SECTION 3 General Issues in Management

Tacit Knowledge Aquisition and Transfer in the Process of Informal Learning

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Abstract

Tacit knowledge and informal learning are claimed to be essential in creating and maintaining competitive advantage and innovation capability in organizations. Therefore acquisition and transfer of tacit knowledge is necessary for organization to survive and difficult because of low level of articulation. Is informal learning as a collective activity a precondition for tacit knowledge to be transferred and shared unarticulated? The main question of the article is "*How tacit knowledge is related with informal learning?*" The aim of the article is to *analyze the liaisons between tacit knowledge and informal learning in organization.* The article does not contain empirical research and rather seeks to clarify key concepts and relationships between them.

The paper commences with definitions of the concepts of tacit knowledge and informal learning clarifying inaccuracies and identifying the place for the concepts and the level of analysis. The paper is finalized by the description of the liaisons between tacit knowledge and informal learning – inaccuracies are identified and possible interconnections between them are visualized in the schemes.

Key words: tacit knowledge, implicit knowledge, informal learning.
JEL Classification: D83.

Introduction

A competitive edge is created and sustained by those organizations that learn quicker than their competitors, because they deploy their knowledge assets most effectively (Pemberton and Stonehouse, 2000). The biggest part of all knowledge is defined as being tacit, which is "admitted to form foundation for building sustainable competitive advantage" (Cavusgil et al., 2003). Tacit knowledge has an impact on organization's innovation capability, it is "important for firm knowledge creation as well as successful new product development" (Madhavan and Grover, 1998). Therefore acquisition and transferring of tacit knowledge are necessary for organization to survive especially in global changing environment. Since tacit knowledge is characterized by the low level of articulation it builds a challenge to find ways how to use and share it unarticulated between individuals, inside the organization as well as between several organizations. Employee engagement in common group activities is claimed to be as one of the prerequisites for knowledge sharing.

Informal learning is described to be collective (occurring at the workplace, within the family, etc.) as well as self-directed activity (Eurostat, 2001 and Hörner/Ruß in ISCED97). Together with formal and non-formal, informal learning makes lifelong learning which is necessary for organization to upgrade employees' skills and knowledge in order to remain competitive and stay attractive to the labor market. Informal learning is distinguished by occurring naturally in everyday situations – in the right place at the right time – and making up to 90% of all learning in the workplace, according to some sources (Sorohan, 1993).

Is informal learning, as collective activity, the required prerequisite for tacit knowledge acquisition and transfer? The article will elaborate on the broader question "*How tacit knowledge is related with informal learning?*" The **aim** of the article is to *analyze the liaisons between tacit knowledge and informal learning in organization.* The article does not contain empirical research and rather

seeks to clarify key concepts and relationships between them. Thus the **objectives** of the article are to define and clarify the concept of knowledge in both individual and organizational levels; to define tacit knowledge in the workplace and draw distinctions between tacit knowledge, explicit knowledge and implicit knowledge; to identify and describe informal learning in both individual and organizational levels, to clarify distinctions and find out liaisons between tacit knowledge and informal learning.

The paper comprises three major sections. The first section commences with definition of knowledge concept, stressing its differences with information, defining knowledge place in the data-wisdom sequence and identifying possible knowledge analysis levels. Further knowledge types are identified, describing different views. Also definitions and relationship between tacit, implicit, explicit knowledge are described. The emphasis is placed on tacit knowledge and its importance.

The concept of informal learning in the context of lifelong learning is described in the second section. Also possible analysis levels (individual and organizational) are identified.

After analysis of tacit knowledge and informal learning, in the third section inaccuracies related to and the liaisons between tacit knowledge and informal learning are defined in the form of possible interconnections.

The place of tacit knowledge

Before defining tacit knowledge, the concept of knowledge should be clarified.

As Bhatt (2000) states, it is agreed that knowledge is an organized combination of ideas, rules, procedures, and information. In a sense, knowledge is a "meaning" made by the mind (Marakas, 1999). Without meaning knowledge is static, it is only disorganized information (Bhatt, 2000)

Although the researches stress the differences, "knowledge and information are often confused for each other" (Logan and Stokes, 2004) and used synonymously. Usually the concept of information is defined inaccurately by equating it to the concept of knowledge. For example, information is…

- *knowledge* transmitted to each other verbally, through press, radio, and television (Bračas, A. Tarptautinių žodžių žodynas, 2001);
- specially cumulated and arranged *data* and *knowledge* received from data (Bankininkystės ir komercijos terminų žodynas, 1997).

Information and knowledge are the elements of sequence defined differently by various sources. According to Wiig (1999), at first there are signals, which are the base for data; data becomes information which is the base for knowledge. Knowledge, before getting to the stage of wisdom, has to overpass the stage of understanding (Fig. 1).

Signals → data → information → knowledge → understanding → wisdom

Fig. 1. The place for knowledge (*Wiig, 1999*)

The sequence used by the other sources (Logan and Stokes, 2004; Mullins, 1999; Suresh, 2002) is simpler. Logan and Stokes (2004) argue that "information structures data, knowledge structures information, giving it additional levels of meaning and providing it with utility". Bloom (1956) links data, information, knowledge and wisdom into one system called learning levels (stages) (Fig. 2).

Data → information → knowledge → wisdom

Fig. 2. Learning levels (*Bloom, 1956*)

The main elements of the sequence are defined as follows:

- *Data* is "the pure and simple facts without any particular structure or organization, the basic atoms of information" (Logan, Stokes, 2004).
- *Information* consists of "facts and other data organized to characterize a particular situation, condition, challenge, or opportunity" (Wiig, 1999).
- *Knowledge* requires "information in conjunction with patterns between data, information, and other knowledge, couples it with understanding and cognition" (Mullins, 1999).
- *Wisdom* is applied knowledge (Mullins, 1999); "the capacity to choose objectives consistent with one's values and within larger social context" (Logan and Stokes, 2004).

Still the concepts of information and knowledge are mixed up and equated. The authors distinguish them as follows: "Information is a resource and knowledge is the capability to exploit it" (Logan and Stokes, 2004), "information is factual; knowledge is intelligence" (Kahaner, 1997). Information is not intelligence until it is efficiently communicated (Vine, 2000).

The importance of distinction between those two is emphasized by Lee and Yang (2000): "One person's knowledge can be another person's information". Further they argue that knowledge is more than information, information is transformed into knowledge when a person reads, understands, interprets, and applies the information to a specific work function. Although we claim that reading is not the only way for information to be transmitted into knowledge we accept the authors' notion person acquires knowledge not information only when he understands and applies it.

As it was mentioned previously tacit knowledge is crucial for organization to survive in a turbulent environment. Therefore it is necessary to define what tacit knowledge is. As McAdam and McCreedy (1999) state, "knowledge is considered as consisting of tacit and explicit elements". Nonaka (1991) confirms with a statement that knowledge exists in two states: tacit and explicit.

Explicit knowledge is "formal and systematic" (Nonaka and Takeuchi, 1995), it can be learned from book (Logan, Stokes, 2004). Explicit knowledge is relatively easy to articulate and communicate and, thus, transfer between individuals and organizations. It resides in "formulae, textbooks, or technical documents" (Lee and Yang, 2000).

Tacit knowledge "is deeply rooted in an individual's action and experience" (Nonaka and Takeuchi, 1995), it is personal intuitive knowledge (Logan, Stokes, 2004). Tacit knowledge is the knowledge which cannot be explicated fully even by an expert and can be transferred from one person to another only through a long process of apprenticeship (Polany, 1962). The part of the skill remains unarticulated and known only to the person who has that skill. Tacit knowledge is the skills and "know-how" people have inside each of them that cannot be easily shared (Lim, 1999).

Some sources claim that tacit and explicit knowledge should not be opposed against each other, the distinction between them should not be seen as dichotomy, but, as Inkpen and Dinur (1998) suggest, a spectrum with a two knowledge types as the poles at either end (Fig. 3).

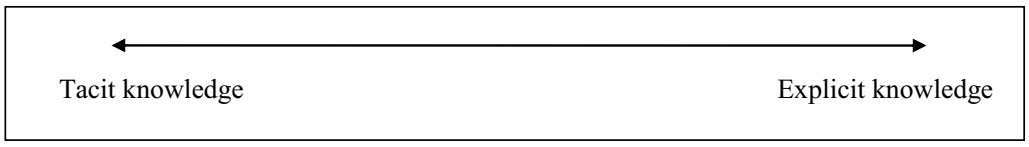

Fig. 3. Relationship between tacit and explicit knowledge (*according to Inkpen and Dinur, 1998; Cavusgil et al., 2003)*

Moreover some of the authors state that knowledge can exist in three forms. According to Imel (2003), knowledge has a number of dimensions, including explicit, implicit, and tacit. Although it is stated openly or can be noticed that some sources use tacit and implicit knowledge synony-

mously, the two have significant differences or, as Knowledge Harvesting, Inc. (2001) states, "the terms "tacit" and "implicit" are not interchangeable".

"Tacit" refers to things we know that cannot be made explicit (cannot be expressed using language). Tacit knowledge is not accessible to consciousness. Implicit knowledge is that which has not been made explicit and is presumed to be possible. Implicit knowledge is something that is known, but is very difficult to verbalize. Tacit and implicit knowledge is stored in human brains (Knowledge Harvesting, Inc., 2001).

The distinctions between the three are usually drawn in the context of capability to be articulated (Fig. 4). According to Nickols (2003), tacit knowledge is knowledge that cannot be articulated; implicit knowledge can be articulated but hasn't; while explicit knowledge has been articulated and, more often than not, captured in the form of text, tables, diagrams, product specifications etc. The described distinction explains the cases (Cooke, 2003; Crowley, 2001; Gourlay, 2002; McInerney, 2002) where only tacit and explicit knowledge is identified. Those sources claim that tacit knowledge, although with difficulty, can be articulated, which means that tacit knowledge is consolidated or replaced (as in the notion of Demarest, 1997) with implicit one.

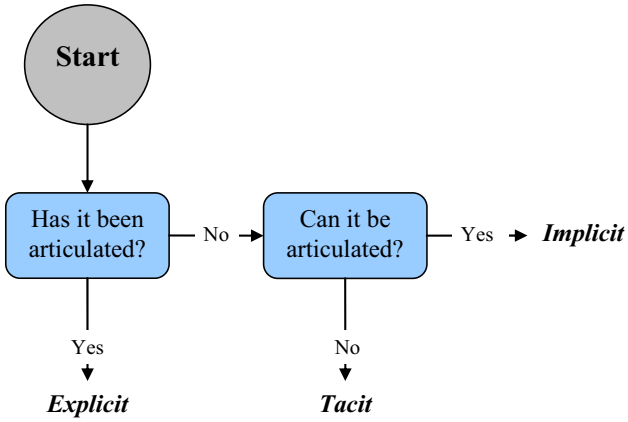

Fig. 4. Distinctions between tacit, implicit and explicit knowledge (*Nickols, 2003*)

Referring to the previous remark on tacit and explicit knowledge being two poles of continuum, Fig. 3 has to be complemented (Fig. 5).

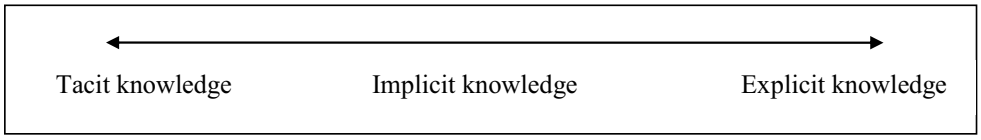

Fig. 5. Relationship between tacit, implicit and explicit knowledge (*according to Knowledge Harvesting, Inc., 2001; Imel, 2003*)

One of the limitations for knowledge (as well as tacit knowledge) analysis is a lack of determination on the level of knowledge – whether knowledge can be individual or organizational. Quinn et al. (1996) accept only existence of individual knowledge. They argue that the concept of organizational knowledge, at best, is a metaphor, as it is not the organization, but people in the organization who create knowledge.

Bhatt (2000) claims, that knowledge is neither completely stored into individuals nor into the organization. A part of knowledge is stored into individuals, and a part of it is stored into the organization. Blackler's (1995) ideas are congruent with Bhatt's (2000). He proposes, that knowledge

can either exist in the individuals (in the brains or the bodies of the individuals) or outside them, i.e. in the organization itself, or might not be stored at all as "knowing". When located outside individuals, knowledge exists in the culture, in routines or in symbols.

The ideas of Blackler (1995) are emphasized in article of Ortenblad (2001). He distinguishes three approaches to knowledge location. Representatives of so called "old organizational learning" (e.g. Argyris and Schon, 1978; March, 1991; Simon, 1991) claim that knowledge is acquired by individuals but is transferred to the organizational memory and is stored there in the form of routines, rules, procedures, documents and culture. Therefore knowledge is organizational.

The approach of learning organization suggests that "knowledge mostly stays in individuals" (Ortenblad, 2001) although some of it might be located outside them – knowledge is individual as well as organizational.

According to third approach of "new organizational learning" knowledge can not be stored anywhere, it is context dependent (Lave and Wenger, 1991) and defined as situational process – knowing.

Firstly, in this section the distinction between knowledge and information was clarified by Bloom (1956), Logan and Stokes (2004), Mullins (1999), Kahaner (1997) who put the two concepts in the most common sequence of data – information – knowledge – wisdom.

Secondly, after analysis of knowledge concept tacit knowledge is described. Tacit knowledge is defined as personal intuitive not accessible to consciousness knowledge which cannot be articulated and cannot be explicated fully even by an expert and can be transferred from one person to another only through a long process of apprenticeship (Nonaka and Takeuchi, 1995; Logan and Stokes, 2004; Polany, 1962).

For some sources tacit knowledge is a second pole for tacit-explicit knowledge continuum (Nonaka, 1991; Nonaka and Takeuchi, 1995; McAdam and McCreedy, 1999; Lee and Yang, 2000; Logan and Stokes, 2004) while the others involve the third dimension of knowledge – implicit (Knowledge Harvesting, Inc., 2001; Imel, 2003; Nickols, 2003).

This section is finalized by the question of knowledge level and location. The place of knowledge differs according to different sources: the "old organizational learning" (e.g. Argyris and Schon, 1978; March, 1991; Simon, 1991) approaches argue that knowledge resides in organization and is organizational. The "learning organization" approach adds individual as possible place and claims that knowledge is individual as well. According to the representatives of "new organizational learning" (Lave and Wenger, 1991), knowledge – as knowing – does not have location, because it is situated process.

Informal learning in the workplace

Learning is constant change in organism behavior related to experience (Myers, 2000). Learning is the process when the learner personifies and discovers *knowledge* or transfers and experiences it through interaction with others (Tereseviciene et al., 2003).

The concept of informal learning can usually be found under the umbrella concept of lifelong learning. Influenced by globalization, changing nature of work and required skills, in order to remain competitive advantage, organizations throughout the world constantly have to upgrade and develop competence of their employees therefore lifelong learning is necessary. According to Eurostat (2001), lifelong learning is seen as encompassing all purposeful learning activity, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. Lifelong learning involves all formal, non-formal education and informal learning.

Although some sources (Malcolm et al., 2003) claim that there is "no difference between informal and non-formal provision or activity", we refer to the following distinctions and definitions brought by Eurostat (2001):

Formal education can be characterized as intentionally organized learning events, with regular fixed duration and schedule, structured hierarchically with chronological succession of levels and grades, admission requirements and formal registration, held within established educational institutions and using pre-determined pedagogical organization, contents, methods and teaching/learning materials.

Non-formal education refers again to intentionally organized learning events, which take place in an institutional setting but do not fulfill one or more of the conditions (hierarchy level-grade structure, admission requirements, registration, predetermined/not flexible teaching/learning methods, duration and scheduling).

All the rest learning activities are stated to be informal. *Informal learning* is any activity involving the pursuit of understanding, knowledge or skill ... (Livingstone, 2001), is a lifelong process whereby individuals acquire attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment … (Conner, 1997-2005). Informal learning might occur accidentally as well as intentionally; it is characterized by a relatively low level of organization and is less structured. It may take place at the individual level (e.g. self-directed learning) as well as in groups of people (e.g., at the workplace or within the family) (using definitions of Eurostat, 2001 and Hörner/Ruß in ISCED97).

Again informal learning is not understood as antithesis to formal but as the opposite point in continuum according to Bruckner (http://www.personnelzone.com/) (see Fig. 6).

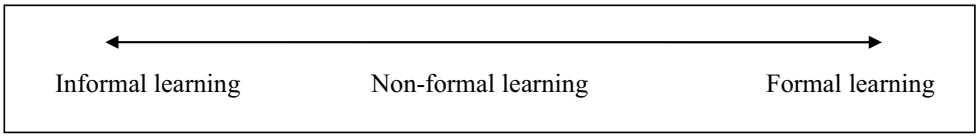

Fig. 6. Relationship between formal, non-formal and informal learning (*according to Bruckner*)

There are few discrepancies noticed during the analysis of informal learning. As it is stated (Smith (1999) quotes McGiveney, 1999), informal learning (and especially accidental informal learning) "might not be recognized as learning". Even though it is not recognized, informal learning makes the biggest part – up to 70% or 90% of all learning in the workplace (Labor Statistics report of US Department of Labor's Bureau, 1996; and Sorohan, 1993, respectively). Much of what we learn, both in and out of the workplace, occurs during informal practice (Fox, 1997) and impact of formal training on practice can be quite marginal (Garrick, 1998; and Boud, 1999), although most of the employees are offered formal or non-formal training opportunities. Being unrecognized and unappreciated informal learning is most common and crucial for organization success.

As it was noted before, knowledge is considered to be individual and organizational. Since knowledge is an outcome of learning process can the same be said about learning? As Kamoche (1997) proposes, "in any organizational environment, learning can be both organizational and individual, the former relying heavily on the latter".

Referring to the three approaches on organizational learning defined by Ortenblad (2001), the sources distinguish different entities of learning. Since informal learning is a part of all learning the same notions can be applied. Some researches argue that only individuals are capable of learning (Simon, 1991), the others agree that organizations can also learn but only in the way similar to individuals (Argyris and Schon, 1978). The representatives of "new organizational learning" follow the notion of Cook and Yanow (1993) and state that organization learns "not as an individual or individuals, but as a collective" (i.e. humans as social beings).

In today's turbulent environment with emphasis placed on lifelong learning the concept of informal learning emerges. Informal learning is as the process of acquiring knowledge, skills, attitudes and understanding and composes the biggest part of all learning. The place of it is defined in two ways: first, informal learning is the opposite point in formal-informal continuum; second, informal

learning (as well as all learning) might be executed by individuals, organizations as individuals or collective.

Finally, people in the workplace are usually offered formal and non-formal training; they do not recognize informal learning (especially accidental one), although it makes more than 70% of all workplace learning and employees tend to engage in it naturally and right on time.

The role of informal learning in tacit knowledge acquisition and transferring

The biggest part of all workplace learning (up to 70-90 %) consists of informal learning. To evaluate the amount of tacit knowledge in organization is nearly impossible since all of it is not articulated. Both tacit knowledge and informal learning make great impact for person and organization to adapt in turbulent environment also both are not recognized in some cases.

What are the liaisons between the two important concepts? The interconnections between the concepts of tacit knowledge and informal learning can be explained in multiple ways. The liaisons are described by the following structures (Fig. 7, Fig. 8 and Fig. 9).

First of all, knowledge is acquired and shared in the process of learning. Therefore tacit knowledge is also acquired and transferred through informal learning (as a part of all learning). Tacit knowledge is a product in the process of informal learning (see Fig. 2).

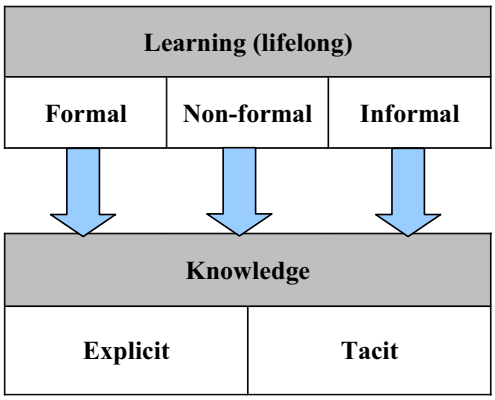

Fig. 7. Interconnections of concepts of tacit knowledge and informal learning (the way of knowledge acquisition)

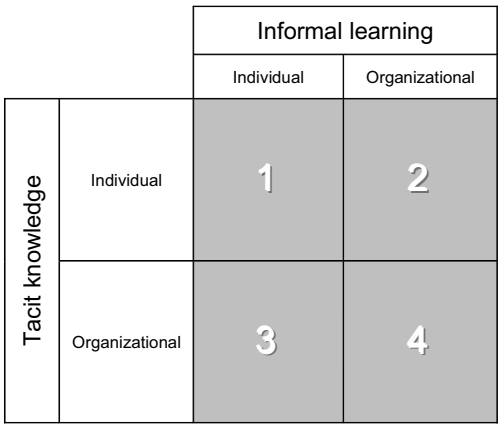

Fig. 8. Interconnections of concepts of tacit knowledge and informal learning (level of knowledge/learning concept analysis)

Knowledge can be individual as well as organizational (Blackler's, 1995; Ortenblad, 2001; Argyris and Schon, 1978); learning, on the other hand, can also be individual and organizational. This is also applied for tacit knowledge and informal learning. Fig. 8 describes all possible interconnections between tacit knowledge and informal learning regarding the level of analysis – individual or organizational.

First quadrant: "*Individual* tacit knowledge/ *Individual* informal learning". Individual learner captures individual knowledge (1 quadrant).

Second quadrant: "*Individual* tacit knowledge/ *Organizational* informal learning". Since organization can learn as a group of individuals (Argyris and Schon, 1978), individual knowledge is acquired (2 quadrant).

Third quadrant: "*Organizational* tacit knowledge/ *Individual* informal learning". According to "old organizational learning" approach individuals learn as agents for organization but knowledge is stored in the memory of organization (3 quadrant). As Pemberton and Stonehouse (2000) emphasize, "one of the most important roles of organizational learning and knowledge management is to ensure that individual learning leads to organizational knowledge".

Fourth quadrant: "*Organizational* tacit knowledge/ *Organizational* informal learning". McInerney (2002) suggests, that tacit knowledge residing in individual does not complement organization much therefore organizations should focus on creating a knowledge culture that encourages learning and the creation and sharing of knowledge. This is the foundation for organizational learning to acquire organizational knowledge (4 quadrant).

Although some researchers (Byrne, 2001) claim that explicit knowledge is mostly found as organizational and tacit knowledge is more personal and individual, according to Pemberton and Stonehouse (2000), explicit and tacit knowledge begin as individual knowledge (1 and 2 quadrant) and are transformed into organizational knowledge (3 and 4 quadrant).

One more interconnection between tacit knowledge and informal learning might be defined by the level of recognition of informal learning and tacit knowledge (Fig. 9). As it was mentioned, informal learning, and especially accidental informal learning, is not always recognized by the learner himself. The same is with tacit knowledge, which is "both known and unknown to the holder" (Imel, 2003).

As it was defined, knowledge is usually seen not as totally tacit or totally explicit but located somewhere between two poles, thus the more tacit is knowledge the less it is recognized by the holder. Also with learning the more informal it is the less it is recognized by the learner.

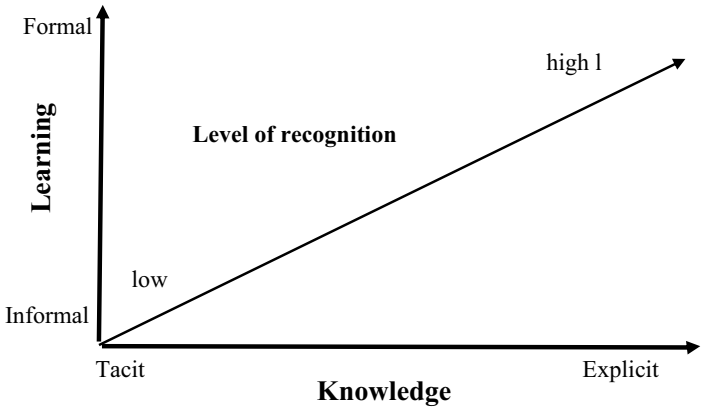

Fig. 9. Interconnections of concepts of tacit knowledge and informal learning (level of knowledge/learning recognition)

The liaisons between tacit knowledge and informal learning can also be defined by inaccuracies found between the two concepts. The first inaccuracy noticed between informal learning and tacit knowledge is tendency to use the concept of knowledge instead of learning and vice versa – that is not justified for knowledge is one of the learning products. Learning is a process through which knowledge is acquired. To deepen this relationship Cavaleri (2004) states: "knowledge both informs learning and is also its product". Besides, learning can be considered as process (dynamic approach) as well as outcome (result – static approach) while knowledge is always an outcome (static approach). Therefore tacit knowledge might be a part of learning (and informal learning as well) – as Digenti (2000) states: "at the heart of [informal learning] is the transfer of tacit knowledge", informal learning "allows the tacit knowledge resident in a group to emerge and be exchanged" (Senge in Digenti, 2000).

The other inaccuracy between tacit knowledge and informal learning is described by the contiguous use of concepts "tacit" and "informal": there can be found notions of informal knowledge and tacit/implicit learning. While informal knowledge is synonymous to tacit knowledge, tacit/implicit learning differs with informal one. The outcomes of informal learning might be all sorts of knowledge: tacit, implicit and explicit. "If tacit knowledge is about the content of what is learned, implicit learning is about the process" (Atherton, 2005). During implicit/tacit learning tacit knowledge is acquired – learners are not able to articulate what they have learned (Hager, 1998).

The analysis of liaisons between tacit knowledge and informal learning is defined by few possible interconnections. Tacit knowledge can be acquired and transferred in the process of learning – formal, non-formal and, most commonly, informal. Both, informal learning and tacit knowledge might be analyzed in two levels, that is, as individual tacit knowledge/informal learning or organizational tacit knowledge/informal learning. Besides, both knowledge and learning might not be recognized by the knowledge holder/learner himself/herself if the extent of learning informality and knowledge tacitness is high.

Furthermore, inaccuracies between tacit knowledge and informal learning are described. Learning by some sources is unjustifiably used to replace knowledge although the latter is an outcome of the former. Besides informal learning is the way for tacit knowledge to be acquired, transferred and shared. Also the concepts of informal knowledge and tacit learning are used confusingly.

Paper limitations and delimitations

There are few inaccuracies found analyzing literature on tacit knowledge and informal learning. First, some authors do not identify the level of analysis. Learning which occurs in individual level differs from that of organizational level. Knowledge as a learning outcome can be individual and organizational as well.

Second, the misinterpretation of the concept of knowledge is discovered in some sources due to equation of knowledge with information.

Third, informal learning is a rather new concept; therefore it is not even recognized by some authors. Moreover, literature completely lacks agreement about "what informal learning is and what the boundaries between informal, formal and non-formal learning are" (Malcolm et al., 2003). Informal learning also can occur as intentional as well as accidental. The latter might not be recognized by the learner himself.

Fourth, knowledge and learning, especially tacit knowledge and informal learning are equated.

Thus tacit knowledge and informal learning were analyzed and the misinterpretations were clarified in the article.

Paper delimitations are concluded as follows: the article has static format. It partially analyzes processes, but the emphasis is placed on explanation and clarification of the concepts, narrowed to the field of tacit knowledge and informal learning.

Conclusions

Tacit knowledge is advocated by knowledge management researchers to be essential for organizational success. Informal learning is the form of lifelong learning used most frequently, especially in workplace. Informal learning is a process and tacit knowledge is a product of the learning, most of the time informal. Although importance of both tacit knowledge and informal learning is shown, there are still some discrepancies left in theoretical as well as practical fields.

First, the concept of knowledge is sometimes confused for information, although knowledge is in higher hierarchical level and is considered as organized information with meaning applied used to achieve defined objectives. Also, the level of knowledge is not always defined. As researchers argue, knowledge can reside in individual in organization or might be seen as situated process – knowing.

Even more inaccuracies occur while talking about tacit knowledge. Since tacit knowledge is claimed not to be possible to articulated, the biggest part of it is unknown for the knowledge holder. Defining level of capability to articulate some authors identify tacit and explicit knowledge, while others include implicit one. The first set of researchers in most cases expends the limits of tacit knowledge including the features of implicit one.

Informal learning is usually identified as part of lifelong learning, which is less organized, less structured and happens in everyday situations. The accidental form of informal learning usually is not recognized by the learner himself/herself. Although it is claimed that informal learning comprises about 70-90% of all workplace learning, organizations still make more investment to more formal learning and education.

Analysis of liaisons between tacit knowledge and informal learning revealed that both concepts are sometimes used incorrectly. The concepts of informal knowledge and implicit learning appear and are used in ambiguous cases. Although tacit knowledge and informal learning are supposed to make great influence on individual and organization they are not recognized in some cases.

Several interconnection structures are used to define liaisons between the described concepts: types of knowledge/types of learning; level of knowledge analysis/level of learning analysis; level of knowledge/learning recognitions.

The analysis of the concepts made in the article requires further empirical research on how informal learning is used in tacit knowledge acquisition, sharing and transfer; how to enhance and facilitate informal learning in order to make knowledge sharing friendly environment; why tacit knowledge and informal learning tend to be unrecognized.

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