

# SHARING WHAT YOU KNOW, BUILDING EXPERTISE

## *Information Sharing between Generations in a Business Organization*

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**Abstract:** This paper explores the processes connected to information and knowledge sharing in the context of expert work in an organization undergoing technical succession. The qualitative empirical research was conducted among six senior-junior pairs participating in the technical succession in the studied company. According to the results, factors affecting knowledge sharing between generations are interaction, expectations, dispositions and circumstances which includes time for sharing and proximity. Knowledge sharing, which may include both transfer and building, happens in eight phases. Informal interaction is of high importance underlining an open information culture between generations and constitutes a prerequisite for sharing experts' work related knowledge. Further, the novices in this study have high trust in the experienced employees knowledge and skills—though not necessarily in them as persons which, according to the results, can prevent knowledge sharing even when the circumstances for sharing are favourable. An important aspect in the study is how influential the novices' conception of the work task is on knowledge sharing. Depending on whether they define their work as development or maintenance work determines the nature of knowledge shared and how it is shared.

## 1 INTRODUCTION

It is widely acknowledged that sharing what you know is of great importance for business organizations. The importance of information and knowledge is present in many respects but especially when a business faces retirement of experienced employees it is evident that knowledge transfer between generations or technical succession (Rothwell and Poduch, 2004) is crucial. *The aim of this paper is to explore processes connected to information and knowledge sharing especially in the context of expert work in an organization undergoing technical succession. What factors have influence on sharing and what are the prerequisites of information and knowledge sharing?*

The probability of information sharing between individuals depends very much on the context and the nature of information (Widén-Wulff, 2007; Wilson, 2010). In this paper we will focus on the contextual aspects affecting information and knowledge sharing.

## 2 LITERATURE REVIEW

In order to draw a picture of the information and knowledge sharing processes in the studied company and illuminate how knowledge is shared and new expertise built we need to look at organizational information behaviour in general and knowledge building for a specific goal in particular.

### 2.1 Information and Knowledge Sharing in Organizational Context

When studying information sharing in organizations it always involve individuals and their information behaviour which is affected by psychological, social and environmental variables (Wilson, 2000). Consequently the organizational information behaviour is a result of constant interaction between individuals in a social and cultural context. There are many ways of defining the contextual factors affecting sharing and from an information and knowledge management point of view almost impossible to cover all enablers and barriers to sharing. Many studies have emphasized

organizational culture or information culture and its influence on people's attitudes to information and knowledge sharing (Jarvenpaa and Staples, 2000; Widén-Wulff, 2005). These studies give a good idea about cultural incentives such as openness in communication as enablers to effective use of the intellectual capital in the organization.

Although we know that the goal of Information Management is to increase information sharing (Choo, 2002) actual information sharing has still been a relatively unexplored part of the organizational information behaviour (Wilson, 2010). Apart from studies on information cultures in general, studies on information sharing in organizations have mainly been conducted with social aspects in the forefront (Sonnenwald and Pierce, 2000; Talja, 2002; Mackenzie, 2005; Widén-Wulff, 2007) underlining social networks and collaboration.

Exploring also other disciplines Wilson (2010) broadens the perspective of information sharing in organizations. He points out that sharing happens more likely where the individual experience benefits from sharing and trusts the person sharing with. He also relates information sharing to trust and proximity. Persons with high trust and proximity are most likely to share whereas persons with low trust but still have proximity negotiate the likelihood of sharing. Finally, without trust and proximity sharing is unlikely. Studies on information sharing and social exchange theory underline similar observations. Information sharing can be compared to a so called gift economy; social networks are important but in the end social reward is a key to sharing (Hall, 2003; Hall and Widén-Wulff, 2008)

Information and knowledge sharing prerequisites in general can be concluded to be about an information culture where social reward and benefits, trust, and proximity are present. When it comes to sharing connected to a specific task or goal it might be that these prerequisites are somewhat different which will be explored in this study. Knowledge sharing is a relatively wide concept and will be explored more closely as knowledge transfer and knowledge building between generations to narrow down factors that influence this process.

## 2.2 Knowledge Building for a Specific Goal

In this study the concept knowledge sharing between generations describes such knowledge transfer between generations that involves interaction and that can entail knowledge building as defined by

Bereiter (2002). Paavola, Lipponen and Hakkarainen (2004) argue that the goal of knowledge building in the organization is to develop, assess and reconfigure conceptual artefacts in co-operation so that it supports the community in the long term. Knowledge building is, thus, target-oriented, collective action which develops knowledge useful to the organization.

In their studies Wenger (1998) and Carlile (2002, 2004) prove that the meaning and value of knowledge derive from its employment. This employment of knowledge is related to the target-orientedness of knowledge building: the goal is to develop knowledge that facilitates successful working, as deemed by individuals, in the prevailing circumstances. Knowledge new to the organization or the "building blocks of organizational knowledge" come to the organization, for example, with the introduction of new members. (Cohen and Levinthal, 1990; Brown and Duguid, 1991.) New employees participating in the knowledge sharing between generations are, thus, bearers of new organizational knowledge which enables knowledge building.

## 2.3 Knowledge Sharing between Generations and Expert Work

Knowledge transfer between generations refers to a process in which an experienced shortly retiring employee and a novice transfer work-related knowledge between themselves (DeLong, 2004; Rothwell and Poduch, 2004). Since knowledge transfer between generations entails interaction it is here called knowledge sharing which can also involve knowledge building, as described above.

In this study knowledge sharing between generations is explored in the context of expert work. Expert work means here "self-controlled knowledge work" and "modern craftsmanship" which is based on formal education (Pyoria, Melin and Blom, 2005). The essence of this work is to use knowledge in new ways and to combine knowledge from different fields (ibid.; Barley, 1996). Experts continuously develop their knowledge and skills; expert work is about generating ideas and planning. All this requires not only theoretical, formal education, but also co-operation and the ability to communicate. (Pyoria et al., 2005.)

Hence, in expert work the abilities to utilise knowledge in various practical situations become essential. In expert-work related knowledge sharing this means two things. Firstly, it means that it is important to share practical, situation bound and

experiential knowledge which cannot be transferred without interaction (Davenport and Prusak, 1998; De Long, 2004). Hence, knowledge sharing becomes a necessity. Secondly, it means that knowledge is only transferred or shared when the recipient has understood the knowledge given and is able to use it (Szulanski, 2003).

### 3 METHOD

The company involved in the study designs and manufactures electrical equipment and systems. Its global competitiveness and success are based on knowledge and know-how which has been built over decades by its experts and which transfer to the next generation is essential for the company's future.

At the time of the study the company was undergoing a technical succession. The management had chosen six key experts or "seniors" among those retiring and assigned each a successor or a "junior" to whom the senior was to transfer knowledge necessary for the work. The seniors had expert duties in R&D and production planning, as well as management duties in sales and manufacture. At the time of the research interviews the pairs had been transferring knowledge for about a year. All those involved in the technical succession were men.

The primary research data was collected in semi-structured interviews with 12 expert-duty employees in the senior-junior pairs. One year after the first interviews follow-up interviews with the juniors were conducted. All the interviews were recorded and later transcribed by a professional.

The first phase of data analysis comprised a thematic analysis (Hirsjarvi and Hurme, 2004). In the second phase of the analysis the articulation method (Grossberg, 1995; Hall, 1997) was used to interpret the data. The method is utilised in cultural research and defined as "a practice in which elements that do not necessarily have a previous relationship are connected" (Grossberg, 1995, p. 269). Articulation, thus, means interconnecting or linking concepts and phenomena. In this study the applying of the articulation method revealed that work is the interviewees' context of interpretation involved in knowledge sharing between generations.

### 4 ANALYSIS AND RESULTS

Here the main results of the data analysis are presented. The factors of knowledge transfer and the phases of knowledge sharing were conducted by

thematic analysis. The contexts of work in the interviewees' speech were constructed by applying the articulation method. Finally, by linking the results of these two analysis the formation of knowledge sharing between generations is explained.

#### 4.1 Factors of Knowledge Transfer between Generations

The interviewees identify four factors that influence their knowledge transfer in each pair. These factors are the senior and junior's mutual interaction, external expectations of them, their personal dispositions and the circumstances of knowledge transfer (Virta, 2011).

##### 1. Interaction

In the knowledge transfer interaction is essential because written knowledge or "*documented knowledge*" is not enough to absorb conducting the work, but rather the transfer requires dialogue. Knowledge transfer between the senior and junior, thus, presupposes a practice in which things and phenomena are observed and therefore understood. Intertwined in their mutual work, dialogue is maintained and fuelled by the junior's questions which lead the senior to communicate things necessary to the junior. The interaction between the senior and the junior, that is, dialogue and working together, is thus a prerequisite for knowledge transfer.

On the basis of the data analysis there is a haphazard custom of documenting knowledge within the company which can be seen as a part of its organizational culture. At the same time, unofficial interaction is very common and abundant in the company. The interviewees emphasize that unofficial meetings and discussions are essential in their work-related knowledge acquisition and development.

##### 2. Expectations

The company management has given the seniors and juniors haphazard or "loose" guidance about the knowledge transfer: there are no common or pair-specific plans, schedules or follow-up procedures. Despite of their "loose" guidance, the seniors and juniors are aware of the expectations the company has set on them concerning their knowledge transfer, and they also want to meet those expectations. In this case the external expectations are, thus, enablers of knowledge transfer.

##### 3. Dispositions

The interviewees endow the knowledge transfer with the seniors and juniors' personal dispositions and qualities which facilitate or, on the other hand,

hamper interaction and also the knowledge transfer within it. The seniors consider the juniors' university-level technical education to be their "common good quality" because it is the best possible foundation for learning the seniors' work. The juniors consider the seniors' expertise and the underlying experience to be their best quality, that is, what they themselves wish to achieve. These positive disposition act as enablers of knowledge transfer between the seniors and juniors.

All the juniors, thus, trust in the seniors' knowledge and skills and believe that these will be useful in their own work, too. However, on the basis of the results, knowledge transfer between the senior and junior may not necessarily occur if the junior can acquire the knowledge he needs also from another source and if he feels that the risks in using this source are lower than in transferring the knowledge with the senior. For example, if the senior tries to transfer an underlying attitude to the conduct of a work and this attitude differs from the junior's, the junior sees knowledge transfer including more negative rewards than positive rewards or benefits and knowledge transfer does not happen.

#### 4. Circumstances

Knowledge transfer between the senior and junior is also influenced by their possible busy work schedules and their physical distance from each other at the workplace. These two factors are here called circumstances. If the senior and junior have enough time for knowledge transfer and if they work close to each other, circumstances act as enablers of knowledge transfer. In the contrary case they can be barriers. However, according to the results, this is not the case in all situations.

## 4.2 Knowledge Sharing between Generations: Transfer and Building

The results show that knowledge sharing between generations, which may include both transfer and building, happens in eight phases. Outlining them illustrates how knowledge sharing proceeds. The phases, thus, present a simplified framework of the process of knowledge sharing. The phases of knowledge transfer related to expert work are the following (Virta, 2011):

### 1. Familiarisation

In familiarisation the senior familiarize the junior with the knowledge being transferred through documents, discussions and work situations. Hence, the senior is the initiator of the activity. As a result

the junior receives knowledge that the senior has chosen and defined to be transferred.

### 2. Deliberation

In deliberation the junior makes the knowledge being transferred clear to himself by understanding it in the light of his own knowledge and experience. Hence, the result of deliberation is the junior's understanding of the knowledge being transferred.

### 3. Corroboration

In corroboration the junior goes to the senior to seek corroboration of his knowledge conception or "check the validity of the knowledge" from the senior. Hence, the junior is the initiator of interaction. Corroboration leads to the senior and junior's mutual understanding of the knowledge being transferred.

### 4. Use

In using the junior starts using the knowledge being transferred in his work. By using the knowledge, it becomes the junior's "own skill" when he is able to act independently based on it and hence, knowledge transfer ends.

The phases of knowledge building related to expert work are the following (Virta, 2011):

### 5. Assessing

When using the knowledge transferred, the junior may identify shortcomings in the knowledge or the activity based on it. This is why he starts assessing the knowledge. This may lead to the junior's idea of how the knowledge can be transformed or developed.

### 6. Modifying

In modifying the junior begins, on the basis of his idea, developing the knowledge transferred to him. He acts alone, that is, he gets no help from the senior or anyone else in the company, because they do not possess such knowledge or competence that would help him.

### 7. Honing

In honing the junior checks with the senior whether the modified knowledge is applicable in the company and whether it fulfills the company's needs. A result of this senior's and junior's co-operation is knowledge modified and applied to the company.

### 8. Use

In using the junior starts using the new knowledge in his work. In knowledge building, the phases of assessing, modifying and honing are planning the knowledge or examining it through theory, during which the junior and senior are not certain how the knowledge in practice facilitates or



enhances work. The relevance of the new knowledge both to the individual and to the company is only proven in use. Hence, the knowledge building is not finish until the junior starts using the new knowledge.

In knowledge sharing between generations the transfer of existing knowledge is the prerequisite for building new knowledge because knowledge is built on the knowledge transferred. This means that only after the phases of transfer (Phases 1–4) can one proceed to the phases of knowledge building (Phases 5–8). The senior and junior may also continue knowledge transfer without ever building knowledge. In knowledge sharing, the phase of knowledge use (Phase 4) leads to assessing knowledge building (Phase 5) when the junior notices shortcomings in the transferred knowledge when using it. Knowledge building begins if the junior starts modifying the knowledge transferred.

### 4.3 Knowledge Sharing in the Context of Expert Work

The interpretation of the interviewees' verbal accounts by applying the articulation method made it possible to understand knowledge sharing by examining it in the context of work. In the subject company both the seniors and the juniors are employed in expert duties as defined officially. All the interviewees, furthermore, communicate that their work entails carrying out both current procedures, that is, "*maintenance*" work, and their "*development*". However, the interviewees have two separate views of their own work and performing it, and these differ with regard to what the role or significance of "*development*" is in work. In practice the interviewees can to some extent adapt the content of their work by "*choosing*" between maintenance and development which means that the tasks in the particular type of work become emphasized while the other type receives less attention.

The differences in the knowledge and its use between maintenance and development work depend on whether the work primarily concerns using the knowledge or applying and adapting it. In maintenance work, knowledge is used as such and work is reactive: adapting to the company's operation and acting in the present. The juniors speaking in the context of maintenance work do not necessarily need their seniors' knowledge in order to do their job.

In development work, the knowledge is material to be refined and accommodated to one's own and the company's use. Development work is proactive:

spontaneous assessing and reconfiguring the company's operations, as well as orienting to the future. For the juniors speaking in the context of development work their seniors' knowledge is essential: without it they are not able to do their job.

The linking of the findings of the thematic analysis and articulation method proved that the junior's conception of his own work either as maintenance or development explains the knowledge transfer and building between the senior and the junior. The juniors who talk of their work as maintenance work possibly transfer knowledge with their seniors. These juniors do not build new knowledge based on the knowledge transferred. The juniors, however, who talk of their work as development work transfer knowledge with their seniors. These juniors also build new knowledge. The junior's understanding of his work as maintenance is, therefore, not a sufficient prerequisite for either knowledge transfer or knowledge building. On the other hand, the junior's conception of his duties as development work is a sufficient prerequisite for knowledge transfer and an essential one for knowledge building.

The circumstances related to knowledge transfer, the busy schedules and the physical distance between the senior and the junior, cannot fully explain why some senior–junior pairs transfer knowledge while others do not. In the pairs, in which the junior speaks in the context of development work, busy schedules and physical distance do not prevent knowledge transfer. In the pairs, however, in which the junior assumes the context of maintenance work, busy schedules and physical distance can prevent the transfer.

## 5 DISCUSSION

In earlier studies it has been shown that information and knowledge sharing prerequisites in business organizations are embedded in an information culture where social reward and benefits, trust, and proximity are present (Hall, 2003; Widén-Wulff, 2007; Wilson, 2010). Knowledge sharing connected to a specific task such as knowledge sharing between generations, shows that these prerequisites can be further specified and that they are highly context bound.

This explorative study shows that expert-work related knowledge sharing between generations, that is, knowledge transfer and building take place between the expert and the novice in eight phases. Knowledge transfer and building end when the

novice has understood the knowledge transferred or built and is capable of independently using it. Expert work-related knowledge sharing between generations, thus, proceeds in interaction in the course of which the novice receives the knowledge, understands it and takes it to use (Szulanski, 2003).

Based on these results we can argue that an important starting point is that knowledge sharing between generations takes place in a dialogue and working together involved in work situations. Informal interaction is of high importance, underlining in this context an open information culture between the generations, and constitutes a prerequisite for sharing experts' work-related knowledge.

The common aims and expectations are also strong enablers to sharing where both novices and seniors know that it is important for the company that knowledge is shared to keep the expertise within the company.

Further, the novices in this study have high trust in the experienced employees knowledge and skills—though not necessarily in them as persons which, according to the results, can prevent knowledge sharing even when the circumstances for sharing are favourable.

Finally, an important aspect in this study is how influential the novices' conception of the work task is on knowledge sharing. Depending on whether they define their work as development or maintenance determines the nature of knowledge shared and how it is shared. Work task and context is highly important when defining enablers and barriers to knowledge sharing. On the basis of the results the circumstances, time for knowledge sharing and physical distance or proximity between the experienced employee and novice, do not prevent knowledge sharing if the novice necessarily needs the knowledge and if the experienced employee is the only source of the knowledge. This is the case when the novice understands and implements his work as development instead of maintenance.

## 6 CONCLUSIONS

This paper has explored information and knowledge sharing in the context of expert work in a business organization undergoing technical succession. The study has put forward important insights to the knowledge sharing process showing enablers and barriers to knowledge sharing in a specific context. As in earlier studies an open information culture is shown to be important but further contextual aspects

are underlined such as conception of work tasks affecting knowledge sharing. Also the importance of an interactive work situation is put forward.

Trust has been shown in many earlier studies to be of high importance for knowledge sharing. Also in this study trust was underlined but more specifically trusting the other person's expertise than trust on an individual level.

The results show that knowledge sharing between generations is a process based on interaction, and, therefore, it is more important to focus managerial efforts on people and what they know than on the knowledge itself (Spender, 2006; Widén-Wulff, 2007). This means that knowledge sharing between generations should be planned and managed from the needs and conceptions of its participants by finding out whether they define their work mainly development or maintenance.

Creating favourable circumstances for knowledge sharing means that sufficient time is allocated to the sharing and that the expert and novice work in close proximity. These circumstances facilitate knowledge sharing in particular among those novices who understand their work as maintenance.

The eight phases of knowledge sharing can be utilised in companies to set a schedule for knowledge sharing and to follow up its implementation. The progress is, therefore, not assessed based on what knowledge moves between the expert and the novice at any particular instance, but the goal is to be aware of how the novice's assimilation of the knowledge being transferred or new knowledge building proceeds.

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