHICS APPROVAL CERTIFICATION ..........141
APPENDIX B: CONSENT FORM FOR RESEARCH PARTICIPANTS .........143
APPENDIX C: STRUCTURE OF SLS LIBRARY’S REFERENCE TEAM .......147
List of Tables

TABLE 1: SUMMARY OF COMMUNICATIVE SITUATIONS FOR LEARNING AND KNOWLEDGE SHARING .......................................................... 72

TABLE 2: RESOURCES/CHANNELS FOR NON-FACE-TO-FACE KNOWLEDGE SHARING ........................................................................ 85
# List of Examples and Figures

<table>
<thead>
<tr>
<th>Example</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Voluntary Storytelling for Knowledge Sharing</td>
<td>60</td>
</tr>
<tr>
<td>2</td>
<td>Consultation-oriented Storytelling</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>Sharing Knowledge by Means of Interruption</td>
<td>64</td>
</tr>
<tr>
<td>4</td>
<td>Collaboration</td>
<td>67</td>
</tr>
<tr>
<td>5</td>
<td>Messages on the Notebook at the Reference Desk</td>
<td>77</td>
</tr>
<tr>
<td>6</td>
<td>Electronic Mail Messages</td>
<td>80</td>
</tr>
<tr>
<td>7</td>
<td>Annotations from the Library’s Web Page, “Find an Article”</td>
<td>82</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Workplace Learning as a Socio-Cognitive Process in a Community of Practice</td>
<td>99</td>
</tr>
</tbody>
</table>
CHAPTER 1: INTRODUCTION

Today's society is characterized by change, constant change. The driving force behind the change is varied, ranging from the introduction of new technologies, the prospering international trade, to the increasing recognition of and respect for the sociocultural minorities. Every time there is a change, people have to learn to cope with or adjust to it. In the developed countries, people are experiencing social changes in a faster pace than ever as a result of continual economic, political, and technological developments. It is no exaggeration to say that learning has gradually become part of our life. Indeed, Jarvis (1999) describes society in late modernity as a "learning society" and stresses the importance of continuous learning for achieving personal and professional goals (p. 159-167). Similarly, organizations have to adapt to internal as well as social changes. The needs to learn continuously and to share knowledge among organizational members have emerged in organizations of all sizes, for-profit and not-for-profit alike. In view of the situation, large corporations have expended an enormous amount of resources on promoting organizational learning (OL) and knowledge management (KM). They strive to turn themselves into what Senge (1990) and Watkins and Marsick (1993) call "learning organizations." By virtue of the practical utility in helping corporations augment their effectiveness and competitiveness in their markets, OL and KM have been widely researched in the business world by consultants and management scholars (e.g., Argyris, 1992; Argyris & Schön, 1978; Brown & Duguid, 1991, 2002; Davenport & Prusak, 1998; Kim, 1993; Kofman & Senge, 1993; Marsick & Watkins, 1996; Nevis, DiBella, & Gould, 1995; Nonaka, 1994; Nonaka & Takeuchi, 1995; Senge, 1990; Snowden, 2002; Taggart,
2001; Watkins & Marsick, 1993). Meanwhile, more and more academics have launched interdisciplinary studies to uncover and/or shape the learning and knowledge-managing practices in the not-for-profit setting. They aim at assisting not-for-profit organizations in providing better services and in competing more favourably for funding and resources.

In view of the significance of OL and KM, I contemplate conducting an empirical research study of the human communication involved in OL and KM. The organizational setting for the study will be a library. The reason for performing the research in a library is that I used to work as a full-time librarian in two research libraries on the East Coast of North America before pursuing this master’s degree. My job responsibilities enabled me to gain work experience in cataloguing and classification, reference service, and classroom instruction. Owing to the changes in the workplace, my colleagues and I had to learn continuously in order to perform our duties adequately. For example, both libraries migrated their electronic mail systems to new ones and upgraded their integrated library systems for the online catalogues. The new systems required us to alter our work procedures and adapt to new technology. To avert problems with using the new systems, the libraries provided us with training in advance. After a short adjustment period, we became familiar with the new systems and were able to deal with their problems readily. Yet, changes in technology or work procedures and the consequential adjustment and learning did not happen frequently. It was the libraries’ reference service that prompted serious continuous learning and knowledge sharing. Since the libraries were open to the public, my colleagues and I had to deal with people from all walks of life. They had different cultural and educational backgrounds, and were seeking information on many
distinct topics. While the libraries often reminded us of the importance of learning continuously in order to serve the library users proficiently, the ultimate urge for continuous learning and knowledge sharing came from ourselves, the librarians. We realized that we were employed to provide adequate services to people with different information needs. We understood that it was our responsibility to be responsive and make the best use of the available resources to help the library users in their search for information. Therefore, we had to cultivate the habits of acquiring new skills, exploring various information resources, and sharing what we learned with one another. Indeed, Abels, Jones, Latham, Magnoni, and Marshall (2003) and Marshall, Fisher, Moulton, and Piccoli (1997) list the dedication to lifelong learning and knowledge development as one of the core competencies for the librarians and information professionals in the 21st Century. When discussing the future development of reference service, Stalker (1999) also highlights the significance of librarians' commitment to learning on their own initiative (p. 89). On the other hand, Smith and Montanelli (1999) state that librarians in general are spending more time learning in order to prepare themselves for competent library services (p. 132). The library management and practitioners alike, as Anderson (2003), Li (2001), Tang (2000), and Teng and Hawamdeh (2002) report, are also aware of the need to engage librarians in lifelong learning and knowledge sharing.

The acute need for ongoing learning and knowledge sharing among reference librarians (and other library workers who also provide reference service) makes the reference team of a library a fertile organizational unit in which to study OL and KM. Therefore, I propose to study reference librarians' OL and KM from a communicative
perspective by exploring: 1. How the members of a library's reference team communicate to facilitate OL and to manage their work-related knowledge; and 2. How the communicative practices involved relate to the formation and maintenance of a professional community among the reference staff members. Based on the findings, I will discuss how the reference staff members co-construct their workplace reality and gain their professional identity through the communicative practices involved in OL and KM. I will also explore the relationship among OL, KM, and group dynamics. In this respect, this study is in line with Weick and Ashford's (2001) argument that it is valuable to examine the processes by which information is circulated and reality created in an organization. The findings will shed light on how the organization emerges and advances by means of its members' interactions.

As noted earlier, not many academic studies were conducted with the focus on the OL and KM in the not-for-profit sector. Moreover, those studies tended to discuss the effects of managerial policies on the employee's learning in not-for-profit organizations. Most of them did not investigate how learning and knowledge sharing were achieved through day-to-day human interaction. By conducting this case study, I wish to contribute to the scholarships of OL and KM in the not-for-profit sector. More specifically, the outcomes of this study will be conducive to uncovering the connection between OL and KM in an organizational context in terms of human communication. OL and KM have been examined separately as educational, psycho-behavioural, and managerial issues by academics. Yet, the interrelations between these two kinds of human endeavour have not been discussed in depth. By teasing out the details of interaction among individuals in an
organizational context, I wish to reveal how OL and KM are constructed and interconnected through human communication. As Taggart (2001) contends, OL and KM are intertwined and people are at the heart of both (p. 28). Organizations have to integrate these two domains so that they can brace themselves for the rapid changes in society and workplace (p. 25). Last but not the least, this study can also help bring out the centrality of human communication in the study of organizational operations in general.

Since the commitment to lifelong learning is hailed as a core competency for librarians (Abels, Jones, Latham, Magnoni, & Marshall, 2003; Marshall, Fisher, Moulton, & Piccoli, 1997), there is a need for research into how this competency manifests in reality. This case study can fulfil the need and help generate topics for future research. In addition, the findings will be of use to both practitioners and educators of Library and Information Studies. Hopefully, the results will prompt other libraries (and not-for-profit organizations that have a similar mandate and operational needs as libraries) to discuss and reflect on their OL and KM in terms of human communication. That might stimulate constructive dialogues among practitioners, which in turn might generate fruitful insights for the profession of librarianship.
CHAPTER 2: LITERATURE REVIEW

Both organizational learning (OL) and knowledge management (KM) have been widely studied in academia and the business world. The first half of this chapter will present an overview of the academic works on these two topics. Afterwards, I will discuss how this study can help bridge the epistemic gap left by the current research into OL and KM.

2.1 Academic Studies of Organizational Learning and Knowledge Management

OL and KM are usually regarded as two separate subject areas. The former has been a common research topic in Organizational Development, Adult/Continuing Education, and Organizational Psychology since the 1960’s. The latter has been explored in various disciplines such as Business Studies, Human Resource Management, Computer Science, as well as Library and Information Studies for more than a decade. Although both topics concern the generation, organization, and communication of information and knowledge in human learning, they are not often discussed together in one study. Moreover, scholars and private researchers have created their own frameworks to account for the mechanisms of OL and KM separately.

2.1.1 Learning in general and organizational learning in particular

Before reviewing the academic developments of OL and KM, I will first go over several relevant concepts.

2.1.1.1 Information, knowledge, and learning

Both information and knowledge are involved in learning. Yet, there is no consensus among scholars on their definitions and characteristics. For instance, Schultze
(2000) reports that there are at least five major ways to interpret and differentiate information and knowledge (p. 40). Nonetheless, as Jarvis (1999) suggests, the general understanding is that information is objective and "is potential knowledge to be learned" (p. 144). In the learning process, "its validity is tested through critical thinking" (Brookfield, 1987, cited in Jarvis, 1999, p. 147). Knowledge, on the other hand, is subjective and is derived from information. It "is gained as a result of learning in the cognitive domain" and has not been verified in practice (Jarvis, 1999, p. 147). When it is tried out and legitimized, it becomes "practical knowledge" (p. 147). Jarvis notes that most of practical knowledge is generated by individuals in actual practice. Moreover, an individual's (practical) knowledge of a particular subject is information to another if the latter is a layperson of that subject. In Schultze's (2000) words, "information and knowledge are in a dialectic, mutually constitutive relationship" (p. 6).

Just like information and knowledge, learning has been interpreted in distinct fashions. But Kim (1993) points out that theorists usually regard learning as a "connection between thought and action" (p. 38). He argues that learning encompasses acquiring two essential elements: "the ability to articulate a conceptual understanding of an experience" and "the physical ability to produce some action" (p. 38). Having either ability only is partial learning. From a constructivist point of view, Berends, Boersma, and Weggeman (2003), Brown and Duguid (1991, 2001b), Daley (2002), Jarvis (1999), and Lave and Wenger (1991) contend that learning is subjective, practical, experiential, situated, and context-based. Lave and Wenger (1991) stress that learning is characterized by "legitimate peripheral participation" (p. 29).\(^\text{2.1}\) Learners always start from the
"periphery" of "a community of practitioners," legitimately move into the community and pick up its "sociocultural practices," gradually acquire new knowledge, and finally become a "full participant" in the community (p. 29). Meanwhile, drawing on his empirical studies of OL, Jarvis (1999) states that:

[p]eople carry all their learning from their previous experiences (their biography) into every situation, and these are employed in coping with their current situation and in creating new individual experiences for themselves from which they learn. Learning is therefore the process of creating and transforming experience into knowledge, skills, attitudes, values, emotions, senses, and beliefs. (p. 40)

Jarvis also brings up the significance of "disjuncture," a state of "disharmony between [an individual’s] constructed experience of a situation and [his/her] biography" (p. 66). It is a "disjunctural situation" that presents an opportunity for an individual to create new experience for learning (p. 66).

2.1.1.2 Organizational/Workplace learning

One of the treatises on this subject is Argyris and Schön’s (1978) *Organizational Learning*. They define it as "a process in which members of an organization detect error or anomaly and correct it by restructuring organizational theory of action, embedding the results of their enquiry in organizational maps and images" (p. 4). Of utmost importance is the concept of "double-loop learning" (Argyris, 1992, 2001; Argyris & Schön, 1974, 1978), which pinpoints that effective learning includes not only communication about facts but also critical self-reflection on and understanding of the reasons and motives behind the facts. In 1990, Senge published a classic in the field, *The Fifth Discipline*. Drawing on earlier academic discussions and his consulting experiences, Senge theorizes how organizations can transform themselves into learning organizations by means of "shared
vision," "personal mastery," "team learning," "mental models," and "systems thinking" (the "fifth discipline"). Senge's work is followed by enthusiastic discussions of the learning processes in organizations. Meanwhile, the learning practices in organizations have been differentiated as individual learning, team/group learning, organizational-level learning, and inter-organizational learning (Antal, 2001; Hobbs, 1999; Watkins & Marsick, 1993). Individual learning refers to the acquisition of knowledge at the personal level; it is accomplished by individual organizational members' processing of the data and information gathered from the external environment. As Wagner and Sternberg (1985) and Ashford and Black (1996) report, individual learning is usually actualized implicitly through experience and/or conversation (both cited in Weick & Ashford, 2001, p. 710-711). Team/Group learning takes place when the knowledge generated is shared among the members of a team/group. When the knowledge is shared in an organization through the collaboration and communication between teams/groups, the learning climbs up to the organizational level. Thanks to seminars, conferences, and electronic mail discussion lists, individuals from different organizations have opportunities to discuss and share their thoughts, experiences, and practices. The outcome is that the work-related knowledge is transferred from one organization to others, which gives rise to learning at the inter-organizational level. These four levels of learning (individual, team/group, organizational-level, and inter-organizational) are interconnected and have similar mechanisms (Hobbs, 1999). They are like Chinese boxes with the subordinate level underlying the supraordinate one. Diverse theoretical frameworks concerning learning at different levels were created in the past two decades. Scholars, institutes, and private consultants have
brought forth numerous analogies to describe and analyze the learning process.²³ They have also formulated various managerial principles and best practices for facilitating learning in organizations (e.g., Bennet & O’Brien, 1994; DiBella, 1997; Haines, 1995; Marsick & Watkins, 1996). On the other hand, recognizing that a large portion of OL is accomplished informally during the daily interactions among fellow workers, some researchers have focused their studies on uncovering the interrelations among workplace context, formal training, and informal learning (e.g., Brown & Duguid, 2000; Hara, 2002; Marsick & Watkins, 2001; Pak & Snell, 2003). Those studies form the foundation of the “social learning theory in organizational learning literature,” which highlights “informality, improvisation, collective action, conversation and sense making” as well as the “distributed and provisional nature” of learning (Elkjaer, 2003, p. 44).

Since this study centres on the learning and knowledge-managing practices among the reference staff members in a library, the learning at the individual and team/group levels is of the most interest to me. Hence, I decide to use “workplace learning (WL)” instead of “organizational learning” when referring to the learning in the reference team in general. In this way, there will not be confusion between the learning only inside the reference team and the learning in the library as a whole.

In short, OL (hereinafter referred to as WL) became a prevalent topic in the business world in the 1980’s and 1990’s, for corporations realized that only if their employees kept on learning would they be able to maintain and expand their market share. A diversity of research studies, theoretical frameworks, and best practice approaches have
blossomed with a view to assist corporations in raising their effectiveness and competitive advantage.

2.1.2 Studies of workplace learning on basis of communication

According to Weick and Ashford (2001), scholars have approached different aspects of WL from the communicative perspective. For instance, Cook and Yanow (1993) define it as the “acquiring, sustaining, or changing of intersubjective meanings” through an organization’s “artifactual vehicles” and “collective actions” (p. 384, cited in Weick & Ashford, 2001, p. 707). Weick and Ashford argue that an organization functions as a “marketplace of ideas” where organizational members try to convince one another of their own interpretations of reality (p. 713-714). Therefore, communication plays a critical role because it encourages the exchange of novel interpretations (p. 717) and “the individuals with the more developed persuasion skills ought to be particularly adept at shaping the content of their organization’s learning” (p. 714). Moreover, communication is one of the core elements of feedback seeking, which in turn contributes to enculturation and WL (Louis, 1990; Morrison, 2002; Weick & Ashford, 2001, p. 716). The language and techniques used in the communication process are important to WL. On the one hand, the language should be unequivocal (Weick & Ashford, 2001, p. 721-723) and the content has to be “rich in dynamics, process imagery, verbs, possibilities, and unfolding narratives” to represent “the flow and continuity in which learning is embedded” (p. 724). On the other hand, the communicators involved ought to focus on the learning-related themes, respect different “voices,” and strike a balance between “advocacy” and “inquiry” (Kellett & Goodall, 1999, p. 184-186). The goal is to create a “dialogue” for the sake of
open communication, free flow of ideas, and collaborative learning (Ellinor & Gerard, 1998; Issacs, 1999; Kellett & Goodall, 1999). “Appreciative inquiry,” for instance, is a managerial method that utilizes (group) dialogues to assist employees with self-reflection and learning from their successful experiences (Hall & Hammond, n.d.; Hobbs, 1999).

In conclusion, Communication Studies has paid more attention to but not yet delved into WL. Most of the studies that discuss the communication involved in WL originated from Business Management and Adult/Continuing Education. As noted by Weick and Ashford (2001), communication scholars have plenty of opportunities to engage in rewarding research and generate valuable insights into WL (p. 727-728). In response to the growing awareness of the role of communication in WL, I intend to find out and analyze how learning in a workplace is accomplished by human communication. A discussion of the theoretical underpinning of this study will come up in Section 2.2.1.

2.1.3 Knowledge management

In the 1980’s, academics and business consultants gradually recognized that pooling and sharing the working knowledge of an organization’s employees would boost the organization’s intellectual capital and thus its survival of fierce market competitions. Their whole-hearted discussions and recommendations formed the foundation of knowledge management (KM). The theme of KM at its inception focused on how new technology could store knowledge in an organization and disseminate it to support decision making and to bring about “process reengineering” (Koenig & Srikantaiah, 2002, p. 14; Snowden, 2002, p. 4). However, it turned out that harnessing knowledge with computerization and process reengineering only produced disillusioning outcomes. Based
on his studies and consulting experiences, Nonaka (1994) constructed a theory of knowledge generation and published with Takeuchi in 1995 one of the most influential books in KM, *The Knowledge-creating Company*. Their approach transcends the fixation on information technology and mentions the human and social factors involved in KM. They underscore the significance and utility of “socialization,” “externalization,” “combination,” and “internalization” in the implementation of KM. What ensues is a plethora of discussions that elaborate how to steward working knowledge. On the basis of their conception of knowledge, those discussions fall into either of two models: the “cognitive” and the “performative” (Kuhn & Jackson, 2003).

At present, KM is being developed in distinct directions by researchers in various disciplines. For instance, Snowden (2002) states that knowledge is “paradoxically both a thing and a flow” (p. 7, boldface and italics original). Organizations should utilize information technology to transfer it as a thing and channel it as a flow in order to share and leverage it in complex work situations (Norris, Mason, Robson, Lefrere, & Collier, 2003; Snowden, 2002). Meanwhile, Brown and Duguid (2001a, 2001b, 2002) as well as Wenger, McDermott, and Snyder (2002), among others, assert that cultivating networks of organizational members in the form of “communities of practice” is the key to successful KM. The communities will build and maintain topical pools of collective knowledge for their members to share and explore. Moreover, the shared identity among the members will facilitate the flow of knowledge. Stacey (2001), however, contends that “knowledge arises in complex responsive processes of relating between human bodies” (p. 4). In this sense, knowledge is “an ephemeral, active process of relating” that cannot be
stored nor managed but “is continuously reproduced and potentially transformed” (p. 4).

On the other hand, the input from Computer Science points to the utilization of information architecture and artificial intelligence to develop local knowledge-based expert systems on an organization’s Intranet (Gregor, 1999; Sil & Konar, 2001). Furthermore, technologies should be adopted to create a directory of the experts in an organization and to facilitate the communications among them (Kankanhalli, Tanudidjaja, Sutanto, & Tan, 2003). Yet, academics and practitioners from Library and Information Studies point out that KM is an extension of traditional librarianship skills. They specify that on the one hand, KM is rooted in effective cataloguing and user-friendly indexing taxonomies for the “content management” of an organization’s Intranet (Koenig & Srikantaiah, 2002, p. 16-18; Pilsk, McIntyre Colby, Andrew, & Wilson, 2002). On the other, it relies on cultivating “information literacy” among the organization’s employees (Bruce, 1999; Oman, 2001). In short, it is the librarianship skills that contribute to deft stewardship of information and knowledge.

To sum up, KM has been a buzzword in the private sector since the early 1990’s. It has evolved to the stage at which the human and social factors instead of new technologies are the foci of concern. Different disciplines have generated their viewpoints of theorizing and advancing it, but there does not seem to exist sufficient communication among them to facilitate mutually beneficial collaboration.

2.1.4 Studies of knowledge management on basis of communication

Viewed from the communicative perspective, the discussions of KM can be classified into two approaches: The emphasis on utilizing technologies for better
communication gives rise to the "information-based approach" while the focus on the human factor and work processes constitutes the "people-based approach" (Iverson & McPhee, 2002, p. 259). So far, communication scholars have been more inclined to explore the people-based approach. For instance, Giroux and Taylor (2002) and Heaton and Taylor (2002) proffer a communicative interpretation of knowledge creation and management. Based on their analyses of linguistic and ethnographic data, they argue that knowledge generation occurs in a broadly defined "community of practice" (Wenger, 1998; Wenger, McDermott, & Snyder, 2002) and contributes to an intellectual discourse that is instantiated in the interaction among the community's members. The knowledge is thus community-based and is produced, shared, and managed discursively through the interpersonal interaction in that community.27 Along this line, Zorn and Taylor (2004) assert that "KM is a process of organizational communication primarily because KM is fundamentally concerned with sensemaking: the construction of meaning by people who are caught up in a practical world of work, with its multiple, and frequently immediate, concerns" (p. 104).

Meanwhile, Iverson and McPhee (2002) expound on three KM-oriented communicative actions that are common in communities of practice. "Celebration" is a means to "recognize knowledge accomplishments and problems solved" (p. 263). "Articulation" refers to open, creative discussion of verbalized ideas; it exists, among others, in the form of "translation" and "storytelling" (p. 263). "Collaboration" is achieved when the members of a community of practice work together and "contribute to knowledge growth in sensitive and appropriate ways" (p. 264). One type of articulation,
storytelling, has been extensively studied by communication and management scholars (e.g., Antal, 2001; Boje, 1991, 2001; Brown, 1990; Brown & Kreps, 2001; Czarniawska, 1997; Davenport & Prusak, 1998; Denning, 2001; Kaye & Jacobson, 1999; Kreps, 1990; Lave & Wenger, 1991; Mumby & Clair, 1997; Orr, 1990, 1996; smith & Keyton, 2001; Snowden, 1999, 2000; Weick, 1995; Wylie, 1998). Kreps (1990), for example, labels organizational stories as “repositories of organizational intelligence” (p. 191) while Boje (1991) comments that stories form “the institutional memory system of the organization” (p. 106). Antal (2001), Brown and Kreps (2001), Lave and Wenger (1991), and Weick (1995) suggest that telling stories is an effective and powerful tool to capture and share knowledge among organizational members. It helps them pass working knowledge on to one another, develop a common outlook among themselves, and benefit from one another’s experiences, successes, and failures. The organizational members, in other words, build their knowledge upon the lessons learned from the stories. At the same time, they construct and reinforce their identity as the members of a community of practice.

Kuhn and Jackson (2003), in the meantime, contend that the interaction for generating “capacities for action” comprises “knowledge-accomplishing activities,” which are inherently communicative, pragmatic, contextualized, and goal-directed (p. 13). Drawing on the ethnographic data collected from a telecommunications call centre, Kuhn and Jackson report that face-to-face knowledge-accomplishing activities emerge in the form of “information transfer” and “collaborative hypothesizing.” A specific kind of information transfer, “instruction,” occurs when an employee solicits problem-solving information from his/her co-worker or supervisor (p. 23). If a co-worker or supervisor
volunteers to offer useful information to his/her co-worker during the problem-solving process, the information transfer is termed "self-presentation" (p. 25). However, if the employees collaborate to tackle the ambiguity in the problem-solving process, they engage in collaborative hypothesizing (p. 28-29). The "determinacy" of a situation influences what form of knowledge-accomplishing activity will occur (p. 30).\textsuperscript{2,10} Similarly, based on her study of oral medical communication, Gülich (2003) writes that "knowledge transfer" is facilitated by "conversational techniques" such as "reformulation" and "illustration." The former "consists of retrospectively characterizing an expression produced earlier on as insufficient or unsatisfactory," which is followed by the offer of a paraphrased alternative (p. 237). Illustration, on the other hand, is performed by means of "metaphorical language," "exemplification," "scenarios," and "concretization" (p. 241).

In sum, human communication is gradually and increasingly recognized as a significant platform for studying and implementing KM. Communication scholars have examined KM in terms of communicative practices utilized to generate, share, capture, disseminate, and retrieve knowledge in a workplace. Their studies bring up a human communication-based analytical approach to study and advance KM. This research project is an attempt to contribute to that approach by uncovering the communication involved in the WL and KM among the reference staff members of a library. I will come back to this issue in Section 2.2.1.

2.1.5 Studies of workplace learning and knowledge management in libraries

Witnessing the private sector going full steam to introduce WL and establish KM practices in its work environment, not-for-profit organizations gradually became aware of
the significance of continuous learning and knowledge sharing in face of escalating
demands for their services. As Antal (2001) points out, "a great deal can be learned for
the fields of civil society and social capital, from both an intellectual, theory-building
perspective and a policy-oriented, practical perspective, by looking at how business
organizations are managing their learning processes" (n.p.).

In the profession of librarianship, some administrators of academic libraries already
recognized the significance of WL in the 1990’s. Despite the differences between
corporations and academic libraries, the discussions and studies of the latter in this regard
were often modelled on the research conducted in the private sector. Phipps (1993) and
Riggs (1997), for instance, write about how academic libraries can benefit from Senge’s
library with a framework derived from the concepts and arguments advanced by Senge
(1990) and Watkins and Marsick (1993). She concludes that WL occurs at the individual,
departmental, and organizational levels (p. 227). Moreover, there is a complementary
relationship between learning and innovation (p. 228). On the other hand, Varlejs (1999a,
1999b) draws on the works of Adult/Continuing Education when studying librarians’ WL.
She reports that librarians in general acquire new skills and knowledge through informal
self-directed learning that "is largely intertwined with everyday work" (1999a, p. 193).
Furthermore, ongoing learning "is an attribute central to [librarians’] professional life" (p.
194).

KM as a research topic received scant attention from the library field until recently.
The studies conducted so far usually concentrate on adopting advanced technologies
and/or implementing certain managerial practices. For example, Townley (2001) states that KM is a managerial technique that can assist academic libraries in attaining their organizational goals. With reference to the findings of Davenport, De Long, and Beers’s (1998) survey, Townley suggests that managers of academic libraries roll out KM by creating “knowledge repositories,” improving “knowledge access,” enhancing the “knowledge environment,” and managing “knowledge as an asset” (p. 49-51). Likewise, Tang (2000) and Teng and Hawamdeh (2002) argue that libraries can utilize various operational practices, managerial arrangements, and technological innovations to generate a new type of culture that bolsters collaboration, knowledge sharing, and lifelong learning among employees.

It is apparent that most of the above-mentioned researchers adopt the managerial perspective. They believe that as long as the (academic) libraries make use of certain new technologies and create the suitable culture, WL and KM will take place as a matter of fact. They tend to brush aside the fact that it is the employees who bring about WL and KM through day-to-day interaction. Moreover, they do not present sufficient detail about how the employees learn and share knowledge in their workplaces. What they proffer is simply a discussion or verification of managerial theories as generally applied to the libraries where they work or conduct their studies. They are not able to probe into the human communication involved in the WL and KM in particular contexts.

Another approach to study WL and KM among librarians is found in Li’s (2001) and Schultze’s (2000) research. Li carries out an ethnographic study of some Taiwanese academic librarians’ WL while Schultze writes up a “confessional ethnography” of the
"knowledge work" of three types of professionals (administrators, competitive intelligence analysts, and corporate librarians) in an American company. With "thick description" (Geertz, 1973) of the workplace contexts and work activities, Li and Schultze capture in detail how the librarians learn to do their jobs, develop their working knowledge, and discharge their professional practices in situ. Li (2001) finds that the academic librarians learn mainly through interacting with others in the workplace. The learning is often informal, self-directed, and contingent upon various individual and contextual factors. Schultze (2000), on the other hand, concludes that the corporate librarians perform their duties by "translating," which entails interpreting their clients' questions, evaluating the information retrieved, and rendering the relevant information "recognizable" to the clients (p. 24-25). By immersing themselves in the librarians' work lives, Li and Schultze witness and go through the subtle details of what constitutes the librarians' professional practices. Hence, they are able to provide illuminating analyses of the librarians' WL and KM in terms of mundane work practices and day-to-day human communication.

2.2 Communication, Workplace Learning, and Knowledge Management

In this section, I will discuss some epistemological and ontological issues in the scholarship of Organizational Communication. Then, I will expound the theoretical underpinnings of this study.

2.2.1 Critique of studies on workplace learning and knowledge management

Whereas some studies on these two subjects were grounded in actual work practices without an a priori theoretical model as the backdrop, many were investigations performed by researchers who planned to verify and elaborate certain theoretical
frameworks laid down by former relevant studies. Oftentimes, the researchers based their methodologies and arguments on theories emanating from Business Studies, Adult/Continuing Education, Human Resource Management, Organizational Psychology, or Computer Science. They adopted a positivist approach and attempted to find empirical data as evidence to buttress the pre-existing theoretical frameworks in their disciplines. They largely dismissed the concern that their abstracted frameworks might not be adequate to cover the actual fine-grained learning and complex knowledge-managing practices in disparate workplace situations. What they ended up with was unsurprisingly overgeneralizations of managerial or workplace practices that reflected the inherent causal presumptions of their theoretical underpinnings. Indeed, as Moore (1996) points out, there exist many sweeping and mechanical models concerning employees’ learning and their underlying cause-and-effect presumptions fail to account for the complexity of today’s organizations (p. 62). The so-called best practices about learning organizations and KM sound marvellous, but they are by no means panaceas for all organizations (Rose, 1996, p. 15).

It appears that the researchers equipped with pre-existing theoretical frameworks overlooked the social and communicative nature of WL and KM. To share knowledge for collaborative learning involves human communication in a particular social context. Boden (1994), for example, argues that learning in an organization is predicated on hiring literate and communicative employees who can well understand the context and immediate logic of their workplace (p. 212-213). On a similar note, Brown and Duguid (2001b) stress that “what individuals learn always and inevitably reflects the social context in which
they learn it and in which they put it into practice” (p. 201). The context usually comprises the workplace, the colleagues, the profession concerned, and some “idiosyncratic external social forces bearing on each individual” (p. 201). Yet, some researchers tend to reduce the social and communicative nature of WL and KM to conditions that can be tinkered with by applying certain sweeping managerial principles or practices. Some even relegate it to be the behavioural outcome of a prescribed organizational culture. They treat it as something that can be objectified, moulded, and re-engineered by the management with psychological or materialistic incentives. What those researchers do to some extent tallies with Fairhurst and Putnam’s (1999) description that early studies of human communication in organizations were “little more than a mechanical transmission, the reflection of structure, the discharge of psychological concepts like scripting, or interpersonal communication with air conditioning” (p. 1).

Human communication, however, is a process in which the individuals involved actively interpret, construct, and actualize their mutual relationships and the associated social aspects in a particular context. Pearce (1995) and Shotter and Gergen (1994) state that human communication consists of an indeterminate and historical flow of interpersonal interactions that contributes to a contingent social process of reality construction. In a figurative sense, individuals in a particular context employ communicative practices to co-spin “webs of significance” (Geertz, 1973) to enact reality. Taylor and Van Every (2000) see human communication as “coorientation” because it is “an ongoing process of making sense of the circumstances in which people collectively find [themselves] and of the events that affect them” (p. 58). They orient themselves
socially by interpreting the context and then co-creating an intersubjective reality with their communicative behaviour. According to Boden (1994), human communication is constituted of individuals' knowledgeability and use of language. To explain it in her terms, an intersubjective reality is accomplished communicatively by "language-in-action" and is expressed in verbal "accounts which are, through and through, historical yet immediate and utterly tailored to local events and conditions" (p. 14). Individuals, in this way, use language to bring "social structure" (Giddens, 1984) into being in a context that "has unique, locally managed contingencies and concerns" (Boden, 1994, p. 17). Moreover, the individuals utilize language to carry forward the social structure by communicatively reviving in situ the "fundamental and irreducible elements" of "all human experience, exchange, and events" (p. 17). They reflexively perpetuate the social structure beyond temporal and spatial limits with the language-in-action in their communicative behaviour. In this sense, human communication functions as the medium for constituting, enacting, manifesting, and perpetuating the structuration of society.

The same conceptualization can be applied to the ontological interpretation of an organization. Fairhurst and Putnam (1999) remark that a researcher who studies an organization can look for "the organizational in the communicative" (p. 2). In this respect, Taylor (1999), Taylor and Robichaud (2004), and Taylor and Van Every (2000) uphold the emergent, mutually constitutive relationship between communication and organization in their discussions of how an organization emerges and evolves from the human communication in it. Drawing on Dewey's (1916/1944) arguments, Taylor (1999) emphasizes that "society (including organization) exists not by but in communication" and
that communication should not be regarded "as a function, but as an essence" (p. 22, italics original). Taylor and Van Every (2000) describe an organization as a "flatland" where communication and organization are "at a single level" (p. 143).\(^2\)\(^13\) Building their arguments on Boden's (1994), Deetz's (1992), and Giddens's (1984) theorizing, they contend that human communication in an organization generates two outcomes that instantiate the reciprocity between communication and organization. The first is that a situation is brought into being through communication that produces "a view of circumstances including the people, their objects, their institutions and history, and their sitting in a finite time and a place" (p. 33-34). In other words, organizational members "co-orient" themselves by interpreting and co-constructing an intersubjective reality with reference to the context when they communicate with one another. The second outcome is that a situated discourse is generated, enacted, and perpetuated through the communication among the organizational members. The discourse offers "an interpreted world of collectively held and negotiated understandings that link the community to its past and future and to other conversational universes of action by its shared inheritance of a common language" (p. 34).\(^2\)\(^14\) To put it simply, the organizational members utilize language reflexively in day-to-day interaction to build a communal discourse that helps them reach back to the organization's history and extend to its future. In this way, the organization's social structure is reproduced from the past and carried forward to the present and the future by means of a communal discourse that is instantiated in human communication.\(^2\)\(^15\) According to Taylor and Robichaud (2004), the communal discourse exists in two forms, text and conversation:
As text, discourse is a manifestation of human sensemaking (Weick, 1995). The making of text is how organizational members reflexively (Giddens, 1984) and retrospectively (Weick, 1995) monitor, rationalize, and engender the action of organizing. As conversation, discourse is an instrument of organizational action, and text is a resource that enters into its construction. Linked to the purposes of organizing, conversation is tied to object-oriented and materially based activity. In contrast, discourse as text constructs the organization as an object of reflection and interpretation." (p. 396-397, italics original)

Whatever form it manifests itself, the communal discourse "indexes the network of interlocking agencies that make up the object-oriented co-orientation of the organization" (p. 407). In short, human communication, both spoken and written, constitutes the reality of an organization and accomplishes the organizing therein.

In addition, the members of an organization gain their identity when they interpret and co-construct an intersubjective reality in the process of communication. Eisenberg (2001) writes that "[p]eople draw from the surround to make sense of their lives and, in so doing, construct their identities" (p. 544). Carbaugh (1995) also notes that identity and interpersonal relations "are constantly subjected to an interactive and occasioned process, with repercussions of these being felt not only in, but beyond the present occasion" (p. 276). Meanwhile, organizational members' identity is associated with their professional practice. It is, as Taylor and Van Every (2000) contend, "coemergent with that of the organization" and "contingent on the existence" of a professional community in which the members participate (p. 270). Brown and Duguid (2001b) also argue that organizational members' identity is grounded in their community of professional practice (p. 201). The relationship among identity, communication, and professional practice is vividly illustrated by Orr's (1990, 1996) ethnographic study of photocopier technicians.
By examining their day-to-day interactions, Orr concludes that the technicians formed a community of practice and carved out their professional identity with the exchange of "war stories" about fixing photocopiers. Moreover, they built and maintained a "communal memory" with the aid of a communal discourse.\(^2.19\) In this way, human communication in an organization not only constitutes organizing but also contributes to the formation and maintenance of organizational members’ identity and sense of community.

Furthermore, the intersubjective reality co-created by organizational members’ communication embodies the sociocultural aspects of an organization. In the words of Pacanowsky and O’Donnell-Trujillo (1983), “a culture is not something an organization has; a culture is something an organization is” (p. 146, italics original). The sociocultural features of an organization are not determined by its formal structure or predictable employee behaviours that are susceptible to managerial engineering. They are constituted and enacted communicatively among the individuals in the organizational context. As Geertz (1973) describes, the study of the sociocultural features is “not an experimental science in search of law, but an interpretive one in search of meaning” (p. 5).\(^2.20\) By centring on the day-to-day human communication and interpreting it with reference to the organizational context, researchers will be able to uncover the interplay among human communication, sociocultural atmosphere, and group dynamics in an organization.\(^2.21\)

From the above arguments, it is apparent that human communication is central to an organization’s existence and operations. To examine WL and KM, it is disputable to neglect the role that human communication plays in accomplishing them. In fact,
interpersonal communication provides a significant threshold to figuring out how WL and KM emerge and come to fruition in a particular organizational context. An understanding of the organizational members' communication will also reveal how they construct their identity and enact the sociocultural atmosphere of the organization, which in turn will shed light on why WL and KM occur in certain ways in the organization.

2.2.2 Workplace learning and knowledge management as human communication

WL and KM in an organization (or a unit of it), therefore, can be construed as instances of organizing by means of human communication with the goal of generating, sharing, disseminating, and institutionalizing the organization's work-related knowledge. They intrinsically encompass organizational members' co-construction and enactment of an intersubjective reality through the language-in-action embodied in their communicative behaviour with the use of a communal discourse developed in the organizational context. What constitutes and facilitates WL and KM is not any structural rules or cultural norms imposed by the management. It is the organizational members' communication in a communal discourse, the formation of their professional identity, and their enactment of the sociocultural atmosphere. In Schegloff's (1982) terms, WL and KM are examples of "interactional achievement" (cited in Gülich, 2003, p. 236).

Taylor and Van Every (2000) pinpoint that human communication is tied to knowledge sharing and collective learning in two ways. On the one hand, communication provides the "medium" through which knowledge is "transacted" by language-in-action for sharing and learning among a community of organizational members (p. 32). On the other hand, it contributes to the growth of a distributed knowledge base which is shared
and discursively accessible by the members (p. 32). In this way, knowledge becomes a kind of "resource" that is continually developed and elaborated by the members and is manifested in the members’ communication (Zorn and Taylor, 2004, p. 104). Moreover, “the translation of this shared (or distributed) knowledge through its voicing by” the members enacts “the structuring of the community of work” in their workplace (Taylor & Van Every, 2000, p. 32). WL and KM, from the communicative perspective, are not any novel or groundbreaking managerial discoveries in the recent decades. They have all along been inherent in various mundane interpersonal interactions in an organization because work-related knowledge is thereby created, pooled, shared, retrieved, and acquired discursively among organizational members to maintain the organization’s operations. The key to uncovering the intricacies of and the interrelations between WL and KM is to conduct interpretive studies of the organizational members’ communicative practices in the workplace context. As Berends, Boersma, and Weggemen (2003) suggest, researchers of learning in organizations should delve into the relevant social practices (i.e., communicative practices) as well as “the way these practices are structured and the way they are accomplished by knowledgeable organizational actors” (p. 1053). Moreover, interpretive studies of WL and KM will help bridge the epistemic gaps left by the previous positivist research.

In the following chapters, I will first discuss the research methodology and related issues. Then, I will analyze the communicative practices among the reference staff members in a library. The individuals’ language use, identity formation, sociocultural atmosphere, and group dynamics will also be examined in detail. A discussion of the
interrelations between WL, KM, and other findings will then be presented. I will suggest directions for future research in the last chapter.
CHAPTER 3: METHODOLOGY

In this chapter, I will present how I utilize an ethnographic approach to conduct the study at a library. I will also discuss the ethical issues, describe the methods for data analysis, and consider the limitations of the methodology. The chapter will conclude with a description of the library where I gather the empirical data.

3.1 Ethnography as Research Method

A variety of methods are available to study human communication in a particular context, but ethnography is increasingly being used because it is effective in unveiling the intricate social construction inherent in interpersonal interaction. Hirsch and Gellner (2001) report that there is a surge in adopting ethnography as a research method in different disciplines as a result of "a long march away from positivism: that is, away from attempting to model them [human sciences] upon, and justify them in terms derived from, the natural sciences" (p. 2). Indeed, Agar (1996) points out that ethnography "offers a social science metaphor within which the richness and variety of group life can be expressed as it is learned from direct involvement with the group itself" (p. 63). Amid the diverse applications is organizational ethnography, which has been developed by anthropologists, sociologists, and management researchers who aim at exploring organizational lives empirically (Rosen, 2000). Schwartzman (1993) asserts that with ethnography, researchers who study human behaviour in organizations are able to "examine the taken for granted, but very important, ideas and practices that influence the way lives are lived, and constructed, in organizational contexts" and thus to "understand the way that everyday routines constitute and reconstitute organizational and societal
structures" (p. 4). Ethnography, in other words, shows how day-to-day interactions are constitutive of the overarching structure of an organization (p. 4). Similarly, Van Maanen (2001) argues that ethnographers' "particularizing" reports of specific episodes render apparent the "human logic attached to organizational processes," which allows "a degree of ethnographic charity to be granted to those whose behavior might otherwise appear as odd, alien, lazy, malicious, conformist, mendacious, uniformed, or simply inexplicable" (p. 243).

In Organizational Communication, ethnography is also recognized as an insightful research method for figuring out how the intersubjective realities in organizations are co-constructed and interpreted through day-to-day interpersonal interaction (Boje, 1991; Carbaugh, 1988; Carbaugh & Hastings, 1992; Goodall, 1989, 2000; Pacanowsky & O'Donnell-Trujillo, 1982, 1983). It became popular in the past decade among researchers who investigated workplace learning (WL) and knowledge management (KM) in organizations or in units thereof (e.g., Heaton & Taylor, 2002; Henning, 1998; Hovde, 2001; Kuhn & Jackson, 2003; Li, 2001; Orr, 1990, 1996; Schultze, 2000; Smart, 1998). With data collection methods such as participant-observation, note-taking, and interviews, ethnography provides the researcher with opportunities to witness and experience WL and KM practices through fieldwork. It constitutes what Bourdieu (1977) describes as a methodology with a "practice orientation" (cited in Schultze, 2000, p. 4), for it sheds light on the social structures of people's interaction as well as on the construction of those structures. The qualitative data garnered are essential for and instrumental in generating insights into the intersubjective realities actualized in a workplace. With such rich data,
for instance, Henning (1998) reveals that refrigeration service technicians' learning “involved a rich array of methods constructed from the resources inherent in social relations, discourse, and the physical qualities of the objects in the everyday world” (p. 86). Likewise, Hovde (2001) employs ethnography to identify technical writers’ tactics for handling organizational constraints and resources in the process of learning software programs and then writing up manuals for them. Because of its practice orientation and unique advantages for studying day-to-day mundane activities, ethnography is selected as the research method for this study.

In the following sections, I will go over the preparation work for the fieldwork of this research project.

3.2 Searching for Ethnographic Site

I started the search for an ethnographic site in July 2002. After consulting my academic advisor and several professors at The University of Calgary, I decided to focus on studying the communication involved in the WL and KM in a library. The major reason was that I worked as a librarian for four years. The fact that I knew the general operations of a library might give me an advantage in finding an ethnographic site. Therefore, I mailed my research proposal to four libraries in a medium-sized city in Western Canada. They were classified as academic libraries because they were affiliated with and funded by post-secondary educational institutions to support the academic information needs of the institutions' communities. I targeted academic libraries because I believed that the reference staffs there had to emphasize and strictly engage in continuous learning in order to provide adequate services to their knowledge-based users.
The administrators of the four libraries invited me to discuss the research proposal with them in person in August and September 2002. Two of the libraries then notified me that they were willing to grant me the permission to conduct the study there. Both libraries were very supportive and encouraging in response to my request. Yet, in view of the libraries' organizational structures, the size of their reference teams, and the amount of time needed for an ethnographic study, I chose the one with a simpler structure and a smaller reference team. When I finally cleared the necessary research ethics approvals, I contacted the Director of the SLS Library (a pseudonym) and signed a research agreement with him. The research questions were as follows:

1. At the SLS Library, how do the reference staff members communicate to accomplish workplace learning and to manage (share, accumulate, disseminate, and retrieve) work-related knowledge?

2. What features do the reference staff members as a team exhibit with respect to their language use, professional identity, and group dynamics?

3. What relations exist among the reference staff members' workplace learning, knowledge management, language use, professional identity, and group dynamics?

The term, "reference staff members (RSMs)," is used to refer to the library employees who are involved in the preparation for and provision of reference service. They include the reference librarians, the reference library technicians, and the Systems Librarian. (I will explain why the Systems Librarian was included in the study in Section 3.7.) With regard to WL, interpersonal communication is not always an essential part. An
individual can acquire new skills and knowledge through self-study, practice, and/or experimentation. Those kinds of WL do not fall into the scope of this study. I focus on the WL that involves interpersonal communication between two or more RSMs within the physical context of the SLS Library. The RSMs’ learning that occurs at professional development events such as conferences and seminars, is not considered. Moreover, the learning derived from the one-on-one interaction between an RSM and a library user is excluded from this study. A description of the SLS Library and its reference team will be given at the end of this chapter.

3.3 Design of Study

To secure trust from the Director and the RSMs of the SLS Library, I assured them that the study would only focus on their communicative practices and would not be evaluative in nature. The design of the study is described below.

3.3.1 Time frame for fieldwork

I spent 16 hours at the Library every week for the ethnographic fieldwork from October through December 2002. I usually went in around noon on weekdays when the Reference Desk was busy. The high volume of interaction at the Desk helped speed up my socialization to the workplace within the short fieldwork period. Moreover, I was able to collect more data from the frequent interaction between the RSMs. Nevertheless, I also did fieldwork in the evening and on Sunday. The reason was that some librarians during those time slots were part-timers. Interacting with them gave me an opportunity to find out how the full-time RSMs communicated with their part-time colleagues and maintained their work relationship.
As time went by, I realized that I needed more time to collect additional data and verify with the RSMs my understanding of the Library’s workplace situation. So I reached an agreement with the Library Director that allowed me to continue the fieldwork from January through June 2003. However, I reduced the on-site time to five hours or less per week during the extended fieldwork period. The continuous interaction with the RSMs refreshed my memories of their workplace practices and deepened my understanding of their work life. 

3.3.2 Human subjects of study

In this study, the reference team was treated as an organization itself as well as a unit of the SLS Library. I met with the Library Director and the RSMs in person in August 2002. I presented the research proposal to them and explained the study’s purposes, duration, design, and data collection methods. I also accentuated the study’s respect for anonymity and confidentiality. The RSMs realized that I was working on a research project for a master’s degree, and that I had to find an academic library as a research site and do ethnographic fieldwork there. As a former librarian, I proposed that I undergo training and attend staff meetings so that I could prepare for the Library’s reference service and eventually work alongside the RSMs at the Reference Desk. In this way, I would become an ethnographic participant of the Library’s reference team. I would receive no remuneration in return. The Library Director and the RSMs were receptive to the research proposal and granted me the permission to conduct the fieldwork there. The SLS Library and I understood that my performing the reference duties was a voluntary act and was simply a means for me to engage in the real-life WL and KM inside the Library.
My "working" there was regarded as a means to the fulfilment of a self-arranged unpaid research-oriented "practicum" that enabled me to collect empirical data for an ethnographic study. In this way, both the participating RSMs and I myself were the human subjects for the study. My role was a student-researcher/practitioner or what Adler and Adler (1994) call an "active-member-researcher" (cited in Schultze, 2000, p. 10).

The recruitment of the RSMs as the subjects will be described in Section 3.4 when I discuss the study's ethical issues.

3.3.3 Data collection methods

There were four methods of data collection. The first consisted of participant-observation, casual discussion with the RSMs, and writing ethnographic fieldnotes. Agar (1996) says that "if you watch people doing things, you learn something you can't get by just talking with them, although you can't learn much unless you do talk with them before, during, and after the event" (p. 157). Therefore, every time I visited the Library, I spent time observing as unobtrusively as possible the RSMs' interaction with one another. The locations where I observed them included the Reference Desk, the Library's computer lab, and the rooms for staff training and meetings. When I noticed something of interest to me, I might ask the RSMs questions and try to strike up a conversation with them on the scene. I did not have any pre-conceived questions or a pre-determined sequential structure for the conversation. The flow and contents of it were contingent upon the immediate situation and the RSMs' willingness to open up. Yet, whether I would start a
conversation depended on the situation. If the RSMs were engaged in their tasks, I would not interrupt them but wait until there was a chance to talk with them.

As a rule, I did not write fieldnotes on the spot except in the meetings. The main reason was that I never wanted to create the impression that I was monitoring the RSMs' behaviour. That would have undermined my attempt to cultivate rapport and a trusting relationship with the RSMs. Moreover, as an RSM myself, I had to provide reference service to library users who might approach the Reference Desk any time. Under such circumstances, I would not have sufficient time to scribble even brief fieldnotes. Furthermore, there would have been concern over the security and confidentiality of the fieldnotes since I might have to leave them unattended when I was providing reference service. Nonetheless, I did write fieldnotes during staff training and meetings because the attendees usually jotted down points themselves. I believed that writing fieldnotes during the training and meetings was more natural.

I tried to memorize the salient features of the RSMs' interaction when I was observing them. For my conversations with them, I would capture their main points with the key words that they used. To avoid a fadeout of memory, I wrote brief fieldnotes during break time in the Library or immediately after each site visit. When I arrived home, I elaborated the notes on the basis of my recollection. The fieldnotes were then categorized, sorted, and compared against one another for analysis.

The second method of data collection was my participation in the provision of reference service. By being a member of the reference team, I was able to work at the Reference Desk and attend staff training and meetings. The interaction with the RSMs
provided a means for me to be immersed in the real-life communication concerning WL and KM in the Library. Such first-hand experiences supplied crucial and valuable data for my understanding of the communicative practices inside the Library. As asserted by Saville-Troike (1982), an ethnographer who shares the “intuitions” of those being studied “can plumb the depths and explore the subtle interconnections of meaning” and thus “will be able to accurately describe the socially shared base which accounts in large part for the dynamics of communicative interaction” (p. 111-112). Hence, every time after “working” at the Library, I reported the work experience reflexively in a journal. The self-reflection writings were then categorized and compared with the fieldnotes to identify similarities and discernible patterns. They turned into what Schultze (2000) and Van Maanen (1988) call “confessional writing,” because I had to “give a self-revealing and self-reflexive account of the research process” (Schultze, 2000, p. 4). In Hertz’s (1997) words, this data collection method “implies a shift in our understanding of data and its collection—something that is accomplished through detachment, internal dialogue, and constant (and intensive) scrutiny of ‘what I know’ and ‘how I know it’” (quoted in Goodall, 2000, p. 137).3,4

Another reason for me to participate in the reference service was articulated by Van Maanen’s (2001) discussion of an ethnographer’s subtle role when s/he is studying the colleagues in his/her own profession: “In theory, [...] the ethnographer is the ‘detached observer’ attending first and foremost to research. In reality, [...] such a stance is not only impractical and likely to cause resentment, but immoral if suffering results” (p. 252). In my case, because of my education background and experiences in librarianship, I would
have felt odd if I had had to stay aloof from providing reference service when library users were lining up in front of the Reference Desk. Moreover, it was likely that library users would approach me when they saw me standing behind the Desk. Therefore, I preferred becoming an active member of the reference team rather than a completely “detached observer.” Otherwise, as Van Maanen (2001) describes, I would have reduced “ethnography to a soulless, empty, technocratic pursuit, devoid of recognizably human obligations and attachments” (p. 252).

Being a member of the reference team, I was able to receive the work-related documents distributed to the RSMs. As suggested by Eisenberg and Goodall (2001, p. 352) and Jarvis (1999, p. 111-115), I treated the accessibility to the documents as a data collection method. Those documents ranged from memoranda, training handouts, meeting minutes, to the librarians’ informal biweekly work reports. They were distributed to me in print and electronic formats. In addition, I gained access to the Library’s Intranet and the RSMs’ work notes kept at the Reference Desk. They were the vehicles for and the outcomes of the interpersonal interaction in the workplace. After “working” at the Reference Desk for several days, I realized that the Library’s web site also played a role in the RSMs’ communication. Hence, I included the web pages as work-related documents for data collection. All these different types of documents were the Library’s textual artifacts. They had particular functions in the day-to-day operations of the Reference Desk, the reference team, and the whole Library. At the same time, they provided a window for me to find out how the RSMs communicated with one another to accomplish WL and KM. As argued by Jarvis (1999), such documents offer insights into
communicative practices and workplace situations; thus, they should be interpreted as “social products” and examined carefully (p. 112-115).

The last method was a formal one-on-one interview of some RSMs. By the end of November 2002, I had identified some patterns of the communicative practices involved in the RSMs’ WL and KM. In order to verify those patterns, I invited 10 RSMs to a one-on-one interview in mid December 2002. The interviews also provided me with opportunities to discuss some workplace issues with the RSMs individually. To protect anonymity and confidentiality, I approached the interviewees by electronic mail and did not announce to the reference team who they were. I usually chose the RSMs who had a working history with the SLS Library. They were able to feed me with the changes in the workplace situation and communicative practices over the years. Nevertheless, I also sent my invitations to the RSMs who recently joined the reference team but had worked in other libraries before. I believed that they would be able to point out the communicative practices that were particular to the reference team of the SLS Library. Since the reference staff was made up of both librarians and library technicians, I interviewed five members from each group. I wanted to audio-tape the interviews so that I could transcribe the dialogues for future reference. Yet, I sensed that doing so would trigger resistance to the interview or deter the interviewees from opening up. Hence, I chose to jot down concise notes only during the interviews. Then, I elaborated the notes immediately afterwards. During the interviews, I verified with several interviewees my concern over the possible deterrent effect of taping the dialogues. They agreed that such a practice would have caused anxiety and discomfort on their part.
The interviews were semi-structured. Instead of using a questionnaire, I prepared some guidelines for the contents and progress of the interviews. Because of my participation in the reference service, I was able to pose specific questions that centred on the workplace situation and the RSMs' communicative practices. Sometimes, I mentioned my own work experience at the SLS Library in order to create rapport with the interviewees and to induce a discussion of some relevant topics. It turned out to be an effective way to help the interviewees open up.

3.4 Ethical Issues

The proposal for this study had been examined and approved by the research ethics committees at The University of Calgary (see Appendix A) and the parent institution of the SLS Library. Before I launched the ethnographic fieldwork, the Library Director had notified all RSMs by electronic mail of my presence in the Library. I prepared a participant consent form (see Appendix B) and distributed it to the RSMs. The form highlighted that the fieldwork was conducted solely for my own research purposes. My contact information, as well as that of my academic advisor, was available on the form so that the RSMs could approach me or my academic supervisor if they wished to obtain more information about the study. The RSMs had the right to decide whether to participate in the study or not. They would be included only if they were willing to participate. I requested that they sign the form and return it to me if they intended to participate. Participants could withdraw at any time during the study. In that case, I would debrief the withdrawn participant on what I had done in the fieldwork. I would also destroy the data collected from him/her up to the point of his/her withdrawal. If an
RSM decided not to participate in the study, I would not observe or interview him/her for data collection. In the end, 16 of the 23 RSMs signed and returned the consent form.

Similarly, for the one-on-one interview, I verbally informed each interviewee of the reasons for conducting the interview before I started it. The interviewee could withdraw at any time during the interview. The data collected from a withdrawn interviewee would be destroyed immediately.

To protect anonymity and confidentiality, I will not mention the real name of the SLS Library, its internal policies, and the RSMs’ names in the research report or any possible presentation of this study. When it is necessary for me to talk about a particular participant, I will always use the female personal pronoun because the majority of the participants were female. Moreover, I will refer to the participant as “RSM-#,” where “#” is a consecutive number that will not be repeated. In this way, the information provided by the participant cannot be traced back to him/her. All the fieldnotes taken and data collected during the study are kept strictly confidential and stored in a locked drawer in my home. Only I have access to them. For the data extracted from the work-related documents, I will consult the Library Director first if it is unclear whether I can use them for analysis. All research data will be disposed of in two years after my submission of the research report to The University of Calgary. The fieldnotes and the print records of the data will be shredded. The electronic records of the data on computers, software, and diskettes will be deleted. The research report will not be published or disclosed to the public without the Library Director’s prior authorization.
As a former librarian, I understand that libraries have their policies and standards of practice for services. In the research agreement, I stated that I would abide by the SLS Library's policies and standards of practice when collecting data and providing reference service there. In addition, I would not receive any remuneration for my research-oriented "practicum" at the Library, and I would be responsible for all the expenses incurred in the study.

In view of the suggestion that an ethnographer provide feedback to the research site (Eisenberg & Goodall, 2001, p. 348; Saville-Troike, 1982, p. 112; Silverman, 2000, p. 205-206), I offered to submit a copy of the research report to the SLS Library after the completion of this study. I will be available for a presentation if the Library Director and/or the participants need some clarification of the research results. I hope that the study will help the RSMs enhance their understanding of WL and KM from a communicative perspective. That will contribute to a mutually beneficial relationship between me as the student-researcher/practitioner and the reference team.

3.5 Data Analysis

I started sorting the data one month after the fieldwork had begun. I aimed at identifying recursive patterns that characterized the RSMs' communicative practices. No statistical calculation was employed throughout the study. Instead of converting the data into figures, I will discuss the details of the RSMs' interaction in the form of conversation. Since I did not tape-record anything during the fieldwork period, I have to reconstruct the conversation according to my observations, fieldnotes, memories, and work experience at the SLS Library. Whereas the technique of reconstruction compromises the authenticity
of the conversation, Goodall (2000) argues that it is a legitimate method to present ethnographic data. He adds that “in the interests of telling a good story it is permissible to omit details that have no bearing on the tale, but it is not permissible to make things up” (p. 123, italics original). As a member of the reference team, I can draw on my recollection and experience to reconstruct conversations for analysis. If I had doubts about a reconstructed conversation, I would always consult the participating RSMs to ensure that I did not create ungrounded data for the study.

Another way to present the data will be the narration of my own work experience at the SLS Library. It entails reflexive reports about my communication with the RSMs for the purposes of WL and KM. In this way, my “confessional writings” (Schultze, 2000; Van Maanen, 1988) will become part of the research report.3\textsuperscript{5} The reasons for having the confessional writings are to utilize my personal “experience to generalize to a larger group or culture” and to “enter and document the moment-to-moment, concrete details” of the work life at the Library (Ellis & Bochner, 2000, p. 737). The outcome will be a more fine-grained analysis of the interrelations among human communication, WL, and KM in the context of the Library.

Specific concepts and methods that are utilized to analyze the RSMs’ communicative practices will be discussed in Chapter 4.

3.6 Limitations of Research Methods

The major limitation is related to data collection. Since I decided not to tape-record the RSMs’ interaction and the one-on-one interviews, I had to rely exclusively on my observations, fieldnotes, and memories. Being a novice ethnographer, I admit that my
observation and fieldnote-writing skills are far from flawless. That might have dented the quality of the data collected. On the other hand, I suspect that I did not receive all the work-related documents during the fieldwork period. Although the Library Director had notified the RSMs of my need to collect work-related documents in various formats, I did not receive electronic messages from some participating RSMs throughout the fieldwork period. It was unusual and unlikely that those participants never sent work-related electronic messages to one another during the nine months. Therefore, I conjecture that those participants forgot to include me in the recipient list for their team-bound work-related messages. That might have reduced the quantity of the data available for analysis.

Another limitation stemmed from the fact that I did not have a chance to work and socialize with the RSMs in the office areas. As mentioned earlier, I spent most of the on-site time at the Reference Desk, the Library’s computer lab, and the rooms for staff training and meetings. Yet, I suspect that there might be some WL- and KM-related communicative practices among the RSMs that occurred in the office areas. While I wished to linger around the office areas to observe, the deficiency of space there would have made my presence awkward and obtrusive. As a result, I may not be able to report the whole spectrum of communicative practices that the RSMs adopted to accomplish WL and KM.

3.7 Description of SLS Library

The SLS Library is funded by, and thus forms part of, a post-secondary institution located in a medium-sized city in Western Canada. It is mandated to provide information services that support the teaching, learning, and research of the academic communities of
its parent institution.  

Currently, there are nine full-time librarians, eight full-time library technicians, and five part-time librarians on the reference team. The librarians report to the Director while the library technicians are managed by two full-time librarians who function as co-coordinators. (See Appendix C for the organizational structure of the reference team) In addition to the above 22 members of the reference team, there is a full-time Systems Librarian who manages the Library's integrated system (with modules for the online catalogue, circulation, acquisitions, and serials check-in). He also organizes a weekly staff gathering and sharing session (pseudonymously called "Tech's Break" in this report) in which he or a co-worker in the Library shares useful tips on using the Library's technologies or interesting topics related to library services. Although he is not on the reference team, I counted him as an affiliated member of the team because of his close working relationship with the RSMs.

The full-time librarians' (except the Systems Librarian and the Technical Service Librarian) job responsibilities comprise reference service, in-depth research consultation, information literacy instruction, collection development, faculty liaison, administrative duties, managerial/supervisory work, and special projects. They usually spend only three to six hours every week working at the Reference Desk. In contrast, the part-time librarians only work at the Reference Desk although some also participate in collection development. The library technicians are responsible for reference service and a wide range of operational duties such as processing inter-library loans, maintaining computer equipments and in-house databases, replenishing office supplies at the Reference Desk, reshelving the items in the reference collection, etc. Each of them works 12 to 16 hours at
the Reference Desk every week. It is obvious that the RSMs’ work duties cover a wide variety of library services. However, for this study, I focused on the WL and KM pertinent to the reference service provided within the Library.

Most of the RSMs have been working with the SLS Library for more than 10 years. However, there are several who joined the Library in the past few years. All RSMs are “generalists,” which means that they have to deal with questions related to the disciplines covered by the Library’s parent institution. Yet, each of them is assigned to specialize in at least one broad academic area. One full-time librarian is usually paired up with one or two library technicians, and they work together to develop the information resources for a broad academic area. The librarian also liaises with the faculty members of that academic area in order to understand their information needs and to develop customized information literacy instruction for students. The instruction is usually held at the state-of-the-art computer lab inside the Library. The librarian is in charge of the instruction but is often assisted by a library technician. After the instruction, the librarian and the library technician will attend to students in need of individual help.

The Library’s Reference Desk faces the entrance/exit. It is the most conspicuous public service point in the Library even though it is not the closest to the entrance/exit. Unlike the traditional plain reference desk, it is a hollow, round-cornered X-shaped enclave that is bordered by a strip of ergonomically designed counter. There is a computer at each of the two corners facing the entrance/exit. In between the two corners is a trough bay area. Lying there are a telephone directory published by the Library’s parent institution and some information sheets about different facilities on campus. Also
present is a notebook which the RSMs frequently use to jot down work-related messages, questions, and answers. The RSMs on duty usually sit or stand close to the two computers. Oftentimes, one librarian and one library technician are scheduled to work at the Reference Desk at the same time from 10:00 a.m. to 7:30 p.m. During peak hours, however, three or even four RSMs serve there to avoid a lineup of library users.
CHAPTER 4: LEARNING, KNOWLEDGE SHARING, AND COMMUNICATION

This chapter is composed of two main sections: The first discusses the occasions at the SLS Library when learning takes place and knowledge is shared among the reference staff members (RSMs). The second focuses on the communication channels adopted by the RSMs to facilitate learning and to manage knowledge. Before turning to these two sections, however, I will first introduce a framework for the analysis and discuss what the RSMs regard as work-related knowledge.

4.1 Analytical Units and Methods of Human Communication

To identify and study the language varieties and communicative practices used in a cultural group, anthropologists and sociolinguists have developed an analytical scheme known as ethnography of communication. It investigates “social meaning, diversity of practices, and actual language use in context” (Keating, 2001, p. 286) with a view to understand “the communicative life of people” and “what is significant and important to them as they communicate” (Carbaugh, 1995, p. 271). While it was initially conceived as a framework to analyze tribal cultures, ethnography of communication has since been utilized to examine sociolinguistic phenomena such as bilingualism, ethnic varieties of a language, and the communicative patterns of particular social groups (e.g., Goodwin, 1990; Morgan, 1998; Philipsen, 1992). Of importance in this framework are three units of analysis: “communicative situation,” “communicative event,” and “communicative act” (Hymes, 1972, cited in Saville-Troike, 1982, p. 28-30). According to Keating (2001) and Saville-Troike (1982), the communicative situation maintains a consistent social ecology within which communication takes place. The communicative event is an episode of
interaction that is characterized by the same topic, purpose, participants, and setting. The communicative act, which can be performed verbally or non-verbally, carries a particular interactional function such as a request or a command. As a rule, a communicative situation encompasses a cluster of communicative events, each of which is constituted by one or more communicative acts.\(^1\) In addition, Hymes (1972) brings up the “SPEAKING model” to illuminate eight dimensions of a communicative situation: “setting,” “participants,” “ends,” “act sequences,” “key,” “instrumentalities,” “norms,” and “genres” (cited in Keating, 2001, p. 290-291).\(^2\) In this chapter, I will adopt some relevant concepts of ethnography of communication when appropriate to flesh out the analysis.

To present a communicative event and the communicative acts therein, I will reconstruct conversations between the RSMs and probe into their flows. I will also examine and quote the words which the RSMs used during the one-on-one interviews. These analytical methods will help me dissect the RSMs’ communicative practices involved in their workplace learning (WL) and knowledge management (KM). Moreover, they will be instrumental in revealing the RSMs’ group dynamics and perception of their professional identity. My focus on the RSMs’ language use in the analysis echoes Alvesson and Kärreman’s (2000) and Putnam and Fairhurst’s (2001) arguments that language and language use are increasingly recognized as important resources for organizational communication. As Putnam and Fairhurst say, “discourse patterns fuse with organizational processes in ways that make language and organizations a unique
domain—one that differs from the study of linguistics in general and discourse analysis in other social settings” (p. 78).

4.2 Interpretation of Knowledge among Reference Staff Members

Based on their analysis of the KM literature, Alvesson and Kärreman (2001) charge that researchers’ concept of knowledge is “inconsistent,” “vague,” “broad,” “two-faced,” and “unreliable” (p. 997-1000). Yet, “[a] common take on knowledge seems to be to accept or side-step the inherent problems of defining the concept, but go on and use it anyway” (p. 999). In order to avoid that pitfall, I find it appropriate to explain what the RSMs heuristically regard as work-related knowledge in the context of the SLS Library before I proceed to analyze how they communicate to accomplish WL and KM. According to the RSMs, work-related knowledge is “something” that they have to understand or exercise so as to perform their duties, make sound judgments, and/or resolve problems on the job. Usually, that something is tied to information or expertise. For example, the RSMs have to be familiar with the Library’s resources before they can identify the most suitable one(s) to tackle library users’ questions. Similarly, they need to have digested the Library’s policies in order to decide whether they can entertain certain library users’ requests. On the other hand, the RSMs have to be able to put into practice some competencies such as interpersonal skills, presentation skills, and technical know-how. Only in this way can they realize how to effectively assist library users with distinct backgrounds, as well as how to troubleshoot a wide range of technical problems that arise any time in the Library. In short, the RSMs conceive work-related knowledge in a pragmatic manner and seem to have a nebulous idea of what exactly it is.
On reflection, I as an RSM believe that work-related knowledge encompasses more than an understanding of information and a grasp of expertise. To be an RSM, I ought to have knowledge that is grounded in cognition and sociocultural savoir-faire. More specifically, I think that knowledge results from a comprehension of the theoretical concepts that are pertinent to my work duties at the SLS Library. For instance, the fact that I am able to construct search statements with different search fields and Boolean operators (NOT, AND, OR) when using electronic databases, means that I know how information is organized on those databases and how Boolean logic can be applied to yield precise and manageable search results. It is the cognition of database structures and the functions of Boolean operators that constitutes my knowledge. On the other hand, I also have to realize whether it is socioculturally acceptable to act in a certain way in the workplace. An example is that my understanding of and experience with the reference team's sociocultural norms help me determine whether it is appropriate to interrupt and volunteer to assist another RSM when I sense that the individual has encountered difficulty in handling a reference question.

Drawing from the RSMs' interpretations and my reflection on the work experience, I contend that work-related knowledge for the SLS Library's reference team can be roughly divided into four domains: 1. An awareness and understanding of the information about the workplace; 2. A grasp of expertise useful in providing reference service; 3. Cognition of theoretical concepts pertinent to library services; and 4. Sociocultural savoir-faire specific to the context of the SLS Library. While the four domains seem to be independent of one another, they to some extent overlap and even
converge into the "something" that the RSMs matter-of-factly refer to as work-related knowledge. They are not abstracted but instantiated in the RSMs' professional practices and experiences. Their significance lies not only in their utility in enabling the RSMs to perform their duties in the SLS Library, but also in helping them be recognized as who they are professionally. Having clarified what knowledge means in the reference team, I will now look into how the RSMs learn in the workplace by creating, sharing, and acquiring knowledge through communication.

4.3 Communicative Situations for Learning and Knowledge Sharing

On the basis of formality, the communicative situations for learning and knowledge sharing among the RSMs fall into three categories: 1. Planned formal training; 2. Planned semi-formal sharing session; and 3. Spontaneous informal learning at work.

4.3.1 Planned formal training

Because of the rapid and continuous change of information technology, the SLS Library plans and organizes "training days" and "brush-up days" for the RSMs. Training is especially important and necessary now as a result of the use of new software programs in the Library's operation and the mushrooming of electronic information resources. As attested by the RSMs, the training provides them with an opportunity to learn about the new software programs and electronic information resources used at the Library. In general, large-scale training is organized at least twice a year and all full-time RSMs are expected to attend them. During a training session, the RSMs sometimes pair up and give presentations on software programs or electronic information resources in which they are interested and/or well versed. Sequentially, a training presentation is usually made up of
two communicative events: an explanatory talk on a particular program or information resource, and a follow-up period. The first communicative event consists in the presenters' communicative act of explaining their understanding of the subject, and is often accompanied by a live demonstration and attendees' hands-on practice. The presenters and the attendees form a give-and-take relationship in the sense that the presenters actively share their knowledge while the attendees listen and acquire the shared knowledge. This communicative event carries a serious tone and sometimes may appear in the form of instruction, with the presenters standing behind a lectern. It is oftentimes characterized by the distribution of handouts or the use of PowerPoint slides.

The second communicative event, a follow-up period, provides a chance for the attendees to seek clarification from the presenters. More often than not, the communicative acts involve asking and answering questions: An attendee raises a question about the subject, followed by the presenters' (or other attendees') effort to offer a satisfactory answer. However, this sequential structure could be disrupted or entirely displaced by some attendees' feedback and/or suggestions if those attendees were knowledgeable about the subject. The attendees might bring up issues that the presenters did not touch on or elaborate. Then, the presenters and the attendees would discuss them. If the subject was available for use, the presenters and the attendees might test it during their discussion in an attempt to gain a deeper understanding of it. New work-related knowledge might be generated collaboratively in the discussion and hands-on trial and then acquired collectively by the presenters and the attendees on the spot. A typical scenario is that RSM-1 gives a presentation on the search functions of an electronic
database that is fairly new to the Library. Then, RSM-2 suggests that certain features of
the database be used with the search functions so as to yield more precise search results.
RSM-1 responds by acknowledging and discussing with RSM-2 the pros and cons of the
suggestion, which might give rise to the contribution of other RSMs. RSM-1 might
access the database to verify whether RSM-2’s suggestion is workable. The open
discussion (and hands-on trial) can end up with new knowledge of the seemingly most
effective way to use the database. The knowledge will be shared with and acquired by
other RSMs during the discussion.

While the attendees’ questions, feedback, and/or suggestions might seem intrusive
or challenging, the presenters are usually receptive to them. The RSMs understand that
the follow-up period is the time for interaction and collaborative learning. Indeed, all the
RSMs whom I interviewed believed that it was not offensive to ask questions or to
provide feedback and/or suggestions. As RSM-3 (who was often a presenter in training
sessions) pointed out, the presenters “appreciated the questions” and thought that it was a
way to share information. If somebody could share information about the Library’s
resources, they were welcome. Similarly, RSM-4 enthused that the questions raised
during training sessions were “signs of curiosity;” they were for “collaborative
exploration” and “the benefit of the enterprise.” There was a recognition of the need to
learn. It was “a group thing, not a contest.” RSM-5 said that training sessions provided a
respectful environment for learning. The questions were asked out of “a need to know.”
There was no challenging among the RSMs. Meanwhile, RSM-6 described that the
discussions after presentations were not arguments but conversations for clarification. As
an attendee/observer myself, I felt that the follow-up period opened the floor for more communication and participation. The exchange of ideas and alternatives as well as the benevolent ambiance created a sense of involvement and complementarity among the RSMs. This impression was especially strong when I compared the RSMs’ dialogic discussions with the rowdy and bitter arguments staged by some co-workers during the training sessions in my former workplaces.44

In sum, the training and presentations planned and organized by the Library provide a formal communicative situation for the RSMs to share their knowledge, experience, and insights. The first communicative event in a presentation is characterized by the presenters’ imparting of their knowledge about a chosen subject to the attendees. It is an occasion for disseminating useful tips. The second communicative event in the presentation offers a constructive forum (and sometimes also a hands-on trial) for the RSMs to interact, suggest alternatives, discuss their experiences, reflect on what they know, experiment new ideas, and generate new work-related knowledge collaboratively. It is marked by the RSMs’ mutual respect and dialogic exchange. The RSMs commented that they benefited from the training because they gained access to and acquired the work-related knowledge that was imparted and collaboratively created during the presentation. As RSM-7 and RSM-8 noted in their interviews, they found the training “interesting” and “encouraging.” They “enjoyed” the sharing and mutual help. Planned formal training, therefore, plays a significant role in the RSMs’ learning and knowledge sharing.
4.3.2 Planned semi-formal sharing session

Another communicative situation for learning and knowledge sharing is the planned staff gathering and sharing session known as “Tech’s Break” (a pseudonym). It differs from training in that it is open to all staff members of the Library and that it is organized weekly by the systems librarian. As a rule, two or three 20- to 30-minute sessions are arranged for the same topic at the Library’s meeting room every Tuesday morning. In this way, the staff members working on different shifts can attend the session that suits their schedule the best. The topic usually revolves around the information technology utilized at the Library even though sometimes it stems from the contents of the workshops, seminars, or conferences which some staff members attended. The systems librarian sends an e-mail message to all staff members by the end of the week to announce the topic and time of the sessions on the following Tuesday. The staff members are not obliged to attend, but they are encouraged to drop in, “[e]njoy some treats and share some tips on the tools of [their] trade” (quoted from the systems librarian’s announcement e-mail messages).

Similar to the formal training, Tech’s Break is conducted in a presentation form with PowerPoint slides. The presenter is more often than not the systems librarian although other staff members are invited from time to time to speak on particular topics. However, Tech’s Break is a semi-formal communicative situation, as shown by the fact that the presenter usually sits with the attendees and that the attendees do not receive any handout and do not have a chance for hands-on practice. Moreover, the atmosphere is light and there are cookies for the attendees, who sometimes bring their own drinks. The
presentation consists of two communicative events: an explanatory talk on the topic and a feedback time. Yet, it is common that they blend together. Attendees may ask questions as feedback or suggestions every now and then during the talk. Brief dialogic discussions ensue among the presenter and the attendees. Then, the presenter resumes the talk. The spontaneous questions and discussions are not considered intrusive but are welcome and expected. They prompt the presenter and the attendees to think over some issues. Yet, because of the short duration (20 to 30 minutes) of Tech's Break, not many questions are raised and the discussions are momentary. As a result, the discussions usually do not blossom into forums for the RSMs to generate new work-related knowledge collaboratively. Instead, they more likely bring about opportunities for the RSMs to learn from one another by sharing their ideas, experiences, and/or insights. The discussions might or might not be picked up after Tech's Break.

While the RSMs sometimes skip Tech's Break, they treasure it as an occasion for them to exchange useful tips and experiences with one another. As RSM-9 said, Tech's Break fostered a "continuous learning atmosphere" in the SLS Library by introducing to all staff members "new tricks" of making a better use of information technology. Its casual and socializing ambiance made the learning and sharing more "enjoyable." The RSMs in general think that Tech's Break has become part of their regular work life since its inception around mid 2001.

In short, Tech's Break is a weekly planned semi-formal communicative situation that offers the RSMs (as well as other staff members of the Library) an opportunity to gather, share, and acquire knowledge mainly related to using information technology in
the workplace. While it is more frequent than the formal training, its short duration limits the possibility of collaborative creation of new knowledge among the presenter and the attendees. It functions more as a supplementary conduit to promote and facilitate ongoing learning and knowledge sharing in a casual manner.

4.3.3 Spontaneous informal learning

Learning and knowledge sharing among the RSMs are not confined to planned communicative situations only. Indeed, they very often happen spontaneously when the RSMs are at work. Their natural habitat is the Reference Desk although they also come up during staff meetings and work-time conversations. In general, the spontaneous informal learning involves only two or three RSMs, and it emerges in the form of certain communicative practices.

4.3.3.1 Eliciting and acquiring knowledge by asking questions

The most common way for the RSMs to acquire work-related knowledge is to raise a question spontaneously when they are not able to tackle a problem at work. The question is usually brief and straightforward. For instance, the RSMs at the Reference Desk often ask one another about how to fix some minor problems of the networked printers. Every time they do that, they initiate an impromptu communicative event of knowledge sharing with the communicative act of asking a question. The RSM who answers the question shares her knowledge and the RSM who asked the question learns how to deal with a glitch. Such spontaneous knowledge sharing occurs in various communicative situations such as working at the Reference Desk, meetings, small talk,
etc. There is another way to raise a work-related question. It will be discussed in Section 4.3.3.3.

4.3.3.2 Voluntary storytelling for knowledge sharing.

The Reference Desk is always staffed by at least two RSMs from 10:00 a.m. to 7:30 p.m. (except during the term break). Sometimes, no library users come to the Reference Desk to seek help at all. During such down time, the RSMs often share their knowledge and experiences by volunteering to tell work stories that have three main components: 1. Identification of a reference question or technical problem (from the equipment in the Reference Desk area) that an RSM encountered; 2. An account of the action that the RSM took to tackle the question or problem; and 3. A description of the outcome of the action. Here is a typical work story:

1. RSM-10: Three students came to the Desk this morning and asked how to look for information about personal care products for men.
2. RSM-11: It’s an interesting topic.
3. RSM-10: Yes, it was. They’re working on a group project about the development of personal care products and services for men. They wanted to find statistics about the sales of men’s skin care products and the markets of cosmetic services targeted at men. They were also looking for information about the trends of those products and services.
4. RSM-11: So what did you tell them?
5. RSM-10: Once I used [name of a reference book] and found some statistics about that kind of products. So I took the students to the shelf and told them to try it. I also flipped through several other books sitting on the shelf, and told them those books could be useful.
6. RSM-11: Had they searched the databases?
7. RSM-10: No. They came straight to the Desk for help. I told them to use [names of two databases], and showed them how to search them. They got excited because there were quite a few articles written on that topic already.
8. RSM-11: Maybe there’d be statistics and relevant analyses available from the web sites of some professional associations.
9. RSM-10: I did a search on Google and found some associations for manufacturers of personal care products in general. I printed out the list of associations,
22. and told the students to check out those sites and see if there’re any goodies.
23. RSM-11: Sounds good!
24. RSM-10: Then, there was a student waiting for help. So I told the three students
to try all those resources first. I also told them they could make an
appointment with [name of RSM-12] if they needed more advice on getting
the information.
28. RSM-11: They could also talk to [name of RSM-13] for the statistics. I bet she’s
done some similar searches for students.
30. RSM-10: Yeah. Well, maybe the students would come back later.

Example 1. Voluntary Storytelling for Knowledge Sharing (Reconstructed on the
basis of my observation of and participation in the reference service at the SLS Library)

In the example, RSM-10 and RSM-11 were in the communicative situation of
working at the Reference Desk. RSM-10 voluntarily launched the communicative event
of storytelling. With the communicative act of narrating, she first identified a reference
question that she had to deal with from lines 1 to 8. Prompted by RSM-11’s interest in
the work story, RSM-10 explained what she did to handle the situation from lines 10 to
22. She wrapped up the story by telling the outcome of her action from lines 24 to 27,
with a suggestion offered by RSM-11 on lines 28 to 29. Although the story was just a
plain narration of RSM-10’s ordinary work life at the Reference Desk, it informed RSM-
11 of what could be done to handle a reference question about personal care products and
services for men (and even questions of a similar nature). In this way, some work-related
knowledge was relayed from RSM-10 to RSM-11 by means of storytelling.

Work stories like the above example are told voluntarily every day at the SLS
Library. While the RSMs usually tell them at the Reference Desk (where most stories
originated), they also do so during meetings and work-time conversations. Verbalizing
episodes of work life serves to share knowledge and insights from the narrating RSM and to facilitate learning on the part of the listening RSM(s).

4.3.3.3 Consultation-oriented storytelling

Sometimes, the RSMs tell another type of work story when the traffic of reference requests is low. The work story contains two major components: 1. Identification of a thorny reference question or technical problem that an RSM had to deal with; and 2. Making a request for advice on how to deal with the question or problem. A non-essential component can appear in the middle for the storyteller’s admission of failure to properly answer the question or to resolve the problem. The purpose of telling the story is to bring up the question or problem and then to consult the listener for advice. This is a typical consultation-oriented work story:

1. RSM-14: Just now, there was a student looking for the chemical properties of a mineral called magnesite. I took him to the shelf for [names of two reference books]. But there was not much information about the mineral. So I checked two other books in that [reference shelf] area and showed him what I got. But he still wasn’t too happy about what was available. He said he was looking for information related to how the mineral’s chemical properties affected its use in the fireworks industry. I wasn’t sure what other resources could be useful to him. Do you have any suggestion about where to get that kind of information?
2. RSM-15: Did you try [name of an electronic reference tool]? I think you might get that kind of information from it.
3. RSM-14: Oh well, I didn’t mention that to the student.
4. RSM-15: Let’s see if there’s anything relevant in it ...
5. [RSM-15 accesses the electronic reference tool on her computer while RSM-14 is standing next to her watching. Then, RSM-15 performs a search for magnesite.]
6. RSM-15: There’re several entries for magnesite. ... [scanning the entries retrieved] ... It seems the second entry is the most relevant to the fireworks industry. And there’s a see-also note for magnesium carbonate. Maybe the student could try this and search under magnesite and magnesium carbonate.
7. RSM-14: Uh hah. I think the student just looked over those reference books quickly and left. If he comes to the Desk again later, I’ll tell him this and
Example 2. Consultation-oriented Storytelling (Reconstructed on the basis of my observation of and participation in the reference service at the SLS Library)

In the example, RSM-14 initiated the communicative event of storytelling and described a reference question with the communicative act of narrating from lines 1 to 7. She ended the narration with a confession of her unawareness of other relevant information resources on line 8. Then, she started the communicative act of asking on lines 8 and 9 to solicit advice from RSM-15. What followed was a conversation that conveyed RSM-15’s knowledge of how to deal with the reference question. RSM-14’s storytelling, thus, translated into a consultation with RSM-15, which resulted in RSM-15’s knowledge sharing and RSM-14’s acquisition of new knowledge. As a rule, this type of consultation-oriented storytelling happens not only at the Reference Desk but also at staff meetings and ordinary work-related discussions.

Storytelling as a communicative event, whether it be plain narration or oriented towards consultation, seems to have become a common part of the RSMs’ work life. Oftentimes, the work stories serve as leads for learning and knowledge sharing. As a new RSM, I figure that they also socialized and acculturated me by introducing me to episodes of how the RSMs provided reference service at the SLS Library. The RSMs’ behaviours narrated became examples and implicit guidelines for me. Gradually, I learned the ropes and understood what role I should play when serving library users. Such understanding accumulated and consolidated into my background knowledge about working on the reference team at the SLS Library. RSM-16, another new RSM, also thought that in
addition to reading the new employee handouts given to her, listening to work stories was
a way to adapt to the working environment. From the stories, she gained ideas about the
expected ways of behaving as an RSM and used them as the guidance for providing
reference service.

4.3.3.4 Sharing knowledge by means of interruption

Another form of knowledge sharing occurs frequently when the need for reference
service is low. If only one library user approaches the Reference Desk, one of the RSMs
there will greet the user and offer help. Since the reference area is quiet, it is not
uncommon that the idle RSM(s) hears how the other RSM answers the user’s question. If
the hearing RSM(s) senses that her colleague encounters difficulty in answering the
question or has not provided the most appropriate answer, she might interrupt and
volunteer to offer assistance to her colleague and the library user. A typical scenario of
such knowledge-sharing interruption is like this:

1. [A library user comes to the Reference Desk where RSM-16 and RSM-17 sit at the
two front corners.]
2. RSM-16: Hi, can I help you?
3. User: I'm doing an assignment about a writer called Clifford Odets. He's a
   playwright. I have to find information about his works and commentaries
   from his critics. How should I go about doing that?
4. RSM-16: Are you working on a particular play of his?
5. User: Not really. Any play written by him is okay.
6. RSM-16: Let me check the online catalogue and see if we have any books about
   him and his works.
7. [RSM-16 turns the computer monitor towards the user and searches the online
catalogue. The library user is waiting. RSM-17 is curiously watching and listening
to how the reference transaction unfolds.]
8. RSM-16: We have several books about Clifford Odets. They're scattered in the
   PN, PR, and PS sections of the circulation collection. I can print out this
   page for you and you'll know where to track down the books.
18. RSM-16: It seems Odets is a well-known playwright in modern time. I think there might be journal articles written about his works. Once you’ve picked a play for your assignment, try [name of a database] and see if there’re any articles written about that play.


20. [RSM-17 stands up and moves towards RSM-16.]

21. RSM-17: Can I add something? Maybe you can try [name of another database]. It’s a full-text database for English literature. It has a section about the criticisms of a writer’s works. You can also find some reference resources from the database.

22. RSM-16: Ah ... Let me pull up that database.

23. [RSM-16 logs into that database and shows its different sections to the user.]

24. User: Terrific! Thanks a lot.

25. RSM-16: You’re welcome. Thanks, [name of RSM-17]. I should take a closer look at this database.

26. RSM-17: Yeah, the database is pretty handy.

Example 3. Sharing Knowledge by Means of Interruption (Reconstructed on the basis of my observation of and participation in the reference service at the SLS Library)

Although RSM-16 and the library user started the reference transaction (communicative situation), RSM-17 participated in it as an inactive member because she paid attention to how the transaction unfolded. When she noticed that RSM-16’s suggested database on line 20 was not proper, she turned to active participation by tactfully breaking in on the interaction. She initiated the interruption (communicative event) by asking the question (communicative act), “Can I add something?”, on line 24. Then, she offered an alternative suggestion on lines 24 to 27 that alerted RSM-16 and the library user to the usefulness of the English literature database. RSM-16 acknowledged the unsolicited help on line 28 and wrapped up the reference transaction by showing the database to the library user. By means of the interruption, RSM-17 voluntarily shared her knowledge of the English literature database with RSM-16 and the library user. On the
other hand, RSM-16 learned how to use the database to handle similar reference questions in the future.

As abrupt and intrusive as the knowledge-sharing interruption may seem, the RSMs do not mind. In fact, they expressed gratitude to the unsolicited help and suggestion during the one-on-one interviews with me. They generally thought that since the reference area was open and quiet, it was inevitable that an RSM would hear and follow the process of a reference transaction conducted by a co-worker. Moreover, they felt that there was a "practical need" for the interruption because each RSM specialized in a broad subject area and might not be familiar with certain subject-specific information resources. The interruption, therefore, provided a prime opportunity for them to share what they knew about the library resources. Nevertheless, the interviewees added that whether they would initiate a knowledge-sharing interruption was contingent on the interpersonal dynamics in the reference transaction. If they believed that it was appropriate for them to chip in, they would do it respectfully and diplomatically so as to avoid taking over the reference transaction. The common strategy for launching the interruption was to ask a void question such as, "Can I add something?" or "Do you mind if I join you?" On the other hand, if a co-worker interrupted them and suggested an alternative answer to a reference question, they usually would not feel offended. Instead, they would appreciate the unsolicited help and take the chance to learn something new. As RSM-18 said, the reason for offering help voluntarily was not to show off but to "get the information out." It was good for the reference service. Library users would like it and feel that they were cared for. RSM-19 commented that it was a "common practice"
for the RSMs to jump in and share information during a reference transaction. She emphasized that the goal of the interruption was to “help each other” in a “collegial” and “service-oriented environment.” She had done that and would not harbour any negative feelings towards a co-worker who interrupted her. When I first started working at the Reference Desk, some RSMs cut in on my assistance to library users and I felt uneasy about the interruptions. However, after witnessing how the RSMs chimed in during reference transactions to share what they knew, I realized that it was socioculturally acceptable to perform the interruption diplomatically. Gradually, when I sensed that I might be able to help an RSM during a reference transaction, I would join in respectfully.

To sum up, the knowledge-sharing interruption is often employed to relay work-related knowledge from one RSM to another. Instead of degenerating into pugnacious bickering or squabbling over the turf, it is a norm that is accepted and observed by the RSMs for the benefit of the reference team and the library user.

4.3.3.5 Collaboration

The RSMs at the Reference Desk sometimes collaborate to help a library user, especially when the reference request is low and the user’s question is complicated and challenging. A typical scenario of such collaboration is like this:

1. [Three library users come to the Reference Desk where both RSM-20 and RSM-21 are available for help.]
2. RSM-20: Hello. Can I help you?
3. User 1: We’re working together on a group project, but we don’t know how we can get the information we need.
4. RSM-20: What’s the topic of your project?
5. [Curious, RSM-21 is looking at and listening to the users.]
6. User 1: We’re studying how new immigrants to Canada adjust to and settle down in the new environment. We want to know how many immigrants moved to
10. Canada in each of the past five years. Also, we want to find out what
11. problems they faced, what social services they needed, and how their needs
12. might impact the immigration policies.
13. User 2: We also want to interview some new immigrants in the city. They could
14. help us understand their problems.
15. RSM-20: Well, sounds like it's a big project. You can use different resources for
16. each of the questions you mentioned. Have you done any research so far?
17. User 2: Not yet. We're just starting.
18. RSM-20: I suggest you start with [name of a database]. It's good for Canadian
19. news and statistics. Let me pull it up ...
20. RSM-21: [turning to RSM-20] I can try [name of another database]. It may have
21. journal articles on this topic.
22. [Both RSM-20 and RSM-21 search the databases. The three users are waiting
23. eagerly.]
24. RSM-21: I've got some articles about immigration, but most of them are about
25. immigration to the U.S. or the immigration tide at the beginning of the 20th
26. century.
27. [RSM-21 turns the computer monitor to the students so that they can look over the
28. search results.]
29. RSM-20: There're articles about immigration to Canada from [name of the
30. database], but most of them are short news stories. You don't find a lot of
31. statistics from them.
32. [RSM-20 turns the computer monitor to the students so that they can look over the
33. search results.]
34. RSM-21: Maybe you could use broader, truncated search terms and limit the search
35. to journal articles with the advanced search function.
36. RSM-20: Okay. Let me try again.
37. [RSM-20 searches the database in the way suggested by RSM-21. Then, she goes
38. over the search results with the users.]
39. RSM-20: These articles look pretty good. I think they'll be useful to you.
40. User 1: Terrific.
41. RSM-20: For statistics, you can try [name of a database]. Other than that, ...
42. [turning to RSM-21] Do you have any suggestions for the statistics part?
43. RSM-21: Try the web sites of [names of two government departments]. They
44. must've done some studies on the immigration issue. Let me pull them up
45. from the web.
46. [RSM-21 surfs to the web site of the first government department.]
47. RSM-21: Voilà. There's a section of their research publications. Let me see ...
48. [turning to RSM-20] Do you know how to search their research
49. publications?
50. RSM-20: No, I don't. Do they have some kind of grouping or classification of
51. their publications?
52. RSM-21: They should ... [turning to the library users] We have to figure out how
53. to get the department’s publications about immigration. Just give us a sec.
54. User 2: Sure. We can wait.
55. [The two RSMs discuss how to retrieve relevant research publications from the web
56. site. They experiment with different methods and soon pull up some useful
documents. Then, they turn to the library users and give them a search
demonstration.]
59. RSM-21: Okay, that’s how to get those documents from this web site. Now let me
60. go to the web site of the other government department ...
61. User 1: The documents you showed us are great. I think they should be enough
   for our project.
63. User 2: Do you have any suggestion on interviewing new immigrants? How
   should we go about doing that?
65. RSM-21: You could ask [name of a society]. They organize cultural activities for
   different ethnic groups.
67. RSM-20: Contact [names of two organizations]. They specialize in services for
   new immigrants. I think they might be able to find some interviewees for
   you.
70. RSM-21: That’s right! They’re exactly the type of agency you want to talk to.
71. User 2: Do you have their telephone numbers or e-mail addresses?
72. RSM-20: No, I don’t have them on hand. But I can look them up for you.
73. [turning to RSM-21] I’ll look up the information about [name of the first
   organization]. You look up the other one, okay?
75. RSM-21: Sure.
76. [The two RSMs search the Internet for the contact information of the two
   organizations. Then, they write down the information and hand it to the users.]
78. RSM-20: There you go.
79. Users: Thanks very much!
80. RSM-20: No problem.

Example 4. Collaboration (Reconstructed on the basis of my observation of and
participation in the reference service at the SLS Library. This example is a simplified
version of what actually happens when two or more RSMs collaborate. A real-life
example is usually much longer.)

In the reference transaction (communicative situation), both RSM-20 and RSM-21
attended to the three library users since they were the only people in need of reference
service during the slow time. The communicative event of collaboration began when
RSM-21 volunteered to help RSM-20 and searched a database for the users on lines 20 to
21. The knowledge sharing between the two RSMs occurred on three spots: 1. RSM-21’s
unsolicited suggestion on lines 34 to 35 and RSM-20’s acknowledgment on line 36; 2. RSM-20’s question on lines 41 to 42 and RSM-21’s answer on lines 43 to 44; and 3. RSM-20’s unsolicited suggestion on lines 67 to 69 and RSM-21’s acknowledgment on line 70. The paired communicative acts of suggesting and acknowledging as well as asking and answering characterized the manner in which the two RSMs shared their work-related knowledge and insights. Also present in the example was the collaborative generation of new knowledge. On lines 48 to 53, the two RSMs admitted that they did not know how to retrieve the relevant research publications from the government department’s web site. Therefore, they worked together to figure out the search mechanism (lines 55 to 57) and eventually gained new knowledge by discussing dialogically and exploring the web site collaboratively. While the three library users were the ultimate beneficiaries in the reference transaction, the two RSMs also acquired new knowledge from their sharing, mutual assistance, dialogic discussions, and collaborative exploration.

During the one-on-one interviews with me, the interviewees opined that individual RSMs’ personality and the interpersonal dynamics in a reference transaction would to some extent determine the possibility of a collaboration. However, they pointed out that collaboration was a common way for them to provide reference service and to “maintain service quality.” They admitted that when they were not able to handle a reference question, they would count on one another for help and collaboration. As RSM-22 described, the RSMs were “complementary” to one another. They played a “collegial role” and learned together as a “nurturing group.” RSM-23 mentioned that if she was not
sure of her answer to a question, she would invite a co-worker to chip in. She felt that the RSMs were good at sharing knowledge, and that they "care[d] about each other" and would "appreciate each other's help." Meanwhile, RSM-24 noted that whenever a library user came in, s/he sought information from the Library, not a particular RSM (unless the user had made an appointment with a particular RSM for an in-depth research consultation). If the user's question was tricky, it was natural for the RSMs to collaborate to find out the answer.

As a new RSM, I sensed that collaboration was another means that socialized and acculturated me to become a member of the reference team. Through the interaction with the RSMs, I realized that sharing with and learning from co-workers were the norms at the Library. To survive the multitude of reference questions asked by library users, it was important to work together and help each other out. Moreover, continuous learning was expected of all RSMs. It was a practical need and a professional obligation. Therefore, the RSMs were willing to share what they knew for the sake of collaborative learning. It was an expedient way to help themselves keep afloat in a rough sea of reference questions and technological advancements. In my small talks and one-on-one interviews with the RSMs, they agreed on the necessity of knowledge sharing and on-the-job learning. As RSM-25 remarked, the RSMs recognized "the need to learn continuously for [their] jobs." Likewise, RSM-26 commented that there were plenty of sharing and learning opportunities at the Library. She thought that the RSMs were "open to learning" and took advantage of the available opportunities.
In short, the RSMs share their knowledge and learn from one another by means of collaboration. It is a matter of fact in the RSMs' work life because they understand that they benefit from one another professionally by doing so. The spectrum of communicative situations, events, and acts for learning and knowledge sharing at the SLS Library are summarized in Table 1:

**TABLE 1**

Summary of Communicative Situations for Learning and Knowledge Sharing

<table>
<thead>
<tr>
<th>Modes of learning and knowledge sharing</th>
<th>Communicative situations</th>
<th>Communicative events involved</th>
<th>Communicative acts involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned formal training</td>
<td>Training session</td>
<td>1. Explanatory talk</td>
<td>1. Explaining</td>
</tr>
<tr>
<td></td>
<td>(known as “training day” or “brush-up day”) made up of presentations</td>
<td>2. Follow-up period</td>
<td>2. Asking and answering; suggesting and acknowledging; dialogic discussion</td>
</tr>
<tr>
<td>Planned semi-formal sharing session</td>
<td>Tech's Break</td>
<td>1. Explanatory talk</td>
<td>1. Explaining</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Feedback time</td>
<td>2. Asking and answering; suggesting and acknowledging; dialogic discussion</td>
</tr>
<tr>
<td>Spontaneous informal learning</td>
<td>Meeting; reference transaction; work-related conversation</td>
<td>1. Elicitation and acquisition of knowledge</td>
<td>1. Asking and answering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Storytelling</td>
<td>2. Narrating</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Consultation-oriented storytelling</td>
<td>3. Narrating; asking and answering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Interruption (mainly in reference transactions)</td>
<td>4. Interrupting for making a suggestion, and acknowledging</td>
</tr>
</tbody>
</table>
The planned formal training provides a centralized communicative situation in which the RSMs gather to share and generate work-related knowledge, to celebrate their experiences and insights, and to increase their involvement in the reference team. It contributes to the RSMs’ professional development and enhances the Library’s reference service. The planned semi-formal sharing session, on the other hand, provides a casual yet centralized communicative situation for learning through knowledge sharing. It reminds the RSMs (and other library employees) of the significance of continuous learning and mutual sharing. In contrast, the spontaneous informal learning as a communicative situation is much more random, frequent, decentralized, and individualized. It is usually led off by two to three RSMs, and takes place naturally in various fashions whenever the RSMs work together. Owing to its sheer flexibility and frequency, it is the major means for ongoing learning at the Library. It gives rise to knowledge sharing, knowledge creation, or both.

The communicative acts involved in learning and knowledge sharing can be categorized into three groups. The first consists of unidirectional knowledge-imparting techniques such as explaining and narrating. They are employed when an RSM possesses specific work-related knowledge and is willing to share it with another/other RSM(s). The second group exists in the form of asking and answering as well as suggesting and
acknowledging. Constituting the “adjacency pair” sequence (Schegloff & Sacks, 1973, cited in Boden, 1994, p. 68), these communicative acts are performed to achieve knowledge sharing between two RSMs who have different degrees of mastery of a topic or subject. The RSM who answers or makes a suggestion is the one who knows more. The third group is made up of dialogic discussion. It is conducive to both knowledge sharing and knowledge creation. However, as shown in the communicative events of training presentation and collaboration, dialogic discussion is often coupled with hands-on trial before the RSMs are able to generate new knowledge. Utilizing these mundane acts, the RSMs habituate themselves to the communicative events identified and accomplish knowledge sharing and/or knowledge generation recursively. These communicative events (or practices) constitute social processes that are fundamental to and embedded in the RSMs’ professional development, socialization, work coordination, and involvement in the reference team. To accommodate the practices, the RSMs cannot be selfish or self-defensive. Instead, they have to uphold the common goal of providing quality reference service. As depicted earlier, the RSMs are willing to admit ignorance and share alike among themselves. Their mutual trust, respect, and support have created a collegial atmosphere, which in turn helps them pull off such “interactional achievement” (Schegloff, 1982, cited in Güllich, 2003, p. 236) as on-the-job learning through knowledge sharing and collaborative knowledge generation.

4.4 Communication Channels for Learning and Knowledge Sharing

Oftentimes, learning and knowledge sharing at the SLS Library occur in communicative situations in which two or more RSMs are co-present. According to the
RSMs, face-to-face conversational interaction is the “preferred,” “most common,” and “most important” channel for communicating, learning, and sharing. It is popular because it offers an easy, clear, and straightforward way to “convey quality information.” RSM-27 even described the reference team as “a face-to-face crowd” and the Library as “a face-to-face institution.” Indeed, the reference team has been banking on face-to-face interaction to accomplish learning and knowledge sharing. For example, training sessions and Tech’s Break provide regular opportunities for the RSMs to gather and share ideas, insights, expertise, and experiences. Similarly, spontaneous informal learning thrives because of the frequent face-to-face interaction among the RSMs. Since they sit close to one another in the office area, it is convenient for them to meet and start a work-related conversation or discussion. When they work together at the Reference Desk, they talk about work-related issues all the time. In fact, I noticed that some RSMs do not always sit down when they are manning the Reference Desk. In that way, they can manoeuvre around if they have to seek or offer help or collaborate with their co-workers. Only when it is difficult or time-consuming for them to meet will they rely on telephone. Even then, they still prefer conversational communication.

Nevertheless, the RSMs raised the point that face-to-face interaction cannot accommodate a large number of participants (except in planned training or sharing sessions). As the spontaneous informal learning is the major means for ongoing learning but usually involves only two or three individuals, the RSMs textualize their work-related knowledge and share the texts through five different channels.45
4.4.1 Library’s internal document

During training sessions, some presenters distribute handouts to the attendees. The handouts serve two purposes. They help the presenters share their knowledge with the attendees, and aid the attendees in understanding the presentation. The gist of the presentations recorded on the handouts is for the attendees’ reference. Moreover, during the follow-up periods of the presentations, the handouts could serve as guidelines for brainstorming and knowledge-generating discussions. The collaborative knowledge creation in the discussions would be more orderly and substantial.

Handouts are also given to new RSMs for the purpose of orientation. Usually, the handouts offer instructions on how to perform some tasks. For instance, a handout has been prepared to explain how to conduct a reference interview with the library user. Based on the instructions on the handout and the observation at the Reference Desk, a new RSM is able to understand and learn the skills for eliciting useful information from a library user during a reference interview. The usefulness of handouts is apparent from the fact that there is a binder at the Reference Desk for the handouts prepared by the RSMs. They are categorized for easy access.

Internal documents such as memoranda, minutes of staff meetings, and reports of the Library’s internal studies also serve as vehicles for communication among the RSMs. Nevertheless, they are geared more towards conveying information that concerns the administrative aspect of reference service. Moreover, they do not circulate as widely as handouts. For instance, the minutes of librarians’ meetings are distributed to the librarians only even though the library technicians can access them from the Library’s Intranet.
To sum up, internal documents hold information that originated from the RSMs' knowledge and expertise. They serve as repositories in support of learning and knowledge sharing.

4.4.2 Notebook at Reference Desk

Sitting between the two front corners of the Reference Desk is a handy and important tool for textualizing and sharing knowledge among the RSMs. It is a notebook for dated, brief messages and questions that are related to specific tasks in the reference area and the immediate operations of the Reference Desk. It is divided into several sections so that the RSMs can jot down new notes and search for previous notes according to their nature. The RSMs have the habit of reading the notebook every now and then when they are working at the Reference Desk. By going over the notes, they are able to track down the development of service-related issues. They are also able to find out what issues or problems need immediate attention. When an RSM figures out the answer to a recurring reference question or the solution to a frequent technical problem, she will write it down on the notebook so that other RSMs will benefit and understand how to deal with it. For example,

1. [Message 1]
2. [date]
3. Periodical — [name of a magazine and its call number]
4. Catalogue shows 4 issues available — no spot on periodical shelves. Can someone check with serials to see if this been discarded?
5. [not signed]
6. [not signed]
7.
8. Missing
9. [not signed]
10.
11.
12. [Message 2]
13. [date]
14. Beet membrane permeability — They’re BACK!
15. Students are looking for an article to support their lab —
16. [name of a database] works —
17. permeab% (in plant% or ABs)
18. membrane%
19. [not signed]
20. 21.

22. [Message 3]
23. [date]
24. [name of a course] Lab
25. The Instructor says students should be able to find textbooks etc. that deal with
26. pretty much any part of the project. They can reference from a text the bilayer
27. construction of a membrane. They can discuss what a vacuole is and where it’s
28. found in a cell. Students can search “ethanol and membrane” in [name of a
29. database].
30. [not signed]
31. 32.

33. [Message 4]
34. [date]
35. A student was looking at course notes in [name of a course management program],
36. but they only came up as a powerpoint presentation. (No option to print.) It had
37. been giving her the option to print on her home computer. Another student said the
38. same thing had happened to her. She accessed the notes by closing the browser and
39. logging in again. I also suggested that if it still didn’t work, she try a different
40. browser. OR: right click to get option to save to desktop OR: look in Library Help
41. Desk / How to print PowerPoint 6 slides per page.
42. [RSM-28 signed]
43. 44.
45. Another way is to do a right-click on the link to the powerpoint presentation, and
46. select “save link as.” Save it to a floppy or desktop or wherever, then go and open
47. it. It should then open with powerpoint and give you the file 2 print options.
48. [RSM-29 signed]

Example 5. Messages on the Notebook at the Reference Desk (Copied verbatim from
the notebook)

In this sense, the notebook functions as a repository to which the RSMs contribute
their (newly generated) knowledge for sharing, and from which the RSMs acquire new
knowledge and then apply it to the immediate context. It is a pool for knowledge exchange and a resource for the spontaneous informal learning among the RSMs. This function of the notebook is obvious from Messages 2 and 3 in Example 5. Moreover, the notebook provides a vehicle for succinct communication among the RSMs who do not have a chance to discuss work issues and problems face-to-face. It liberates them from the temporal and spatial constraints, as illustrated by the asynchronous interaction between two RSMs in Messages 1 and 4. Indeed, on a handout distributed to the RSMs concerning how to obtain technical assistance for the computers and printers in the reference area, the last sentence states: “Always leave a clear message in the notebook in case you’re not there when help arrives” (boldface and underscore original). It proves that the notebook functions as a significant communication channel for the operations of the Reference Desk. The interaction in the notebook, however, usually gives rise to knowledge sharing only, not knowledge generation.

In short, the notebook expedites the sharing of knowledge that is necessary for maintaining the operations of the Reference Desk. At the same time, the notebook also becomes an unofficial chronicle of the RSMs’ efforts to tackle the questions and problems encountered. As an artifact, it captures in text the reference team’s collective memory.

4.4.3 Electronic mail

The textualization of learning and knowledge sharing is also carried out in the electronic format. One of the ways to achieve it is the utilization of the electronic mail system of the Library’s parent institution. The RSMs often capture and disseminate their work-related knowledge by e-mail. It offers the advantage that knowledge can potentially
be disseminated to the whole reference team within a short time. Indeed, most RSMs indicated that they would opt for e-mail if they wanted to make an announcement to or share insights with a large number of co-workers. The messages below are evidence for such practice:

1. **[E-mail 1]**
2. Hello
3.
4. [name of a database] was re-imaged on the library computers last night. The computers in the classroom and the computers in the library now have [name of a database] 2002. (The data is actually to 2000).
5.
6. To get to it go to:
7. Start
8. Programs
9. [name of the database]
10. The balance sheet goes to the [name of a Canadian province] level.
11.
12. [name of the database] will allow you to search for an industry by NAICS. (6 digits)
13. To search for an industry click on the NAICS code and click "search". If a match is found, the industry will appear.
14. [name of the database] 2000 All (4 digits)
15. [name of the database] 2001 (6 digits)
16.
17. [RSM-30 signed]
18.
19. **[E-mail 2]**
20. Hello
21.
22. The pamphlets have been weeded and are now in Tech Services. The remaining pamphlets will be changed to main collection and will become 3 week loans. They will also be put into a better format for shelving. In the mean time, if you have a student who requires a pamphlet take the request to Circulation and they will treat it as a rush item and obtain it from Tech Services.
23.
24. Thank you.
25.
26. [RSM-31 signed]
27.
Greetings all!

I barely contained my excitement when I found the journal [name of a journal] - on the [name of a database vendor] database [name of a database] - full text from 1936 on.

I didn’t contain my excitement (I ran down the hall to tell [names of two RSMs]) when I discovered on the same database the journal [name of a journal] available in full text from 1930 on.

Now I’m just so excited I had to let everyone know - the journal [name of a journal] is available full text on this same database from 1916 on!!

These are very fun to browse through - lots of interesting stuff from a long time ago.

Cheers,

[RSM-32 signed]

Example 6. Electronic Mail Messages (Copied verbatim from the RSMs’ group e-mails)

Generally speaking, the RSMs regard e-mail as an effective channel for “mass distribution of information” and quick group communication. They also rely on it for asynchronous communication, which helps them break free from the temporal and spatial constraints. At the same time, e-mail messages function as a type of knowledge repository. They expedite knowledge exchange among the RSMs, as shown in the messages in Example 6. In fact, some RSMs told me that they printed out important e-mail messages for learning and later reference. Yet, the knowledge shared via e-mail tends to centre on general issues or policies about reference service (and other library affairs). While it contributes to the RSMs’ background knowledge about the Library, it might lack
the depth, specificity, or immediacy of the knowledge captured in the notebook at the Reference Desk.

4.4.4 Library's web site

Another means to textualize knowledge electronically is the RSMs’ compilation of web pages, which are categorized and linked to one another to form the different sections of the Library's web site. Whereas some web pages mainly list the electronic information resources available from the Library, some contain knowledge and insights generated by the RSMs over the years. For instance, the web page, “Find an Article,” provides explanatory summaries about the coverage and contents of the Library’s databases. In addition, under the heading, “Other ejournal lists and sources,” there are annotations which indicate that the web page author knows about the resources:

1. [name of a free Internet resource] - another index to online journals with direct links to full text articles. Seems better for Arts/Humanities than Sciences
2. [name of another free Internet resource] - another index to online journals with direct links to full text articles. Seems very strong in Business and Computing journals

Example 7. Annotations from the Library’s Web Page, “Find an Article” (Copied verbatim from the web page; italics original, boldface added)

Similar annotations are also present on other web pages such as “Find a Statistic.” Moreover, the web pages constituting the “Internet Subject Guides (ISGs)” list free, reliable Internet resources on a wide range of subject areas. Almost all ISGs consist of five components: “Reference Collection,” “Articles,” “Great Sites,” “Other Lists of Good Links,” and “Other Library Internet Guides.” They are the outcomes of the RSMs’ textualizing their insights and experiences. Although the Library’s web site was developed
with a view to extend services to off-campus users, it is heavily used by the RSMs themselves during the provision of reference service. It functions as an up-to-date clearinghouse of work-related knowledge and assists the RSMs in identifying or locating useful information resources. I noticed that when the demand for reference service is low, some RSMs browse and use the Library's web site to keep themselves informed of the available resources. This act embodies self-learning that is not much different than the spontaneous informal learning.

In addition to being a central knowledge repository, the collection of ISGs also serves as a directory of the RSMs' expertise and specialization. At the bottom of each ISG is the name of the RSM who is responsible for authoring and maintaining it. If an RSM is in need of consultation on a particular subject area, she can track down the Library's expert in it by checking the relevant ISG. While most RSMs know by heart who specializes in what subject areas, new RSMs like me find the ISGs handy when they have to learn about the division of labour among the RSMs with regard to subject specialization. The ISGs, therefore, help construct a knowledge map at the Library that indicates how the expertise in various subject areas is distributed among the RSMs.

4.4.5 Library's Intranet

The Library's Intranet comprises the following folders: "Announcements," "Documents," "Director's Report," "Annual Report," and "Minutes." As an RSM-33 noted, the Intranet is "an archive" for the Library's administrative documents (those described by the folders' titles). The handouts and PowerPoint slides for training presentations were also uploaded there for the RSMs' (and other library employees')
reference. When I browsed the Intranet, the folder, “Announcements,” only contained few messages posted back in 2001. Yet, the other folders were continuously updated and deposited with recent reports or documents. When asked about their use of the Intranet during the one-on-one interviews, almost all the 10 RSMs admitted that they did not have the habit of visiting the Intranet. The main reason for accessing the Intranet would be to retrieve certain reports or minutes. However, they usually received a physical copy of those documents and thus did not need to find them from the Intranet. An exception would be that the library technicians did not obtain the minutes of the librarians’ meetings. Some of them might access the Intranet and read the minutes or internal reports to keep themselves informed of the discussions and decisions on particular Library-wide issues. In this way, the library technicians would be using the Intranet as a source of information for the spontaneous informal learning about the Library’s policies and management directions. Nonetheless, that was not a common practice.

It is obvious that the Intranet does not disseminate up-to-date work-related knowledge as e-mail messages and the Library’s web pages do. Instead, it is socially constructed as “an archive” and a virtual cabinet for storing the Library’s administrative records and training materials. It digitally preserves the documents that textualized the history and developments of the Library. In other words, it plays the role of being the hub of the Library’s organizational memory, of which the reference team’s collective memory is an essential part.

In sum, the RSMs accomplish knowledge sharing and knowledge creation mainly by means of face-to-face conversational interaction. However, they strategically utilize
different textualizing resources to help themselves with knowledge sharing when they are not able to communicate face-to-face. The use of the resources can be mapped onto the three types of communicative situations in which learning and knowledge sharing are embedded, as shown in Table 2:

**TABLE 2**

<table>
<thead>
<tr>
<th>Modes of learning and knowledge sharing</th>
<th>Communicative situations for face-to-face learning and knowledge sharing</th>
<th>Resources/Channels used to substitute face-to-face communication for knowledge sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned formal training</td>
<td>Training session</td>
<td>Handouts (especially for those who could not attend training sessions)</td>
</tr>
<tr>
<td>Planned semi-formal sharing session</td>
<td>Tech’s Break</td>
<td>Handouts (especially for those who did not attend Tech’s Break)</td>
</tr>
<tr>
<td>Spontaneous informal learning</td>
<td>1. Meeting; 2. Reference transaction; 3. Work-related conversation</td>
<td>1. Library’s internal documents (handouts, memoranda, minutes, reports, etc.); 2. Notebook at Reference Desk; 3. E-mail messages; 4. Library’s web site; 5. Library’s Intranet</td>
</tr>
</tbody>
</table>

It is clear that the spontaneous informal learning is the most flexible of the three modes of learning, for it can be accomplished by a variety of communication channels. Indeed, the essence of spontaneous informal learning is the spontaneity. Provided that an RSM has the intention to acquire new knowledge, she can achieve it by distinct means. It
explains why the spontaneous informal learning is the most frequent and individualized mode of learning at the Library. Among the five channels discussed above, most of the interviewed RSMs noted that e-mail was the most common and important because of its rapidity and wide coverage of recipients. The notebook was, as RSM-34 described, "the secondary channel for communication." However, it is handy for finding the information most needed for the immediate operations of the Reference Desk. Although the RSMs did not mention the Library's web site often, it is undeniable that they have been using it as a conduit for knowledge sharing due to its ease of access and extensive coverage. Since the communications in these channels are concise, they contribute mainly to knowledge sharing. Knowledge creation is usually not the outcome. The strategic use of these channels shows that when the RSMs are not able to share knowledge by mean of face-to-face interaction, they adapt available resources to support their learning and knowledge sharing through communication. The utility and significance of the resources are not determined by their state-of-the-art-ness but socially constructed by the RSMs with reference to their communication habit and the workplace context.

The textualized messages conveyed through the channels serve as repositories of the RSMs' knowledge, insights, and experiences. They crystallize into a contextualized discourse that is unique to the RSMs, and they capture, store, and disseminate knowledge that might otherwise be lost over time. Moreover, they help illuminate the distribution of expertise in the Library, which expedites consultation and knowledge exchange among the RSMs. By recording the professional activities in the Library, they also contribute to the reference team's collective memory. In this sense, textualization plays a crucial role in the
RSMs’ learning and knowledge sharing when face-to-face conversational interaction is not possible. It preserves the RSMs’ knowledge in tangible forms, and helps maintain the solidarity of the reference team. I will elaborate these arguments in the next chapter.
CHAPTER 5: REFERENCE STAFF AS A COMMUNITY

This chapter presents an examination of the special qualities of the reference team. I will first focus on the discursive quality of the reference staff members’ (RSMs’) language, and then proceed to analyze the professional identity of and the group dynamics among the RSMs. Based on the arguments, I will develop a framework to interpret the relationship between workplace learning (WL) and knowledge management (KM). I will also suggest directions for future research into WL and KM.

5.1 Workplace Language as Professional and Communal Discourse

The interviewed RSMs in general said that they did not encounter difficulty in communicating with their co-workers. As RSM-35 commented, the RSMs were “on the same wavelength” and had “total communication” by speaking “the same language” and by utilizing different communication tools. Indeed, the language used by the RSMs, both spoken and written, forms a characteristic discourse for the reference team. It anchors in and evolves from the RSMs’ professional practices. Its vocabulary is predicated on the literature and professional practices of librarianship. For example, librarianship terminologies such as “reference interviews,” “information literacy,” “online catalogue,” “call numbers,” “collection development,” “database vendors,” “content embargo,” “full-text databases,” “Boolean operators,” “truncation marks,” “advanced search,” “remote/off-campus access to electronic resources,” “bibliographic citations,” “interlibrary loans,” etc., are adroitly and heuristically utilized by the RSMs in their workplace communications. These are the quintessential words that the RSMs employ to refer to and discuss their tasks. The very presence of these terminologies shows that the jargons
and professional practices of librarianship are the lifeblood of the RSMs' work life. In other words, the RSMs' language (and professional practices) is a manifestation of their knowledge of librarianship. It crystallizes into a professional discourse that characterizes the RSMs as reference service practitioners who are conversant with the professional practices of (academic) librarianship.

At the same time, the RSMs' language is rooted in the context of the SLS Library where their professional practices are actualized. Its vocabulary revolves around the particularities of the reference service in the Library. While some jargons are self-explanatory, others would not make sense to anyone who has never engaged in the Library's reference service. For instance, terms such as "Library Council," "Ask a Pro," "Tech's Break" (a pseudonym), "CCC," "START students," "Main Street," "TAL," and "mature students" convey definite meanings and connotations to the RSMs. Yet, they would not mean much to an individual who is not an RSM. Even if the individual had been providing reference service in another academic library, s/he would still hardly be able to surmount the barrier to fathom the terms. The reason is that the individual had never been involved in the reference team and thus did not know much about the actual services provided in the particular context of the SLS Library. It is apparent that merely a knowledge of (academic) librarianship would not be sufficient to enable the individual to communicate with the RSMs. Instead, engaging in the Library's reference service practices is the key to gaining a background knowledge of the reference team and to attaining the ability to decipher and master the RSMs' contextualized language. In this sense, the RSMs' professional discourse also functions as a communal discourse. On the
one hand, it embodies the RSMs' knowledge of (academic) librarianship as applied to the context of the SLS Library. On the other, it reflects the solidarity and uniqueness of the RSMs as a community of practice (CoP).\textsuperscript{5.2}

The image of being in a community is not foreign to the RSMs. When asked to suggest a metaphor of the reference team during the one-on-one interviews, the RSMs who managed to provide one gave metaphors that implied a sense of community. In fact, RSM-36 even simply depicted the reference team as a "comfortable, supportive community." Other RSMs, on the other hand, likened the team to "a goddess with many faces," "a world with different types of people," "a jigsaw puzzle," "the centre of a wheel," and "a structure made up of building blocks." What is common among the metaphors is that they highlight a communal, synergetic whole (the reference team) with "a common core set of values and knowledge" that is upheld and internalized by "collaborative," "complementary," yet "not interchangeable" parts (the RSMs). It is evident that the interviewed RSMs had already perceived the communal nature of the reference team. They had also recognized that a work-related knowledge base was cultivated, shared, and maintained by the RSMs as "a common core set of value and knowledge." Therefore, it is appropriate to label the reference team as a CoP.

Being the members of the community, the RSMs are able to read, write, and understand their discourse in both professional and communal ways. Every time they use the discourse, they not only legitimize and (re)generate the discourse heuristically and communally but also affirm and validate their professional/communal identity (being the RSMs at the SLS Library). The RSMs' language, in other words, embodies and
perpetuates the professional and communal features inherent in the reference team by
discursively bonding the RSMs together and by characterizing them as the members of a
CoP in the context of the SLS Library. It transcends the temporal and spatial constraints,
and serves as the medium for the RSMs to access the common workplace knowledge base
shared among them. It also contributes to the RSMs’ “co-orientation” (Taylor &
Robichaud, 2004; Taylor & Van Every, 2000) and thus helps them co-construct and
interpret an intersubjective workplace reality where they can communicate, collaborate,
and coordinate their tasks. The real-life messages listed in Examples 5 and 6 in Chapter 4,
for instance, are indexical of the professional and communal qualities of the RSMs’
discourse. Thanks to such qualities, the RSMs are able to interpret the messages
intersubjectively and access the knowledge or insights textualized by their co-workers. In
this way, the professional/communal discourse facilitates the RSMs’ learning and
knowledge sharing in spite of the temporal and spatial constraints in the workplace.

When the RSMs alter their professional practices due to changes in the workplace
context, they also correspondingly modify the professional/communal discourse to reflect
the alteration. For instance, as the library instruction is increasingly geared towards the
research needs of specific courses, the librarians have been updating the content of the
instruction. Accordingly, they replace the term, “bibliographic instruction,” with another,
“instruction in information retrieval and evaluation,” which better describes the nature of
their instruction and links it to the courses’ “learning outcomes.” Such change in
terminology reveals that the RSMs use their professional/communal discourse flexibly and
reflexively with reference to their common workplace knowledge base, their professional
practices, and the particularity of their workplace context. They are knowledgeable agents who create, maintain, and use the discourse. Whenever they introduce a new concept and/or practice for a change or innovation in the workplace, they enact the concept and/or practice by correspondingly adding a new term to the discourse. By using the term (and performing the corresponding practice) recursively, they integrate the concept and/or practice into their common workplace knowledge base. That in turn contributes to their intersubjective construction and interpretation of the workplace reality.

5.2 Community of Reference Staff Members

Based on my interactions with the RSMs during the fieldwork period, I sensed that they have organized themselves into a united and supportive CoP. They share and value the mandate of serving library users, and are ready to help one another in the provision of service. When asked to describe the reference team, the RSMs (especially the newer ones) used words such as “open,” “friendly,” “collegial,” “helpful,” “trusting,” “casual,” “nurturing,” “accommodating,” “appreciative,” “participative,” “collaborative,” “complementary,” “well-intentioned,” “service-oriented,” and “mutually respectful.” Indeed, whereas the reference team consists of both librarians and library technicians, the interviewed RSMs (five librarians and five library technicians) attested that the difference in status among them was not a matter of concern when they worked together at the Reference Desk. They stood by one another and did not hesitate to offer help when their peers have to deal with difficult questions. As RSM-37 commented, the Reference Desk was a “non-threatening,” “respectful” environment that “provide[d] support and help to library users and the colleagues.” Meanwhile, the interviewed RSMs did not suspect that
an RSM who asked for help or collaboration was trying to shirk. They understood that they had to “work together to provide good library services.” In RSM-38’s words, it was “teamwork” that they did at the Reference Desk. They “trust[ed] each other and work[ed] well together.” In short, what RSM-39 said during the one-on-one interview precisely outlined the group dynamics of the reference team: The RSMs were “on the same wavelength.” When working together at the Reference Desk, they “look[ed] beyond their ego and adopt[ed] a user-centred perspective.”

As a new member of the reference team, I found the RSMs more approachable, understanding, and motivated in comparison to the employees of the libraries where I had worked full-time before. They provided me with tremendous support even though I only “worked” there to collect data for my own research project. They were welcoming and willing to share what they knew in order to help me adapt to the workplace and become a member of their team. Thanks to the amicable atmosphere, I became less defensive and did not feel the urge to hide my ignorance of different subjects. When I tried but was not able to handle a reference question, I would ask for help from the RSMs without feeling embarrassed. I understood that they would not turn me down and that I would always learn something useful from them. At the same time, I became more ready to lend a hand to any RSMs that might need help. That was how the reference team as a CoP functioned (and survived!), and it was expected of me as a member of the community. All in all, the RSMs’ affability cultivates mutual trust, respect, support, and rapport among them, which in turn fosters a collegial and nurturing communal atmosphere. It is in such an understanding context that the RSMs gain their professional/communal identity and
become accustomed to performing at ease various communicative practices (especially interruption and collaboration, which were discussed in Chapter 4) for learning and knowledge sharing.

In addition, the RSMs uphold the same goals with regard to their service. One of them concerns continuous learning. During the library staff planning day four years ago, they (and other library employees) discussed their workplace situations and reached a consensus: There was a "practical need" for continuous professional development as a consequence of the expansion of the SLS Library's parent institution as well as the constant change in the technologies utilized in the provision of reference service. Since then, the RSMs have been actively engaging in continuous learning and knowledge sharing with the encouragement and assistance from the Library. For instance, they attend conferences, seminars, and workshops, bring back what they learned to the Library, and present it at training sessions or Tech's Break (the planned semi-formal sharing session). They also explore and experiment with new information resources to find out how they can make the best use of them. Moreover, they liaise with faculty members and work with students in order to gain a better understanding of different disciplines and subject-specific information needs. As the interviewed RSMs described, the reference team believed that ongoing learning was essential to the excellence of reference service. They thought that the Library had "provide[d] a positive atmosphere for continuous learning" and that the reference team was "open to learning" for the sake of "keep[ing] up with current knowledge." Besides, RSM-40 remarked that "[t]here was no competition involved in the team" for knowledge sharing. Meanwhile, RSM-41 stressed that the RSMs' continuous
learning was "a group thing, not a contest" because "information services [were] collaborative services." Under such circumstances, the RSMs do not merely work together. They have recognized the significance of continuous learning, have consensually set it as a communal goal, and are committed to achieving it. To learn and share knowledge continuously is not so much a managerial order imposed on them as a voluntary act for accumulating professional assets, expediting career advancement, and reinforcing communal rapport. It is a characteristic indispensable to the maintenance of their professional/communal identity (of being the ever-learning members of the RSM CoP at the SLS Library).

In sum, the RSMs as a CoP understand and acknowledge the professional need for continuous learning. In a collegial and mutually trusting atmosphere, they have forged an interdependent and collaborative working relationship among themselves. They learn together and share their work-related knowledge willingly. The mutual respect and assistance enhance the RSMs' interpersonal relationships and further the communal rapport. The interplay of these factors gives rise to the recursive occurrence of the communicative practices discussed in Chapter 4 for the accomplishment of continuous learning and knowledge sharing.

5.3 Workplace Learning in Terms of Discourse and Community of Practice

Grounded in the empirical data discussed, I conclude that WL is a socio-cognitive process situated in a particular workplace context. It is expedited by KM, which is a collective effort among the members of the workplace to (generate and) share new work-related knowledge. The purpose of KM is to disseminate and institutionalize the new
knowledge so that the members can acquire called-for information and skills in a timely manner and thus benefit professionally. KM is often accomplished in face-to-face conversational interaction with the performance of certain communicative practices. For instance, in the SLS Library, the RSMs’ learning and knowledge sharing activities emerge in three modes: planned formal training, planned semi-formal sharing session, and spontaneous informal learning. Each mode translates into different communicative situations that encompass individual communicative events and specific communicative acts. (Refer to Table 1 in Chapter 4 for detail) When face-to-face conversational interaction is not possible, the members of the workplace utilize available resources strategically to pull off KM. While the channels employed vary across contexts, textualization is always involved in the non-face-to-face KM-oriented communication. It offers the advantage that the knowledge to be shared is recorded in textual repositories that transcend temporal and spatial limits. If the authors of the resulting texts are noted clearly, textualization also contributes to the creation of a knowledge map in the workplace through the identification of who is conversant with what knowledge. In the SLS Library, for example, the textual knowledge repositories include internal documents, the notebook at the Reference Desk, e-mail messages, the Library’s web site, and the Library’s Intranet. The RSM who authored a subject-specific web page is by default the expert in that subject. When there are thorny reference questions about that subject which the RSMs cannot answer properly, they will turn to the subject expert for assistance or consultation. The knowledge map illustrates the collectiveness and division of labour involved in KM endeavours. It also highlights the importance of human communication in
KM activities. Moreover, it indicates the existence of a common, contextualized knowledge base in the workplace.

Contingent upon the practical need and the group dynamics, the KM-oriented communicative practices (both face-to-face and textualized) may sediment into some recursive interactions among the members of the workplace. Thanks to KM, the members acquire new work-related knowledge and integrate it into their common workplace knowledge base. The content of the knowledge base is manifested in the members' professional practices and explicated by their language. As the language evolves from the members' professional practices and is rooted in their workplace context, it exists in the form of a professional/communal discourse. The discourse reflects changes or innovations in the workplace, and helps the members co-construct and interpret an intersubjective reality where they are able to communicate, collaborate, and coordinate their tasks. By virtue of their distinctive, context-based practices and discourse, the members of the workplace form a CoP and gain their professional/communal identity. Every time they participate in KM, engage in the professional practices, and/or use the discourse, they authenticate their professional/communal identity and enact their CoP. In the case of the SLS Library, the RSMs acknowledge the practical need to learn continuously. Their KM-oriented communicative practices thrive on their mutual trust and the workplace's collegial atmosphere. The RSMs possess common work-related knowledge that enables them to provide context-sensitive reference service (professional practices) and to communicate in a unique work-based language (professional/communal discourse). The particularities of their practices and discourse bond them into a CoP and confer upon them
the RSM identity. Whenever they participate in KM, perform their reference duties, and/or communicate in their RSM-speak, they authenticate their membership of the RSM community.

By means of KM, the members of a workplace enter into WL and build a CoP with a common, contextualized knowledge base. The community members develop their knowledge base with respect to the workplace context over time in order that they can continue their professional practices in new situations. At the same time, they alter their professional/communal discourse in tandem with the development of their knowledge base. In this way, they are able to perform their professional practices, communicate with one another in their discourse, and maintain their professional/communal identity in the changing environment. Last but not the least, the community members are able to pursue future WL and KM collaboratively on the foundation of their knowledge base. In the case of the SLS Library, the RSMs constantly update their common workplace knowledge base with the new knowledge shared and/or generated in planned formal training, planned semi-formal sharing session, and spontaneous informal learning. The RSMs, therefore, are able to continuously provide reference service (professional practices) in the face of the library user's changing needs. They also use their language (professional/communal discourse) reflexively to explicate the content of their updated knowledge base. Being conversant with both the context-sensitive reference service and the work-based language, the RSMs are able to maintain the identity in their CoP over time. The interconnections among WL, KM, discourse, and CoP are illustrated in Figure 1:
The members of a workplace engage in knowledge management by means of various communicative practices embedded in planned formal training, planned informal sharing sessions, and spontaneous informal learning.

New work-related knowledge is integrated into the common, contextualized knowledge base shared among the members.

Knowledge is explicated in the members' professional/communal discourse in the form of text and conversation.

Knowledge is manifested in the members' professional practices.

The members form a community of practice and gain their professional/communal identity.

The members maintain their professional/communal identity because they are able to continue their practices and communicate in their discourse in new situations.

* The members' professional/communal discourse develops in tandem with their practices.

Figure 1. Workplace Learning as a Socio-cognitive Process in a Community of Practice
5.4 Implications and Directions for Future Studies

As a socio-cognitive process, WL takes place in a CoP every day. Embedded in the process are KM activities that expedite learning and knowledge sharing among the members of the community by means of (mediated) human communication. While KM is susceptible to some managerial measures, it is not at all a new phenomenon created and engineered by managers. Instead, it comes into existence partially (if not mainly) through everyday mundane interpersonal interactions in which the members of the community participate in order to maintain their professional/communal identity in a changing workplace environment. Both WL and KM are context-sensitive and are not determined by whatever hard-and-fast rules or overgeneralizing best practices. In addition, professional practices, language (in the form of a professional/communal discourse), identity, and group dynamics play pivotal roles in maintaining the cohesion of the community. On the basis of the previous discussions, I am going to raise several issues that warrant future studies.

Given the fact that spontaneous informal learning is the major way to generate, share, and acquire new knowledge among the members of a CoP, managers have to reconsider their roles and practices as well as "re-think management" (Zorn & Taylor, 2004, p. 111, italics original). In Plaskoff's (2003) words, the development of a CoP and the nurturing of WL therein require "significant adjustment in the organization and in management's attitudes toward the structures within those organizations" (p. 179). However, as Zuboff (1988) points out, some managers cling to the traditional top-down supervision style and tend to discourage informal discussion among their supervisees (p.
If managers plan to promote WL and KM, how should they view and handle small talks among their supervisees during work hours? Moreover, how can they keep themselves up-to-date with the CoP’s practices and discourse? How will their KM-oriented collaborations with supervisees impact their workplace authority? How can they assume and retain their hierarchical authority in the face of employee empowerment? Answers to these questions will help create a workplace that is rewarding and fulfilling to both managers and employees.

The introduction or utilization of new information technology to expedite WL and KM in a CoP should take into account the characteristics of human communication in the community. Whereas state-of-the-art technologies can bring about convenience and accelerate the dissemination of information, they have to be adopted and integrated into the community’s communicative practices before they can take effect in contributing to WL and KM. In the SLS Library, for instance, the RSMs do not consider the technologically advanced Intranet as a viable channel for knowledge sharing. Instead of being the hub of communication, the Intranet has been unconventionally used as an archive for the Library. Face-to-face communication and the use of “older” technologies such as the notebook at the Reference Desk, electronic mail, and the Library’s web site are the major and effective vehicles for knowledge sharing. This example suggests that new information technology per se is not panacea for WL and KM. As Suchman, Blomberg, Orr, and Trigg (1999) contend, meaningful use of technologies in a workplace involves “artful integrations” and entails an analysis of how “social/material specificities” are “assembled together to comprise [individuals’] everyday experience” (p. 404). Indeed,
according to Orlikowski (2000), the use of technologies is “not external or independent of human agency” but stems “from people’s repeated and situated interaction with” them (p. 407). Unfortunately, it seems that some managers are (still) not aware of these arguments. As pointed out by Gilmour (2003) and Plaskoff (2003), corporations have invested billions of dollars in new technologies and have been blindly thinking that the utilization of them will enhance interpersonal relationships and automatically generate WL and KM. But the fact is that “high use of IT [information technology] does not necessarily make a strong CoP” for learning and knowledge sharing (Hara & Kling, 2002, n.p.). Moreover, face-to-face communication can be more effective than any state-of-the-art technologies in expediting KM (Bailey & Hendrickson, 2004). In short, the development of workplace informatics for the sake of WL and KM has to consider the utility of the technology with regard to the workplace context and the communication habits therein. Only if the technology is integrated into the communicative practices will it benefit WL and KM. What the management should take note of is not how many sophisticated features some new technology offers, but whether and how the members of the workplace will actually adopt and integrate the technology to their day-to-day communication.

As verified by the RSMs' comments and behaviours, the sociocultural factors in a CoP are crucial in inducing WL and KM. Indeed, scholars in Business Management have been advocating that leaders create, develop, and maintain proper cultures to improve organizational effectiveness (Brownell, 2003, p. 45). While the sociocultural aspect of a CoP is to some extent amenable to the managerial policy and rhetoric, it does not succumb
to the manipulation of the management. As social agents, the members of the community can choose to defy the managerial policy and act in a way that is more congruent with their own beliefs. In Wright's (1994b) words, those employees engaged "in a creative process of producing culture from mundane details of their work and through innumerable and infinitesimal transformations of the dominant culture, adapting it to their interests" (p. 24, cited in Iedema & Wodak, 1999, p. 12). If the management attempts to encourage WL and KM in the CoP, managers should know better than to create and impose a contrived culture for them. As the findings of this study show, commitment, trust, rapport, and mutual respect among peers carry immense weight in the generation of volunteered assistance and collaboration. If the members of the community understand the practical need to share knowledge and recognize its significance for collective good and career advancement, they may be more willing to engage in knowledge sharing and ongoing learning. Meanwhile, interpersonal conflicts in the community may dampen the effort to promote WL and KM. Hence, the repercussions of interpersonal conflicts on WL and KM as well as ethical ways to handle them will be worth researchers' attention.

In addition, the professional/communal discourse generated in a CoP is of the essence in WL and KM. It is the medium with which KM-oriented communicative practices are performed and the content of the community's knowledge base is explicated. Therefore, the development trajectory of the discourse can be a worthwhile topic for future studies. As Hardy, Palmer, and Phillips (2000) state, "discourses create social 'reality' through the production of concepts, objects and subject positions, which shape the way in which we understand the world and react to it" (p. 1233-1234, italics
Whereas their model of discourse generation is geared towards operational strategizing, it might spark insights into how the professional/communal discourse evolves in relation to the communicative situations and events involved in learning and knowledge sharing. An understanding of the development of the professional/communal discourse will help a CoP reflect on how its members construct and appropriate the discourse. It might provide the individuals with hints for facilitating their own WL and KM. It might also uncover how they accomplish the four types of "interaction process" in constituting their CoP with the discourse (McPhee & Zaug, 2000). Furthermore, it might shed light on issues related to the communication and knowledge sharing between different CoPs.

In conclusion, human communication is pivotal to the WL and KM in a CoP. Apart from that, it constitutes, instantiates, and perpetuates the community's social structure. In other words, human communication is vital and central not only to WL and KM but also to the very existence of the community. It is the means and the medium for the organizing and coordinating in the community. In light of this, scholars of Organizational Communication should seize the day and develop an interdisciplinary approach to the research into organizational operations. The theorizing about interpersonal communication, discourse analysis, organizational structuration, and social psychology will be the most relevant to such interdisciplinary approach.
ENDNOTES

Chapter 1

1.1 Organizational learning (OL) and knowledge management (KM) were not often explored by the scholars specializing in the management of not-for-profit organizations. So far, only a handful of academic studies have been conducted on the OL or KM in not-for-profit organizations (e.g., Hovde, 2001; Ristau, 2001; Teng & Hawamdeh, 2002; Wheeler, 2000). Professor Timothy Pyrch from the then Faculty of Continuing Education at The University of Calgary, nonetheless, noted that there existed rising awareness of the importance of OL and KM to not-for-profit organizations (personal communication, July 2002). As Antal (2001), Teng and Hawamdeh (2002), Townley (2001), and Wheeler (2000) point out, not-for-profit organizations can definitely benefit from the outcomes of the studies on the OL and KM in the business domain. Therefore, academics are trying to figure out what practices not-for-profit organizations can adopt from the findings and recommendations generated by the research conducted in the business world.

1.2 Soon after I immigrated to Canada from Hong Kong in 1995, I pursued a master’s degree in Library and Information Studies at a Canadian university. After graduation, I was employed as a cataloguer by a library in Eastern Canada that specialized in the research literatures of medicine, science, and technology. I stayed there for two years, learning cataloguing, serials management, and information services from scratch. Then, I moved on to another job and worked as a technical processing librarian at a library on the East Coast of the United States that specialized in the research literatures of business, industry, and natural science. In addition to the processing of library materials, I had to work at the reference desk and teach classes. The interaction with library users generated the driving force and underscored the practical need for continuous learning. Hectic as it might be, I enjoyed the on-the-job learning.

Chapter 2

2.1 Brown and Duguid (2002) elaborate the concept of legitimate peripheral participation by writing that “[p]eople learn by taking up a position on the periphery of skilled practice and being allowed (hence the importance of legitimacy) to move slowly from the periphery into the community and the practice involved” (p. 35). They argue that students’ lurking “on the sides of exchanges among graduate students and faculty” is an example of learning by legitimate peripheral participation (p. 35).

2.2 The term, “organizational learning,” is more often used in the literature of Business Management. (For analytical summaries of OL, refer to Berends, Boersma, and
2.4 Nonaka (1994) argues that there exist "four modes of knowledge conversion" (p. 18). The first is "socialization," by which individuals acquire and share tacit knowledge through social interaction (p. 19). On-the-job training is regarded as a form of socialization. The second mode is "combination," a process that generates exchange and creation of "different bodies of explicit knowledge held by individuals" through human interaction such as meetings and telephone conversation (p. 19). "Externalization," the third mode of knowledge conversion, turns tacit knowledge into explicit knowledge through the use of metaphor (p. 19). The last mode is "internalization," an action-oriented process that converts explicit knowledge into tacit knowledge (p. 19). It is similar to learning. Although Nonaka foregrounds the human and social factors in KM, he does not probe into the communicative and contingent nature of the four knowledge conversion processes.

2.5 For example, Zuckerman and Buell (1998) define KM as "the strategic application of collective company knowledge and know-how to build profits and market share" (p. 81). They argue that successful KM requires a company's employees to have "the ability to analyze and then effectively target the right knowledge assets and apply them to business practices" (p. 82). To achieve KM, it is advisable that an organization develop a "transactive memory system" (Wegner, 1986, cited in McGrath & Argote, 2001, p. 621) to help its employees identify who knows what the best among themselves. Likewise, Bontis (1997) asserts that an organization
should build intellectual capital on the foundation of its employees’ work-related knowledge if it wishes to boost its effectiveness. Davenport and Prusak (1998), on the other hand, focus on the linkage of knowledge with the human behaviours and work processes in an organization’s culture and physical environment.

2.6 In their analysis, Kuhn and Jackson (2003) classify the conceptions of knowledge in the KM literature into the “cognitive model” and the “performative model” (p. 5-11). They write: “In the first model, the cognitive model, knowledge is located in the minds of the individual knowers, whereas, in the second model knowledge is found primarily in the performance of joint activity” (p. 5). Kuhn and Jackson critique the two models and proffer an alternative, communicative conception to interpret and study organizational knowledge.

2.7 Heaton and Taylor (2002) conclude that if an organization wishes to harness the knowledge generated by the different communities of practice within it, its managers need to develop an understanding of those communities’ workplace contexts and intellectual discourses (p. 229-230). In addition, the managers ought to render the different intellectual discourses comprehensible to the communities involved if they plan to encourage “productive collaboration between communities of knowledge” (p. 230).

2.8 Organizational storytelling has been a popular research topic for scholars in different disciplines. Some of the prominent studies were conducted in the field of critical discourse analysis. For instance, Mumby and Clair (1997) state that organizational storytelling functions ideologically in four different ways: (1) through representing sectional interests as universal; (2) by obscuring or transforming structural contradictions; (3) through the process of reification (that is, making human constructions seem natural and objective); (4) as a means of control, or hegemony (Gramsci, 1971). (p. 187-188)

On the other hand, Czarniawska (1997) advocates the study of organizational life and identity in terms of narrative from an anthropological perspective. She argues that

[...] [The notion narrative knowledge] alerts us to the ways in which the stories that rule our lives and our societies are constructed. Further, it can generate unusual insights by bringing organization studies closer to culture studies and literary theory. (p. 5)

Nevertheless, these two schools of thought regarding organizational narrative do not elaborate on the role of storytelling in KM. Therefore, they are not further discussed here.
2.9 Communication and management scholars have identified seven functions of storytelling as a managerial tool (Brown, 1990; Kaye & Jacobson, 1999; Kreps, 1990; Smith & Keyton, 2001):

1. To persuade, generate support, and instigate action for an organizational change initiative
2. To promote and facilitate learning by capturing and disseminating knowledge to organizational members
3. To create a sense of community with shared goals, beliefs, values, and assumptions so as to increase the cohesion of the organizational culture
4. To reduce uncertainty in organizations and (re-)socialize organizational members so that they can (re-)define their identities and produce a positive interpretation of their organizational experiences
5. To communicate a leader’s vision and muster organizational members’ commitment
6. To describe and convey issues, concerns, or interpersonal dynamics within organizations as perceived by the management
7. To gather feedback in story form from organizational members so that the management can have a clear picture of the organizational performance and use it as guidelines for future change and development

What is in common among the first five functions is that the outcome consists of an adjustment in organizational members’ attitude and/or behaviour. In this way, storytelling is regarded as a means for the management to modify the organizational culture. It helps alter the beliefs and/or values of the culture in such a way that the organizational members may respond by changing their thinking and practice in the direction preferred by the management. The modified culture shared by the members will be conducive to accomplishing managerial goals and to augmenting organizational effectiveness.

2.10 Kuhn and Jackson (2003) argue that the unit of analysis in studying knowledge creation should be the “knowledge-accomplishing activity.” They have developed a model in which workplace situations are characterized against a continuum of “determinacy,” which is “marked by increasing or decreasing clarity as to the sorts of activities that will produce a capacity to act” (p. 14). A determinate situation usually leads to the knowledge-accomplishing activity in the form of “information transfer” or “instruction” (p. 20-25). “Collaborative hypothesizing” between coworkers tends to occur in an indeterminate situation (p. 26-29).

2.11 Taylor and Robichaud (2004) elaborate that

[c]o-orientation (1) is negotiated through dialogue, (2) aims to produce coordination of belief, action, and emotions with some mutually understood object, and (3) is mediated by text. [...] Co-orientation is a triplet of (minimally) two actors and one object, in which the term ‘object’ refers to the
practical world of joint activities that actively engage people's attention and care (Engeström, 1990). (p. 401)

2.12 When discussing how organizations can be communicatively viewed as "discursive constructions," Fairhurst and Putnam (2004) examine three interpretations of the relationship between discourse and organization. The "object orientation" treats an organization as "an already formed object or entity with discursive features and outcomes" (p. 9). The "becoming orientation," however, claims that "discourse exists prior to organizations because the properties of language and interaction produce organizing" (p. 13). Yet, in the "grounded in action orientation," "the organization never assumes the form of an identifiable entity because it is anchored at the level of social practices and discursive forms" (p. 16).

2.13 Taylor and Van Every (2000) categorize the ontological interpretations of an organization into two theories: "heteronomous theory" and "autonomous theory" (p. 142-143). The heteronomous theory features an "organization-as-entity image" and regards communication as "being in or within organization" (p. 142). The autonomous theory conceives of an organization as a "flatland" which "is invariably situated, circumstantial, and locally realized in a finite time and space, involving real people" (p. 143). In the flatland model, "managerial interventions are not in fact exogenous at all, but merely another locally realized, personally communicated act expressed in language (a speech act)" (p. 143).

2.14 Alvesson and Kärreman (2000) expound that on the basis of the continuum of contextual immediacy, the discourses in an organization form a "discursive ladder" and can be classified into four categories: "micro-discourse," "meso-discourse," "Grand Discourse," and "Mega-Discourse." The micro-discourse refers to the language use in specific, local/situational contexts; the meso-discourse concerns the broader patterns of language use in similar situational contexts; the Grand Discourse comprises assemblies of discourses that constitute the organizational reality; the Mega-Discourse deals with organizational phenomena that span across time and space (p. 1133-1134). Taylor and Van Every's (2000) discussion of discourse mainly covers the first three categories.

2.15 In Boden's (1994) words, organizations "are more like fine and transparent mesh matrices, the threads of which are being woven and re-woven by current members with a considerable mix of old patterns and new stitches" (p. 15).

2.16 It should be noted that Taylor and Van Every (2000) and Taylor and Robichaud (2004) define "conversation" and "text" in particular ways. Conversation refers to "the total universe of shared interaction-through-languaging" (Taylor & Van Every, 2000, p. 35). Text, on the other hand, either in spoken or written form, is both a "product" and a "process" (Heaton & Taylor, 2002, p. 222). As a product, text is
"an object in its own right"; as a pragmatic process, text is "an instance of social meaning in a particular context or situation" (Halliday & Hasan, 1985, p. 11, cited in Heaton & Taylor, 2002, p. 222). When critiquing Taylor and Van Every's work, McPhee (2004) writes that the text should be regarded as a kind of "symbolic formulation" that "can have reflexive application to other organizational realities—to other texts and communication processes, as well as to material resources, practices, and members' positions and relations" (p. 358). Moreover, a text enjoys "a sort of permanence" (p. 358) in that "both the material inscription and the foundation for its interpretation, in knowledge and context, endure far beyond the immediate setting of a communication episode" (p. 359). It is also "coherent enough to be useful in everyday or organizational praxis" (p. 359). McPhee's arguments are in line with Smith's (1996) discussion of the materiality and replicability of the text:

The material text creates a join between local and particular, and the generalizing and generalized organization of the relations of ruling. It is the materiality of the text itself that connects the local setting at the moment of reading into the non-local relations that it bears. Its technology, its system of distribution, and its economy are foundational to the peculiar property of abstraction that provides for forms of social relations that have no particular place or time in which they happen. (p. 176)

2.17 From the functional perspective, McPhee and Zaug (2000) focus on communication processes as the elements of what constitutes an organization. They contend that a complex organization consists of four specific types of "message flow" or "interaction process," which are characterized by their nature and function for "membership negotiation," "self-structuring," "activity coordination," and "institutional positioning" respectively:

The four flows allow four divergent descriptions of organizational processes: the first recounts the struggle of individuals to master or influence their member roles, statuses, and relations to the organization. The second articulates how organizational leaders design, implement, and suffer problems with decision and control mechanisms. The third focuses on members engaging in interdependent work or deviating from pure collaborative engagement. The fourth describes the organization as a partner, often anthropomorphized, in exchange and other social relations with other organizations. (n.p.)

These message flows are required because a complex organization requires "distinct types of relations to four 'audiences'" (n.p.). I believe that McPhee and Zaug's approach proffers a viable alternative to studying WL and KM in terms of human communication. Yet, the discussion of its application is out of the scope of this report.
2.18 Taylor and Robichaud (2004) add that
organizing [...] is accomplished through co-orientation as organizational members simultaneously orient themselves to a shared object of concern and to each other. [...] They take on identity as members of the organization and, through their agency and sensemaking, the identity of the organization itself becomes apparent. (p. 398)

2.19 Orr (1990) describes the formation and maintenance of the technicians’ community this way:
The identity of technicians, then, is defined by the ability to do technical things to a machine. The skill that they demonstrate in fixing machine problems creates and proves this identity, and their stories celebrate this identity to themselves and others, while creating another part of the identity: member of the community, contributor to the community memory. (p. 187)

On a similar note, when discussing knowledge acquisition in a community of practice, Lave and Wenger (1991) comment that “learning and a sense of identity are inseparable: They are aspects of the same phenomenon” (p. 115). For a detailed discussion of the interrelationships among knowing, practice, and identity in a community of practice, refer to Iverson’s (2004) study.

2.20 Taylor (1999), Taylor and Robichaud (2004), and Taylor and Van Every (2000) note that the positivist approach to organizational studies is inadequate. It “has generally been receptive to the idea that organization has a structure” which “may be planned and implemented” (Taylor & Van Every, 2000, p. 171). It is a problematic approach because “after the structure has been revealed, there is no mechanism to explain how it might subsequently evolve other than through the intervention of a deus ex machina” (p. 171).

2.21 In the 20 years after Pacanowsky and O’Donnell-Trujillo’s (1983) article was published, there was not much epistemic change in the study of the sociocultural aspects of an organization. Many researchers still cling to a positivist approach and aim at discovering formulae for shaping the cultures of organizations with the aid of surveys and statistical calculations. Whereas Van Maanen (1998) reports that the popularity of the interpretive approach in the form of case study, ethnography, and linguistic study was on the increase in the 1980’s and 1990’s (p. xix), the positivist approach still remains as the mainstream in the study of the sociocultural features of an organization. More work has yet to be done to promote and illustrate that the interpretive approach provides an adequate means for studying the sociocultural atmosphere of an organization.

2.22 From a postmodern feminist perspective, Smith (1996) also argues that interpretations of organizations and the transfer of knowledge should be grounded in actualities of and local practices in people’s lives. In addition, Eraut (1994) asserts...
that it is important to examine the context when studying WL because “[p]rofessional knowledge cannot be characterized in a manner that is independent of how it is learned and how it is used. It is through looking at the contexts of its acquisition and its use that its essential nature is revealed” (p. 19, cited in Daley, 2002, p. 79).

2.23 Zarraga and Bonache (2003) note that the presence of five “psychosocial variables” is conducive to the generation and sharing of work-related knowledge in an organizational setting. Those variables, including “mutual trust,” “active empathy,” “lenience in judgement,” “courage,” and “access to help,” create a “high care” sociocultural environment. Similarly, Pace Marshall (1997) provides a list of sociocultural features that are instrumental in cultivating “learning communities.” While it is debatable that a WL- and KM-friendly sociocultural environment could actually be engineered by the management, there is no argument that the sociocultural atmosphere in an organization does play a role in its members’ group dynamics and communicative behaviour.

Chapter 3

3.1 The RSMs in general agreed that they learned more about different disciplines by discussing reference questions with library users. It was because some users had an in-depth understanding of certain subject areas and thus knew the subject-specific concepts and terminologies. The RSMs could pick up those concepts and terminologies during the discussion as a form of WL. Moreover, the RSMs might gain a better sense of what information resources would be most relevant and useful for certain specific topics. In addition, the RSMs would enhance their interpersonal skills by interacting with the users. They would be able to better gauge how much assistance that the users needed, and would better understand how to most effectively guide the users in using an information resource.

3.2 Moreover, the users coming to the SLS Library in the evening and on Sunday were somewhat different than the ones using the Library around noon time on weekdays. There were usually more part-time and mature students, and even people from the public, in the evening and on Sunday. Their interaction with the RSMs might clue me in on whether their information needs would generate impacts on the RSMs’ WL and KM.

3.3 Even though I “worked” at the SLS Library from October 2002 through June 2003, almost all the fieldwork was conducted in the two and a half months between October and mid December. The use of reference service dropped sharply in the last three weeks of December because most library users were preparing for examinations. The Reference Desk was usually manned by only one library technician. Except telephone conversations, there was virtually no interaction.
among the RSMs at the Reference Desk. Thus, I was not able to observe much. Nor could I work much as an RSM due to the lack of reference questions. The time for my observation of and participation in reference work was rather limited between January and June 2003. The reason was that I had other engagements during that period and could only visit the Library sporadically. My observation and provision of reference service were minimal.

3.4 Schultze (2000) argues that "[i]nterlacing self-reflexive and autobiographical material with actual ethnographic material is particularly effective for achieving cultural critique because readers are constantly challenged to examine their own practices and assumptions while they are learning about the practices and assumptions of others" (p. 8).

3.5 In Ellis and Bochner's (2000) terms, my confessional writings of the work experience at the SLS Library constitute an RSM's "autoethnography." The composition of it entails my self-reflection.

3.6 Because of the city's rapid growth in the 1990's, the parent institution of the SLS Library has been expanding to provide more educational opportunities to the city's residents. According to the Library Director, however, the SLS Library has not received sufficient resources to develop in proportion to the institution's expansion. Its size, collections, and number of employees do not catch up with the escalating information needs of the parent institution.

3.7 The Director and the full-time librarians sit in the same area; their offices are lined up in a C-shape. Due to a lack of space, the part-time librarians do not have their own offices but share a desk at a corner of the area occupied by their full-time counterparts. The library technicians are seated in a village of cubicles, which is separated from the librarians' offices by the cubicles for another unit of the Library. Nonetheless, the library technicians' cubicles are by no means far from the librarians' offices and are conveniently linked to the latter by a hallway.

Chapter 4

4.1 To illustrate the concepts of communicative situation, event, and act, Saville-Troike (1982) gives an analysis of the communicative situation of an elementary school class. She points out that "[a]lthough setting and participants usually remain the same, each event involves different ways of speaking and different rules for interaction. In bilingual classes, a shift in languages is often involved at event boundaries" (p. 31-32).

4.2 According to Keating (2001, p. 290-291), the eight dimensions of Hymes' (1972) "SPEAKING model" are interpreted as follows:
1. Setting: The temporal and spatial aspects of a communicative situation, including the social valuing of these aspects
2. Participants: The composition of the social group participating in different communicative events, including age, gender, relationships of persons to each other, etc.
3. Ends: The purposes of a communicative event, such as outcomes and goals
4. Act sequences: The way message form and content interdependently contribute to meaning, including silence, co-participants’ collaborative or supportive talk, laughter, gesture, etc. (Ervin-Tripp, 1969, p. 72, cited in Keating, 2001, p. 291)
5. Key: The tone, manner, or spirit in which a communicative act is performed; or the emotional tone of the communicative event, indicated by choice of language or language variety, gesture, or paralinguistic cues such as intonation, laughter, and crying
6. Instrumentalities: Channels or media of transmission such as oral, written, or gestural
7. Norms: Shared understanding of social structure and relationships that determines the proper way to interact and interpret the interaction
8. Genres: Categories such as poem, tale, and letter, as well as attitudes about these genres

4.3 Instead of trying to craft a precise definition of knowledge, I only intend to bring up the heuristic meaning of work-related knowledge among the RSMs in the context of the SLS Library. It is for the sake of the analysis of learning and knowledge sharing. The clarification and refinement of the concept of knowledge are outside the scope of this research report.

4.4 I have witnessed many instances of rowdy and bitter arguments in different workplaces. One of the most vivid occurred when I was working as a full-time librarian on the East Coast. The occasion was an in-house training session for the information service staff. The presenter was a librarian who wanted to share his knowledge of how to make the best use of an electronic database. While he was giving a live demonstration, some librarians raised questions about the efficiency of the way he used the database. They asserted that there were better ways to search it. In response, the presenter defended his own suggestions and argued with his challengers. The noise level rose significantly soon and the demonstration ground to a halt. The arguments became so vehement that the coordinator of the training session had to step in and request that the presenter and the librarians stop their debate. When the training session was over, the presenter was agitated and his challengers were pissed off. They turned an opportunity for sharing and collaborative learning into a round of belligerent intellectual wrestling.

4.5 Pragmatically, the interruption is similar to what Schegloff, Jefferson, and Sacks (1977) call a conversational “other-initiated other-repair” because the RSM who
broaches the interruption voluntarily offers a “correction” of some inadequacy (or “repairable”) uttered by her co-worker in the previous turn. While Schegloff, Jefferson, and Sacks claim that other-initiated other-repair has a “dispreferred status” (p. 379) and usually yields to either self-initiated self-repair or other-initiated self-repair, it is not the case when it comes to knowledge sharing among the RSMs. Other-initiated other-repair in the form of interruption is the norm. The RSMs accept and practise it because they understand that the interruption is performed to share what they know, to offer help to each other, and to provide the best possible service to the library user. As Ho and Jernudd (2000) point out, various facets of an interaction such as the interpersonal dynamics, locale, ambience, and purpose contribute to how interactants view and manage their linguistic behaviour (p. 223). In the workplace context of the SLS Library, the practical need for the RSMs to help one another and to provide adequate service, override the purported sequential preference for conversational self-repair.

4.6 I use the term, “text,” to refer to the written product of textualization (or what McPhee (2004) calls “symbolic formulation”). In this research report, I will not discuss text in terms of “an instance of social meaning in a particular context or situation” (Halliday & Hasan, 1985, p. 11, cited in Heaton & Taylor, 2002, p. 222). (See note 2.16)

4.7 To the RSM who composes an e-mail, its contents record her knowledge. To the recipients of the e-mail, the contents offer new information. Therefore, the e-mail (as well as other texts) is more like an information repository to the recipients. However, I use the term, “knowledge repository,” because it has been in use widely.

Chapter 5

5.1 “Library Council” refers to the management unit that is composed of the Director and all the librarians. “Ask a Pro” is the name of the SLS Library’s virtual reference service. “Tech’s Break” is a pseudonym for the weekly planned informal sharing session. “CCC” is the acronym for one of the campuses of the Library’s parent institution. “START students” are student workers who are hired under the auspices of a particular grant. “Main Street” refers to the major walkway outside the Library. “TAL” is the acronym for a library consortium of which the SLS Library is a member. “Mature students” refer to those who are older and go back to school after graduation some years ago; the term implies that those users are usually not very computer-literate and need some special, if not substantial, assistance.

5.2 Wenger (1998) and Wenger, McDermott, and Snyder (2002) define a community of practice (CoP) as an informal group of practitioners in a profession, and stress the voluntary mutual commitment on the part of the practitioners. Strictly speaking, the reference team does not constitute a CoP because it is a formally structured unit.
with clearly identified roles for the individual RSMs. However, it does carry the communal, goal-oriented, and identity-generating nature of a CoP. In addition, more and more communication scholars define and use "community of practice" in a considerably broader sense and in a more flexible manner (Cf., Giroux & Taylor, 2002; Heaton & Taylor, 2002). Therefore, I decided to refer to the reference team as a broadly defined CoP.

5.3 I admit that my impression of the RSMs’ group dynamics is highly related to my previous work experiences in two libraries. In the first one, some co-workers were cliquish and not easy to work or communicate with. In the second one, there were strong discontent and disrespect between the management and the rank and file. At the same time, the rank-and-file librarians and the technical assistants formed their own factions and often did not collaborate to resolve work problems. With regard to the RSMs, a possible reason that they have formed a united and supportive CoP, is that they were concerned about their job security. Their colleagues at a comparable academic library in the same city lost their jobs as a result of the parent institution’s decision to reduce the library to a small one-librarian resource centre. To avert a similar professional fate, the RSMs (as well as other employees of the SLS Library) have to provide quality service to prove their worth. As they are “generalists” who have to serve a growing post-secondary institution covering various academic disciplines, the expedient way to provide quality service is for them to be united and offer mutual support. That makes their work life easier and helps protect their job security.

5.4 The mutual trust, respect, support, and rapport in the reference team appeared very strong and obvious when I compared the RSMs with the co-workers in a previous librarian job. Some of my former co-workers were indifferent to offering assistance and collaborating when they worked with others at the reference desk. Moreover, they expressed discomfort and/or resentment if a co-worker paid attention to how they provided service or if a co-worker joined in their reference transactions to offer help voluntarily. Meanwhile, some other co-workers were overbearing and sometimes belligerent. On the whole, there was little sense of belonging in the workplace. In such situation, I acted much more defensively and avoided interacting with some co-workers.

5.5 I argued in Chapter 4 that work-related knowledge in the reference team could be roughly divided into four domains: 1. An awareness and understanding of the information about the workplace; 2. A grasp of expertise useful in providing reference service; 3. Cognition of theoretical concepts pertinent to library services; and 4. Sociocultural savoir-faire specific to the context of the SLS Library. However, information and skills are most often shared among the RSMs by means of communicative practices. Therefore, I only mention them in the conclusion.
5.6 Hardy, Palmer, and Phillips' (2000) model of discourse as a strategic resource states that the production of a discourse is divided into "the circuit of activity," "the circuit of performativity," and "the circuit of connectivity." The circuit of activity consists of three steps: 1. Individual makes new discursive statements to manage meaning; 2. Symbols, narratives, rhetoric, metaphors, etc., are employed; and 3. Discursive statements attempt to associate relations/referents with a particular concept. The circuit of performativity furthers the discourse production with: 4. Concept is embedded in discursive context; 5. Subject position of the enunciator warrants voice; and 6. Symbols, narratives, rhetoric, metaphors, etc., possess receptivity. The circuit of connectivity completes the production process with: 7. Discursive statements "take" connecting relations/material and concept in a specific situation; 8. Subject positions and practices emerge; and 9. Accumulation of statements/practices influences future discourse (p. 1235).

5.7 See note 2.17.
REFERENCES


Goodall, H. L., Jr. (2000). *Writing the new ethnography*. Walnut Creek, MA: Alta Mira Press.


Appendix B: Consent Form for Research Participants

Research Project’s Title:
Library reference staff’s communication and their on-the-job learning

Researcher:
Adrian Ho, Faculty of Communication and Culture, University of Calgary

This consent form, a copy of which has been given to you, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The research project is part of the requirements for my completion of a master’s degree in Communication Studies. It is an ethnographic study that will explore the communication processes involved in the reference staff members’ (librarians and information technicians) on-the-job learning and knowledge managing inside the Library. The goal is to generate an ethnography that will present a systematic description of the reference staff members’ professional development in the context (or “culture”) of the Library. The reason for choosing you as a participant in the study is that you learn continuously in the workplace and share your working knowledge with other reference staff members frequently, in order to handle every possible kind of questions from the users of the Library.

On-the-job learning is understood as the reference staff members’ ways to seek information and generate knowledge through work experience. Knowledge managing refers to the sharing, dissemination, and retrieval of working knowledge among the reference staff members. This study will focus on the communication processes involved and will not be evaluative in nature.

The study will be conducted at the Library from October through December 2002. During that period, I will be shadowing the reference staff members when they perform their duties. After becoming familiar with the duties, I will provide reference services alongside with them. I will also attend meetings and receive internal e-mail messages which are related to the Library’s reference services. All these are simply methods for me to experience the real-life learning and knowledge-managing practices inside the Library. You as a participant will not have to make special work arrangement for my working here.

The data collection methods will include: 1. workplace observation; 2. writing fieldnotes; 3. my participation in the reference work; 4. casual discussions with the reference staff members; and 5. collecting the print and electronic documents that are
work-related and distributed to the reference staff members. The casual discussions will be unstructured and only concern the provision of reference services inside the context of the Library. If later I find that there is a need for in-depth discussions of the learning and knowledge-managing practices inside the Library, one-on-one interviews with some reference staff members may be requested. Nevertheless, it is not known at present whether such interviews are necessary. If they are, I will schedule them in such a way that they will not interfere with the Library's services. In short, I will conduct fieldwork at the Library and the research process will be ethnographic in nature. No questionnaire or test instrument will be used throughout the study.

You have the right to decide whether to participate in this study or not. You will be included in the study only if you are willing to participate in it. Your decision regarding the participation will not affect your standing as a reference staff member at the Library. Participants can withdraw at any time during the study. If that happened, I would debrief the withdrawn participants on what had been done in the study. I would also destroy the data collected from them up to the point of withdrawal.

To maintain anonymity and confidentiality, the names of the Library and the reference staff members will not be mentioned in the final research report or any presentation of this study. When necessary, pseudonyms will be used to refer to the participants. I will make sure that the pseudonyms and the information provided by the participants cannot be traced back to them. The final research report will not be disclosed to the public without the Library's prior authorization.

All the fieldnotes taken and data collected during the study will be kept strictly confidential and stored in a locked drawer in my home. Only I will have access to them. They will be disposed of after two years from when I submit the final research report. The fieldnotes and print records of the data will be shredded. The electronic records of the data on computers, software, and diskettes will be deleted.

If the reference staff members wish to receive updated information about the study during the course of the research, the Library can notify me at any time. I will provide a progress report of the study. After the study is completed, I will submit a copy of the final research report to the Director of the Library. I will be available for a presentation if you need elaboration of the research results.

I as the researcher will not receive any remuneration during and after the study. I will be responsible for all the study-related expenses while I am conducting the research at the Library.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators,
sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact:

Adrian Ho (Researcher)
Tel./Fax: 210-7231
E-mail: akfho@ucalgary.ca

OR

Dr. Brian Rusted (My research project supervisor)
Associate Professor
Faculty of Communication and Culture
University of Calgary
2500 University Drive NW
Calgary, Alberta T2N 1N4
Tel.: 220-7766 Fax: 282-6716
E-mail: rusted@ucalgary.ca

OR

Dr. [Name]
Research Officer
[Name of SLS Library’s parent institution]
[Address of parent institution]
Tel.: XXX-XXXX Fax: XXX-XXXX
E-mail: XXXX@institution.ca

If you have any questions or issues concerning this project that are not related to the specifics of the research, you may also contact the Research Services Office of The University of Calgary at 220-3782 and ask for Mrs. Patricia Evans.

Thank you!
If you are willing to participate in the research study, please complete this portion of the form and return it to Adrian Ho. Thank you!

<table>
<thead>
<tr>
<th>Participant's name</th>
<th>Participant's signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Researcher's name</th>
<th>Researcher's signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Witness's name</th>
<th>Witness's signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A copy of this consent form has been given to you to keep for your records and reference.
Appendix C: Structure of SLS Library’s Reference Team

* The Systems Librarian was regarded as an affiliated member of the Reference Team.