COMMUNITIES OF PRACTICE: IMPROVING KNOWLEDGE MANAGEMENT IN BUSINESS

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ABSTRACT

The formation of communities of practice in business represents, possibly, the best way to manage knowledge bases in organizations since they integrate the most important dimensions in knowledge management: the technological dimension, the strategic dimension and the cultural or behavioral dimension. This paper explains what communities of practice are and why they serve as an efficient tool in knowledge management. Since this is a recently developed field, our study is exploratory, and is intended to identify trends and conceptual aspects associated with this topic. Our research will be based on the application of two bibliometric techniques (life cycle analysis and citation breadth analysis) to total articles related to communities of practice and published in academic and popular journals from 1998 to 2009. This paper demonstrates that the conceptual and practical framework revealed through the articles published during period under study prove that these communities integrates the technological, managerial and behavioral relevant factors. For this reason, writings on communities of practice are conceptually more solid than theoretical bases associated with knowledge management projects, which emphasize the technology-oriented and popular approaches.

JEL: I20, M12, M14, M53, M54

KEYWORDS: Job satisfaction, labor management, worker empowerment, corporate culture, training, personnel management, employee participation, knowledge management, communities of practice

INTRODUCTION

Since 1990, knowledge management became the new promise in business environment. The central idea behind this new approach is to motivate organizations to internally generate knowledge and information and allow the employees' access to such databases for immediate use and application. In our "knowledge society", a proposal like this is hard to resist due to the competitive advantage it offers. Some theorists go a step further by saying that knowledge's creation is a key source for competitive advantage in organizations; therefore, they argue that not only is a resource, but the primary asset. (Drucker, 1993).

However, there is no consensus regarding the value, meaning and usefulness of knowledge management as a management tool (Ponzi, 2002). A major difficulty lies in having focused such projects in terms of information technology almost exclusively (Skyrme, 1997). However, the problem lies not in the use of technological capabilities in themselves, but in fail to "capture and hold" the tacit knowledge that employees bring to organizations. (O'Dell & Jackson, 1998; Nonaka & Takeuchi, 1995).

So what is "knowledge management"? Apparently, as per literal use of the phrase, strategic management and the information systems are fundamental disciplines in knowledge management. But, are organizational culture and organizational behavior important issues in knowledge management?

The purpose of this paper is to demonstrate if the creation of communities of practice is an efficient platform for managing knowledge bases in organizations. The first part of this paper discusses why organizations has been facing problems in their knowledge management projects due to the fact that important behavioral characteristics has not been taking in consideration. Next, the paper proposes the

formation of communities of practice to close this gap in knowledge managing process. Finally, through the application of two bibliometric techniques, and literature review during 1998 to 2009, it will be shown that communities of practice is a more robust theoretical construct to understand and manage knowledge in organizations.

LITERATURE REVIEW

Knowledge Management-Conceptual Problem

Academic literature has been defined knowledge management from various theoretical perspectives. For example, although Nonaka and Takeuchi (1995) did not use the term "knowledge management", they defined the concept "organizational knowledge" as "the capacity which the company has to create new knowledge and distribute it throughout the organization." This implies active intervention of the human resources in knowledge management process. Skyrme (1997), on the other hand, defined it as "explicit and systematic management of vital knowledge on business ...." This definition is oriented towards the tendency to categorize knowledge as a productive asset, so the emphasis is on strategic management. On the other hand, O'Dell and Jackson (1998) introduced the technology perspective saying that, through knowledge management, organizations "can transfer the right knowledge to right people at the right time"

These definitions highlighted three aspects about knowledge management. First, any project aims to capture relevant information through electronic information systems. Second, it is a management process as it adds value to the company and promotes an efficient performance. Third, since it must take into account the organizational culture and human resources participation, the psychosocial perspective cannot be overlooked in these projects.

Indeed, recent researches in knowledge management confirm the importance of these three dimensions or theoretical constructs of knowledge management (Muzumdar, 1997; Mattila & Larsen, 2002). For example, Ponzi (2002) analyzed academic journals and trade articles from 1991 to 2001 in order to understand the evolution and conceptual development of the knowledge management field and confirm if the technological orientation was the principal orientation in knowledge management articles during such period. Sadly, attempts to develop knowledge management programs with particular orientation towards the technological and strategic aspects have been producing huge operational losses in businesses (Beazley, Boenich & Harden, 2002, Malhotra 2004).

As some scholars of organizational behavior have established, if we want to create an environment that will lead to continuous learning in organizations, it is necessary to know how human beings construct knowledge in social and dynamic interaction (Argyris, 1978, Lave & Wenger, 1991). For this reason, knowledge management projects should include more cultural considerations in their designs in order to be successful. Wenger (1998) proposes the creation of communities of practice in organizations to this end. In fact, these communities serve the social, cultural and cognitive tools for an adequate knowledge management in organizations. Also, they promote the interaction between different components of the organization, which encourages creativity and innovation in businesses.

Communities of Practice

For Malhotra (1997), a community of practice is a group of individuals that are held together by informal relationships through which they share identity, unity of purpose and meaning. Moreover, one of its main proponents, Etienne Wenger (2002), mentions that people in these communities share experiences within a particular domain of knowledge, which allow them to develop perspectives, practices and particular approaches as a group.

What do these definitions implies? Specifically, the interaction between members of such communities enables them to combine tacit and explicit aspects of knowledge, increasing the capacity and flexibility of knowledge bases in organizations (Wenger, McDermott & Snyder, 2002).

Thus, as an alternative to knowledge management in organizations, the communities of practice should avoid the biased trend of privileging the technological and strategic dimensions in the implementation of such projects. But, are such dimensions of relative importance in such communities' work or not?
Knowledge workers need to understand the applications of new technologies to their business environments. They can delegate certain tasks to information systems, which will allow them to concentrate their efforts on activities that add value and strengthen the creativity and innovation in organizations. In fact, technology is necessary, the managerial competence is important, but they are not unique categories. Cultural and human factors are vital. Therefore, when we analyze the conceptual structure of communities of practice, do we noticed that these communities keep the same technological and administrative bases as other forms of knowledge management, or consider the cognitive aspects and the social issues that have been absent from such projects?

METHODOLOGY

From the definitions of communities of practice outlined above, we derive concepts such as social interaction, mentoring, education, group dynamics, information systems, management practices, among others. Essentially, concepts that refer to the same three theoretical constructs that have served to narrow the field of knowledge management, according to scholarly and popular literature that we cited earlier: technological, strategic and management, and psychosocial. However, although various empirical researches demonstrate the origin of knowledge management and its theoretical constructs, this is not the case for the concept of communities of practice. Can we conclude, then, that it suffers from the same structural issues and conceptual problems than knowledge management?

To answer that question, we propose a bibliographical research on the concept of communities of practice, trough which we will analyze the academic and popular articles regarding this topic published from 1998 to 2009. We will use *ABI/Inform Database* to select those articles. This database compiles all articles related to business administration topics.

This will be an exploratory analysis based in the use of two bibliometric techniques: *life cycle analysis and citation breadth analysis.* The purpose of an exploratory research in this context is to identify, describe and analyze the characteristics of published articles in academic and popular journals, allowing us to examine the scope and nature of a recently developed concept (such as communities of practice) as well as understand all its implications.

The life cycle analysis will be used to examine and describe the trend and development that has been observed in the last twelve years in literature related to communities of practice. Our first research question in this phase will be: How has been the evolution of the concept of communities of practice from 1998 to 2009 according to business literature?

The citation breadth analysis will allow us to delineate the epistemological and practical development of such topic over those years. Our second research question in this phase will be: Do the publications from 1998 to 2009 show an interdisciplinary nature for the concept of communities of practice?

Study Design

A bibliometric analysis is the technique that best lends itself to an exploratory study because it produces a clear perception of the nature and behavior of an academic field (Lucca & Berrios, 2003). In this study we

used two of these techniques: the life cycle analysis (Abrahamson & Fairchild, 1999) and breadth and depth analysis (White & McCain, 1998).

The life cycle analysis serves to delineate trends in disciplines based on number and types of published articles over a particular period of time. The intention is to reveal patterns in literature in order to explore whether these changes have been motivated by a discursive shift or new paradigm in a particular discipline. In our research, this analysis served to study the evolution of communities of practice as a technical tool and an academic field during the years under review: 1998-2004.

Moreover, the breadth and depth analysis serves to examine the interdisciplinary and theoretical development of a discipline (Ponzi, 2002; White & McCain, 1998). This analysis shows what it is publishing under a new field of study, who are the most relevant authors, what areas of study serve as a basis for developing such new concept, what are the works most cited, among others. This analysis allowed us to reveal the conceptual structure of communities of practice.

Procedure

As stated already, a discipline is intimately linked to its literature, because it serves to document the problems, concerns and issues as manifestation of its development (Neely, 1981). For this reason, the unit of analysis was the article because it is the primary basis of communication within an academic area (Lopez, 1999). Articles represent a repository of knowledge developed in a field (APA, 2003).

Thus, the population subject to analysis represents the total number of articles published during 1998-2004 and 2004-2009 under the topic of communities of practice. As we will see later, the number of articles published under this concept, has been increasing dramatically since 2004. We used the database *ABI/Inform Global*, sponsored by *Proquest* electronic service, which organizes the articles published in professional journals based on the following categories: *academic, semi-academic and popular or trade*. Academic journals are prestigious, refereed journals, and semi-academic journals are moderate or high prestige, but not refereed. Popular magazines, on the other hand, are journals published by consultants and practitioners. Other databases are extremely useful, but not as specific in business matters.

We did a search of all articles published from 1998 to 2009 in this database and under the captions *abstract, title*, and *document text*. Also, we used the search phrase *communities of practice but not knowledge management*, in order to list all the articles that discussed issues related to communities of practice, exclusively. Later, we tabulated such articles by year of publication, type of journal or magazine in which they were published, and the nature of its content: information systems, strategic management and organizational behavior; in fact, the three theoretical constructs under analysis (see Table 1). Since the amount of articles published after 2004 increased geometrically, we separated data in terms of two periods: 1998-2004 and 2005-2009.

But, how had been evolving the concept of communities of practice from 1998 to 2004 and from 2005 to 2009? We will prepare graphs which will demonstrate trends and discursive nature of this field during these periods.

On the other hand, the application of breadth and depth analysis implies several steps. First, we determine the relative importance of academic journals in which articles were published. For this purpose, we used three rating systems used by different institutions: *Strategic Management Journal* published in March 2005, *University of Pennsylvania*, published in 1998, and the *Association for Information Systems* published in 2003.

Table 1: Number of Published Articles by Year, Journal Type and Content: Communities of Practice

Panel A: Journal Type

Year	Academic	Semiacademic	Popular	Totals
1998	50	2	21	73
1999	52	2	13	67
2000	88	2	22	112
2001	111	2	31	144
2002	132	5	43	180
2003	130	8	44	182
2004	158	3	57	218
Totals	721	24	231	976
(%)	73.87%	2.46%	23.67%	
2005	2926	250	1892	5068
2006	3024	225	1701	4950
2007	2941	224	1576	4741
2008	2811	205	1528	4544
2009*	2391	163	1178	3732
Totals	14093	1067	7875	23035
(%)	61.18%	4.63%	34.19%	

Panel B: Content or Orientation

Year	Management	Information Systems	Organizational Behavior	Totals
1998	12	6	51	69
1999	16	9	49	74
2000	21	19	61	101
2001	33	28	76	137
2002	39	38	104	181
2003	35	46	100	181
2004	42	56	130	228
Totals	198	202	571	971
(%)	20.39%	20.80%	58.81%	
2005	1627	1503	1944	5074
2006	1632	1443	1855	4930
2007	1491	1451	1800	4742
2008	1488	1393	1663	4544
2009*	1388	1106	1247	3741
Totals	7626	6896	8509	23031
(%)	33.11%	29.94%	36.95%	

*This table shows number of articles published in "ABI/ Inform" database for periods under study (1998-2004, 2005-2009). Panel A shows total articles published by journal type (academic, semiacademic and popular) and under the topic of communities of practice. The figure in each cell represents the amount of articles published for each year and type of journal. Panel B shows total articles published by content or discipline (management, information systems and organizational behavior) and under the topic of communities of practice. Figures in each cell represent the amount of articles published by year and under journal type or content. The percentage row (%) represents the proportion of articles published by journal type for periods under examination. *Totals include items recovered from the database search made in October 2009.*

We obtained a weighted average of the values assigned by these institutions to such prestigious journals and magazines and ordered them in terms of that weighted average. Later, we searched for the number of articles (more than two articles) related to communities of practice which were published in those journals during 1998-2004. Those journals carried the weight of publications in this field during 1998-2004. Articles published after 2004 were not taken in account for this procedure due to their volume (see Table 2 and Table 3).

Second, we used the databases *Social Sciences Citation Index (SSCI)* and *Science Citation Index (SCI)* to search for the most cited articles related to communities of practice for periods under study, as well as the fields of study more relevant and related to those selected articles. The *ABI/ Inform Global* does not allow recovery of data in terms of subject or fields of study, thus we need to use of these other databases (SSCI and SCI).

Table 2: Articles Published in Academic Journals, 1998-2004, Communities of Practice

Journal or Publication	Average	SMJ	WSU	AIS	1998-2004
Organizational Dynamics	19.3	19	-	19.5	3
Organizational Studies	17.5	25	-	10.0	10
Long Range Planning	17.2	14	-	20.3	3
Academy of Management Executive	17.0	17	-	-	4
California Management Review	15.6	24	11	11.7	3
Human Relations	14.3	12	-	16.5	12
Management Science	13.1	13	13.5	12.8	4
Sloan Management Review	11.0	-	11	11.0	7
Personnel Psychology	10.2	10	-	10.3	3
Organization Science	6.8	8	5.5	-	6
Strategic Management Journal	4.5	1	8.5	4.0	8
Academy of Management Review	4.1	5	2	5.3	9
Administrative Science Quarterly	3.4	6	3	1.3	5
Association of Computing Machinery	-	-	-	-	6
Management Learning	-	-	-	-	27
Marketing Management	-	-	-	-	11
Journal of European Industrial Training	-	-	-	-	7
Education & Training	-	-	-	-	3
Journal of Management & Governance	-	-	-	-	5
Journal of Organizational Change & Mgmt.	-	-	-	-	6
Journal of Workplace Learning	-	-	-	-	18
The Learning Organization	-	-	-	-	7
Computational & Math. Organization Theory	-	-	-	-	4
Human Resource Management Journal	-	-	-	-	6
Industrial & Communication Training	-	-	-	-	3
Journal of Economic Geography	-	-	-	-	3
Journal of Intellectual Capital	-	-	-	-	3
Information Science	-	-	-	-	4
Human Resource Management Int.l Digest	-	-	-	-	3
Journal of Education for Business	-	-	-	-	3
Journal of Management Education	-	-	-	-	4
Practical Aspects of Knowledge Management	-	-	-	-	5
Information Research	-	-	-	-	3
Information Society	-	-	-	-	4
Organization	-	-	-	-	3
Journal of Management Information System	-	-	-	-	3
Strategy and Leadership	-	-	-	-	3
Journal of Management Inquiry	-	-	-	-	3
Sub-total					224
Other (for journals with two articles or less)					747
Total					971
% journals with more than two articles					23.07%

This table shows the relative importance of academic journals in which articles related to communities of practice were published during 1998-2004. The figure in each cell under second column (average) represents weighted average of the rankings assigned by evaluating institutions to cited journals. The figures in cells under SMJ, WSU and AIS columns represent individual rankings assigned to same journals by each institution. The last column represents the number of articles published for 1998-2004 in cited journals and under communities of practice. (SMJ- Strategic Management Journal; WSU-Wharton School University of Pennsylvania; AIS- Association for Information System)..

Once items were recovered, we search for those articles cited three or more times in those databases and whose journal's ranking are better. In addition, we made sure that these articles were published by journals which also were part of *ABI/ Inform Global*, as this is the original database of the study. The goal of this process was to determine which authors carry the weight of publications, and what articles forms the conceptual bases for the development of communities of practice as a field of study during 1998-2004 (see Table 4).

Table 3: Articles Published In Semiacademic and Popular Journals, 1998-2004, Communities of Practice

Journal or Publication	SA	P
Fortune	5	-
Healthcare Forum Journal	-	4
Network World	-	3
Training	-	14
T & D	-	3
Computing Canada	3	-
Oil & Gas Journal	3	-
Government Executive		3
Association Management		9
Executive Excellence		3
Information Today		3
Management & Research News		3
Sub-total	11	45
Other (for journals with two articles or less)	13	245
Total	24	290
% journals with more than two articles	45.8%	15.5%

This table shows the relative importance of semiacademic and popular journals in which three or more articles related to communities of practice were published during 1998-2004. The figure in each cell represents total of articles published for semiacademic journals (SA) and popular journals (P). The percentage of articles from journals with more than two publications during 1998-2004 is represented by the last line of the table.

Table 4: Articles Most Cited in Academic Published in Semiacademic and Popular Journals, 1998-2004, Communities of Practice

Article's Title	Times cited	Ranking
Wenger, E. C. & Snyder, W. (2000). Communities of practice: The organizational frontier. *Harvard Business Review, 78*(1), 139-+.	62	4
Easterby-Smith M., Snell R. & Gherardi, S. (1998). Organizational learning: Diverging communities of practice? *Management Learning 29*(3), 259-272.	39	8
Robert, J. (2006). Limits to communities of practice, *Journal of Management Studies, 43(3), 623-639.*	39	18
Thompson M. (2005). Structural and epistemic parameters in communities of practice, *Organization Science, 16(2), 151-164.*	37	22
Handley K, Sturdy A, Fincham R, et al (2006). Within and beyond communities of practice: Making sense of learning through participation, identity and practice , *Journal of Management Studies, 43(3), 641-653.*	34	19
Wenger, E. (2000). Communities of practice and social learning systems *Organization, 7*(2), *225-246.*	32	24
Fox, S. (2000). Communities of practice, Foucault and actor-network theory *Journal of Management Studies, 37*(6), 853-867.	21	49
Wasko, M. M. & Faraj, S. (2000). "It is what one does": why people participate and help others in electronic communities of practice. *Journal of Strategic Information Systems, 9*(2-3), *155-173.*	21	50
Amin, A. & Roberts, J. (2008). Knowing in action: Beyond communities of practice, *Research Policy, 37(2), 353-369.*	19	10
Dube L, Bourhis A, Jacob,R. (2005). The impact of structuring characteristics on the launching of virtual communities of practice, *Journal of Organization Change Management, 18(2), 145-166.*	15	21
Lin FR & Hsueh, CM. (2006). Knowledge map creation and maintenance for virtual communities of practice, *Information Processing and Management, 42(2), 551-568.*	14	20
Comtu, A. & Wilmott, H. (2003). Re-embedding situatedness: The importance of power relations in learning theory. *Organization Science, 14*(3), 283-296.	12	32
Cross R, Laseter T, Parker A, et al. (2006). Using social network analysis to improve communities of practice, *California Management Review, 49(1), 32-+*	12	17
Lesser, E. & Storck, J. (2001). Communities of practice and organizational performance. *IBM Systems Journal, 40*(4), 831-841.	11	2
Liedtka, J. (1999). Linking competitive advantage with communities of practice. *Journal of Management Inquiry, 8*(1), 5-16.	10	1
Kaghan, W. & Phillips, N. (1998). Building the Tower of Babel: Communities of practice and paradigmatic pluralism in organization studies, *Organization, 5*(2), *191-215.*	9	9
Collier, J. & Esteban, R. (1999). Governance in the participative organisation: Freedom, creativity and ethics. *Journal of Business Ethics, 21*(2-3), 173-188.	4	6

This table shows most relevant articles under communities of practice and included in Social Sciences Citation Index (SSCI) and Science Citation Index (SCI) databases during 1998-2009. The first column represents number of citations of each article in such databases during 1998-2009. The second column represents the rank assigned in such databases to each article in terms of relative importance in communities of practice field during 1998-2009.

RESULTS

Our first research question was: How has been evolving the concept of communities of practice from 1998 to 2009 according to business literature? Table 1 shown the number of published articles related to communities of practice during the 1998 to 2004 and 2005 to 2009, both in terms of type of journals and nature of content. Table 1 demonstrated that percentages of academic articles in both periods (73.9% and 61.2%, respectively) were in proportion of three times to one, comparing with non-refereed and popular journals. On the other hand, we could say that in early years, articles under communities of practice were related to organizational behavior topics, substantially (58.1%). However, in the last five years, the consideration turned more interdisciplinary, since the proportion of published articles with technological, managerial and cultural orientations was, practically, the same (within 30% to 35%). This points to a much more solid theoretical view, because it shows that communities of practice represents an excellent platform for better performance in knowledge management, because they attends all important aspects in such projects: administrative, technological and cultural.

Our second research question was: Do the publications from 1998 to 2009 show an interdisciplinary nature for the concept of communities of practice? The citation breadth and depth analysis allowed us to delineate the epistemological and practical development of communities of practice topic over those years.

Table 2 shows the order established by three different systems used to classify most relevant academic journals in business topics. Journals were organized in terms of their weighted average of values assigned by each classification system. Only 77 of 971 articles (7.9%) retrieved from the database ABI/Inform Global belongs to most relevant journals, and 224 of 971 articles (23%) represents journals with three or more articles related to communities of practice and published from 1998-2004. However, 80 of such 224 articles (35.71%) were published in Organization Studies, Human Relations, Management Learning, Journal of Organizational Change & Management and Journal of Workplace Learning. These are academic journals with substantial content in organizational behavior, relation that supports the cultural orientation of communities of practice articles in early years.

On the other hand, Table 3 showed that three journals represented a 45% of all articles published in non-refereed journals with three or more articles from 1998-2004 (Fortune, Computing Canada and Oil & Gas Journal), while only 15% were represented by popular or technical magazines. Thus, in early years, communities of practice articles were more academic, cultural and theoretically based, not technically oriented.

However, Table 1 shows that trend has been changing since 2005. Although the orientation in the last five years is academic and conceptual too, all theoretical constructs have been receiving a fair treatment in literature: management topics, technology topics and organizational behavior topics.

Table 4 shows that only four articles comply with two essential characteristics: be one of most cited articles and have a high ranking. Those articles were cited ten or more times from 1998-2004 and were ranked within the first ten more relevant articles for the same period. For example, *Communities of practice: The organizational frontier* (Wenger & Snyder, 2000) was cited in 62 occasions and ranked as fourth more relevant article. In this article, Wenger and Snyder introduced communities of practice as a new organizational form that emerged to improve knowledge sharing and organizational learning and change. This is possible for these groups because they become closely related by their shared experiences and sense of purpose.

Organizational learning: Diverging communities of practice (Easterby-Smith, Snell & Gherardi, 1998) was cited in 39 occasions and classified as eighth most relevant article. Authors recommended the

creation of communities of practice as a new paradigm in creation and dissemination of knowledge. Such communities have a clear understanding of knowledge domain in their organizations and represents, as they stated an excellent mechanism to help companies in tacit to explicit knowledge transformation.

On the other hand, in the article *Communities of practice and organizational performance*, Lesser and Storck (2001) established that such communities promote behavior change and performance improvement. In their article details some achievements in formation of communities of practice: the degree of connection and interaction between participants, the creation of a sense of trust and mutual respect, and the formation of a common language and common context among members of the community. This article was cited in 11 occasions and was classified as second most relevant article.

Janet Liedtka, in her article *Linking competitive advantage with communities of practice* (1999), cited in 10 occasions and which was ranked first, considers that issues such as organizational learning, leadership, participation, collaboration and strategic thinking have been focused on business through decades. The intention behind these aspects is the same: companies could develop capabilities to adapt to continuous change. Lietdka stated that for any of these projects must have communities of practice as a platform. She also mentions that the fact that communities operate on the basis of a good value system will encourage that organizational practices mentioned above will be grounded on a goal congruence basis among all members of the organization as a primary value.

Undoubtedly, the most cited articles reach the same conclusion: the strength of communities of practice lies in providing the much needed psychosocial elements that will make knowledge management projects to be successful.

CONCLUSION

The principal purpose of this paper was to investigate how has been developing the concept of communities of practice according to business literature in recent years. Specifically, this research demonstrated that, since 1998, publications relating to knowledge management in organizations have been directed towards the formation of communities of practice as a workable platform. In fact, the interdisciplinary content of the articles of communities of practice was independent of the period and type of journal in which articles were published, suggesting that it is a better defined theoretical construct.

In order to reach this conclusion, we analyzed academic and popular articles regarding communities of practice and published from 1998 to 2009 in *ABI/Inform Database*. Later, we applied two bibliometric techniques to analyze selected articles: life cycle analysis to examine and describe the trend and development that has been observed in the last twelve years in literature related to communities of practice, citation breadth analysis to delineate the epistemological development of such topic over those years. The articles under examination were classified in terms of type of journal (academic, semi-academic and popular) in which they were published and its disciplinary content (strategic management, information systems or organizational behavior)

Our first research question was: How has been evolving the concept of communities of practice from 1998 to 2009 according to business literature? In early years (1998 to 2004), articles under communities of practice were related to organizational behavior topics, substantially. However, in the last five years (2005-2009), the consideration turned more interdisciplinary, since the proportion of published articles with technological, managerial and cultural orientations was, practically, the same. This point to a trend that reveals that the concept of communities of practice is more solid than the knowledge management projects, because they attend all important aspects: administrative, technological and cultural.

Our second research question was: Do the publications from 1998 to 2009 show an interdisciplinary nature for the concept of communities of practice? In early years (1998 to 2004), academic journals with substantial content in organizational behavior were privileged in business literature related to communities of practice, relation that supports the cultural orientation absent from knowledge management discussions. However, that trend has been changing since 2005. Although the orientation in the last five years is academic and conceptual too, all theoretical constructs have been receiving a fair treatment in literature: management topics, technology topics and organizational behavior topics.

In addition, once we examined the most cited and more relevant articles related to communities of practice and published during 1998-2009, we reached the same conclusion: the strength of communities of practice lies in providing the much needed psychosocial elements that will make knowledge management projects to be successful.

We had some limitations in our present study. A bibliometric analysis is a technique of discourse analysis that allows us to explore and describe the theoretical orientation of a field of study. In this study we assume that the theoretical constructs from previous studies on knowledge management (Mattila & Larsen, 2002; Ponzi, 2002), serve to analyze the nature of the literature on communities of practice. Indeed, the results of this research were consistent with these assumptions. However, as a bibliographic research and exploratory nature, we cannot generalize the findings of this study.

For future research, would be worthwhile to examine how established communities of practice consider technological, strategic and behavioral problems in their implementation. Following this research, we suggest a comparative analysis of companies that have implemented communities of practice with those which used other forms of knowledge management in their organizations. This analysis will aim to determine if establishing communities promotes organizational learning and knowledge management or will suffer, inevitably, the problems that already had other approaches in the past.

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