

Challenges in Managing Tacit Knowledge: A Study on Difficulties in Diffusion of Tacit Knowledge in Organizations

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Abstract

To manage intangible assets such as knowledge is perceived as an important capability for competition. One of the major issues for managing knowledge resources is diffusion of knowledge within organizations. Knowledge management needs different forms according to the possibility to code knowledge. Internal individual processes like experience and talent obtain tacit knowledge that is difficult to code. Therefore it cannot be managed and shared as explicit knowledge. To rely on personal tacit knowledge is risky. Conversion of tacit knowledge to explicit or at least ability to share it offers greater value to an organization. But what are the difficulties related to sharing tacit knowledge? Different difficulties are to be found related to perception, language, time, value and distance.

Keywords: Knowledge management, Tacit knowledge, Organizational learning, Knowledge sharing

1. Introduction

The *tacit knowledge* approach highlights understanding the sorts of knowledge that individuals in an organization have, moving people to transfer knowledge within an organization, and managing key individuals as knowledge creators and carriers. One of the significant capabilities of competition is managing perceived intangible assets such as knowledge in organization. Besides managing this intangible asset of enterprises, another vital issue is considered as diffusion of knowledge within the organization. (Ron Sanchez, 2012).

Knowledge resources can be divided into at least two different components depending on the possibility of structuring and coding the knowledge. The possibility to code and the externalization of knowledge is of essential importance to the diffusion of it according to some researchers, while other again considers the codifying unnecessary or of minor importance. Structured knowledge is often diffused by different systems for storing and sharing knowledge and today there has been much scientific interest in the technology of these systems (Bennett and Gabriel, 1999; Zack, 1999).

The most recent interest in knowledge management (KM) and especially the interest in the information technology (IT) paradigm of KM (Gloet, 2000) is an indication of this interest. Unstructured knowledge is also diffused by different forms of codifying, written or spoken and scientific interest has been aimed at the communication of knowledge in different forms (Lee, quoted in Bennett and Gabriel, 1999).

There has been some interest in management of tacit knowledge but the field is still relatively unexplored and not fully understood (Zack, 1999) compared to work on explicit knowledge (Leonard and Sensiper, 1998; Holtshouse, 1998).

Since tacit knowledge is seen as critical to the success of groups and organizations (Melissa Peet, 2011) recent scholarly work has focused on how organizations can create conditions that enable knowledge creation, i.e. "the process of making available and amplifying knowledge created by individuals [. . .] and connecting it to an organization's knowledge system" (Nonaka et al., 2006, pp. 1179-1193).

The interest in diffusion of tacit knowledge has been rare but is increasing (Augier and Vendelo, 1999).

A deeper understanding of externalization and diffusion of tacit knowledge must be achieved for organizations to unleash the resources of tacit knowledge.

Understanding the difficulties of tacit knowledge and its challenges in managing tacit knowledge within organization could be a means for such deeper understanding.

What are the difficulties related to sharing tacit knowledge? The study sets a theoretical foundation for an empirical analysis of the field.

2. Tacit knowledge

The most important feature of the tacit knowledge approach is the fundamental principle that knowledge is basically individual in nature and is consequently complicated to extract from the heads of individuals. (Ron Sanchez, 2012). The tacitness of knowledge is tough to estimate but knowledge can be observed in a range where at one extreme end we find the entirely tacit and unconscious knowledge and at the other end the completely explicit, structured and coded knowledge (Polanyi, quoted in Leonard and Sensiper, 1998).

In such a dualist framework tacit and explicit is juxtaposed or co-existing in a synergetic relationship (Gill, 2000). In working life we find many epitomes of tacit knowledge such as intuition, rule-of-thumb, gut feeling and personal skills. These can be classified into two dimensions, the technical and the cognitive dimension. The technical dimension encompasses information and expertise in relation to "know-how" and the cognitive dimension consists of mental models, beliefs and values (Gore and Gore, 1999). Individuals are the primary repositories of tacit knowledge that due to its transparent uniqueness is not easy to communicate. We can understand tacit knowledge as when one has emancipated oneself from the technical formulas for action. It is for example to be able to cook without a recipe or to have an intuitive feeling of the right decision.

Tacit knowledge is achieved by internal individual processes like experience, reflection, internalization or individual talents. As a result it cannot be managed and taught in the same mode as knowledge which is explicit. Tacit knowledge is mostly stored only in human beings, while explicit kind of knowledge can be stored in a technological or mechanical way, like in information systems or handbooks. Tacit knowledge is technical or cognitive and is made up of mental models, values, beliefs, perceptions, insights and assumptions (Elizabeth A. Smith, 2001)

Tacit knowledge cannot be given in lectures and it cannot be found in databases, textbooks, manuals or internal newsletters for diffusion. It has to be internalized in the human body and soul. Different methods like apprenticeship, direct interaction, networking and action learning that include face-to-face social interaction and practical experiences are more suitable for supporting the sharing of tacit knowledge. To rely on personal tacit knowledge in organizations is risky. Conversion of tacit knowledge to explicit or at least ability to share it offers greater value to the organization.

3. Knowledge assets in organizations

The definition of organizational knowledge is yet another concept that has very little consensus within literature. Variations include the extent to which the knowledge is spread within the organization, as well as the actual make-up of this knowledge. Hatch (2010) defines it as: "When group knowledge from several subunits or groups is combined and used to create new knowledge, the resulting tacit and explicit knowledge can be called organizational knowledge." Others present a broader perspective: "individual knowledge, shared knowledge, and objectified knowledge are different aspects or views of organizational knowledge" (Ekinge & Lennartsson 2000). As always, texts emphasizing an IT based outlook once again offer shallower, information-based definitions, e.g. Virvou & Nakamura 2008, "Information internalized by means of research, study or experience that has value to the organization".

Different levels of knowledge, regarding the possibility to codify, can be recognized in organizations' knowledge resources (Gore and Gore, 1999). The easiest to code is structured knowledge, in for example databases and instruction books. Unstructured knowledge found in, for instance, reports or discussions is possible to code but this is not always done. The hardest to code is tacit knowledge, which is the most transparent and subjective form of knowledge (Augier and Vendelo, 1999).

Organizations' knowledge resources and assets have pertinently been expressed as an iceberg. The structured, explicit knowledge is the visible top of the iceberg. This part of the knowledge resource is easy to find and recognize and therefore also easier to share. This is also done in organization through different forms of technological and pedagogical methods. Beneath the surface, invisible and hard to communicate, is a momentous part of the iceberg. This hidden part applies to tacit knowledge resources in organizations. We know more than we can express (Polanyi, 1966) and therefore this part of the knowledge resource can be more difficult to share.

4. Influence of tacit knowledge

Tacit knowledge can also be seen as the icing on the cake. Structured and explicit knowledge is of importance but to achieve excellence in a job one has to master higher levels of knowledge, the unstructured and intangible tacit knowledge. Explicit knowledge is for everyone to find and use but tacit knowledge separates the masters from the common (Lawson and Lorenzi, 1999). An organization's core competency is more than the explicit knowledge of "know-what"; it requires the more tacit "know-how" to put "know-what" into practice (Brown and Duguid, 1998).

Tacit knowledge makes work go smoothly, it increases the quality of the work and it often characterizes a master of his/her profession.

The efficiency of making decisions, serving customers or producing is improved by the use of tacit knowledge. Also the accuracy of task performance is improved by the use of tacit knowledge (Brockmann and Anthony, 1998).

In the world of today where the significance of time is increased while the length of it is decreased, experts can achieve major time saving improvements by using tacit knowledge. Even if coded knowledge is easier to diffuse the role of tacit knowledge is often essential for being able to use coded knowledge. Coded knowledge can even be unusable without the augmentation of tacit knowledge (Shariq, 1999; Brown and Duguid, 1998). One can learn the importance of service quality by reading textbooks but not learn a "smiling attitude" by reading about it.

5. Sharing tacit knowledge within organizations

The characteristic of tacit knowledge is the difficulty in coding it so as to be shared. There can be found two different schools regarding externalization and codification of tacit knowledge. One that believes that tacit knowledge must be made explicit for sharing and another that regards tacit knowledge as always being tacit.

One example of the first is Nonaka and Konno (1998) who have created a model of knowledge creation in the SECI-model. This model also concerns transfer of tacit knowledge. They assert that the process include four modes, socialization, externalization, combination, and internalization in an ongoing circular movement. Socialization includes the essential social interaction that is needed to learn new knowledge. In this mode tacit knowledge is converted to tacit knowledge. As many scientists claim learning is a social action and interaction is needed to be able to learn (see for example Argyris and Schön, 1978). Learning is achieved for example by modeling or team-work. For knowledge to be shared it first has to be made conscious and articulated; an externalization must occur. In the second mode this externalization converts tacit knowledge to explicit. Some understandable forms of expressing or articulating tacit knowledge are to be developed (Nonaka and Konno, 1998). In the process of combination, that is the third mode, explicit knowledge is transferred to explicit knowledge. Now knowledge is transferred by communication at for example meetings or discussions. The last mode is Internalization that converts the explicit knowledge back to tacit knowledge.

The individual will at this mode absorb the knowledge by for example learning-by-doing, training or exercising. The mode in focus in this article is externalization. Difficulties are raised in reducing the tacitness of one's knowing in order to make it explicit.

It is often difficult to document or even express things that seem obvious and natural to oneself. To be able to share tacit knowledge the possessor of it must first become conscious of the knowledge he/she possesses and then find a way to express the knowledge. Only after this can a sharing of knowledge occur. But even then many of the traditional methods of knowledge diffusion are impossible to apply.

This externalization could accordingly cause problems in diffusion of tacit knowledge. But is externalization really necessary? Are we always conscious of what we do when we share our tacit knowledge or is tacit always going to be tacit? The other school regarding the sharing of tacit knowledge claims that this is the case. According to this view there is no need to express explicitly tacit knowledge. To make all knowledge explicit and eliminate the tacit personal elements in it could even be destructive to all knowledge (Polanyi, 1966). Tacit knowledge includes the ability to percept particulars that constitute entities. In externalizing tacitness, the focus is moved from the entity to the particulars. If this focus is changed to the particulars the sight of the entity is lost and with that also the tacit knowledge. Accordingly, to diffuse tacit knowledge the exertion should not be in externalizing it but in understanding entities by their particulars.

We share explicit as well as tacit knowledge in interaction with other people and through experience and exercise. Whether the distributor of the tacit knowledge is conscious of the knowledge and the sharing or not is not of importance (see Polanyi, 1958, 1966).

Irrespective of the need of externalization in sharing tacit knowledge there is an agreement that tacit knowledge diffusion is more difficult than the sharing of explicit knowledge. Many of the ordinary methods for knowledge diffusion used in organizations today are of minor use in regard to sharing of tacit knowledge (Brockmann and Anthony, 1998). Tacit knowledge cannot be taught, trained or educated (Brockmann and Anthony, 1998), it can only be learnt. To learn tacit knowledge requires active contribution of the learner and the learning process takes time. On this road to tacit knowledge there are many obstacles that will obstruct or make our journey difficult.

6. Difficulties of sharing tacit knowledge

If tacit knowledge is observed, as Polanyi (1958) suggests, as highly individual and attainable only through personal practice and experience, diffusion seems to be impossible (Augier and Vendelo, 1999). Other researchers propose a more positive approach to dispersion of tacit knowledge (Bennett and Gabriel, 1998). Regardless of the estimation of means of knowledge diffusion researchers assent in that there are *difficulties* in sharing tacit knowledge (see for example: Nonaka and Konno, 1998; Bennett and Gabriel, 1999; Leonard and Sensiper, 1998; Zack, 1999; Holthouse, 1998). These difficulties can mainly be related to perception and language but also to time, value, and distance.

a) Perception and language are measured to be the main difficulties in sharing tacit knowledge. Perceptually the characteristic of unconsciousness entails a problem of people not being aware of the full range of their knowledge (Polanyi, 1958). In contrast, formalized explicit knowledge seems to be recognized easily in oneself but the feeling of a missing connection or the fundamentals of intuition (*perception*) are harder to be identified and viewed. This type of knowledge is so internalized that it has often become a natural part of our behavior or way of thinking (*managers*). Just as we do not have to be aware of our heart beating we do not use/utilize ourselves in reflecting on our own tacit knowledge.

The challenge and another difficulty with *language* lie in the fact that intangible tacit knowledge is held in a non-verbal form. For most people articulating/expressing something natural and obvious could be hard and challenging. More experience and deeper knowledge directs to higher tacitness of knowledge and that leads to greater difficulties in articulating the knowledge.

b) As another important factor of difficulties Time also increase challenges for sharing tacit knowledge. The internalization of this form of knowledge requires a long time both for individual and organizational forms of knowledge (Augier and Vendelo, 1999; Bennett and Gabriel, 1999). Although experiencing and reflecting on the experiences is the time consuming process, but it is considered as a necessity to develop tacitness in one's work. The speed of today's business world increases and time for reflection is scarce. An organizational form of tacit knowledge can be found in routines, organizational culture and cognitive schemes. In these cases we can call into question the need of an externalization of tacit knowledge.

Learning organizational culture or mental models occurs over *time* and through active participation and interaction in the organization (Leonard and Sensiper, 1998). When for instance *staff training* is employed for sharing organizational culture in the different restaurant (as it could be considered as an enterprise) the trainer is not always aware of sharing knowledge. A conscious externalization of tacit knowledge has not taken place but tacit knowledge has been shared. In this case socialization is more significant than the externalization.

c) *Value* is another field with challenges and difficulties in sharing tacit knowledge as well as explicit knowledge. Many forms of tacit knowledge, such as intuition and rule-of-thumb, have not been considered valuable (Zack, 1999). Value is often associated with some form of measurement. In today's business world we have slowly learned to value immeasurable things like knowledge but to value even more elusive and intangible things like tacit knowledge is even today extraordinary and unusual.

"Knowledge is power" is a phrase that is definitely entrenched in our minds. Especially in the knowledge society of today knowledge has become a valuable asset. If this knowledge is collective in an organization this is fine but for many this refers to the power an individual can gain by hoarding and storing knowledge for individual use.

d) *Distance* also raises difficulties in today's work-life. The need for *face-to-face* interaction is often perceived as a prerequisite for dispersion of tacit knowledge (Holtshouse, 1998; Leonard and Sensiper, 1998). In these days when organizations tend to disperse into more distant (Leonard and Sensiper, 1998), virtual or global (Bennett and Gabriel, 1999) forms, face-to-face interaction becomes more the exception than the rule. This will be a difficulty especially in sharing tacit knowledge.

The difficulties with transfer of tacit knowledge can however also be considered as an advantage for the organization. Tacit knowledge in crucial areas for the organization obstructs copying by outsiders and therefore strengthens the competitive advantage (Leonard and Sensiper, 1998; Brown and Duguid, 1998).

7. Conclusions

This study intended to set a theoretical foundation for researches on the tacit knowledge sharing in organizations. The significance of tacit knowledge in the knowledge resources of an organization can be considered important although the interest in scientific circles has been rather insignificant. An increase in interest can, however, be noticed in recent years. The importance of tacit knowledge has been pointed out in relation to decision-making, time-management, quality and competitiveness. To unleash the power of tacit knowledge in an organization the sharing of tacit knowledge must be managed differently from explicit knowledge. Many of the traditional methods of knowledge diffusion like manuals and lectures are unsuitable for tacit knowledge. Different methods like apprenticeship, direct interaction, networking and action learning that include face-to-face social interaction and practical experiences are more suitable for supporting diffusion of tacit knowledge.

Theoretically the necessity of externalization of tacit knowledge to explicit has been taken into call, especially concerning more collective forms of tacit knowledge such as mental maps, values and organizational culture. Although different opinions regarding tacit knowledge and the diffusion of it is represented in academia all agree on the difficulty of sharing tacit knowledge. The main difficulties in sharing tacit knowledge are linked with perception and language. The unconsciousness of the tacit knowledge and the difficulty of expressing it are commonly held as the main problems in tacit knowledge diffusion. It is not only that we have difficulties expressing and articulating what we know, we may not even be conscious of what we know or how the tacit knowledge connects to our explicit knowledge.

The second difficulty in sharing tacit knowledge is the consumption of time that the internalization of tacit knowledge calls for. In today's business world time is a scarce resource and internalization of new experiences or knowledge is a process over time. This difficulty with time is attributed to personal tacit knowledge as well as more organizational forms. Difficulties related to values are the prevailing opinion of the need for rationality and logic in business matters. Other difficulties connected to values are opinions like "knowledge is power" and the difficulty in controlling the diffusion of organizational culture in particular. As well as the fact that knowledge can be power in the competition on the market it can be the cause of undesirable competition among employees within an organization. Further difficulties can be found regarding distance. Social interaction is often held as a necessity for tacit knowledge diffusion. The globalization, diversification and virtualization of business that obstruct face-to-face interaction are therefore a threat to tacit knowledge diffusion. The article, however, points out both earlier and future methods to facilitate these kinds of difficulties.

Still only knowing about the difficulties of tacit knowledge diffusion does not ensure organizations can unleash this power of tacit knowledge sharing. To use the expressions of Argyris and Schön this would only be single-loop learning. We would only adjust to the circumstance. To make use of double loop learning (Argyris and Schön, 1996) and also explore elements behind tacit knowledge diffusion and the difficulties of these we should also explore in what ways this sharing occurs. How is tacit knowledge diffused? Which are the methods experts use to share their tacit knowledge? Perhaps we then can find ways to surmount the difficulties and make use of the hidden part of the iceberg of knowledge resources in organizations, the momentous amount of tacit knowledge.

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