Knowledge management differences between manager and operational levels: study in a brazilian industry

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Abstract

The paper aims to identify differences in the way in which managerial and operational level deals with the process of management knowledge in a Brazilian metal-mechanical industry. This study was based on the idea of Gold, Malhotra e Segars (2001) that the knowledge process phases are: creation, conversion, utilization and protection. Through a qualitative research, was observed that: both levels consider the importance of knowledge management, but only the creation phase occurs at operational level (through tacit knowledge) and there is no action to protect knowledge (in both levels). So, the study concludes that knowledge management process has focused only at management level in this organization.

Keywords: *Knowledge management; differences; managers; labors; Brazilian industry.*

Resumen

El trabajo tiene como objetivo identificar las diferencias en la forma en que trata a nivel de gestión y de operación con el proceso de gestión del conocimiento en Brasil la industria metal-mecánica. Este estudio se basó en la idea de Gold, Malhotra e Segars (2001) de que las fases del proceso de conocimiento son: la creación, transformación, utilización y protección. A través de una investigación cualitativa, se observó que: tanto los niveles de considerar la importancia de la gestión del conocimiento, pero sólo la fase de creación se produce a nivel operativo (a través del conocimiento tácito) y no hay ninguna acción para proteger el conocimiento (en ambos niveles). Así, el estudio concluye que el proceso de gestión del conocimiento se ha centrado sólo en el ámbito de gestión en esta organización.

Palabras clave: *Gestión del conocimiento; diferencias; directivos; empleados; industria brasileña.*

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1. INTRODUCTION

In the competitive world the knowledge and innovation management become more important and the traditional structures are not enough for organizational success (Nonaka & Takeuchi, 1997). In the same way that business world change, the organizations need to change and in this process, managers and employees must be prepared for organizational processes and structures change, promoting and assimilating the need of continuous learning, expanding the skills to solve problems and implementing project-based teams as the dominant form of performing the work (Nolan & Croson, 1996).

There is consensus that in the future organizations' successful key will be the ability to learn (Adler & Cole, 1993). And as Subramaniam e Youndt (2005) pointed out, the influence of intellectual capital in the organizations innovative capabilities and survival have been proven in different ways. Therefore, there is a strong need of redesigning organizations to be able to learn (McGill, Slocum & Lei, 1993).

Organizational learning presents a way to enable survival through the catalyst of an internal environment where the company's problems can be solved in an innovative way and the solutions recorded in its memory. So, organizational learning happens when the group absorbs knowledge and links it with their ability to conduct individual and collective activities (Cohen & Sproull, 1996).

In this context, organizations began to worry about a process of continuous renewal. This process is the purpose of the knowledge management area, because its aims is to help the creation and dissemination of knowledge in organizations, focused on the individual and the group, understanding that the production of knowledge is a part of human nature (Von Krok , 2001; Luckesti, Barreto, Cosma & Batista, 1998).

There are some kinds of organizations where the innovative process is crucial for survival (Lawson & Samson, 2001), for example, technological companies and those who are directly influenced by tendencies. The ALFA

organization (fictitious name) is in the second group because it is a metal-mechanic industry that has decorative fashion products as main products in its portfolio. So, the organization has two frequent problems about innovation: they always need to create new designs; and its products are easily imitated by other companies.

This study has as initial assumption to understand the process of knowledge management in a metal-mechanical industry located in a small city in Brazil, and then identify in that organizational level these processes happen (operational or management level). The management level is characterized by the superior position in organization, in which managers have authority and responsibility for company´s activities. In the operational level are the employees with a lower level of qualification, whose functions are directly related whit the production and no decision activity.

So, the research goals are: to determine how important knowledge management processes are in the management and operational level; and if all process (creation, conversion, utilization and protection) occurs in both levels.

The paper assumes that the two levels (management and operational) have distinct characteristics: the first with a more strategic and focused concern in administrative matters and the second with a more operational concern, focused on productive daily activities. Therefore, it is assumed that the knowledge management occurs almost always at the management level. However, in many instances the two levels can develop attitudes of learning. Thus, the empirical research tries to increase understanding about this issues.

2. KNOWLEDGE MANAGEMENT

Knowledge management can be understood as a series of efforts by organizations with the objective to create, acquire, convert, protect and use their knowledge in order to build their competitive advantage (Davenport & Prusak, 1998; Fleury & Oliveira, 2001; Gold, Malhotra

& Segars, 2001). To achieve this goal, the organization uses many ways, such as information technology, organizational structure, vision and values and, individual and group behavior of organizational members (Richter, 2002).

Knowledge management is a continuous redefinition of the organizational purpose and the way to do things in organizations with the intention that the entire company and its participants can make changes in a shorter time, using the knowledge created during the implementation of the action of business. In practical terms, it is a strategy to create processes that can promote and help the knowledge identification, capture and increase (McCampbell, Clare & Gitters, 1999).

The starting point for managing knowledge is the understanding of what Leonard-Barton (1998) calls the company's strategic skills. That is, the organization must identify those skills that were established through years and cannot be easily imitated, so that they are the company's competitive advantage (Fiamel & Prahalad, 2000). Some skills, called supplementary, add additional value to strategic skills, but can be easily imitated, so they do not have to be theorganization focus. This applies, for example, to channels of distribution or packaging techniques. For this reason, it is very important that the company is able to identify and distinguish their skills (Leonard-Barton, 1998), because just the strategic skills should be the focus in the knowledge management process.

Addressing the knowledge management is a complex but necessary task, According to Bailey and Clarke (2000), knowledge management can be understood as a lever for sustaining organizational competitiveness in the future, however, it can cause anxiety to the managers of the organization that need to visualize what is useful and relevant for the storage of information.

2.1. Knowledge Management Process

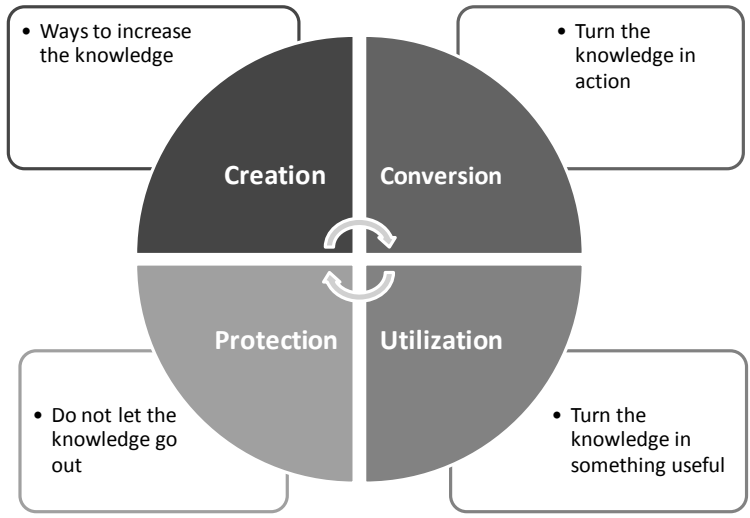
In the process of knowledge management organizations should invest efforts in two dimensions related to knowledge management: infras-

tructure and processes. The tendency to focus on only one of them can bring harmful effects. It is also important to align these dimensions (infrastructure and processes) with the types of knowledge (tacit and explicit) in order to obtain the expected results (Gold, Malhotra & Segars, 2001).

Furthermore, knowledge management is not an end in itself, but relates directly to the organization's strategic objectives and seeks to grow organizational effectiveness. Accordingly, Murray (2002) stresses that the importance of knowledge management process is tied to tangible results that the company wants to achieve, suggesting that management is made relating to data, information and knowledge from the guidelines demand rather than supply.

Among the factors identified by Gold, Malhotra and Segars (2001) as measures of the effect of knowledge management in organizational effectiveness, are the organization's ability to innovate their products and services, to identify new business opportunities, to coordinate the efforts of different units, to anticipate market opportunities for new products and services, to act quickly to commercialize their new products, with agility in adapting to unexpected changes, with flexibility to adjust their goals and objectives to industry changes and market times response to market and to anticipate surprises and crises.

But what is an efficient knowledge management process i? What needs to be done? What aspects need attention? How can innovation happen in an organization? Gold, Malhotra & Segars (2001) give us a helpful answer for those questions saying that, in the first time, attention must be paid to four phases: creation and acquisition, conversion, utilization and protection. Information about some phases are presented in sequence and summarized in Figure 1.



Source: authors.

Figure 1. Knowledge Management Process

a) Knowledge Creation

Knowledge creation, according to Gold, Malhotra & Segars (2001), means the activities, practices or procedures used by organizations to increase their knowledge. It can be done through internal or external processes. Garvin (2000) complements this idea saying that organizations must offer activities in which learning is skilled. Some of those activities are: problem solving in a systematic way; the use empirical data to find problems and not estimative or feelings; the use of data as a basis for decision making; learning through their own experiences, through which companies systematically analyze their successes and failures and record the lessons in order to make them available to all employees, and learning with others through observation of what is being done outside by other companies or customers.

In addition to internally develop their own knowledge, it is also possible that the company learns from the surrounding environment, outside their own borders. One way of learning is through strategic alliances

such as joint ventures, for example. Leonard-Barton (1998, p.165) defines alliances as "prior arrangements and intensive exchange of knowledge, some of which hardly deserve the name of the agreement made before that are informal links between the source and receiver technology".

b) Knowledge Conversion

By knowledge conversion Gold, Malhotra and Segars (2001) understand the processes where knowledge can be used by the organization. And to the authors it happens with codification, sharing and integration processes of knowledge. Each process is explained below:

- Knowledge codification: The explicit organizational knowledge can be encoded through different media –books, projects, procedures, database– and sold to those who have an interest.

- Best Practices: The transfer of best practices has also been highlighted as an important and widespread managerial practices that enable the transfer of knowledge within the organization (Szulanski, 1996).

- Knowledge integration: Grant (1996) identifies the integration of knowledge by the production of goods and services as the main role of organizations. For him, the process of integration of knowledge becomes even more important than the creation, as it is the integrated knowledge that generates organizational skills and the more integrated the knowledge in the company, the greater the difficulty of imitating their skills.

c) Knowledge Utilization

As Davenport and Prusak (1998) observe, transmission and absorption of knowledge have no useful value if it is not used to lead changes in behavior or to develop new ideas. It is necessary to know how to use this knowledge in order to transform it into skills and products.

Some factors might influence people to use knowledge as, for example, they do not have respect and trust in the knowledge source, they are

missing time and opportunities, they are afraid to take risks and quickly judge that some knowledge is not important (Davenport & Prusak, 1998).

Lei, Hitt and Bettis (2001) present a model to use knowledge-generation skills in an integrated way based on three critical factors: the first is the development of an organizational memory, which helps the company identify and solve problems; the second is the promotion of experimentation, which can occur in two types – in a faster and radical way redefines products or process concepts to adapt them with the advances in technology or new markets needs and the other way is an incremental process to controlled and slower experimentations; finally, the third critical factor is the development of dynamic routines that help employees and organization to increase the knowledge, learning new skills and know-how.

d) Knowledge Protection

Knowledge protection is the organizations' actions to avoid that knowledge goes away. And this protection must focus in two ways: against the competition and against the possibility of it being at the mercy of the availability of its keeper. This phase is vital to organization competitively, but this process, as well as the knowledge utilization, has received little attention in the literature (Gold, Malhotra & Segars, 2001).

As this is a harder phase, firstly it is important that the company decides what knowledge is wanted and necessary to protect, and after, what mechanisms will be used for that purpose.

Winter (1998) points out that if the organization cannot hide its knowledge for a long time, it must take action in order to take maximum advantage of this knowledge before it is shared (or stolen).

Knowledge Practice Summary			
CREATION	**CONVERTION**	**UTILIZATION**	**PROTECTION**
Communities of practice creation Metaphors use in the communication Imperative investigations Organizations' failure and success analysis Learning laboratory Searching technology rent a temporary source of knowledge Contract employees Buy other company	Knowledge location and mapping Coding knowledge Communities of practice Experts' socialization Visits to centers of excellence Mentoring Routines, rules and standards Production scheduling Croups to discuss	Development of organizational memory Knowledge repositories Experimentation Dynamic routines Lawyers multiple	No coding knowledge Restriction on observation Division of knowledge Patents Contract monitoring and legal Rewards

Source: authors.

Figure 2. Knowledge Practice Summary

But what can be done to reach success in all those four phases? What practices must be used by organizations? In Figure 2 a knowledge practice summary is presented, based on the authors related before.

3. METHOD

This is a qualitative study that uses a hermeneutic approach. A qualitative study has these basic features: the natural environment as a direct source of data, the researcher as a major instrument for data collection, uses descriptive procedures studied in reality; searches for the meaning of situations for people and the effects on their lives, is concerned with the process and not simply with the results and the product, and privileges to focus on inductive data analysis (Triviños, 1987). The

aspect of hermeneutics is characterized by analysis and interpretation of narratives, obtained with interviews' transcripts conducted with the organization's employees.

The selection of subjects (interviewees) was an intentional non-probabilistic sample. People who work in ALFA organization in different levels and variety of roles and functions were selected. The interview was made to ALFA's owner and ten employees, five at the managerial level and five at the operational level. Each respondent received an encoding as follows: Owner, Managers (M1, M2, M3, M4 and M5) and Labors (L1, L2, L3, L4 and L5).

Data collection was done mainly by interviews, but some observation was also used. In the interviews were considered some aspects (Gil, 1999), such as: interview's preparation, establishment of initial contact, questions formulations, complete responses to stimuli, record responses and interview transcription.

For interpreting the data we adopted discourse analysis, in which the recurring themes were grouped according to their similarities and meanings, giving thus emphasis to the actual speech of the interviewees. Thus, the results were showed trough narrative fragments and in the analysis relations were made between these narratives and the theory (Bardin, 1979).

4. RESULTS AND ANALYSIS

The research findings are presented in six stages: 1) how does knowledge process occur in ALFA organization; 2) the organizational knowledge creation; 3) the organizational knowledge conversion; 4) the organizational knowledge utilization; 5) the organizational knowledge protection; 6) a summary with the manager and operational level confrontation.

4.1. Knowledge Management Process

One can understand knowledge management as a series of organization's efforts with the objective to create, acquire, convert, protect and use

their knowledge in order to build their competitive advantage. To achieve this goal, organizations make use of different components, such as information technology, organizational structure, vision and values and, above all, individual and group behavior of organizational members (Richter, 2002).

ALFA knows that it has many limitations but seeks sustainability and tries to practice such processes to achieve that. The managers and workers have the same view, pointed out that the company uses its skills to priorize the knowledge that represents value to the customer, as described below:

"ALFA has a very broad view of seeing into the future, we were limited to launch new products, and we did, the directors and managers, we started to contact people outside, designers of other cities like São Paulo, Porto Alegre... We made a partnership with some designers and then we increased our product portfolio to make us more competitive and to have a much higher level of creation and enabling more rapid replacement of products in line" (M1).

"The firm has a staff working in the design aspects, some from other states. So the company is always looking to keep up with trends and to better serve its customers" (L4).

To the managers there are a lot of advantages in using knowledge management process, including: process optimization, problem solving and ensuring the perpetuation of the company.

Interestingly, this knowledge is seen not only necessary to keep the actual business competitiveness, but also as a way to enable organization to open new sources of business. This point of view is highlighted by Hamel and Prahalad (2000) as an important competition and survival source.

4.2. Knowledge Creation Practices

ALFA has few initiatives to create knowledge but it was found that the organization is seeking qualification. Nowadays, all employees (managers

and workers) have just receivedquality training with focus in the 5S's implementation. Both managers and workers consider that this training was very important because it was the opportunity to develop a culture for reflection and practices analysis. The course created new prospects for the company working towards the creation and development of new knowledge, as shown in the narratives: "Before, there was no discussion in group, now with the course 5S we meet to see what needs improving in the areas of the organization" (L4). "ALFA has a very broad view to the future, but was limited in launching new products. The 5S program gave impetus to this new form of management" (M1).

It was possible see that ideas are created by employees' insights and that the organization gives them space, openness and support to turn their insights into reality. This is a fundamental aspect for the creation of new organizational knowledge, according to Nonaka and Takeuchi (1997). The meeting of these employees seeking to develop improvements can also be classified into what Davenport and Prusak (1998) call the networks or communities of knowledge holders that are led by the same interests and goals and seeking to solve organizational problems together.

It was observed that the meetings to find new ideas have significantly contributed to the creation of best practices in this organization. Dixon (2002) says that the main meeting role is the knowledge sharing in the way that groups work allowing that people in different areas and levels in the organization change knowledge.

The second practice identified in ALFA to create new knowledge is the formation of specific working groups in their areas, as shown: "we construct a goal and it is assigned to a manager who creates a learning group work" (M4).

According to the managers, after the creation of sectors' meetings groups is searched internal and external knowledge through formal training, technical visits, discussions and exchanges of experience. And all this knowledge is recorded as part of the company documentation. It is noted that the practice of recording the meeting results started a few month ago in the organization.

Whit these work groups there were improvements in the organizational structure, started the use of external consultants and the development of people and technology. About the external sources, ALFA hired expertise professionals, that Davenport and Prusak (1998) consider a great practice, and made technical visits to learn through the successes of other companies, as recommended by Garvin (2000). Using external source brought as main result a different way of doing projects in the company, as shown in the statement: "All this turns into a different way to work, we learned a new way to develop projects, and this way was unknown" (L5).

The third practice identified in the interviews to facilitate knowledge creation is developed only by the design area and consists that with the knowledge production process and considering the financial aspect and market position, identify the best resource uses (material or human) to generate maximum value for the company and to better serve the market. This practice can be classified with what Kissimmee and Prusak (1998) call merging, meeting people with different perspectives to work on joint projects.

"When you begin to mix people with different views, it turns the discussion richer. What we say is that the reality is not hard and based on lifelong learning each people can see a different perspective... So try to capture the different views and understandings can generate a much better reality vision" (M1).

With this narrative we can see the group's intention to question their own mental models, seeking new possibilities for action in the future, looking for priority, things that are essential to any learning process, as Kim (1998) and Turvan (2001) pointed out.

4.3. Knowledge Conversation Practices

In the knowledge conversation practices were presented the ways used in ALFA to encoding, sharing and integrating its knowledge.

a) Encoding

According to one manager, a strong point of knowledge management is to ensure the maintenance of knowledge within the company. In his words, "the more knowledge you have described, the better, because if you have to lose some people in the process, the loss for the company is smaller" (M3).

This is the goal of coding, to take the most intelligent and organized knowledge as possible, through its description, mapping or modeling. The first step, according to Davenport and Prusak (1998) is to identify what knowledge you want to encode. To this end, the ALFA has a practice to generate database of drawings and prototypes that serve for future reference, and generation of new parts. This coding practice is focused in some departments of the company, not being current in all areas. The design and managing area have encoding routines, whereas the other areas like production and shipment normally use verbal communication and rarely record and encode knowledge for future use.

"I believe that the administrative areas have this, we here in the production area, we are not .... What happens is that the expertise teaches the beginners and this is the way to multiply knowledge in ALFA" (L4). "Everything is digital, all is inside the computer, so we have all saved" (M2).

The knowledge is encoded, through a process of research done by the Designer, Commercial and Technological Managers. The process began with a workshop in those two areas in order to instruct them to identify the critical technologies for the organization and its sector. Monthly, the area of technological development has meetings with all employees to obtain suggestions and critics with the intention to develop new technologies. All this information is analyzed for further implementation. To determine the technologies' priority, scores are created (of one to ten) based on criteria such as urgency and impact on the organization. Moreover, the implementation of new technology takes into account financial contingency (necessity x result).

The patent policy can also be identified as a form of codification, according to Davenport and Prusak (1998). But this organization does not patent their products, because variety is extremely large and needs constant variations because it is based on trends.

b) Sharing

The sharing process has different visions in ALFA. For some, this is a natural practice in the company, as shown in this manager statement: "People are naturally motivated to share because the Alpha has a strong technological project which was the acquisition of laser technology for cutting large thick, short sheets. It was born from a project in which people had to sit, discuss and exchange knowledge, thus the emphasis on knowledge, learning and technology has always been very natural" (M5). For others, sharing represents their greatest challenge, as shown by another manager: "The difficulty we're having in the quest to educate people within the company about the importance of sharing knowledge ... only leads me to believe that this is not happening, that is not natural, that is not part of their routine" (M1).

"People travel, make requests, manage information, but do not share, and this difficulty, this change in mentality has to occur here in ALFA. Yesterday, I attended a discussion: will people have to get the same information as other areas already searched, because they sought not to share with the company" (M4).

"How to encourage individuals who have knowledge to share this knowledge with new people who are coming and to maintain business continuity and competitive advantage? This is the great secret. How to take the knowledge of people without hurting anyone's affection" (Owner).

"What is the mechanism to make this knowledge to migrate to the company and not to remain in people's heads? This is a matter that we don't do. Besides not having human capacity, we have a methodology truly sharp and well aware they can do that ... unless the person aggrieved" (M2).

The last two statements, show that the managers recognize that employees are giving up something important when they volunteer to give their expertise to the company. As stressed by Dixon (2002), sharing knowledge means for individuals to offer part of their identity, often built with frustrations and difficulties. Currently, in one manager vision, people do not feel aggrieved in this process due to the culture of the organization's challenges, which makes the employee feel rewarded when it reaches its challenges, but it appears that there is a limit between the pursuit of knowledge by ALFA and the possibility of hurting people's feelings, as the following account:

"People do not feel aggrieved because they feel challenged; they feel rewarded by the challenge they will reach. But you have a limit in this business. ... Until that point, in fact, you have to go in search of knowledge, taking the knowledge that I have within the business and I'm not going to hurt the feelings of people who actually are contributing to this knowledge come" (M3).

Among the causes of the difficulties in internally sharing knowledge we observed problems of communication with less educated employees who felt at times not effectively integrated to participate in activities with managers. Despite this feeling workers use the available time (coffee or lunch time and informal meetings) to work in the creation and sharing of knowledge.

It has also been identified as an obstacle to knowledge sharing the lack of awareness of people and time pressure, as shown by the following statement: "Hindering: perhaps lack of awareness of the importance of sharing and formal methods.... Complicating the main mechanisms for formalizing the exchange is the pressure of time" (L2). "I cannot tell you how it is, how it works... Even the basics, people often ask other people in order to be informed if there is one chain and I ask for someone, if he/she can indicates someone who can tell... As we already have those key people, we will head to them" (L3).

Currently, ALFA's practices and programs to encourage knowledge sharing are: transferring information obtained in training and/or visits,

management meetings, Quality Program (5S) and multidisciplinary working groups (to solve specific problems).

Every ALFA employee is committed to passing on information to be achieved by organization, like observed in some statements: "Company is accessible to schedule meetings with whoever we want... I do not like too many meetings, but looking at my session meeting regularly to solve issues that have already been quoted... We have openness by the company to meet and solve problems. The exchange of information is constant between employees and managers of the area. It is allowed and encouraged by the owner" (M1).

As already mentioned, the activities promoted by the working groups, support this practice through meetings, a report template available in the company, which includes date and place of activity - information relevant to ALFA, recommendations etc. Once completed, the document is available for access by any employee or area. However, according to one worker, this model is not suitable for the purpose of facilitating the sharing: "This here is too little, is more informative, if you want to know how the visit of the employee was and what he learned, you will not be satisfied with a paragraph" (L4).

ALFA had, what is called "Annual lectures" and this kind of meetings are important to combine explicit knowledge, as explained by Nonaka and Takeuchi (1997). Annual lectures occur when the owner presents the dreams of ALFA, what it wants to be and what they're doing to it. To support them, general managers explain what each area will be doing to achieve them, in terms of production, quality, environment, people, human resources and management as a whole. Some opinions about it are: "With this, there is no way you stay out of business. And that makes employees very proud..." (M1). "Where you have a whole marketing vision - a vision of security, a vision of quality, as we're walking, how far we go" (M2).

Finally, the company tries to keep everyone informed of route changes in its goals, and strategies on the market in its area. These meetings

contribute to the combination of knowledge (Nonaka & Takeuchi, 1997), in which explicit knowledge is transformed into new explicit knowledge, through the systematization of concepts.

The ALFA Quality Program is still in process of implementation and aims to encourage the pursuit of best practices. This incentive depends on the interest of each employee, as the company provides the opportunity, not only those who refuse to embrace progress. This thought is portrayed in many interviews as we can see in the following account: "The skills are acquired through participation in trade shows (twice a year) on mechanical, pneumatic, joins fourteen/fifteen employees funded by the company to increase the share of the company's technology and for all to see... The staff has insight into new ways of production and eventually they assimilate new ways of working through the display of more modern equipment and exchange of experiences" (M3).

The stories use is identified by Swap, Leonard, Shields e Abrams (2001) as a mechanism of knowledge transmission that privileges its tacit dimension, ideal for transmission over the managerial system, and organizational norms and values This point is reinforced by Nonaka and Takeuchi (1997), which state that the internalization of tacit knowledge base of individuals through mental models or sharing technical know-how, added to the experience of socialization, externalization and combination. And, then, tacit knowledge needs to be socialized with other business partners, starting thus a new spiral of knowledge creation.

In ALFA there were a consensus that to knowledge internalization is essential to search innovative process and individual creativity development, ensuring the expansion of the scope of practical experience. The most commented story among employees of ALFA is the value that the company gives to innovation since its foundation, which, as shown in the statement. This can be proven by this narratives: "Entire company was born revolutionary in all its processes, and this created a posture, an attitude that remains. This will be transmitted to all who come here and I believe that if we lose this, in essence, the company recently, the company survives due to this culture" (Owner). "ALFA has developed within a

concept of innovation. Or we develop an innovative project that would justify you create new models, designers or, if you are not innovative you cannot be in a competitive market as the metal-mechanic" (M4).

Finally, as a tool to support the sharing of information the organization has its home page and intends to launch an internal newsletter. A kind of small journal, published monthly, is regarded as the institutionalized means of sharing business information, contains sections required in terms of technology, directions employed innovation. ALPHA magazine will be outsourced by professionals who have an affinity with the area and entrance in the company, whose focus is the sharing of innovations that the company promotes or plan to implement.

c) Integration

For Grant (1996), this is the main role of organizations, integrating the expertise of different specialists. One mechanism cited by the author for it happen are the rules and instructions, which in ALFA can be illustrated by the standardization that the company has. Was noted that such procedures need further development and expansion, because it is perceived by the statements that much of what is done in the organization is transmitted verbally and focused on individual knowledge.

To achieve a higher level of standardization and maybe in the future get an ISO certification, the ALFA has trying to qualify its employees and created procedures that to make all the knowledge explicit and normalizing. Such narratives can proven this view: "What we have to integrated knowledge is about the prototypes, and administrative area… these sectors have a need to do this kind of computer control. However, in the production area is all very verbal" (M1). "ALFA believes that is only important in the administrative and prototypes area. In my company it's all verbal in the production... It's very verbal" (Owner). "The organization's practices are to verbalize that I know, but in true are not written procedures that we made in our day to day" (L1). "About the knowledge that we learn nothing is written ... Everyday life is going to give the experience ... But nothing is written is all in the head of the employee." (L2).

Even partially, the company demonstrates that seeks to broaden this integration practice and it occurs mostly in those strategies' sectors that trying knowledge systematization. But are a clearly opinion difference, managers think that knowledge are more integrated than labors. To the labors view there is no explicit knowledge, all is tacit.

4.4. Knowledge Utilization Practices

The formalization of knowledge management in ALFA begins within a culture of knowledge use. Some employees were participating in the course of a quality development that led to the reflection that the company could work better skills and technologies, and may even transfer technology internally. To them is very important to implement what they were learning. But the ALFA's owner recognizes that often this is not happen and that there are natural barriers in the internal culture that need to be overcome. Some narratives about that are: "The training helped us think more... The company seeks new models from participation in fairs and observations as well as their own creations..." (L1). "We made a partnership with Some designers give commission on sales. This allowed to increase our product portfolio makes us more competitive and having a much higher level of creation and enabling more rapid replacement of products in line with underperforming sales" (M5).

Is necessary pointed out that to ALFA the only knowledge that can be put in practice is about new products. No one speak about new process or change the way to do things. The interviews also demonstrated that both managers and labors reflect about all that was learning always think how to put in the organization activities and products.

4.5. Knowledge Protection Practices

ALFA understands the knowledge strategic role and use some practices and rules that seek to prevent it can be lost, by carelessness or naive. This concern seems to be present since the organization creation. However, as the products has as main focus young consumers, was necessary many changes to reach the tendencies, so the ALFA's owner think that patent all products would be quite expensive since changes happen very quickly.

In the interviews are found the concern about knowledge protection, but the think was once the product leaves the company becomes public domain and you cannot control his copies.

What ALFA is trying to do is speed in launching new models, to her owner it is a strategy to always be ahead of the competition. Another practice that the company uses is a policy of maintaining their talents, through the enhancement of its staff. A statement that summarizes this understanding is: "In our business knowledge protection is not possible, when we put some new is the market our competition can imitated it easily. What we have to do is always create and put news to ours consumers" (M1).

All managers showed the imitation worry, but it did not happen at the operational level. Only one worker said something about it. And, to the end, it was observed that the only protection practice in ALFA is about internal knowledge by employees maintaining and avoiding that some documentation (strategic aspects and products prototypes) turns of public dominion. Some documentation is just kneed by managers.

4.6. Results summary

In short, we can observe that both managers and operational level has great concern with knowledge management and its importance. But the organization's practices show that these processes occur almost exclusively at the manager level. Table 1 shows these differences better

Table 1
Knowledge Management in manager and operational level

	Importance		Performance	
Phase	**Manager Level**	**Operational Level**	**Manager Level**	**Operational Level**
Creation / acquisition knowledge	x	x	x	x
Knowledge conversion	x		x	x
Using the knowledge	x	x	x	
Knowledge protection	x	x		

Source: authors.

As expressed in the table, the managers consider all the four knowledge management phases were important. In the same aspect, the workers considered three phases important, excluding the knowledge protection. So, not many differences were found in this aspect.

But, another reality was observed concerning performance, i.e. if the phase really happens in each organizational level. It was found that at the manager level knowledge creation, conversion and utilization happens. At operational level only knowledge creation and conversion have organizational incentives. In the end, it was verified that no level had ways to protect knowledge.

So, was observed that ways applied by ALFA to manager its knowledge are still incipient. At management level there are some practices regarding the creation, conversion and use of knowledge, but the knowledge conversion is the most working and important. And at the operational level, such practices only occur in the process of knowledge creation.

5. CONCLUSION

This work was mainly theoretical ideas from Gold, Malhotra and Segars (2001), authors who seek to synthesize the knowledge management process into four distinct procedures: creation and acquisition, conversion, utilization and protection.

Starting from this premise, was made a qualitative study to identify how such procedures were worked out in a Brazilian metal-mechanical industry. The focus was to examine whether these procedures were employed throughout the organization, independent of the level of the hierarchical structure.

Knowledge management requires awareness of the need to learn and promote an environment of change, requires thinking and pro-active in promoting the growth of the company, needs trust in group and teamwork by promoting dialogue, and requires an understanding of the organization as a learning system. So, this process must be understood

as a social construct, should be viewed primarily as a phenomenon that emerges spontaneously and/or social interactions of individuals, especially in the workplace. Learning communities must be relevant for qualifications and skills development necessary to succeed in the knowledge economy.

It was identified that there is unanimity among the study subjects regarding positive connotation of the work, and that it is a central theme in the lives of all respondents. Knowledge Management as one of the elements that give meaning to work is a recurrent theme in the interviews of the actors in this research, as a stimulus to professional growth in the organization. It was also observed that the modes of knowledge management are influenced by organizational context in which corporate culture is responsible for stimulating and/or inhibit learning.

The empirical study revealed a set of personal and organizational factors that promote learning, such as: working environment, openness and predisposition to learn to learn, style and profile managers, relationships between employees, access to information and resource availability. It is noted however, that such attributes identified are more effective at the tactical level than at the operational. As factors that inhibit learning, were identified: competition, the situations of embarrassment, the fear of exposure, the culture of obedience, the difficulty to expose their ideas in public, the work rate, error intolerance, individualism, and pressures.

This study first objective was to ascertain how important are the two levels attributed to the processes of creation, conversion, utilization and protection of knowledge and the results showed very similar perceptions, only at the operational level the knowledge conversion is not considered important.

The second objective was to verify if indeed the process of creation, conversion, utilization and protection of knowledge occurred in two levels. The results showed that at operational level were the creation and conversion phases and at the management level were creation, conversion and utilization. In both levels there were no practices of knowledge protection.

At the end we conclude that in ALFA in the knowledge management the informal processes are more effective. The company has not focused in the knowledge dissemination formal processes because little written documentation is used and the focus in these moments is on verbal interactions in their daily activities. And the few organization's formal processes are just at managerial level and restricted to some sectors, according to the interviews to both managers and labors.

Finally, summarizing the results, it can be said that the Brazilian metal-mechanic industry uses a process of creation, protection and acquisition of new knowledge. However, these aspects are still focused on the management level of the company.

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