
GUIDELINES TO INNOVATE MANAGEMENT BY KNOWLEDGE VIA COMMUNITIES OF PRACTICE

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Abstract

It wasn't found in the literature a known guideline to develop KM via CoP with the assistance of the Organizational Culture (OC) and Information and Communication Technology (ICT) literature. Based on this knowledge gap, the goal in this study is to propose a guideline to begin the development of KM via CoP in companies. The main question of this study is: which are the key practices occurring in the companies that can help manage the aggregated knowledge necessary to develop an innovative environment? An interview was developed and supported by the literature review on KM, CoP, CO and ICT. After undergoing experts, the instrument was applied to the Human Resource (HR) and Information Technology (IT) managers in the companies. Most of the companies in this study don't know about KM as a strategy to become more competitive and innovative on KBE society. It is proposed for companies to adopt an approach based in following twenty two sequentially guidelines: 1. A flat hierarchy and a structure for projects to the flow of knowledge, so employees can expose and exchange ideas and information at the same level to deepen knowledge and expertise; 2. Integration in person and via internet to store the knowledge generated among employees with concerns and interest in a particular subject; 3. Provide physical and virtual space for information flow in dual carriageway via email or blog with the purpose of sharing information, ideas and advices; 4. Informal space for exchanging experiences among employees as a recreation area designed for them, which purpose of the contact is to assist in solving problems, creating projects and developing the tacit understanding on a topic; 5. Training for the generation of new ideas for the development of collective knowledge, continuous learning, which helps in the sharing of problems, perspectives, ideas and solutions; 6. Provide an information system for the dissemination and sharing of knowledge; 7. Valuing the company culture, for example, by providing communication channels to make interaction and knowledge transfer easier; 8. Mapping the competence of the staff to help achieve their organizational goals and the company in order to develop innovative ideas and solutions; 9. Enhancing knowledge through courses and specializations, scholarships, internal training, career path and promotions; 10. To encourage teamwork and cooperation if only for financial stimulus; 11. Promoting trust and friendship between people; 12. Support the development of internal activities through scholarships,

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training, financial incentives, appropriate environment for safety and environmental technology and implement programs;13. Involve senior management in recognition of the employee's work, and implement a career plan and profit sharing programs and results;14. Taking financial risks innovating;15. Don't promote the employee sanction in case of mistakes;16. Adopt methodologies and techniques used for creating and capturing knowledge, and promote training;17. Adopt methodologies and techniques used for the transfer and sharing of knowledge as a practice;18. Evaluate practices of KM through a physical or electronic form or by reaction activities and career path;19. Enable leaders to have access to different areas of the company to encourage the creation, sharing and the use of knowledge every day;20. Development of KM practices in programs supported by the senior management;21. Frequency or training programs to create, capture, share, use and disseminate knowledge;22. Propose a mediator that motivates the employees to practice knowledge.

Key words: *Knowledge Management, Communities of Practice, Organizational Culture, Information and Communication Technology, Guidelines*

GUIDELINES TO INNOVATE MANAGEMENT BY KNOWLEDGE VIA COMMUNITIES OF PRACTICE

1. Introduction

The knowledge of a company is the result of years of organizational activity in which the knowledge of individuals is combined into a collective whole, according to Kogut and Zander (1992). Choi et. al. (2008) state that knowledge is a critical source that has encouraged companies to devote attention to management, meaning that in the Knowledge-Based Economy (KBE), which has a very competitive base, companies need to settle an innovation environment. An active resource to KBE companies is knowledge, therefore the Knowledge Management (KM) adds competitive value to assist managers. In this context, Valenzuela et. al. (2008) state that KM will stimulate companies to be more efficient and effective by using the knowledge base existence and mobilizing the available knowledge sources to create new knowledge. The development of collective knowledge and for the continuous learning, Information Technologies (IT) are strategic, so that people in a company may share problems, perspectives, ideas and solutions, according to Rosini and Palmisano (2003). Harris (2001) states that the KBE is linked to technology based on computers and new IT potential.

To begin the development of KM in companies, the use of IT and CoP should be considered. The CoP is known as a management tool for the enhancement of companies' competitiveness, according to Li et. al. (2009b).

It wasn't found in the literature known guidelines to develop KM via CoP with the assistance of the Organizational Culture (OC) and Information and Communication Technology (ICT) literature. Based on this knowledge gap, the goal in this study is to propose guidelines to begin the development of KM via CoP in companies. The main question of this study is: which are the key practices occurring in the companies that can help manage the aggregated knowledge necessary to develop an innovative environment?

This study investigates the Critical Success Factors (CSF) of KM and CoP, eight organizational structures and their respective units of analysis, the potentialities and deficiencies in the companies' environment to develop KM via CoP.

An interview was done with decision makers in companies in the interior of São Paulo state, Brazil. The study intends to contribute to academic researchers and to companies to develop KM using the essential meanings of CoP.

This study presents the concepts of KM, CoP, OC and ICT. Also presents the CSF of KM and CoP, methodology, results (guidelines), analysis and conclusions.

2. Literature Review

2.1 Knowledge Management

According to Prusak (2001), KM appears as an answer to social and economic trends, as globalization, computing influence and centred view on knowledge. Although, the more accepted view on scientific community about KM, according to McElroy (1999), is presented under a methodology based on knowledge life cycle or knowledge process.

The interest in Knowledge Management (KM) has grown along with the advances in computers, networks and data management systems. Sharing and collaboration among the

thousands of people scattered around the globe depends on the technology of connection and the organized storage of content, and many knowledge projects have focused on building systems to connect people and capture knowledge, according to Bose (2004).

Due to Knowledge Management (KM) complexity some authors define it from the following standpoint view:

a) KM is one of the biggest strategic uses of IT, due to that many companies create KM systems to manage organizational learning and their know-how (O'Brien, 2004, p.60);

b) KM is the deliberate and systematic coordination of an organization's people, technology, processes, and organizational structure in order to add value through reuse and innovation (Dalkir, 2005, p.3);

c) KM appears as strengthening and a support to company's activity. Maximizing the people's potential on executing your activity in the operational system, fostering impulse to creativity and innovation, beyond the systematizing and more effective use of company's explicit and registered knowledge (Hoffmann, 2009, p.86).

To make the understanding easier, this study highlights five KM principles (Hoffmann, 2009, p.97):

a) Capacitate people work in groups;

b) Preserve culture and values;

c) Assure learning;

d) Create, discover and collect knowledge inside and outside the company;

e) Share and understand models and guidelines to be used.

To preserve culture values and create, discover and collect knowledge inside and outside the company are related to the CSF of KM and CoP adopted in this work.

According to Cortés, Patronicio and Eva (2007), the horizontal structural of a company implicates communication improvement, decision making decentralization and empowerment. Cortés, Patronicio and Eva (2007) state that the main organizational structure characteristics, which are also related to the CSF, that support KM are:

a) Horizontal and flexible structure;

b) Few hierarchy levels;

c) Amplified communication in all the company.

2.2 Communities of Practice

According to Skerlavaj, Dimovski and De Souza (2010), the participation perspective is derived from practice based studies, such as apprenticeship learning, in which no teaching was conducted; that is, knowledge was not directly imparted to participants through instruction-based methods. Within this perspective, learning is understood as the function of participation in CoP. Learning takes place through sustaining a community where knowledge flows richly among individuals, thereby ensuring participation and interactions of individuals. One of the KM principles cited is "assure learning".

Butler et. al. (2008) state that CoP are one of two social and organizational groupings as being vital to the success of knowledge sharing initiative, that involves members of informal communities-of-practice, which have shared knowledge interests. The Knowledge sharing initiative may or may not have organizational processes as their subject. The other social and organizational grouping is a formal way of knowledge workers called a Knowledge Network (KN).

Networks and CoP are spaces and/or strategies based on which the social construction of knowledge takes place, and they have become common in Knowledge Creation and Management (KCM) models, according to Gairín-Sallán et. al. (2010). In this context CoP is a good example of group in which the group members begin to act in a collective and coordinated manner, solving complex tasks, without explicit rules for action such as written procedures, decision rules, formal models, or even without explicit communication.

According to Erden, Von Krogh and Nonaka (2008) which state that organizational knowledge creation theory posits that through knowledge conversion new tacit knowledge can become collective for the group (Nonaka, 1994).

CoP have attracted a lot of attention as a way of fostering learning among a vast array of groups, from public defenders to web specialists or textile workers, according to Bourhis and Dubé (2010), CoP are seen as an innovative way to create and share knowledge in organizations and to combine working, learning and innovating.

As a place for sharing, Wenger (1998) highlights that CoP is the work space for sharing, where the members can communicate, store and share the knowledge of products and profiles. The space to be used could be at a server, in the Internet or the intranet of the company. Dalkir (2005) highlights that the importance of the space is to be used for real time sharing and asynchronous discussion.

The concepts of CoP and Networks of Practice (NOP) are similar. According to Agterberg et. al. (2010) CoP was originally defined as emergent collections of closely connected persons who engaged in frequent, social, face-to-face interactions, working side-by-side, and shared a common situated context or practice, and NOP similarly are self-organizing groups of members who share the same practice but are geographically dispersed.

Due to the importance of the CoP to the success of companies, some studies were developed to provide better understanding to the academic community and companies (KLEIN, CONNELL, MEYER, 2005; FAHEY; VASCONCELOS; DAVID, 2007; USORO et al. 2007). Amin and Roberts (2008) states that CoP is known as “situated learning” on the learning process and on the KM. That attracts the attention of academics and self-employed person due to the fact that CoP is being used to explain learning and knowledge creation across a varied environment at work, company and space.

Wenger (2010) states that create and stimulate knowledge is not pleasant to hierarchy of industrial control and command, meantime it’s essential to CoP, which were till then informal inside the company, that keep up necessary needs to company, would be legalized, engaged and integrated to it.

Bourhis and Dubé (2010) states that a community, whose overall objective represents an organizational priority, is embedded in an organizational culture submitted to organizational practices and exposed to political issues, which may all impact on its actions.

Hislop (2005) highlights the potentiality of CoP in terms of knowledge processes as basis of organizational innovation by supporting and promoting the creation, development and use of knowledge, and as it facilitate and promote individual and group learning, and the sharing of knowledge.

2.3 Organizational Culture

Brown (1995) states that Organizational Culture (OC) is a group of ideas, values and specific activities of a company which has special relevance to your members. Van Maanen

and Barley (1984) state that recent analysis reveal that the companies could be distinguished in some subcultures and sometimes it seems fragmented.

Organizational Culture assists the development of KM and CoP. Some authors discuss the effectiveness of OC and KM in companies. According to Ribière and Tuggle (2005) it seems that the IT tools designed to facilitate knowledge creation, capture, representation, storage, and sharing are now available, but their efficient use and acceptance by knowledge workers remains constrained by OC. Alavi and Leidner (2001) and Jennex and Olfman (2001) state that knowledge sharing OC must be present or nurtured in order to succeed in KM. According to Li, Yezhuang and Zhongying (2006) OC and KM are related and critic to organizational performance. Lee (2006) states that the organizational climate of friendly knowledge is related to the high performance of KM.

Alveson (1993) says that the culture of a company, based on considering it a community instead of viewing it as merely a collection of individuals, makes the company operate efficiently, because management strove to have a strong interpersonal culture.

According to Schein (2004) OC is value, belief and unconscious basic presupposed that are shared for members of a company expressed by principle that could be observed in rituals, words and action.

Liebowitz (2008) states that there are two sides between OC and KM, the first one says OC should be changed before the KM development. The second one, KM is the one that should fit in the OC. Liebowitz (2008) states that there are at least five types of behaviour that influence OC via KM:

- a) Knowledge sharing is the power and not the knowledge is the power;
- b) The ability of critical thinking;
- c) Effective communication;
- d) Team work;
- e) Project management;
- f) Commitment with company's mission, values and sharing believes.

In this study the concept of OC are stated by Schein (1992), Oliver e Kandadi (2006), Zheng (2005) and Zheng (2009). According to Zheng (2005), OC is part of the knowledge, so developing KM means to manage OC. Complementary, Zheng (2009) states that there should be a building theory in a way that both areas are integrated. Zheng (2009) proposes a culture fact classification linked to KM in three groups:

- a) Oriented facts to knowledge;
- b) Oriented facts to people;
- c) Oriented facts to work.

At oriented culture to knowledge, the employees stimulate themselves to share knowledge, they aren't afraid of losing the job or showing good will exploring knew knowledge and they have the freedom to do so. According to Davenport and Prusak (2003), there are eight organizational structures and their respective units of analysis to be considered in this study.

Therefore, this study considers OC important to companies and influence upon the development of KM.

Ribière and Tuggle (2005) indicate that organizations with a higher level of trust are more successful in their use of KM than those organizations with a lower level of trust. In low trusting organization personalization KM tools tend to not be used.

2.4 Information and Communication Technology

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The new Information and Communication Technology (ICT) are considered by Sancho et. al. (2006) a possibility of advance to development and knowledge global diffusion.

According to Hoffmann (2009), ICT have a strategic role on assisting the collective knowledge development and attendant learning at companies which is the easiest way to make easy to people share problems, perspectives, ideas and solution. Hoffmann (2009) says that ICT have their concept increased, including hardware and software, telecommunication, automation, multimedia and other resources, besides information systems, services, business, users and developed complex relations.

Nevertheless, it isn't possible not to consider the human resource on planning, measuring, evaluating and controlling of the organizational performance. According to Hoffmann (2009), technology is nothing less than a support tool to human being, because there isn't an instrument capable of creating knowledge or assisting on recovering, registering and contextualizing information without human intervention. For Hoffmann (2009) ICT can't replace the human factor, because the development of technological tools and the coordinated integration on informational resources help to develop the process that involved on KM in companies.

The three main roles of information systems, according to O'Brien (2004), are to provide to a company the support for operations, management decision making and obtaining strategic advantage. O'Brien (2004) says information systems are classified in a way to distinguish the main roles that everyone performs on operations and management on a business: operational support systems and management support systems.

About the KM systems, O'Brien and Marakas (2007) say that they assist companies and their employee to create, organize, store and make knowledge available. The companies Knowledge Portals are equivalent to information portals, with entrance for corporate intranets that work like a KM systems. Laudon and Laudon (2007) say these systems value a company as long as they reduce time and cost on knowledge acquisition and using and, at the same time, offer knowledge to decision making.

3. Critical Success Factors of Knowledge Management and Communities of Practice

With regard to KM, according to Wong (2005), the Critical Success Factors (CSF) can be seen as activities and practices to be developed in order to ensure the successful implementation and development of KM. To Rockart (1979), the CSF are the limited number of areas where the results are satisfactory and will ensure a successful competitive performance for the company. Critical Success Factors are the key areas where things must go well to ensure the success of a company. Rockart (1979) points out that some factors in any company are considered key to its success and factors associated with the objectives are not met the company going bankrupt.

Among the CSF of KM and CoP identified to be adopted in this work are summarized in table 2.

4. Methodology

An interview was developed and supported by the literature review on KM, CoP, CO and ICT. After undergoing experts, the instruments were applied to the Human Resource (HR) and Information Technology (IT) managers in the companies.

The interviews were intended to determine the strengths and weaknesses of the companies in the development of KM through the CoP to identify the guidelines. And also to identify the key practices.

5. Result and discussion

The goal in this study is to propose guidelines to develop the KM via CoP in companies to achieve an innovative environment.

Most of the companies in this study don't know about KM as a strategy to become more competitive and innovative on KBE society. So it was found in some of them three key practices that manage the aggregated knowledge necessary to develop an innovative environment:

- 1) Master-apprentice model - Valuing the work of master-apprentice model.
- 2) Mediator tool - Information and communication technology contributes to KM and CoP as a mediator tool in changing environments and interaction, since intervening in the learning process and consolidating as means capable of connecting individuals.
- 3) Socialization - Conversion of part of the tacit to explicit knowledge from an individual to another.

In most companies the CSF found as base to the creation of CoP, which give the direction to present the twenty two guidelines, are the nine followings:

- a) A vertical hierarchy and departmental structure which face is integration.
- b) Information flows in print and informal place to exchange information.
- c) Provide training for the dissemination and sharing of knowledge
- d) To know the competence of its employees.
- e) Understand that the value of the employees occurs through courses, scholarships, training, career and promotions.
- f) Half of them have teamwork and cooperation among employees, according to the level of trust and friendship.
- g) Encourage studies and provide financial assistance, training exercises, suitable environment for safety, information technology and health aid.
- h) Recognize programs that appears to participate in profit sharing, career plan, contact by email from the senior management and there is a publication in the mural.
- i) Half practices financial risks for better results and deny there is penalty to employees in case of mistakes.

It is proposed for companies to adopt an approach based in following twenty two guidelines:

1. A flat hierarchy and a structure for projects to the flow of knowledge, so employees can expose and exchange ideas and information at the same level to deepen knowledge and expertise;
2. Integration in person and via Internet to store the knowledge generated among employees with concerns and interest in a particular subject;
3. Provide physical and virtual space for information flow in dual carriageway via email or blog with the purpose of sharing information, ideas and advices;
4. Informal space for exchanging experiences among employees as a recreation area designed for them, which purpose of the contact is to assist in solving problems, creating projects and developing the tacit understanding on a topic;

5. Training for the generation of new ideas for the development of collective knowledge, continuous learning, which helps in the sharing of problems, perspectives, ideas and solutions;
6. Provide an information system for the dissemination and sharing of knowledge;
7. Valuing the company culture, for example, by providing communication channels to make interaction and knowledge transfer easier;
8. Mapping the competence of the staff to help achieve their organizational goals and the company in order to develop innovative ideas and solutions;
9. Enhancing knowledge through courses and specializations, scholarships, internal training, career path and promotions;
10. To encourage teamwork and cooperation if only for financial stimulus;
11. Promoting trust and friendship between people;
12. Support the development of internal activities through scholarships, training, financial incentives, appropriate environment for safety and environmental technology and implement programs;
13. Involve senior management in recognition of the employee's work, and implement a career plan and profit sharing programs and results;
14. Taking financial risks innovating;
15. Don't promote the employee sanction in case of mistakes;
16. Adopt methodologies and techniques used for creating and capturing knowledge, and promote training;
17. Adopt methodologies and techniques used for the transfer and sharing of knowledge as a practice;
18. Evaluate practices of KM through a physical or electronic form or by reaction activities and career path;
19. Enable leaders to have access to different areas of the company to encourage the creation, sharing and the use of knowledge every day;
20. Development of KM practices in programs supported by the senior management;
21. Frequency or training programs to create, capture, share, use and disseminate knowledge;
22. Propose a mediator that motivates the employees to practice knowledge.

6. Conclusions

The KBE asks calls for better preparation of companies for their survival. The intention of this work was to contribute to the companies, aiming to improve their management in terms of knowledge, considered a critical source for innovation.

This study aimed to propose guidelines for developing the KM via CoP with the support of CO and ICT using an interview answered by decision makers from HR and IT areas in companies in the interior of São Paulo states, in Brazil.

The goal was accomplished by identifying the CSF based on the theoretical framework, and by eight organizational structures and their units of analysis, which were essential to establish relevant information and thus identify guidelines to begin the development of KM via CoP in companies.

The future studies that can be done about KM and CoP are:

- a) CoP design;
- b) CoP mediation;

c) Learning in the Proximal Development Zone (PDZ)

Table 1 - Eight organizational structures and their respective units of analysis. Adapted from Davenport and Prusak (2003)

Structure	Unit of analysis
Organizational and technical infrastructure	A set of functions, organizational structures and qualification that benefit every project
Explicit support of board of directors	Messages about the importance of KM and resource for the improvement of infrastructure
Entail on economic and section value	KM entailed to economic benefit that the project will engender in the organization
Process orientation	KM process from the vision over the client, satisfaction, productivity and the quality of the offered services
Clear vision and language	Clear definition of the terms used with information, knowledge, learning, avoiding different terminologies
Not trivial motivators elements	Incentive existence (from organization and human resource area) with motivation for the employees to create, share and use the knowledge
Structure level of knowledge	Repository of knowledge needs a understandable structure for the use of interested individuals (categories and key words)
Multiple channel for the knowledge transfer	Make interaction and knowledge transfer easier by many channels of communication

Table 2 - Critical Success Factors of knowledge management and communities of practice

CSF	References
1. Organization with a little bureaucratic and a little hierarchy	Dubé, Bourhis and Jacob (2003), p. 14; Roberts (2006), p. 628; Wenger, McDermott and Snyder (2002), p. 128
2. Valorization of the culture and of the knowledge sharing	Hara, Shachaf, Stoerger (2009), p. 747 ; Wenger, McDermott and Snyder (2002), p.38
3. Knowledge of the information and communication technology; use to facilitate the communication and places of meeting and talks	Gongla and Rizzuto 2001, p. 849; Hara, Shachaf, Stoerger (2009), p. 742; Dubé, Bourhis and Jacob (2006), p.78 e 81; Wenger, McDermott and Snyder (2002), p.130-131
4. People with something in common, which the knowledge will contribute to the company	Gongla and Rizzuto (2001), p. 847; Roberts (2006), p. 625; Wenger (1998), p. 8
5. Issues closely related to an important issue to the company and the daily work	Dubé, Bourhis and Jacob (2003), p. 13
6. Include members of different backgrounds, skills, age, personality and authority	Roberts (2006), p. 627

References

Agterberg, M.; Hooff, B.V.D.; Huysman, M.; Soekijad, M. (2010), “Keeping The Wheels Turning: The Dynamics of Managing Networks of Practice”, *Journal of Management Studies*, Vol. 47, No. 1.

Alavi, M.; Leidner D. E. (2001), “Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues”, *Mis Quarterly*, Vol. 25, pp.107-136.



Alipour, H.; Davabi, K.; Mehrabi, Z. E Moshtaghi, M. (2010), “The Role of Knowledge Management in the Achievement of Competitive Advantage: a Case Study of Iran Alborze Insurance Company in Western Mazandaran”, *African Journal of Business Management*, Nigeria, Vol. 4, No. 7, pp. 1346-1350.

Alveson M. (1993), “Cultural—Ideological Modes of Management Control: A Theory and a Case Study of a Professional Service Company”, In: Deetz S, Editor, *Communication Yearbook 16*, London, Sage, pp. 3–42.

Bose, R. (2004), “Knowledge Management Metrics”, *Industrial Management & Data Systems*, Vol. 104, No. 6, pp. 457-468.

Bourhis, A.; Dubé, L. (2010). “‘Structuring Spontaneity’: Investigating the Impact of Management Practices on the Success of Virtual Communities of Practice”, *Journal of Information Science*, Vol. 36, pp. 175-193.

Brown, A. (1995), *Organizational Culture*, 2nd Ed, Harlow, Prentice Hall.

Butler, T.; Feller, J.; Pope, A.; Emerson, Bill; Murphy, C. (2008), “Designing a Core it Artefact for Knowledge Management Systems Using Participatory Action Research in a Government and a Non-Government Organisation”, *Journal of Strategic Information Systems*, Vol. 17, pp. 249–267.

Castells, M. (1999), *A Sociedade em Rede – A Era da Informação, Economia, Sociedade e Cultura*, São Paulo, Paz e Terra, Vol. 1.

Choi, B.; Poon, S. K.; Davis, J. G. (2008), *Effects of Knowledge Management Strategy on Organizational Performance, a Complementarity Theory-Based Approach*.

Cortés, C. E., Patronicio, Z. S.; Eva, P. O. (2007), “Organizational Structure Features Supporting Knowledge Management Processes”, *Journal of Knowledge Management*, Bradford, Vol. 11, No. 4, pp. 45-57.

Dalkir, K. (2005), *Knowledge Management in Theory and Practice*, Boston, Elsevier.

Davenport, T. H.; Prusak, L. (1998), *Working Knowledge: How Organizations Manage What They Know*, Cambridge, Ma, Harvard Business School Press.

_____. (2003), *Conhecimento Empresarial: Como As Organizações Gerenciam O Seu Capital Intelectual*, Rio De Janeiro, Campus.

Dubé, L., Bourhis, A., E Jacob, R. (2003), *Towards a Typology of Virtual Communities of Practice*, *Cahiers Du Gres*, pp. 03-13.

_____. (2006), “Towards a Typology of Virtual Communities Of Practice”, *Interdisciplinary Journal of Information, Knowledge and Management*, Vol. 1, pp. 69-93, accessed on December 23rd 2010, [Http://Ijikm.Org/Volume1/Ijikmv1p069-093dube.Pdf](http://Ijikm.Org/Volume1/Ijikmv1p069-093dube.Pdf)

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Erden, Z.; Von Krogh, G.; Nonaka, I. (2008), “The Quality of Group Tacit Knowledge”, *Journal of Strategic Information Systems*, Vol. 17, pp.4–18.

Fahey, R.; Vasconcelos, A. C.; David, E. D. (2007), “The Impact of Rewards within Communities of Practice: A Study of the Sap Online Global Community”, *Knowledge Management Research & Practice*, Hampshire, Vol. 5, pp.186-198.

Firestone, J. M.; McElroy, M. K. (2003), *Key Issues in the New Knowledge Management*. Burlington, Ma, KMCI Press, Butterworth Heinemann, Boston, Ma.

Fleury, A. (1990), “Capacitação Tecnológica e Processo de Trabalho: Comparação entre o Modelo Japonês e o Brasileiro”, *Revista de Administração de Empresas*, São Paulo, Vol. 30.

Gairín-Sallán, J.; Rodríguez-Gómez, D. Armengol-Asparó, C. (2010), “Who Exactly Is the Moderator? A Consideration of Online Knowledge Management Network Moderation in Educational Organizations”, *Computers & Education*, Vol. 55, pp. 304–312.

Gongla, P.; Rizzuto, C. R. (2001), “Evolving Communities of Practice: IBM Global Services Experience”, *IBM Systems Journal*, New York, Vol. 40, No. 4, pp. 842-862.

Hara, N.; Shachaf, P.; Stoerger, S. (2009), “Online Communities of Practice Typology Revisited”, *Journal of Information Science*, Amsterdam, Vol. 35, No. 6, pp. 740-757.

Harris, R.G. (2001), “The Knowledge-Based Economy: Intellectual Origins and New Economic Perspectives”, *International Journal of Management Reviews*, United Kingdom, Vol. 3, No. 1, pp.21–40.

Hislop, D. (2005), *Knowledge Management in Organizations: A Critical Introduction*, Oxford, Oxford University Press.

Hoffmann, W. A. (2009), *Gestão do Conhecimento: Desafios de Aprender*, São Carlos, Compacta.

Hofstede, G. (1980), *Culture’s Consequences: International Differences in Work-Related Values*, Beverly Hills, Sage.

_____. (1991), *Cultures and Organizations: Software of the Mind*, Maidenhead, UK, McGraw-Hill.

_____. (1998b), “Identifying Organizational Subcultures: An Empirical Approach”, *Journal of Management Studies*, Oxford, Vol.35, No. 1, pp.1-12.

Inovar (2010), “Mobilizar Para Inovar”, Brasília, MCT, At [Http://Www.Inovar.Org.Br/Mbc/Inv/Index.Php?Option=Com_Central_Atendimento&Itemid=17](http://Www.Inovar.Org.Br/Mbc/Inv/Index.Php?Option=Com_Central_Atendimento&Itemid=17) Accessed on January 2nd, 2011.

Jennex, M.E.; Olfman, L. (2003), “A Knowledge Management Success Model: An Extension of Delone and Mc Lean’s is Success Model”, 9th Americas Conference on Information Systems.

Keen, P. (1993), “Information Technology and the Management Theory: The Fusion Map”, IBM Systems Journal, New York, Vol.32.

Klein, H. J.; Connell, N. A.; Meyer, E. (2005), “Knowledge Characteristics of Communities of Practice”, Knowledge Management Research & Practice, Hampshire, Vol.3, pp.106-114.

Kogut B; Zander U. (1992), “Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology”, Organization Science, Vol.3, No. 3, pp. 383–97.

Laudon, K.; Laudon, J. (2007), Sistemas de Informações Gerenciais, São Paulo, Pearson Prentice Hall.

Lee, J. H. (2006), “Effects of Managerial Drivers and Climate Maturity on Knowledge Management Performance: Empirical Validation”, Information Resources Management Journal, Vol. 19, No. 3, pp. 48-60

Lee, S. F. C. K.; Goh, D. (2006), “On The Concept and Types of Knowledge”, Journal of Information & Knowledge Management, New Jersey, Vol. 5, No. 2, pp. 151-163.

Li, Z.; Yezhuang T.; Zhongying, Q. (2006), “The Impact of Organizational Culture and Knowledge Management on Organizational Performance”, Information Resources Management Association International Conference, Proceedings, San Diego, Hershey, Idea Group Co.

Liebowitz, J. (2008), “Think of Others Knowledge Management: Making Culture Work For You”, Knowledge Management Research & Practice, Hampshire, Vol. 6, pp.47-51.

McElroy, M. W. (1999), The Second Generation of Knowledge Management, Knowledge Management, pp. 86-88.

Nonaka, I.; Von Krogh, G. (2009), “Tacit Knowledge and Knowledge Conversion: controversy and Advancement in Organizational Knowledge Creation Theory”, Perspective Organizational Science, New York, Vol.20, No. 3, pp. 635-652.

Nonaka, I.; Takeuchi, H. (1997), Criação de Conhecimento na Empresa: como as Empresas Japonesas Geram a Dinâmica da Inovação, São Paulo, Campus.

O'Brien, J. (2004), Sistemas de Informação e as Decisões Gerenciais na Era da Internet, São Paulo, Saraiva.

O'Brien, J. A.; Marakas, G. M. (2007), Administração de Sistemas de Informação: uma introdução, São Paulo, McGraw-Hill.



Oliver, S.; Kandadi, K. R. (2006), “How To Develop Knowledge Culture In Organizations? A Multiple Case Study of Large Distributed Organizations”, *Journal of Knowledge Management*, Bradford, Vol. 10, No. 4, pp. 6- 24.

Polanyi, M. (1966), *The Tacit Dimension*, London, Routledge and Kegan Paul.

Prusak, L. (2001), “Where Did Knowledge Management come From?”, *IBM Systems Journal*, Vol. 40, No. 4, pp.1002-1007.

Rezende, D.A. (2005), *Engenharia de Software e Sistemas de Informação*, 3rd Ed, Rio De Janeiro, Brasport.

Rivière, Vincent M.; Tuggle, Francis D. (2005), “The Role of Organizational Trust in Knowledge Management: Tools and Technology Use and Success”, *International Journal of Knowledge Management*. Vol. 1, No. 1, p. 67-85.

Roberts, J. (2006), “Limits To Communities of Practice”, *Journal of Management Studies*, Oxford, Vol. 43, No. 3, pp. 623-639.

Rockart, J. (1979), “Chief Executives Define Their Own Information Needs”, *Harvard Business Review*, New York, Vol. 57, No. 2, pp. 81-93.

Rosini, A. M.; Palmisano, A. (2003), *Administração de Sistemas de Informação e a Gestão do Conhecimento*, São Paulo, Pioneira Thompson Learning.

Sancho, J. M.; Hernadéz, F. (2006), *Tecnologias para transformar a educação*, Translation Valério Campos, Porto Alegre, Artmed.

Schein, E. (1992), *Organizational Culture and Leadership: a dynamic View*, San Francisco, Jossey Bass.

_____. (1993), “Definición de la Cultura de Organización”. In: C. Ramió; Ballart, X. *Lecturas de Teoría de la Organización*, Madrid, Ministerio para la Administración Pública. Vol.2.

_____. (2004). *Organizational Culture and Leadership*, 3rd Ed., San Francisco: John Wiley and Sons.

Skerlavaj, M.; Dimovski, V.; Desouza, K. C. (2010), “Patterns and Structures of Intra-Organizational Learning Networks within a Knowledge-Intensive Organization”, *Journal of Information Technology*. Vol. 25, pp. 189–204.

Tarapanoff, K. (Org.), (2006), *Inteligência, Informação e Conhecimento em Corporações*. Brasília, IBICT/UNESCO.

Teixeira Filho, J. (2002), *Comunidades Virtuais: Como as Comunidades de Prática na Internet estão mudando os negócios*. Rio de Janeiro, Senac.



Usoro, A.; Sharratt, M.W.; Tsui, E.; Shekhar, S. (2007), “Trust as an Antecedent to Knowledge Sharing in Virtual Communities of Practice”, *Knowledge Management Research & Practice*, Hampshire, Vol. 5, pp.199-212.

Valenzuela, B. M.; Scmitz, G. S., Soltero, A. P., Rubio, F. M., Palma, J. (2008), “Defining the Problem: key element for the Success of Knowledge Management”, *Knowledge Management Research & Practice*, Hampshire, Vol.6, pp.322-333.

Van Maanen; J.; Barley, S. R. (1984), “Occupational Communities: Culture and Control in Organizations”, *Research in Organizational Behavior*, Oxford, Vol. 6, pp. 287-365.

Vygotsky, L. S. (1988), *Pensamento e Linguagem*. São Paulo, Martins Fontes.

Wenger, E. (2010), *Communities of Practice: a few frequently asked questions*, www.ewenger.com, accessed on March 11th 2010.

_____. (1998), *Communities of Practice, Learning Meaning and Identity*, New York, Cambridge University Press.

Wenger, E. C.; McDermott, R.; Snyder, W. C (2002), *Cultivating Communities of Practice: a Guide to Managing Knowledge*, Boston, Harvard Business School Press.

Wong, Y. K. (2005). “Critical Success Factors for Implementing Knowledge Management in Small and Medium Enterprises”, *Industrial Management & Data Systems*, Bingley, Vol.105, No. 3, pp.261-279.

Wren, D. (2007), *Idéias de Administração, o Pensamento Moderno*, São Paulo, Ática.

Zheng, W. A. (2009). “Conceptualization of the Relationship Between Organizational Culture and Knowledge Management”, *Journal of Information & Knowledge Management*, New Jersey, Vol. 4, No. 2, pp. 113–124.

Zheng, W. (2005). *Organizational Cultural Factors that Affect Knowledge Management Effectiveness*. in: *Academy of Human Resource Development Conference*. Bowling Green, Oh: Proceedings... Ahrd.

Zins, C. (2007). “Conceptual Approaches for Defining Data, Information and Knowledge”, *Journal of the American Society for Information Science and Technology*, New York, Vol. 58, No. 4, pp. 479-493.