PS-213

KNOWLEDGE SHARING AND CREATION: DEFINING THE CONCEPTS AND RELATIONSHIPS BETWEEN THE TERMS

Patricia de Sá Freire - Universidade Federal de Santa Catarina – Santa Catarina – Brasil – anadonnerabreu@hotmail.com
Alexandre Ueno - Universidade Federal de Santa Catarina – Santa Catarina – Brasil –atu@certi.org.br
Isamir Carvalho - Universidade Federal de Santa Catarina – Santa Catarina – Brasil – anadonnerabreu@hotmail.com
José Fernando Spanhol - Universidade Federal de Santa Catarina – Santa Catarina – Brasil – spanhol@led.ufsc.br
Colaborador
Neri dos Santos - Universidade Federal de Santa Catarina – Santa Catarina – Brasil – neri@legc.ufsc.br

This study proposes to identify definitions for the terms *Knowledge Sharing and Creation,* analysing differences, similarities and the relationships between the terms. A qualitative bibliographic study was conducted using a systematic review of the literature and a directed search of the subject as data collection tools to refine the search and expand its scope. The results indicate a close relationship between the terms, but with no consensus about the definitions of these concepts due to the various applications of the terms, because of the variety of applications and understandings of Knowledge Management and the type of knowledge that is being worked with - either tacit or explicit. The study concludes that for Knowledge Management to constitute a field of study without losing an interdisciplinary essence, constant vigilance is needed in relation to the definitions of the key concepts of the field and debate should be encouraged about different translations and classifications used by researchers in the field. A model for an Integrated Knowledge Creation and Sharing Process is presented as a contribution to studies in the field.

Keywords: Knowledge Creation and Sharing, Conceptual Framework; Concepts and Relationship; Interdisciplinarity.

1. INTRODUCTION

Any interdisciplinary study requires a translation of languages and a search for consensus concerning the conceptual definition of terms used among different disciplines, which will lead to a better understanding among those involved. As Pacheco, Freire, Tosta affirm (2010, p.137), interdisciplinarity "seeks to integrate the truths of each discipline as simple units, but accept their differences and respect the complexity of their own formation."

Knowing what each discipline understands by the term in use not only facilitates working together, but principally guides the discussions inherent to the research process. That is, it is necessary to discuss the differences and similarities among the meanings of the terms used by different authors to reach a consensus about the meaning that should be adopted for each term to be worked with, even before beginning research.

For the field of Knowledge Management, this dialog among peers is highly important, because its object of study – organisational knowledge – is only created from the sharing of knowledge (Nonaka and Takeuchi, 1997; Von Krogh, Ichijo and Nonaka, 2001; Nonaka and Toyama, 2003). Dialog makes ideas explicit and allows sharing of knowledge, which generates new knowledge.

Since Knowledge Management (KM) is an intrinsically interdisciplinary field, each researcher, depending on his field of origin, aggregates different meanings and key concepts of KM, as appears to be the case with the terms *Knowledge Creation and Sharing*. There is still no consensus concerning these terms (Tonet and da Paz, 2006), about what they are and how they are processed among agents – people and artefacts.

In this way, because of the need to reach a consensus about the main terms of the field of Knowledge Management, the terms Knowledge Sharing and Creation were chosen to serve as the focus of this study. This choice is based on the importance of the creation and sharing processes for Knowledge Management, because they are the first and second step of KM.

Within this context, the following research questions were defined:

- What are the various definitions found in academic journals for *Knowledge Sharing and Creation*?
- What are the approximations, differences and existing relationships between the terms?

To respond to these questions, the objectives of this study include analysing the differences, similarities and existing relationships between the terms *Knowledge Sharing and Creation*, and identifying the different definitions for the two terms presented in the scholarly articles.

2. KNOWLEDGE MANAGEMENT AND ITS PROCESSES

The first definition of Knowledge Management dates to 1986 (Wiig, 1993) which identified it as: "a systematic, explicit and intentional construction of knowledge, and its application to maximize the efficiency of, and return on the knowledge assets of an organisation" (apud Alvares, Baptista, Junior, 2010). Knowledge Management, according

to the *Yankee Group*[1] seeks the establishment of efficient and effective contacts between those that need to know and those who know, and has the objective of converting individual to organisational knowledge. According to Ann Macintosh (1996) KM, in addition to generating knowledge assets, also seeks the management of processes that operate these assets, broadly encompassing the aspects of knowledge development, preservation, utilisation and sharing.

Since there is still no Theory of Knowledge Management, because this is a very new discipline, there is also no consensus among the different articles about the number of steps in the KM processes. In some cases, it is argued that knowledge and management are contradictory concepts, according to Schultze, Stabell (2004).

Fleury (2001), distinguishes three processes: acquisition and development of knowledge; dissemination of knowledge and; memorisation of knowledge. Other authors, like

Eboli (1999), work with the four steps of development, generation, assimilation and diffusion and application of knowledge. Or others maintain the four phases are: generation, preservation, utilisation and sharing of knowledge. Authors can also be found who make the classification in four processes, but nominate them as: creation and acquisition of knowledge; organisation and storage of knowledge; distribution of knowledge and application of knowledge.

Taking a deeper look at the first steps of the KM processes, Nonaka and Takeuchi (1997) perceive this step no longer as an action, but as more of a process. The authors subdivide the step of knowledge creation into four more processes: socialisation, explanation, combination and internalisation.

Others identify five steps of KM, including the Manual of Knowledge Management Techniques and Tools of the Asian Productivity Organisation (APO) which includes these five steps: knowledge identification, knowledge creation; knowledge storage; knowledge sharing; and application of knowledge.

Articles are also found that point to seven processes of KM such as Buoro (2005) who lists the following: knowledge identification, storage, creation, sharing, monitoring, updating and disposal. Buoro indicates knowledge creation before knowledge sharing, because he focuses on knowledge creation from an installed base and the sharing of that knowledge created by the organisation.

However, in most theories, the knowledge sharing phase is indicated as the initiation of the knowledge creation process (Nonaka and Takeuchi, 1997; Nonaka and Konno, 2003; Koenig, 2002; Firestone and McElroy, 2003; McInerney, 2006). The differences in arguments and understandings are usually determined by whether authors are speaking about sharing of tacit knowledge or explicit knowledge that is already stored in the installed base; by the facilitators or inhibitors for the sharing and if they are studying sharing among individuals, groups or companies, and whether they are studying the sharing in a live or virtual environment, by means of Knowledge Management System or not.

[1] http://www.yankeegroup.com.

3. METHODOLOGICAL PROCEDURES

To achieve the objectives of analysing the differences, similarities and relationships among the terms *Knowledge Sharing and Creation,* a qualitative bibliographic study was conducted to identify the different definitions offered by academic journals for the two terms using as a tool a systematic review of the literature, respecting the steps determined by the Cochrane Handbook (Cochrane Collaboration) and the CDR Report6 4 (NHS Centre for Reviews and Dissemination, University of York), concerning the steps of planning, execution, analysis and reporting. Then a directed search of the issue was conducted in books, dissertations and theses to expand the scope while maintaining the focus.

A systematic review of the literature was conducted in the Scopus data base, because this multidisciplinary base allows searching among key words, abstracts and titles of publications. This type of study, as emphasized by the Brazilian Federal Agency for Support and Evaluation of Graduate Education (CAPES) on its site, "is the form recommended to begin a systematic bibliographic study, with broad coverage and that is methodologically correct." Freire (2010, P.45) indicates that "the Scopus base is today the largest base of abstracts and bibliographic references of scientific, peer-reviewed literature, allowing a multidisciplinary and integrated view of the relevant sources for systematic bibliographic research."

Thus, this research respected the required steps of a systematic review, including identifying, selecting and critically evaluating the studies previously conducted about a theme and collecting and analysing the data from these studies. By means of the services provided by Scopus, it was possible to identify articles in periodicals and other scientific and technical documents published about the issue in question (FREIRE, 2010). Through the abstracts provided and articles with permitted access, the content of documents was available, which allowed evaluating their relevance with greater precision and identifying the concepts analysed in the construction of the work.

The study considered articles published in scholarly periodicals and journals in order to design a general view of the academic research about the issue. The descriptors used were *"Knowledge Management," "Knowledge Sharing," " Knowledge Creation" (they were in English given that the Scopus data base is an international data base.*

The survey of the term "*Knowledge Management*" was conducted within parenthesis, so that publications about *knowledge* and *management* in general were not selected. Simultaneously, the study proceeded with the terms "Knowledge sharing" and "Knowledge Creation."

Below we present the first analyses conducted based on the results.

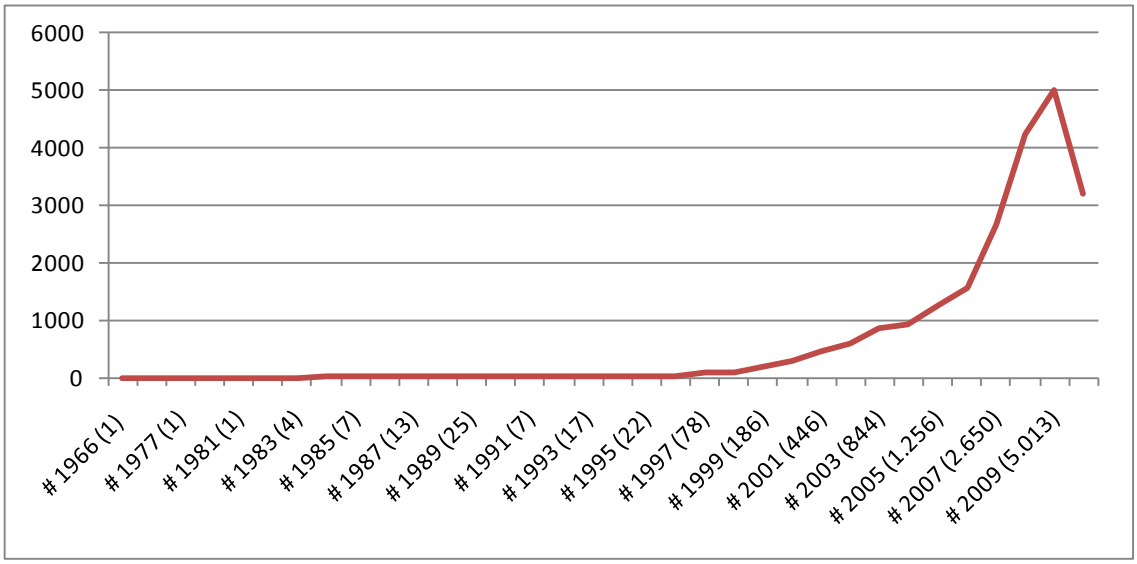
4. KNOWLEDGE MANAGEMENT, SHARING AND CREATION

The initial search for the term Knowledge Management identified 21,624 articles, which allowed constructing the scenery related to the research subject.

The first article published about KM, registered in the Scopus data base is from 1966 (BYRD et al., 1966). After this article, ten years passed before two others were

published, one in 1976 (WILSON; EMERE, 1976) and another in 1977 (FREEMAN, 1977). The theme returned to motivate some academic publications in the 1980s, although only in the late 1990s did questions relating to Knowledge Management begin to raise stronger academic attention, with a significant increase in publications until today as indicated by Graph 1.

Graph 1: Articles about KM registered in Scopus



Source: prepared by the authors

The analysis of the 50 most cited articles in the Scopus data base (which total 61.6% of the citations) reveal that articles that study KM are predominated by studies about the creation and sharing processes - with 54%. This percentage can be stratified according to the following distribution:

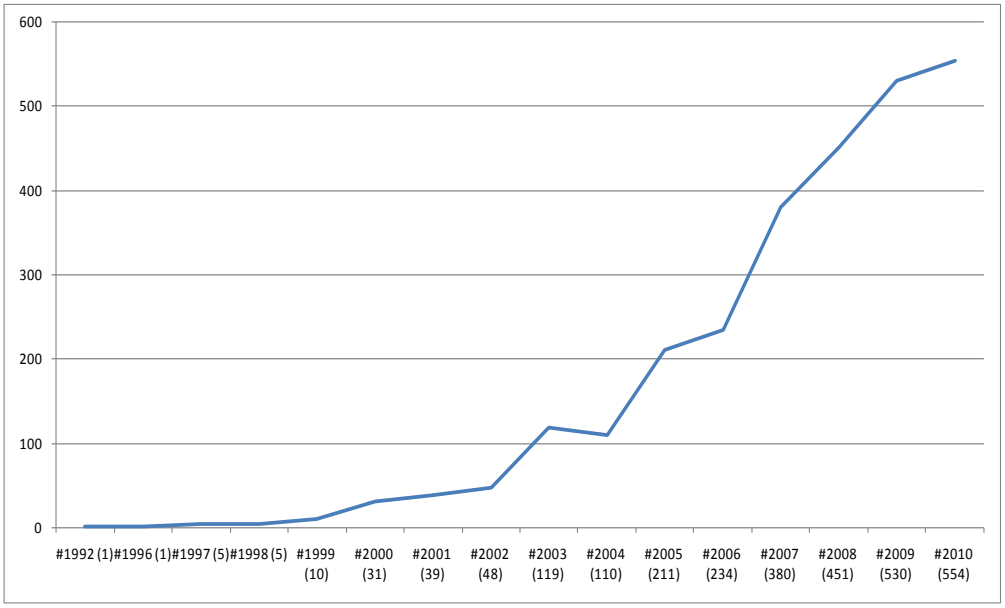
- Knowledge Creation: 04 (8.0%)
- Knowledge Sharing: 17 (34%)
- Knowledge Creation and Sharing: 6 (12%)
- Others: 23 (46%)

4.1. KNOWLEDGE SHARING IN KM

Knowledge sharing in KM was an issue in 2,743 articles on the Scopus database from 1992 and 2010.

Among the authors who research KM who study knowledge sharing, those with considerable productivity include Rezgui, Y. (13 articles from 2006 - 2010); Gottschalk, P. (with 13 articles from 2006 - 2010); Piattini, M. (with 12 artigos from 2004 - 2009); Zhen, L. (with 11 articles from 2007 - 2010) and Vorakulpipat, C. (with 9 articles in conjunction with Rezgui, Y. from 2007 to 2010).

Graph 2: Number of articles about Sharing found in Scopus



Source: Prepared by the authors

A comparative reading of the two graphs displaying academic productivity about the issues of KM (Graph 1) and Knowledge Sharing (Graph 2) clearly reveals that since the second half of the 1990s, particularly after 1996, there was an increase in publications related to the subject of knowledge management and studies about knowledge sharing arose in parallel.

Based on the analysis of the articles about knowledge sharing, concepts about the term can be identified and the construction of Table 1 was initiated.

Among the publications, we see that when some authors use the term *knowledge sharing* they look at the individual action of sharing tacit knowledge including ideas, perceptions and experience paying attention to the context with its pressures and limitations. Other authors use the term to describe processes of dissemination and diffusion of information and organisational knowledge, or that is, treat the term knowledge sharing in relation to knowledge that is already explicit and formalized. There are also authors who compare knowledge sharing to the process of transfer of information and knowledge. Most of these authors come from the field of communication and information. In this article, we focus the analysis on the two first groups of researchers because they are from the field of knowledge management

Table 1: Definitions of Knowledge Sharing

Author Data	Concept
Davenport & Prusak (1998)	Knowledge Sharing (Transfer) = transmission + Absorption (use of knowledge)

Terra (1999)	Process of knowledge dissemination in an organisation at the ontological level.
Szulanski (2000)	Knowledge sharing is a transfer of knowledge but is not an isolated action where one individual transfers something simply to another. Sharing is an integrated process composed of phases, each one with its own characteristics.
Szulanski (2000) e Strocchia (2001),	Knowledge sharing develops by means of an integrated process that has phases with specific characteristics
Bartol e Srivastava (2002	Sharing of information, ideas, suggestions and organisationally relevant experiences, of the individual with others,
Buono (2005)	Effective occurrence of communication and transmission of knowledge of the storage sources with the collaborators who benefit from or apply them
Tonet and da Paz (2006)	Knowledge sharing occurs in a process integrated by a set of independent but sequential phases

Source: prepared by the authors

An analysis of the historic context found that the first article registered in Scopus about the issue of Knowledge Sharing was published in 1992 by Salvini and Williams (1992).[2] The researchers conducted a discussion that is still current, by positioning Knowledge Management Systems (KMS) as bases for the sharing of organisational knowledge, relating the role of a knowledge based management system and a specialist system, with the data base management system and its standard applications. The authors affirm that the base of KMS seeks to facilitate the storage and manipulation of knowledge for knowledge based systems, which allows the practical use of the system and its utility in knowledge sharing.

Dated from 1996, the second article published about the issue is extremely relevant to the field, as indicated by the 129 citations registered in the Scopus base. In this article, Appleyard[3] (1996) treats the term Knowledge Sharing in a similar manner to the terms knowledge dissemination and diffusion. The study sought to understand how the flow of knowledge is processed beyond a company´s borders, by examining patterns of knowledge sharing in the semiconductor industry. The author begins from the principal that the dissemination of knowledge among companies performs a fundamental role in the evolution of management technology, but affirms that little is known about the repercussions of the dissemination itself. By comprehending the mechanisms and determinants of the flows of knowledge, the author affirms that managers and formulators of public policies can more effectively influence the diffusion of knowledge. It is understood that the focus of Appleyard's study (1996) is sharing knowledge that is already explained and formalized in KM systems among the partner companies.

[2] Researchers in the Department of Computer Science, Electrical and Electronic Engineering Heriot-Watt University, 79 Grassmarket, Edinburgh EH1 2HJ, Scotland

[3] Researcher from the University of California USA

Like Appleyard (1996), 44% of the 50 most relevant articles registered in the Scopus[4] data base focus their studies on the role of the KM systems for organisational knowledge sharing. That is, they study knowledge sharing from the perspective of KMS.

With this world view, Cabrera and Cabrera (2002) published one of the most cited articles (146 citations) among the articles studied. These authors maintain that the exchange of information among employees is a vital component of the organisational knowledge management process and a KMS is the best investment for breaking time and distance barriers among individuals. But, the authors warn that even with high investments, it is often difficult to motivate employees to use the system to share their ideas. This problem is caused by difficulties inherent to cooperation. Looking to the social dynamic that blocks knowledge sharing, three interventions arise: those aimed at restructuring the return to individuals who are open to sharing; those that try to increase the perceptions of effectiveness of the sharing process, and those that strengthen employees' perception of the group identity, emphasizing their individual responsibilities within the group results. That is, Cabrera and Cabrera´s (2002) concern is with the sharing of the tacit knowledge of the individuals.

Based on an analysis of the first results of the systematic review of the literature it can be concluded that there are differences in the understanding of the meaning of shared knowledge due to the fact that some authors do not explain if they are referring to the sharing of tacit or explicit knowledge.

Thus, we found[5] works like those of Salvini and Williams (1992), Cabrera and Cabrera (2002), Appleyard (1996) and, also, Terra (1999) and Buono (2005),[6] who relate the meaning of the term to dissemination or diffusion of knowledge because they are dealing with processes of dissemination of organisational knowledge, knowledge that is already explicit and formalized.

This differs from the approach in the studies of Nonaka (1994), Nonaka and Takeuchi (1997), Von Krogh, Ichijo and Nonaka (2001), Nonaka and Toyama (2003) who deal with knowledge sharing as a process previous to the creation of organisational knowledge, because they study the process of explicitness of tacit knowledge of the individual, indicating that this is necessary for the creation of organisational knowledge and, thus, to be possible to disseminate it through the organisation. That is, these authors (Nonaka and Takeuchi, 1997; Von Krogh, Ichijo and Nonaka, 2001; Nonaka and Toyama, 2003) and articles that base their works on these authors such as Freire et al (2010), distinguish the knowledge sharing phase (tacit) from the knowledge dissemination phase (organisational).

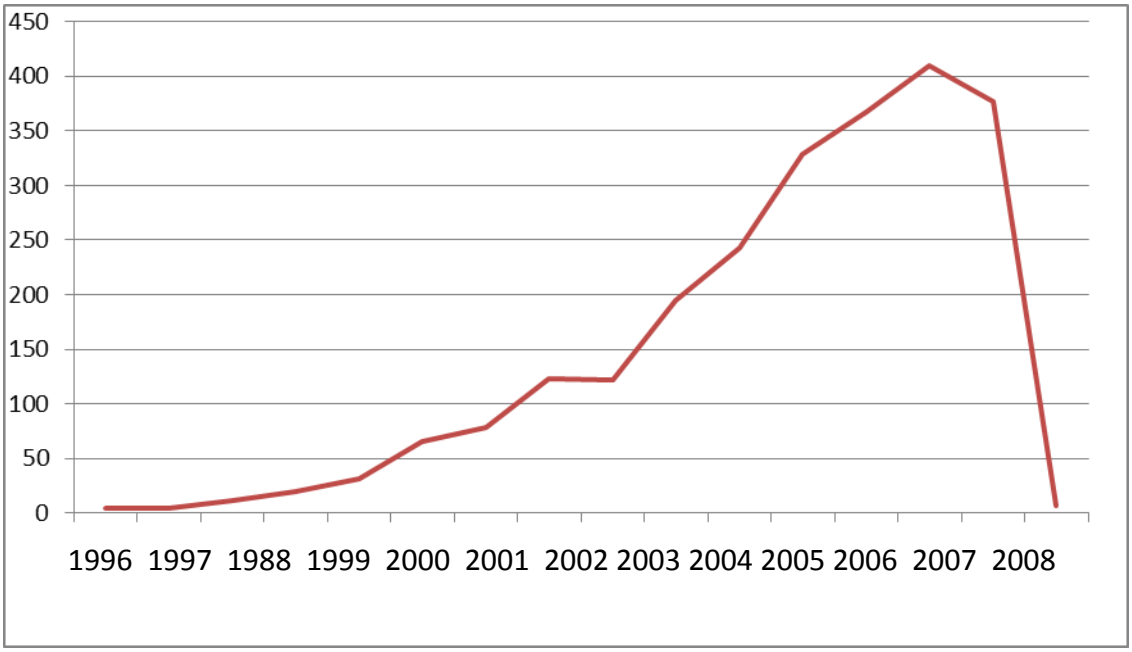
But, since both tacit and explicit knowledge are important for the capitalisation of corporate knowledge (Choi, B., Lee, H, 2003) it is necessary to establish consistency ratio that establish a two-step process: the step of sharing individual knowledge (tacit) and the step of sharing organisational knowledge (explicit).

[4] Publications with 48 - 565 citations resulting from the search for the terms "Knowledge Management" and "Knowledge Sharing"
[5] Authors identified through systematic review of the literature
[6] Authors found by later directed search of the subject

4.2. KNOWLEDGE CREATION IN KM

The study of the Scopus database found 2,387 articles about the subject of knowledge creation in KM, from 1996-2011. It is worth mentioning that seven publications from 2011 were already in the Scopus data base in December 2011, which means they were published in 2010 and dated 2011.

Graph 3: Number of articles about Knowledge Creation registered in the Scopus database



Source: Prepared by the authors

Compared with the previous Graphs about the issues KM (Graph 1) and knowledge sharing (Graph 2), the perception is reinforced of the high number of articles about the issue after 1996.

For this term – Knowledge Creation –all the authors understand it to refer to the development of new knowledge or emergent knowledge in the realm of organisations, as seen in Table 2.

Table 2: Definitions of Knowledge Creation

Author Data	Concept
Kogut and Zander (1992) Nahapiet and Ghoshal (1998).	Individual learning and creation of new knowledge occurs when people combine and share their personal knowledge with others.
Nonaka (1994)	Presents the concept of organisational learning as the process of creation of organisational knowledge. Includes a model called a continuous and dynamic Spiral, with 4 modes of conversion of individual tacit knowledge to explicit organisational knowledge:

	socialisation; combination; externalisation; and internalisation
Bock (1998)	Describes the knowledge creation cycle in an organisation in four steps: knowledge created in people's heads; captured knowledge; classified, indexed, contextualized knowledge; shared and utilized knowledge, which is modified by those who use it and can bring it back for the creation of knowledge.
McDermott (1999)	Only individuals can "know" and convert "knowledge" into action and it is the act of thinking that can transform information into knowledge and create new knowledge.

Source: prepared by the authors

The most relevant article found about Knowledge Creation (with 353 citations registered in Scopus) is that of U.S. author Simonin (1999) from Tufts University. The object of the study was to analyse the role of knowledge in the process of transfer of technological knowledge among partners in strategic alliances based on a sample of 147 multinational companies. It can be understood that this author works in the auto-poietic paradigm, because the study highlights the role performed by the ambiguity of knowledge as a mediator that is tacit, has previous experience, complexity, and cultural and organisational distance from the knowledge transfer process. The author concludes that these characteristics of knowledge do not allow it to be easily moderated by the organisation, making them dependent on their capacity for learning, on the level of collaboration of know-how among the partners, and on the duration of the alliance.

For Simonin (1999) effective sharing of technological knowledge in strategic alliances requires time and organisational competencies to create new knowledge. This study, as early as 1999, already offered leads to possible relationships between the knowledge creation and sharing processes.

Another important publication is that by Argote, McEvily and Reagans (2003), because it presents a framework that proposes to integrate theories about knowledge management, facilitating the combination of similarities among studies and the existing needs to be filled by future research questions about KM.

One explanation of how to process the creation of knowledge into organisational practice is offered by Argote, Gruenfeld and Naquin (2001). The authors explain how the members of a group gain experience when working together, developing new knowledge, understandings or perceptions that none of them had at the beginning of their interactions, or they could combine their previous knowledge into new forms to collectively create a new product.

The authors contribute to the differentiation of the term Knowledge Creation and other similar terms. Argote, Gruenfeld and Naquin (2001) argue that the processes of creation, retention and transfer of knowledge are results of knowledge management, but the creation of knowledge occurs when knowledge is generated in organisations; the retention involves the incorporation of knowledge into a repository and persists for some time; and the transfer is revealed when the experience acquired in one unit of an organisation affects others. As interactionists, Argote, Gruenfeld and Naquin (2001) believe that knowledge is created in the human mind when in social interaction.

The divergence identified in the articles is found principally in the different world views that guide the understanding of how the creation of new knowledge is processed.

Four paradigms were identified in the articles studied that support the understandings of their authors about the process of creating organisational knowledge. These paradigms are the Interactionist, Cognitivist, Auto-poetic, as well as the pragmatic, which can be classified as Functionalist.

The Interactionist, Cognitivist and Functionalist paradigms work with the belief that the knowledge created can be explained and then codified. Their differences are in the understanding of the level of interaction needed to process the learning. The cognitivist paradigm affirms that the creation of knowledge is processed only in the human mind according to universal rules. The interactionist paradigm maintains that it is processed in the human mind without following universal rules, but through a network of interactions existing in the local context of the cultural group to which it belongs. Finally, the functionalist paradigm holds that the creation of knowledge is processed both in the human mind and in the artefacts of the KMS with the clear objective of resolving a group's practical problems.

Each of these three paradigms appears to focus on a type or level of learning. The cognitivists, such as Madhavan, R., Grover, R. (1998) and Walsham (2001), focus their studies on individual learning. The interactionists, such as Long and Fahey (2000), Krogh, G., Nonaka, I., Aben, (2001) and Bresnen et al (2003) are concerned with the learning processed in direct communication among people, even if this communication is realized by electronic or digital media used to analyse the context and the social pressure. The functionalists, such as Wasko, Faraj (2000) and Shaw et al (2001), study the learning processes realized by means of a repository of knowledge, perceiving this repository as an agent of knowledge as active as the individual.

There are also authors, in the auto-poetic paradigm, such as Berends, Vanhaverbeke and Kirschbaum (2007), who also believe that the creation of knowledge is processed in social relations but is dependent on individual interpretations of the moment lived. For this line of thinking, the knowledge created cannot be explained clearly enough to be codified and understood by everyone. Complexity theory supports this world view.

Of course, all of these authors may present other world views in other articles and analyse other objects of study from the perspective of the other paradigms. The classification used here is based on the articles found in this particular study.

4.3. RELATIONSHIP BETWEEN SHARING AND CREATION

As Von Krogh, Nonaka and Aben (2001) affirm, to become competitive, companies can take advantage of the knowledge they have in the entire organisation, expand additional knowledge based on their current knowledge, take advantage of the knowledge of partners and other organisations and, completely develop new knowledge by means of new technologies or markets. The main processes for companies to be able to conduct any one of these KM strategies are the knowledge creation and sharing processes.

Thus, it can be affirmed that knowledge sharing is one of the key processes of knowledge management systems (Bartol and Srivasta, 2002) because this is the route for the explicitness of tacit knowledge that will begin the knowledge creation process, generating new knowledge.

The effectiveness of the creation of organisational knowledge, depends, according to

Von Krogh, Ichijo and Nonaka (2001), on the environment that makes possible encounters among people, promoting relationships that lead to the sharing of tacit knowledge. This is a space that Nonaka and Konno (1998) call “Ba” (or “place”), and which he defines as a shared space where the integrations needed for the creation of knowledge are processed, which can be physical, virtual, mental or a combination of the three.

As highlighted by Vorakulpipat and Rezgui (2008) the first phase of KM is knowledge sharing and, according to the literature, it is seen as a “repository of knowledge,” or that is, “an offer of knowledge.” Vorakulpipat and Rezgui (2008) also indicate that the Knowledge Creation Phase is the step related to the demand for innovation.

For Nonaka, Toyama and Konno (2000), this phase of Knowledge Creation is the organisational, social and collaborative structure of the dynamic KM process, because it involves the nutrition and continuous interaction among tacit and explicit knowledge.

For that reason, according to Vorakulpipat and Rezgui (2008), the first generation of KM (Knowledge Sharing) and the second generation of KM (Knowledge Creation) – respect three different dimensions: the social-technical (a holistic view that recognizes the interaction between social and technical factors for KM), the social-organisational (in which recognition, best practices and trust are the basis for the sharing) and the learning process, such as the 4 processes suggested by Nonaka (1994). For Nonaka and Takeuchi (1997) the dimensions where knowledge sharing should be processed to promote the creation of organisational knowledge are the ontological (whether individual, group, organisational, interorganisational or in a network) as well as the epistemological (from the tacit to the explicit).

It can thus be affirmed that, according to the scientific publications about the issues of knowledge creation and sharing based on the theme of Knowledge Management, there is a close relationship between the knowledge creation and sharing processes.

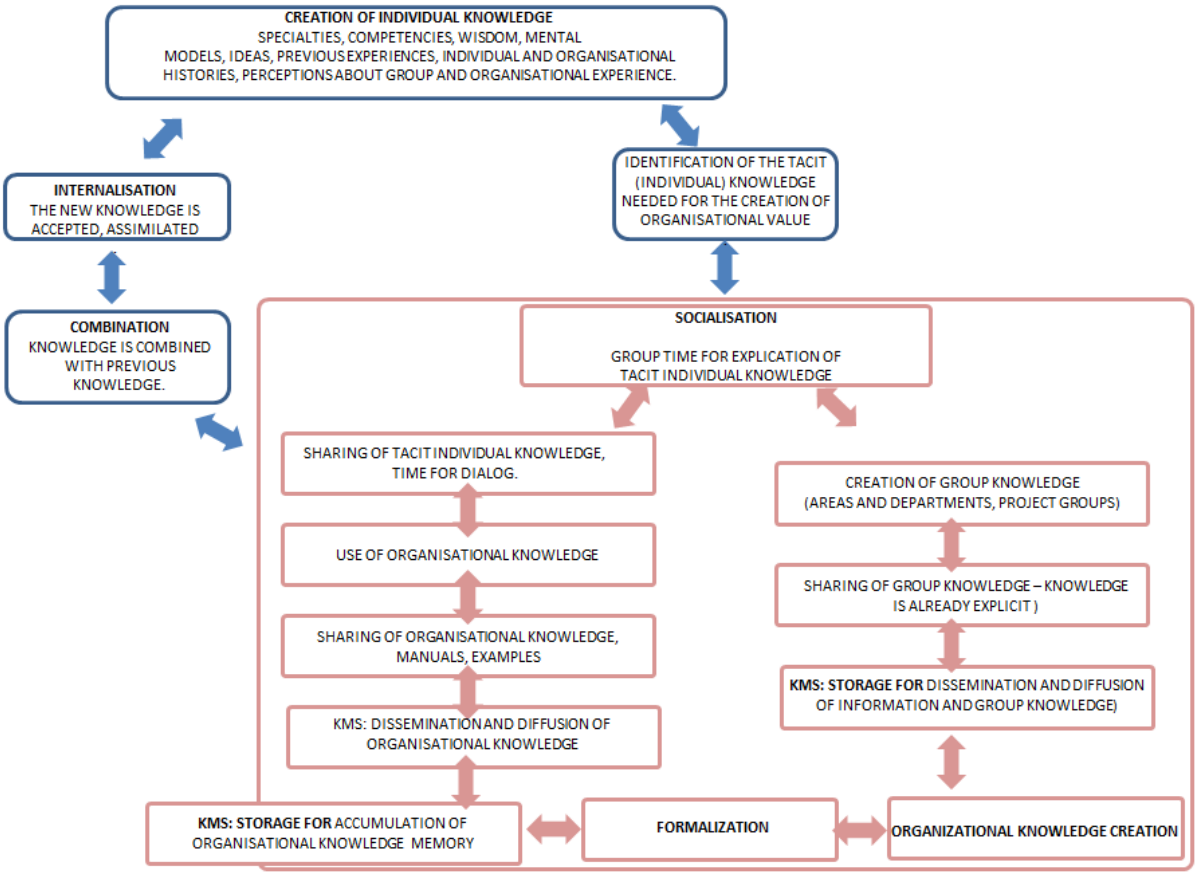
5. FINAL CONSIDERATIONS

After conducting a review of the literature respecting the steps of planning, execution and reporting, and completing the directed searches about the issue Knowledge Sharing and Creation, it was possible to respond to the research questions concerning the different definitions for *Knowledge Sharing and Creation* found in the academic journals and the similarities and differences between the two terms.

The analysis of this material revealed that there are a variety of conceptual understandings of the terms *Knowledge Sharing and Creation* in the field of KM, due to the various possible applications for the proposals of KM and the type of knowledge that is being worked with.

Thus, of the different paradigms identified for the definitions of Knowledge Creation (cognitivist, interactionist, auto-poietic and functionalist) and the different applications of the term Sharing (in reference to tacit or explicit knowledge) an Integrated Process can be proposed (FIGURE 3) to approximate the different world views, with the sole objective of translating these languages to promote understanding.

Figure 3: Integrated Process of Knowledge Creation and Sharing



Source: prepared by the authors

The process proposed incorporates the cognitivist view by pointing to the individual's knowledge construction process, independent from his or her social relationships. It incorporates the interactionist view by positioning the steps of socialisation and sharing of knowledge prior to knowledge creation, both for the group as well as the organisation. It incorporates the functionalist persepctive by determining the different roles of the KMS for the creation of organisational knowledge and its proposal for the formalisation and use of knowledge. In this Integrated Process, the different moments of sharing both tacit and explicit knowledge become clear.

The main contribution of this study is the suggestion of this Integrated Process which is proposed to clarify meanings in order to promote understandings among researchers who focus on the KM process. For KM to constitute a field of study without losing its interdisciplinary essence, constant vigilance will be needed concerning the definitions of the key concepts in the field, and discussions are needed about the different classifications used by the different participating areas.

The continuity of this study is necessary given that this Integrated Process still needs to have incorporated to it a cognitivist view of the term Knowledge Construction, even if this paradigm does not allow itself (in essence) to be formatted and formalized in a process that may appear static.

REFERENCES

ALVARES, L., BAPTISTA, S.G., JÚNIOR, R.H.A. Em Questão, Porto Alegre, v. 16, n. 2, p. 235 - 252, Jul./Dec. 2010.

APPLEYARD, M.M How does knowledge flow? Interfirm patterns in the semiconductor industry Strategic Management Journal Volume 17, Issue SUPPL. WINTER, December 1996, Pages 137-154

ARGOTE, L.; MCEVILY, B.; REAGANS, R., "Managing Knowledge in Organisations: An Integrative Framework and Review of Emerging Themes" Tepper School of Business. Paper 44.2003 Available at: _ Accessed: Jan. 24, 2011

BARTOL, K., ; SRIVASTAVA, A.. Encouraging knowledge sharing: the role of organizational reward systems. Journal of Leadership & Organizational Studies, 9(1), 64-76, summer, 2002

BUORO, G, O Processo de Compartilhamento do Conhecimento: estudo de caso tenarisconfab. Dissertação de Mestrado. Universidade de São Paulo, 2005

BYRD, T.A., MARKLAND, R.E., KARWAN, K.R. , PHILIPOOM, P.R. An object-oriented rule-based design structure for a maintenance management system. Publisher Columbia, University of South Carolina, 1966.

CABRERA, A., CABREA, E.,F., Knowledge sharing dilemmas. SAGE Publications, Organisation Studies, 2002, 23, 5, p. 687-710.

CLARKE, M., Oxman AD (eds). Cochrane reviewers` handbook 4.2.0 [updated March 2003]. In: The Cochrane Library, issue 2, 2003. Oxford

CRD Centre for Reviews and Dissemination, University of York, York, UK. Undertaking systematic reviews os research on effectiveness. CRD´s guidance for carrying out or commissioning reviews. CDR Report number 4 (2nd), March 2001.

CHOI, B., LEE, H. An empirical investigation of KM styles and their effect on corporate performance. Information and Management, 40 (5), pp. 403-417.2003

DAVENPORT, T.; PRUSAK, L. Working Knowledge: How Organizations Manage What They Know. Cambridge, MA: Harvard Business School Press 1998.

EBOLI, M. A Administração do Conhecimento. In: Revista Carta Capital, ano 6, nº110, Nov 1999, p.48-49

FIRESTONE, J. M.; MCELROY, M. W.. “The New Knowledge Management”, Knowledge

Management, 6, no. 9, (June, 2003), 12-16.

FLEURY, M.T.L. Aprendizagem e Gestão do Conhecimento. In: Dutra, J.S. Gestão por Competências. São Paulo Editora Gente, 2001

FREIRE, Patricia de Sá Compartilhamento do conhecimento interorganizacional: causas essenciais dos problemas de integração em fusões e aquisições. 2010 149f. Dissertação (Mestrado). Universidade Federal de Santa Catarina – UFSC. Programa de Pós-Graduação em Engenharia e Gestão do Conhecimento.

FREIRE, P.S., BONILLA, M.A., FIALHO, F.A.P., SANTOS, N. Compartilhamento do Conhecimento: Técnicas e Práticas Facilitadoras. Revista do CCEI. Bagé: Editora LEB. V.13. n. 26. Ago. 2010.

FREEMAN, R. R. Ocean and environmental information. The theory, policy, and practice of knowledge management Marine Policy. Volume 1, Issue 3, July 1977, pp. 215-229

KOENIG, M. E. D. 2002. The third stage of KM emerges. KMWorld 11(3), 20–21.

MACINTOSH, Ann. Position Paper on Knowledge Asset Management. Artificial Intelligence Applications Institute, University of Edinburgh, Scotland, 1996.

McINERNEY, C. Compartilhamento e Gestão do Conhecimento: profissionais da informação em um ambiente de confiança mútua, In: TARAPANOFF, K. Inteligência, informação e conhecimento em corporações. Brasília: IBICT, UNESCO, 2006. P. 57-72.

NISHIDA, K., Fundamental Problemns of Philosophy (Tetsugaku No Kompon Mondai: 1933/34):Volume I, The world of Action: and Volume II. The dialectical World. Tokyo, Japn: Sophia University, English translation by David A. Dilworth in 1970.

NONAKA, I.; TAKEUCHI, H. Criação de Conhecimento na Empresa: como as empresas japonesas geram a dinâmica da inovação. Rio de Janeiro: Campus, 1997.

NONAKA, I.; TOYAMA, R. The knowledge-creating theory revisited: knowledge creation as a synthesizing process. Knowledge Management Research & Practice, v. 1, p. 02-10, 2003.

NONAKA, I., TOYAMA, R. , KONNO, N.. SECI, Ba and Leadership: A unified model of dynamic know-ledge creation. Long Range Planning 33, 5–34. 2000

PACHECO, R.C.;FREIRE, P.S.; TOSTA, K.C. Interdisciplinaridade vista como um processo complexo

de construção do conhecimento: uma análise do Programa de Pós-Graduação EGC/UFSCRBPG, Brasília, v. 7, n. 12, p. 136 - 159, julho de 2010.

SALVINI, S., WILLIAMS, M.H. Central knowledge management for expert systems Mathematical and Computer Modelling Volume 16, Issue 6-7, June 1992, Pages 137-144

SHAW, M.J., SUBRAMANIAM, C., TAN, G.W., WELGE, M.E. Knowledge management and data mining for marketing. Decision Support Systems, 31 (1), pp. 127-137. Cited 118 times.2001

SIMONIN, B.L.Ambiguity and the process of knowledge transfer in strategic alliances. Strategic Management Journal John Wiley & Sons, Ltd Volume 20, Issue 7, July 1999, Pages 595-623

SHIMIZU, H, Ba-Principle: New logic for the Real-time emergence of information. Holonics, 1995;5(1); 67-79.

SCHULTZE, U., STABELL, C., Knowing what you don't know? Discourses and contradictions in knowledge management: Research. Journal of Management Studies, 41 (4), pp. 549-573, 2004.

STROCCHIA, M. (2001). MCTC: Metodologia para la captura y transferencia de conocimiento. Fundación Iberoamericana del conocimiento. Recuperado em 20 de janeiro, 2011, de http://www.gestiondelconocimiento

SZULANSKI, G. (2000, May). The process of knowledge transfer: a diachronic analysis of Stickness. Organisational Behavior and Human Decision Processes, 82(1), 9-27

TERRA.J.C.C. Gestão do Conhecimento:aspectos conceituais e estudo exploratório sobre as práticas das empresas brasileiras. Tese de Doutorado. Escola Politécnica de São Paulo, Universidade de São Paulo, São Paulo, 1999

TONET, H.C.; da PAZ, M.G.T. Um modelo para o compartilhamento de conhecimento no trabalho. Rev. adm. contemp. [online]. 2006, vol.10, n.2, pp. 75-94. Disponível em: http://www.scielo.br/scielo.php?pid=S1415-65552006000200005&script=sci_arttext Acessado em: 21.01.2011

VON KROGH, G., NONAKA, I., ABEN, M.. Making the most of your company's knowledge: A strategic framework. Long Range Planning, 34 (4), pp. 421-439, 2001

VON KROGH, G. V.; ICHIJO, K.; NONAKA, I. Facilitando a criação de conhecimento: reinventando a empresa com o poder da inovação contínua. Rio de Janeiro: Campus, 2001.

VORAKULPIPAT, C.; REZGUI, Y.,Value creation: the future of knowledge management, The Knowledge Engineering Review, 23: 283-294, 2008.

WIIG, K. M. Knowledge management foundations: thinking about-how people and organisations create, represent, and use knowledge. Texas: Schema Press, 1993.

WILSON, J.W., EMERE, G.T.G. Some Factors Affecting Strata Control In The Orange Free State Mines Of The Anglo American Corporation. In: Assoc Mines Managers S Afr Pap Discuss, 1976, Elsevier B.V., pp. 521-564

YOUNG, R., Knowledge management tools and technique manual. Asian Productivity Organisation, Tokyo, Japan 2010. Disponível em: www.apo-tokyo.org