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Managing organizational memory with intergenerational knowledge transfer

Jean-François Harvey

Abstract

Purpose – The purpose of this paper is to provide the systematic analysis of an innovative, intergenerational knowledge transfer strategy in a knowledge-intensive organization.

Design/methodology/approach – The case study method was adopted to study the intergenerational knowledge transfer activities. A triangulated approach was employed in respect of the data collection, which included non-participatory observation, focus groups, documentary analysis, and semi-structured interviews. A pattern analysis of data account was undertaken.

Findings – Two models for intergenerational knowledge transfer are presented: the source-recipient model and the model of mutual exchange. This research also shows how a context conducive to knowledge transfer was developed, and concludes that this context allowed both explicit and tacit knowledge to be transferred.

Research limitations/implications – Often ignored or underestimated this study highlights the need for motivation, inspiration, and empowerment in knowledge transfer. The main limitation of this study is the generalizability of the findings.

Practical implications – The two models for intergenerational knowledge transfer provide a rubric against which both old and new intergenerational knowledge transfer initiatives can be assessed to determine whether they are capable of encouraging the transfer of both explicit and tacit knowledge.

Originality/value – There is little empirical work on the design and implementation of strategies for managing organizational memory. The integrated models and empirical results of this study can serve as guides in that process.

Keywords Intergenerational knowledge transfer, Organizational memory, Knowledge management, Social capital, Information transfer

Paper type Research paper

1. Introduction

Employers in developed economies are facing a major issue: Their population is aging and a high proportion of their workers is set to retire, or at least radically rethink their participation in the labor market. The following is an illustration: In all projection scenarios selected by Statistics Canada (2010), the increase in the proportion of people aged 65 or older is set to continue in the coming years, with this group representing between 23 and 25 percent of the population in 2036, compared to 14 percent in 2009. Visibly worldwide (Bloom and McKinnon, 2010), this phenomenon is clearly reflected in the labor market. The baby-boom generation that followed the second world war is currently becoming a large mass of workers accessing or approaching retirement. These figures are even more worrying when we consider that the median retirement age has fallen by three years – from 65 to 62 in 2008 – since 1976 (Pignal et al., 2010).

The great number of retired older workers is inevitably accompanied by a significant loss of knowledge (DeLong, 2004; Strack et al., 2008). Thus, “the problem won’t just be a lack of...
bodies. Skills, knowledge, experience and relationships walk out the door every time somebody retires – and they take time and money to replace” (Dychtwald et al., 2004, p. 50). To combat the dangers of corporate amnesia, intergenerational transfer of knowledge is a matter of survival. Unfortunately, examples of successful strategies that address this issue are scarce.

In order to better understand how an organization addresses the needs for intergenerational knowledge transfer, the present study followed the implementation of an innovative strategy for late-career nurses (LCNs) and recruits (Rs) at La Pommeraie Health and Social Services Centre (LPHSSC). Launched in 2009, this strategy was recently identified as a Leading Practice by Accreditation Canada. It is particularly interesting to examine an environment where the need for an intergenerational transfer of knowledge is even more glaring. Among Canadian nurses, the group aged between 40 and 59 is predominant, amounting to 57.1 percent of all registered nurses, 54.1 percent of licensed practical nurses, and 62.1 percent of registered psychiatric nurses (CIHI, 2010). In addition, the majority of nurses historically enters retirement earlier than other workers (CIHI, 2010). Furthermore, “hospitals increasingly look like precursors of the knowledge-intensive organizations of the future.” (Adler, 2003, p. 7) Thus, it is even more worth studying the mechanisms put in place in such an organization. This article offers a rare opportunity to transfer lessons on intergenerational knowledge transfer from a strategy that was deployed recently.

This research’s key contribution is the systematic analysis of an innovative, intergenerational knowledge transfer strategy. More precisely, two models for intergenerational knowledge transfer are presented: the source-recipient model and the model of mutual exchange. This study also shows how a context conducive to knowledge transfer was developed, and concludes that this context allowed both explicit and tacit knowledge to be transferred. After reviewing the literature on knowledge transfer, the LPHSSC context is given before the details of the innovative strategy are explained. Thereafter the research methodology is presented, followed by the findings. Finally, the findings and their implications for practice and future research are discussed.

2. Literature review

2.1 Dimensions of knowledge

Showing a multidisciplinary consensus, the two main dimensions of knowledge – explicit and tacit knowledge – were first introduced by Polanyi (1966) and then expanded by Nonaka (1994). Explicit knowledge is formal (rules, procedures, etc.) and easy to transfer in codified and formalized form without a loss of integrity. Since it is seen as an asset (Empson, 2001), explicit knowledge can be easily transferred from one actor to another and is often referred to as know-what (Brown and Duguid, 2001).

Conversely, tacit knowledge is personal, contextual, and incorporated in the memory of actors (Baumard, 1999; Tsoukas and Vladimirou, 2001). Adopting the “knowing as a process” perspective (Empson, 2001), Polanyi suggests that “we know more than we can tell” (Polanyi, 1966, p. 4). Therefore, transferring and creating tacit knowledge requires physical interactions, since its formalization is demanding, sometimes impossible (Ambrosini, 2001), and, hence, difficult to communicate. As a social construct, tacit knowledge comprises each individual’s technical and interpersonal skills (Cook and Brown, 1999; Nonaka and Takeuchi, 1995), as well as groups’ synergies (Polanyi, 1966). Tacit knowledge is commonly called know-how (Brown and Duguid, 2001). Predominant in comparison to explicit knowledge (Bhardwaj and Monin, 2006), tacit knowledge specifically forms the background necessary to interpret and develop explicit knowledge.

However, one should not conclude that there is a sharp division between tacit and explicit knowledge (Kakabadse et al., 2003). Cook and Brown have shown that “each form of knowledge does work the other cannot” (Cook and Brown, 1999, p. 384) and “each form of knowledge can often be used as an aid in acquiring the other” (p. 385). Therefore, although the retrieval of expert tacit knowledge is considered quite difficult, knowledge management strategies must take both perspectives into consideration (Goh, 2002). Studies suggest that
retrieving, codifying, and transferring tacit knowledge is well worth the effort (Kikoski and Kikoski, 2004). Among other things, it provides significant cost savings to organizations through improved know-how and increased innovation (Paik and Choi, 2005; Seidler-de Alwis and Hartmann, 2008). However, in spite of recent advances (e.g. Goh, 2002; Kakabadse et al., 2003; Lang, 2001), the dominant belief is still that knowledge can be codified, captured, and manipulated instead of, at its core, comprising the notion of individuals’ interaction in which, as illustrated by Granovetter (1973), links or ties are considered the bridges by which knowledge transfer occurs between actors.

2.2 Knowledge transfer

The terms “knowledge transfer” and “knowledge sharing” are often used interchangeably and even to define each other. Wang and Noe posit that “knowledge transfer involves both the sharing of knowledge by the knowledge source and the acquisition and application of knowledge by the recipient” (Wang and Noe, 2010, p. 117). This last stage (application) has been identified as most critical, requiring the recipient to show an adequate level of absorptive capacity to create value with the newly acquired knowledge (Alavi and Leidner, 2001; Cohen and Levinthal, 1990; Leonard-Barton, 1988). While it has been suggested that knowledge transfer is better realized through mutual exchanges than through a generic source-recipient model (Argote, 2005; Chini, 2004), most studies on the subject pertain to the latter – putting forward the mathematical theory of communication (Attewell, 1992; Shannon and Weaver, 1949; as cited in Szulanski et al., 2004). Therefore, there is still today a lack of a proven best practice for knowledge transfer (Liyanage et al., 2009).

Several authors have studied the characteristics of knowledge in knowledge transfer activities and pointed out that knowledge tacitness hinders such process. Indeed, scholars (e.g. Inkpen and Dinur, 1998; Szulanski, 1996; Zander and Kogut, 1995) have identified that the degree of codification impacts the speed of transfer. Szulanski (1996) has demonstrated that tacit knowledge tends to stick in one place (i.e. the mind of an individual) rather than flow from one to another. Nonetheless, the importance of tacit knowledge transfer in the health sector cannot be overstated (Williams, 2011). Hence, despite Robert et al.’s (2009) claim that health sector organizations need opportunities for reflection and learning at all levels, the literature on knowledge management has mainly addressed issues, challenges and opportunities for the private sector. Therefore, there is a major lack of strategies designed for the public sector (Cong and Pandya, 2003), and even more so for the health sector (Zigan et al., 2010). In this sense, the present paper seeks to bridge this gap.

Given that knowledge transfer is seen as one of the most important components in order to achieve the status of a learning organization (Easterby-Smith, 1997; Senge, 1990), the attention that leaders devote to this process has grown significantly in recent years (Smith, 2005). A challenge to both theory and practice (Scholl et al., 2004), knowledge transfer processes typically include interviews/videotaping, mentoring, storytelling, communities of practice, and training and education (DeLong and Davenport, 2003). Face-to-face interaction is one factor associated most often with successful knowledge transfer (e.g. Xerox’s reps in Brown and Duguid, 2000; Hewlett-Packard’s engineers in Hansen et al., 1999) as it allows for productive dialogue (Tsoukas, 2009). Those face-to-face interactions shaped through social relationship linkages provide the framework in which individuals can create, retain, and transfer knowledge (Argote et al., 2003; Nonaka and Takeuchi, 1995). For example, Hu (2005) notes that the participants in a tacit knowledge transfer process emphasized the need for a case-by-case, creative, and proactive people-based approach.
based on face-to-face interactions. Nevertheless, how such an approach can be realized remains one of the main research avenues to be pursued.

2.3 The role of proximity in knowledge transfer

Employees sometimes consider knowledge transfer an extra-role behavior (Wang and Noe, 2010). Since transferring knowledge between colleagues while working can be time consuming, building and managing knowledge communities have become critical for organizations (Saint-Onge and Wallace, 2003; Wenger, 1998). As recently observed by scholars in the field of economic geography (e.g. Hall and Jacobs, 2010), a major part of the challenge behind this is the design and development of proximity (Boschma, 2005). Although it supports the interactions that are required for learning to occur, spatial proximity does not always stimulate knowledge transfer. Nevertheless, it may stimulate other dimensions of proximity that are necessary for effective knowledge transfer.

Proximity can be cognitive, organizational, institutional, social, and geographical (Boschma, 2005). Some of these dimensions are particularly relevant, since a large part of tacit knowledge is deeply rooted in action, commitment, and involvement (Cook and Brown, 1999). For instance, knowledge flows more easily if individuals’ relation is socially embedded (Granovetter, 1985). This social embeddedness is the extent of trust and reciprocity in relationships between individuals and the social cohesion in a relationship (Reagans and McEvily, 2003). That is, the more dense the network in a relationship, the more the individuals in that relationship are willing to invest time and energy to transferring knowledge between one another (Cross and Sproull, 2004). In addition, knowledge transfer also implies a certain degree of cognitive proximity (Nootenboom, 2000; Nootenboom et al., 2007). This proximity dimension refers to a shared knowledge base between individuals and the capacity of these individuals to understand one another, transfer knowledge, and learn from one another (Boschma, 2005). In other words, since effective knowledge transfer requires the ability to absorb, clarify, interpret, and apply new knowledge (Cohen and Levinthal, 1990), individuals’ cognitive distance ought not to be too large to learn from one another. These dimensions of proximity deserve more attention (Boschma, 2005).

Such proximity can only be realized within the right context. In that regard, an organization should provide conditions for relationships to emerge, spaces for knowledge transfer and creation that Nonaka and Konno (1998) call Ba. These spaces can be physical, virtual or mental, and encourage the conversion of both explicit and tacit knowledge. Unfortunately, there is still very little empirical work on the development of such a context (Nonaka et al., 2006).

2.4 Intergenerational knowledge transfer

While most young workers show a strong desire to learn with the aim of achieving a certain level of professional autonomy (Ebrahimi et al., 2008), most late-career workers want to continue working (Cappelli and Novelli, 2010). However, the roles given to these workers are crucial. Indeed, over time, they show less confidence, lose their motivation regarding achieving operational tasks, and can also display a high level of anxiety about their raison d’être within their organization (Ebrahimi et al., 2008). They actually look for ways to be useful, notably by transferring their wealth of knowledge gained through the years to the new generation (Mor-Barak, 1995), but are often under-utilized (Coy, 2005; Ebrahimi et al., 2008).

While a specific element of intergenerational interactions lies in the potential to transmit knowledge that one generation has developed by virtue of its location in a chronological order, the successful transfer of that knowledge across generations cannot be taken for granted (Joshi et al., 2010). Studies show that the intergenerational transfer of knowledge is not systematic enough, or that there is no transfer at all (Kuyken et al., 2009). For instance, the perceptions of generations involved in the transfer of tacit knowledge are not consistent about what deserves to be retained, transferred, and reused by the next generation (Hu, 2005). Furthermore, research has only recently been undertaken to specifically investigate the issue of intergenerational interactions. More studies are hence needed to evaluate
interventions which alter organizational work practices to encourage knowledge transfer across generations.

Given the gaps identified in the literature, this research has been guided by an analysis of the strategy for intergenerational knowledge transfer at LPHSSC. Before this research is described, the setting in which the study took place and the methodology used are presented.

3. Research setting
Locally renown for the high quality of its services and its leadership in healthcare, LPHSSC is formed of one hospital with 85 beds for short-term care, five local community services centers and service points, four residential or long-term care centers, three intermediate resources (300 residential or long-term places), and one home-care service. It has an operating budget of $80,000,000 and serves 60,000 people per year. LPHSSC relies on close to 1,300 employees, 130 doctors and pharmacists, as well as 500 volunteers. Among its workforce, it can count on 441 nurses. At the time of this study, 27 percent of them were over 50 years old and only 20 percent under 29 years old.

Well-aware of the growing labor shortage threatening to affect the quality of care, as well as the risk of a loss of organizational knowledge with a large proportion of its nurses nearing retirement, LPHSSC committed to a strategy for ensuring efficient intergenerational knowledge transfer.

3.1 LPHSSC’s strategy for intergenerational knowledge transfer
Backed by the Health Care Management and Governance Experimentation Laboratory, whose mission was to encourage innovation in the health sector organizations of the Montérégie Region, LPHSSC deployed a strategy for intergenerational knowledge transfer through the Intergenerational Cooperation Program (ICP), which is depicted in Figure 1. Every year, the organization allowed about ten LCNs from different sectors to benefit from the re-arrangement of their working hours, which freed up one day per week from September to May. During these days, the LCNs had to define their professional legacy in a “career legacy circle” and optimize their mentoring skills through customized training sessions. Emphasis was placed on communication skills, therefore the LCNs were taught to convey information about the job requirements clearly and to give directions effectively without criticizing the Rs. Afterwards, the LCNs had the option to pass on their professional heritage in a personalized project, to mentor Rs, and/or to participate in storytelling group meetings where knowledge from their past experiences could be shared. It is important to note that the Rs’ participation in the ICP was voluntary and not recognized as working hours.

Figure 1  ICP’s components
The “career legacy circle” sessions allowed the nurses nearing retirement to look back on their professional life, discuss it in the group, and identify their personal most valuable legacy to today’s young nurses. On the other hand, mentoring training sessions offered the LCNs an opportunity to discover themselves and the role they could play as an “influencer”. They also learned how to listen without judging matters when acting as a mentor to Rs. Accumulated knowledge could thus be passed on to the new generation through their preferred method: a personalized project, one-on-one mentoring and/or storytelling group meetings. On these occasions, the content of the discussions was confidential and not circumscribed by the organization.

A year after this strategy for intergenerational knowledge transfer was deployed, nine LCNs from five different sectors had participated in the ICP. All of them mentored young nurses through storytelling group meetings and one-on-one mentoring sessions, with the exception of one who instead realized an ambitious project to transfer her accumulated knowledge – writing a book on her nursing life. Overall, a total of 15 Rs were mentored, and several storytelling group meetings were organized.

4. Research methodology

An exploratory research approach was adopted to study LPHSSC’s strategy for intergenerational knowledge transfer. The case-study method was chosen to highlight elements that were partially unknown and deeply rooted in the workplace, as well as to collect and understand the different stakeholders’ perceptions and ideas. The rationale behind this single-case design is that the ICP is a unique case that is worth documenting and analyzing (Yin, 2009). Requiring involvement at the empirical level, such an approach gave the author the opportunity to create an intimate connection with the phenomenon under study (Eisenhardt, 1989). A broad perspective was taken before focusing on data relevant to the study as this became clearer. There was an important fit between the study objectives and those of the LPHSSC, which is used to partnering research projects, and whose members recognize the added value of such an exercise. The basis for a trust relationship was therefore quickly established. This trust allowed for easier access to key actors and to several other data sources, thus ensuring the validity and relevance of the research methodology (Yin, 2009).

4.1 Data collection

A triangulated approach (Denzin, 1989) was employed in respect of the data collection, which included non-participatory observation, focus groups, documentary analysis, and semi-structured interviews. The observational role consisted of standing back to permit systematic observation of group processes and note an evolution within the intergenerational knowledge transfer activities. Field notes were collected and analytical memos were developed as the fieldwork progressed. Five meetings that lasted two to three hours were attended. Moreover, two focus groups were conducted with the LCNs mid-way through the research. Each of them lasted two hours and covered the ICP’s progress. Documentary analysis targeted at what happened as a result of the ICP was also undertaken. All data collected was used to deepen the author’s understanding of the context under study, to build a relationship of trust with the different stakeholders, and to improve the design of the interviews by ensuring the cultural relevance and appropriateness of the questions, follow-up questions, and probes.

A total of 17 semi-structured interviews were carried out. The sampling was purposeful and determined by redundancy (Patton, 2002). None of those approached for an interview refused. Six LCNs and four Rs were interviewed along with four managers, two “observers” (colleagues of the ICP participants), and the program manager. This made the triangulation of the interviewees possible and led to a more valid picture of the knowledge transfer activities. Furthermore, the LCNs and the Rs interviewed showed differences in their participation levels, which allowed maximum variation sampling, eliciting as broad an understanding of the context under study as possible (Patton, 2002). Developed and pre-tested according to Sudman and Bradburn’s (1982) criteria, the interview guide was
divided into four sections: interviewee background, perceptions of the intergenerational knowledge transfer strategy, intergenerational knowledge transfer activities, and their value. Each interviewee was asked to provide instances of how her observations were applied in reality. The interviews were transcribed after each interview was completed. The data collection methods selected, were not only convenient regarding interpretations (Rossman and Rallis, 2003), but also provided the author the opportunity to enter the world of different groups of actors, and helped avoid single-respondent bias.

4.2 Data analysis and interpretation

The data analysis was undertaken concurrently with the data collection. A pattern analysis of the rich and detailed data account was undertaken (Patton, 2002). First, familiarization with the data was achieved by transcribing it, reading and re-reading it, and noting initial ideas of the knowledge transferred through the ICP. Secondly, the initial codes were generated for interesting data features. Thereafter, potential patterns were explored by gathering all the data relevant to each of these features. After reviewing the features by means of a thematic “map” of the analysis, each theme was defined and named to produce a draft of the findings.

In addition to taking human subjectivity, which is inherent in any researcher, into consideration by making an effort of reflexivity, a strategy of member checking was deployed to maximize the validity of the collected data (Creswell, 2009). The draft of the findings was then presented to a sample of respondents, who commented on the reasonableness of the interpretations. None of the comments needed to be incorporated into the final analysis.

5. Findings

To present the findings, the author explores the intergenerational knowledge transfer strategy that was deployed by LPHSSC through three stages. First, the activities before the actual transfer of knowledge took place are examined. Second, the nature of the knowledge transferred between the LCNs and the Rs is described by using two models of knowledge transfer: the source-recipient model and the mutual exchange model. Both groups of participants richly articulated the value of the ICP for knowledge transfer. Case evidence illustrates that both explicit and tacit knowledge were transferred. Third, the value of the knowledge transfer is examined.

5.1 Knowledge transfer: ex ante

Throughout the career legacy circle sessions as well as the mentoring training, it appears that the LCNs realized that they had gone through significant experiences in their professional life. In fact, as they experienced the difficult and uncomfortable task of introspective analysis and reflexive questioning, the LCNs developed a unique group synergy. And this group synergy allowed the LCNs to discover new colleagues and, through their stories, they were able to gain a better understanding of the skills they had acquired to face the complex reality of their respective department. According to one of them:

The ICP helped me realize the full extent of the knowledge I have gained over time and how useful it can be for my colleagues (LCN).

“Accumulated knowledge could thus be passed on to the new generation through their preferred method: a personalized project, one-on-one mentoring and/or storytelling group meetings.”
Gaining such awareness of the critical knowledge they possessed encouraged the LCNs in helping the Rs by transferring advice, specific techniques, ideas or meaningful stories from their practice and personal history. One of the manager interviewed explained:

Looking at themselves allowed them to gain the confidence necessary to help others (manager).

In fact, the LCNs claimed to have a better understanding of the reality of newcomers and the influence they can have on them. They felt compelled to design a workplace in which recruits would receive positive reinforcement from their more experienced counterparts. In other words, the LCNs were now willing to make it easier for the Rs to learn about the day-to-day aspects of their new position. As one of them mentioned:

I need not to judge, sermonize or moralize younger nurses. I am interested in exchanging with them about what I do and what I have been doing for the past 30 years (LCN).

5.2 Transfer of knowledge

According to the interviewed ICP participants, one-on-one mentoring took place in neutral places (i.e. a restaurant, coffee shop, etc.) every two or three weeks for one or two hours. These meetings were mainly used to discuss current issues broached by the Rs in relation to the LCNs’ experience. Some of them also exchanged knowledge through emails. The following knowledge objects were covered: how to deal with the family of a patient, how to approach and manage a difficult patient, how to interact with colleagues (physicians, nurses, etc.), etc. A young nurse explained:

These are not things that are written in books [. . .] it is practical knowledge and skills while in books we get easy examples in which reality is well defined. But it never happens like this in real life; it is never that simple! (R).

The Rs prepared for the meetings by noting their good and bad shots of the last few weeks, which then served as discussion items. On occasion, advice from the LCNs also touched on the private life of the Rs (e.g. family-work balance). In addition, many discussions were about the inner workings of the organization. According to the interviewed participants, all hospitals differ and the LCNs served as guides to the Rs. The knowledge that was transferred at these times ranged from the usual routine within a given department to phone numbers of contact persons to resolve administrative issues, such as knowing of or applying for openings in another department, pay slip problems, etc. According to the informants, those exchanges allowed for a better understanding of the different departments of the organization and, thereby, of the opportunities to explore other facets of the job.

One-on-one mentoring sessions and the storytelling group meetings allowed the participants to share about the ups and downs of their job in some detail. In the words of an LCN:

In all truth, although it is demanding, what is exhausting in nursing is not so much the physical aspect of the job but rather the emotional one. It is difficult to continually rub shoulders with disease and death. We need to vent our emotions at times but we can’t do so while working. In that sense, the ICP activities were a wonderful platform (LCN).

In addition, the LCNs particularly supported the Rs with regard to their personal development within the nursing profession (e.g. sharing how each of them reacted to their first death). Rs enjoyed the liberty of raising issues which they felt were relevant to their actual needs.

More knowledge was transferred from the LCNs to Rs through personalized projects. A number of documents were produced (e.g. a book of stories was written on how to deal with patients in a terminal stage, and checklists for different procedures were created or updated) and distributed throughout the organization. According to the managers interviewed, some of these documents helped capture and describe the organization’s processes, hence giving clear guidelines about its current policies, procedures and protocols. However, the Rs did not consider such material to be as beneficial as the one-on-one mentoring sessions or the storytelling group meetings. According to them, while
the documents in question were an efficient way of providing help, most of the learning occurred during one-on-one mentoring sessions and the storytelling group meetings.

As depicted in Figure 2, the ICP allowed the establishment of two intergenerational knowledge transfer models: one associated with a source-recipient model and the other with the mutual exchange model. The former is illustrated by the personalized projects during which the LCNs personally decided what knowledge should be transferred to the Rs and created artifacts that pertained to that knowledge. On the other hand, one-on-one mentoring sessions and storytelling group meetings generated a back and forth movement of knowledge between the nurses. For instance, the Rs brought knowledge from their practice to the LCNs, who used that knowledge as a starting point or a common basis to transfer their own accumulated knowledge. The Rs could then apply that knowledge to matters crucial for their job and return to those intergenerational knowledge transfer activities with new knowledge to exchange. Every time the Rs and the LCNs interacted, debate and dialogue were encouraged, which contributed to the understanding between them and of their cognitive paradigms.

5.3 Knowledge transfer: ex post

The intergenerational knowledge transfer strategy deployed by LPHSSC was very valuable for the ICP’s participants. The Rs stated that they had managed to overcome several fears due to the ICP. They became less afraid of making mistakes and began to provide more potential solutions when facing difficulties. They appeared to be less worried about looking silly and showed less hesitation about asking for clarification and advice. This experience allowed the Rs to deepen their understanding of the importance of nurses’ role in the continuum of care. According to the interviewees, this was reflected in their degree of participation within their team. Daily initiatives, the development of new tools, and some of them taking on new positions are examples that support the interviewees’ views. One of the managers interviewed concluded that the Rs were solving more problems themselves. This

![Figure 2 Two intergenerational knowledge transfer processes in the ICP](image-url)
led to an improvement in the nurses’ performance, with two of the four managers interviewed indicating that changes were evident.

Also, the LCNs emphasized that the ICP created a special link between the participants. By establishing such relationships, they became friends. Managers also noticed that all the nurses under their supervision showed a greater willingness to collaborate. They stressed that the nurses had become closer to one another. One of them explained:

Some nurses were sometimes ignored or left alone. Now, it looks as if they have realized they share the same problems and they have somehow created a common identity (manager).

6. Discussion

The diagnosis prompting the LPHSSC to deploy a strategy for intergenerational knowledge transfer centered on the growing nursing shortage. The following section discusses how this strategy served its mission of transferring knowledge between the LCNs and the Rs.

6.1 Knowledge transfer as making learning possible

With respect to its goal of intergenerational knowledge transfer, the ICP led to the conversion of both explicit and tacit knowledge. The mobilization and conversion of the different dimensions of knowledge can actually be indicated as prescribed by Nonaka and Takeuchi (1995). The source-recipient model can be associated with the process of externalization, during which tacit knowledge is converted into explicit knowledge and translated into readily understandable forms. On the other hand, the model of mutual exchange can be associated with socialization, with shared experiences stimulating the acquisition of skills and the establishment of a common frame of references.

The one-on-one mentoring and the storytelling group meetings served as a rare instance of the development of a Ba (Nonaka et al., 2006). Both of these activities went beyond the mere codification of explicit knowledge as suggested by the “knowledge as an asset” perspective (Empson, 2001) and the source-recipient model. The activities surpassed mere dissemination of knowledge through standardized formats and informational messages that are both recognizable and easily reusable. This research shows that both explicit and tacit knowledge were transferred through the mutual exchange model. This model supported the transfer of knowledge from one individual to the collective level through a back and forth movement, which appeared to have a greater impact on its stakeholders.

By contributing with inquiries derived from their practice, the Rs were well served by the mutual exchange model. Furthermore, the way they processed the verbal material depended on the structures that not only enabled them to process bigger chunks of subject matter, but also gave them tacit knowledge of the methods, procedures, and conventions used in the field of nursing and in their organization. Whether intentionally or not, through their interactions with the LCNs, the Rs were learning how to become more skilled in understanding what is important and what is not. This approach helped the Rs to create new references by exploring the cognitive structures already in their minds. The ICP also made knowledge relevant by selectively drawing on past experience and bringing it forward to address the situations at hand (Tsoukas, 2009). Learning became individually adjusted as the LCNs became familiar with each nurse’s zone of proximal development (Lawendaahl et al., 2001). By analogy, the LCNs found themselves creating bonds between knowledge previously acquired by the Rs and learning occurring in the field.

This intergenerational knowledge transfer strategy was very well designed since classic studies over the past five decades have repeatedly shown that, in discussion, learners pay attention and think more actively (Svinicki and McKeachie, 2006). Indeed, one of the better methods for producing focus is to use a problem as the main topic of discussion, which is exactly what the Rs had in mind when they met with the LCNs. Thus, the Rs were not passively listening to LCNs’ advices, but were instead co-developing relevant knowledge through their mutual exchanges. In addition, the LCNs’ task was not to sell a particular solution to the Rs, but rather to listen and teach them how to solve problems themselves. By
providing the Rs with some autonomy while ensuring the pace in an environment focused on learning, the mutual exchange model is a good example of “knowledge transfer as making learning possible” (inspired by Ramsden, 2003).

6.2 The role of proximity in the mutual exchange model

Throughout the ICP, both time and space were tightened to allow knowledge to be transferred through the nurses’ direct interactions as represented in the mutual exchange model. The results also show that the ICP has influenced another type of proximity: social proximity was increased. In this sense, the ties that were established and reinforced through the ICP expanded the participants’ social circle. Working together within the ICP’s boundaries allowed the LCNs to increase their social capital, which is both the social network itself and the benefits that can be realized through social relationships (Nahapiet and Ghoshal, 1998). As illustrated by other scholars (e.g. Cropanzano and Mitchell, 2005), the repetition of successful exchanges strengthened and deepened the participants’ respective relationships. Consequently, in accordance with Coleman’s (1994) writings, the network closure that the ICP engendered, encouraged the development of common goals, norms, and reciprocal expectations about their peers’ trustworthiness, which enhanced the quality of the knowledge that they transferred to one another.

The findings support Willem and Scarbrough’s results showing that social capital does not operate in a purely instrumental way, which could limit knowledge flows (Willem and Scarbrough, 2006). A number of the ICP activities took place through informal face-to-face interaction, which ensured the creation of social rather than purely work-related relationships. Indeed, despite weak ties at the beginning of the ICP, the participants progressively became emotionally attached to one another, hence building stronger connections and enhancing the potential for knowledge transfer. This study therefore provides another example that growth in social capital is beneficial in terms of intellectual capital, as well as cooperative behavior. In other words, the ICP reinforced what Lee (2008) calls a “bonding network”, which is encouraging moral obligations, intimate knowledge transfer, and a sense of belonging. The participants’ strong sense of belonging to the ICP had a major effect on the density of the knowledge transfer relationships. Knowledge transfer appeared to be wed to interpersonal and intergenerational relations.

6.3 Intergenerational knowledge transfer enablers

Based on the above-mentioned results, it can be inferred that the ICP (especially the career legacy circle sessions) provided the LCNs with the possibility to get to know themselves better and gain awareness of their accumulated knowledge, after having taken stock of their lives. By offering them an opportunity to reflect on their practice, choose what they perceive as their most valuable legacy, and transfer this to the Rs, the ICP allowed them to take the full measure of their personal work qualities, qualities that derive from their status, their role, and their commitment. Previously considered trivial, these qualities became important objects of their identity and were then perceived and defined as significant. The LCNs received recognition from their peers and their organization through the validation of their accumulated knowledge as treasured and worth transferring. Such support was particularly important and can be linked to other studies that have demonstrated that knowledge transfer appears to be contingent on individuals’ confidence in sharing valuable knowledge (e.g. Cabrera et al., 2006; Siemsen et al., 2007).
The LCNs were empowered through an interpersonal process whereby the correct information, support, resources, and environment were put in place, enabling them to formulate their increased personal ability and effectiveness and thus set and achieve their own intergenerational knowledge transfer goals. As illustrated by the theories of Kanter (1993), this empowerment gave the LCNs the capacity to influence the behavior of other nurses. They were able to improve the level of collaboration and knowledge transfer, as they reinforced their shared identity, which is tied to what they know (von Krogh et al., 2011).

7. Implications for researchers and practitioners

The findings of this study have implications for the design of intergenerational knowledge transfer strategies. This study shows that the innovative and facilitative, rather than bureaucratic and instrumental, design encouraged the nurses to adopt the ICP approach to intergenerational knowledge transfer. Those responsible for the ICP were interested in cultivating a sense of belonging among the participants within a collective environment, rather than trying to standardize the methods and results related to knowledge transfer. They were also careful not to stifle the LCNs' inventiveness. The LPHSSC's intergenerational knowledge transfer strategy is a genuine example of where the participants' preferences were the essence of the intergenerational knowledge transfer activities. This focus assured that the knowledge transfer mechanisms would not become a burden to the participants. Such extensive autonomy and empowerment are necessary conditions for intergenerational knowledge transfer. In other words, it would be inappropriate to regard the consolidation and validation of knowledge through rigorous top-down procedures as the only intergenerational knowledge transfer approach, especially since the accumulation of explicit knowledge may prove useless if the learners do not understand its contextual use. As Biggs asserted, "knowing facts and how to carry out operations may well be part of the means for understanding and interpreting the world, but the quantitative conception stops at the facts and skills. A quantitative change in knowledge does not in itself change understanding." (Biggs, 1989, p. 10).

Rather than dealing with factual questions, the study shows that it is beneficial to formulate discussions in order to examine the relationships, applications, or analyses of facts and materials. In this respect, the ICP avoids the prospect of only learning through formal lessons (e.g., the source-recipient model) – as if it were possible to put the wisdom of employees nearing retirement into a box, ready to be consumed by new entrants. Instead, the ICP approximates that of learning by interacting (Lundvall and Borras, 1998) to reckon the potential learning that brings a network of employees from different generations interacting with one another. This is consistent with Yang (2007, as cited in von Krogh et al., 2011), who shows that "styles involving strict policies and procedures will be less supportive of knowledge [transfer] than styles emphasizing human interaction, affiliation, morale, cohesion, and workplace harmony" (von Krogh et al., 2011, p. 5).

Finally, Davenport and Prusak state that "the best way to transfer knowledge is to hire smart people and let them talk to one another" (Davenport and Prusak, 2000, p. 88). However, it is not always that simple. For instance, hospitals' working environment is definitely less suited to Davenport and Prusak's approach to knowledge transfer. First, rigid and bureaucratic, a hospital's everyday functioning tends to inhibit the emergence of knowledge transfer initiatives, especially the transfer of tacit knowledge. Second, nurses' work is a challenge in itself:

The physical demands of 12-hour shifts are difficult for older nurses. They spend long hours on their feet and stress joints that have been subject to years of wear and tear. The complex care needs of patients, combined with the nursing shortage, may stretch the capabilities of even the most physically fit nurses (Bell, 2006, p. 56).

The burden thus generated for nurses has a negative influence on the transfer of tacit knowledge. This study offers an answer to the need for job redesign to address the issues of heavy workloads and stress for older employees, while creating reflective social interactions and knowledge transfer opportunities with their younger counterparts. Called “unreflective
practice’ (Tsoukas, 2009), employees facing daily activities similar to those of nurses need their organizations to decisively create such interactions and opportunities. Managers play a central role to this end by building bridges between individuals (occasions of socialization). Therefore, employees stuck in such an “unreflective practice” should not be working in a vacuum, isolated from their peers. Researchers and practitioners need to find ways to provide common ground for collaboration by managing proximities between workers of different generations.

8. Limitations of research/suggested future research

Given the availability of funding and time available, the research was designed to be exploratory. Therefore, the results cannot be generalized and the ICP should not be applied mechanically with the expectation of automatic outcomes. In other words, the findings should not be taken as either exhaustive or conclusive. The purpose of this research was to provide rich data on the ICP participants’ views and experiences and to alert academics and practitioners to the existence of an innovative, intergenerational knowledge transfer strategy.

In addition, as is often the case in knowledge management research, this study utilized self-reported transfer of knowledge, which may have resulted in some level of socially desirable responding. The participants may therefore have been motivated to portray the ICP in the most positive light possible. For this study was conducted over a short period of time, direct access to individual and/or group performance data might have been beneficial. In this sense, it would be interesting to extend the evaluation of such strategies over a longer period of time in order to better judge of its long term value. However, there remains a strong need to develop rigorous tools that could measure the individual and organizational benefits associated with a particular knowledge transfer strategy. Indeed, while activating these learning mechanisms builds up capacity and capability to innovate, the context of resource scarcity in which health sector organizations operate requires some sort of costs-benefits analysis. Though, these organizations must remain conscious that the benefits in question extend well beyond the balance sheet and to the intangible world.

It would also be interesting to spread the ICP to other occupational groups. Having members of different trades going through the first phase of the ICP together could very well influence the nature of the relationship between constituent organizational parts. Since the extent to which boundaries between different occupational groups are overcome has been shown to foster innovation in health sector organizations (e.g. Habersam and Piper, 2003; van Beveren, 2003; Rye and Kimberly, 2007; Wyatt, 2001), this might serve as an opportunity to break occupational and/or structural isolation. A challenge for both research and practice, the establishment of social capital between members of various occupational groups could promote shared understanding and build the high levels of trust required for knowledge transfer and creation to occur.

Investigating how technological tools such as mobile computing could be added to an ICP-like strategy in order to establish a broader approach to knowledge exchange across multiple generations in multiple directions also represents another avenue for future research. In addition to social capital, building structural capital might help further optimize the flows of knowledge within the organization, and this, at a relatively low cost. On the flip side, it might also disenfranchise the types of tacit knowledge exchanges outlined in this paper. More research is definitely needed here.

“The mutual exchange model supported the transfer of knowledge from one individual to the collective level through a back and forth movement, which appeared to have a greater impact on its stakeholders.”
Finally, this study highlights the need for motivation, inspiration, and empowerment in knowledge transfer and creation. Often ignored or underestimated (von Krogh et al., 2011), the importance of these variables calls for more examination.

9. Conclusion

Faced with a growing labor shortage threatening to affect the quality of care, as well as the risk of a loss of organizational knowledge with a large proportion of its nurses nearing retirement, LPHSSC deployed a strategy for transferring knowledge from LCNs to Rs. Considering that more than four out of every five Canadian organizations have yet to plan how to transfer tacit knowledge between generations (Conference Board of Canada, 2008) and that general knowledge management programs often work only for a minority of the employees involved in them (Lawendafti et al., 2001, p. 919), such an example could help other organizations address this very issue. As the workforce ages, organizations that can encourage intergenerational knowledge transfer will be best suited to continue to operate successfully in an increasingly challenging labor marketplace.

In order to maintain the current and future well-being of organizations, the value of older workers should not be underestimated. As prescribed by Nonaka et al. (2006), to transfer and create knowledge, an organization has to bring the right mix of people to the right context and promote their interaction. This study shows how these mechanisms can be designed. By creating meaningful connections between generations, strategies like the ICP give organizations an opportunity to recognize and confirm their members’ skills and experience, to instill a desire to pass on knowledge, and have the power to optimize the working environment.

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**About the author**

Jean-François Harvey is a PhD Candidate at HEC Montréal and SKEMA Business School (joint supervision). A current member of two research centres (Healthcare Management Hub and MosaiC), he has several years of experience in both research and consultation in knowledge management within large organizations. He holds a Joseph-Armand Bombardier CGS Doctoral Scholarship from the Social Sciences and Humanities Research Council (SSHRC) and his research interests include intergenerational knowledge transfer, knowledge creation, networks and communities of practice, creativity and innovation management. Jean-François Harvey can be contacted at: jean-francois.harvey@hec.ca

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