KNOWEDGE DEVELOPMENT WITHIN COMMUNITIES OF PRACTICE USING ORGANIZATIONAL LEARNING

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Abstract: Knowledge assets are a critical resource that can generate a competitive advantage for organizations. Generally, knowledge can be divided in explicit knowledge and tacit knowledge. Organizations focus on managing the explicit knowledge and also on capturing the tacit knowledge embedded in the individuals' experiences. Knowledge development represents the main purpose of the knowledge management domain, in both research and applications. Through the interactions in social networks, community-based knowledge development and sharing have become very effective tools. In this context, more and more organizations are developing communities of practice as strategic tools for knowledge development and sharing within the organization and across organizational boundaries.

1. INTRODUCTION

In the last years numerous contributions and approaches pointed out the importance of communities of practice in the knowledge-based economy. The most relevant argument is that community of practice is the core of collective learning and collective intelligence, relaying on a permanent exchange of knowledge and information related to the practice. Communities of practice enhance particular knowledge that exist in the organizations and contribute to its coherence.

In the context of high competition over value added, the most effective organizational form is not a hierarchical one, but a community, where each member posses a set of skills. Thus, a new organizational form has emerged that complements existing structures and emphasizes knowledge sharing and learning, the community of practice. The concept has received much attention from researchers and practitioners in the management area, especially in knowledge management.

A community of practice, as a particular form of collective action, has the benefits of cooperation on a long run as an effective arrangement. This type of communities create incentives for learning and dissemination of information, allowing

ideas to be translated into action quickly and offer highly feasible means of using and enhancing intangible assets, like tacit knowledge and technological innovation. The social and technological attributes of the knowledge management system determine the success of knowledge development and sharing in communities of practice.

Communities of practice can provide a social reservoir for practitioners, knowledge producers and policy makers in order to analyze, address and explore new ideas and solutions to their problems. Their main objective, related mostly to the learning process rather than to the management process, differentiates communities of practice from other types of groups, like project teams, working groups or social networks.

The remainder of this paper is organized as follows. In Section 2 a review of communities of practice is presented. Section 3 emphasizes the emergence and dynamics of communities of practice, while Section 4 highlights the characteristics of knowledge development and sharing. In the end, Section 5 comes up with conclusions.

2. COMMUNITIES OF PRACTICE

Communities of practice are free associations of persons who choose to improve their skills together. Furthermore, they develop new productive collective capabilities, which are sources of value creation in the knowledge-based economies. Communities of practice are groups of self-governing people who are challenged to create value by generating knowledge and increasing capabilities.

The concept "community of practice" was outlined by Lave and Wenger in early 90's, to describe "a group of people who share a concern, a set of problems or a passion about a topic, and who deepen their knowledge and expertise by interacting on an ongoing basis" [14].

Tabel no. 1

Key characteristics of a community of practice
Sustained mutual relationships – harmonious or conflictual
Shared ways of engaging in doing things together
Rapid flow of propagation of innovation
Absence of introductory preambles, if interactions were the continuation of an ongoing process
Quick setup of a problem to be discuss
Knowing what others know, what they can do, and how they can contribute to an organization
Mutually defining identities
Ability to assess the appropriateness of actions and products
Specific tools, representations and artifacts
Common background, shared stories
Certain styles recognized as displaying membership
Shared repertoire reflecting a certain perspective on the world

Source: Compiled from [14]

Communities of practice are also defined as "groups of people informally bound together by shared expertise and passion for a joint enterprise" [12]. Within communities of practice, the individual knowledge and experiences are shared, new knowledge is developed and problems are solved through interactions between their members.

In respect to the above definition, a community of practice is delimited by three dimensions:

• What it is about – the joint enterprise as understood and continually renegotiated by its members;

• How it functions – the relationships of mutual engagement that bind members together into a social entity;

• What capability it has produced – the shared repertoire of communal resources (routines, habits, artifacts, vocabulary, styles) that members have developed over time.

A community of practice represents "an intrinsic condition for the existence of knowledge" [3]. Thus, communities of practice are characterized by commonly exploration of ideas, knowledge development and mutual learning. Learning in communities of practice is not only replicating instances of practice, but also "learning as legitimate peripheral participation". Legitimate peripheral participation means learning as an integral part of practice, learning as "generative social practice in the lived world". Participation represents the key of understanding communities of practice, because they imply participation in an activity about which all participants have a common understanding. Therefore, both the community and the degree of participation in it are inseparable from the practice.

Another complex definition of communities of practice describes them as "self-organizing and self-governing groups of persons who share a passion for the common domain of what they do and strive to become better practitioners. They create value for their members and stakeholders through developing and spreading new knowledge, productive capabilities and fostering innovation." [7]

Traditional books and journals are inadequate means for obtaining information about the practical problems in many communities of practice. Thus, their members are moving online, towards collaborative knowledge building and forming virtual communities of practice [7]. In order to function, communities have to operate in the virtual world. The internationalization of business determines more and more distributed operations. And the hardest part in transferring a community from the real world to a virtual one seems to be the facilitation of participation. While participation is the key to evolution of the community and to creation of relationships, it develops the community's identity and the sense of trust.

3. THE EMERGENCE AND DYNAMICS OF COMMUNITIES OF PRACTICE

The emergence of centralized structures in communities of practice is the result of a self-organizing process. A starting point of the emergence of communities is related to the existence of problems with current solutions or a shared need. The evaluation of relevant knowledge and information, and also of "best practices" related to the practice represents the most important activities in communities of practice. Through these activities, members are able to engage and participate in collective learning process. Therefore, many communities of practice emerge naturally from existing relationships and trustfulness.

In general, individuals do not consider themselves to be part of a community, knowledge sharing taking place in non-hierarchical groups, beyond the formal work description. This phenomenon has been identified as the "emergent communities of practice" [3]. The emergent communities of practice are created by the complexity, diversity and fluidity of the individuals.

Communities of practice are characterized by the absence of any contractual scheme, agents being able to set the nature of their commitment to the community. The

individual expertise underlies the existence of communities of practice, while members are endowed with different experiences. The heterogeneity determines specialization in different fields implied by the personal background of the individuals. And the specialization effect shows that each member develops specific knowledge related to his field of enquiry and ignoring other parts. Furthermore, communities often develop specific structures of organization. This implies a differentiation in the roles played by specific members. As a result, each member is endowed with different objectives and motivations. The individuals are also characterized by the deepness of their experience in the community representing the time spent in the community and conditioning the level of knowledge of the practice.

The core participants of the community develop common cognitive frames and knowledge. This facilitates coordination among community members, but also restricts the capacity to find solutions to new problems. Original solutions to problems are given by the peripheral members. The process of learning at the boundary is the base of the legitimacy of peripheral members [11].

As we mentioned above, communities of practice represent the core of the collective learning and collective invention processes which relies on a constant exchange of knowledge and information. But the rationale and dynamics for the emergence of centralized structures remain unclear. And it seems that the emergence of centralized structures in the communities of practice is the outcome of a self-organizing process [6].

In this context, temporary organizations are motivated to perform specific actions in order to achieve immediate goals. The emergence of such temporary and network-based organizations has determined the creation of communities of practice, which become active temporary in network-based organizations.

"Communities of practice do not usually require heavy institutional infrastructures, but their members do need time and space to collaborate. They do not require much management, but they can use leadership. They self-organize, but they flourish when their learning fits with their organizational environment. The art is to help such communities find resources and connections without overwhelming them with organizational meddling. This need for balance reflects the following paradox: No community can fully design the learning of another; but conversely no community can fully design its own learning." [13]

The success of a community depends on the ways of interaction between community members, depends on communication, cooperation, coordination and knowledge exchange, but also depends on certain characteristics of the setting, characteristics of the individuals, characteristics of the community and even characteristics of the environment and tools. These characteristics are not static; they can change continually, especially in the early phases of a community.

In such a dynamic perspective, these characteristics represent conditions for the input and output of the community process. Therefore, a successful community depends on the degree to which the processes mutually match each other.

4. KNOWLEDGE DEVELOPMENT AND SHARING IN COMMUNITIES OF PRACTICE USING ORGANIZATIONAL LEARNING

Communities of practice represent the key for the functioning of any organization, and become critical to those that consider knowledge as a principal asset. From this perspective, an effective organization includes a set of interconnected

communities of practice, each of them dealing with specific aspects of the organization competencies. Knowledge is created and shared, organized and revised, and passed on within and among these communities.

The individual knowledge and experiences are shared, new knowledge is developed and new problems are solved through interactions between communities members. Since communities of practice are characterized by a community, a limited group of people, they can create trusted relationships for the exchange of ideas and best practice. Thus, communities of practice are characterized by mutual learning, shared practice and commonly exploration of ideas.

Due to benefits of social learning and collaboration, members are involved and invested in the community. They can bring together multiple perspectives on a problem and also ensure that relevant knowledge is available and accessible to those who need it. And it is all about members' interpretation of knowledge within specific contexts, about their ability to use that knowledge. Communities of practice create an environment of reflection and interpretation that enhances the relationship between their members.

Knowledge can be divided in two types, explicit and tacit knowledge. Explicit knowledge is codified knowledge, transferable in formal language, while tacit knowledge is personal, hard to formalize and communicate. Knowledge is related both to the process of knowledge development and to the process of learning. Knowledge development refers to creation of new scientific knowledge either by individuals and research groups, or by groups of individuals and research groups across organizational boundaries, such communities of practice.

The process of learning refers to an internal process of acquiring new skills, norms and new ways of thinking within inter-organizational collaboration. Learning encompasses both explicit and tacit knowledge. The approach of knowledge development and learning in communities of practice is pragmatic. The knowledge endowment of individuals, the communities consisting of individuals and the links between them co-evolve during the collaboration process.

Knowledge development and learning can take place collectively, in inter-organizational settings. Learning and knowledge development are contextual processes and takes place in communities, flexible evolving networks and in interspaces between companies or universities. Knowledge is path-dependent and what is learned is affected by what is already known.

4.1 Knowledge development

Capturing the tacit knowledge embedded in the individual experiences is not an easy process. Thus, communities of practice offer a practical mechanism to help communities members develop, share and internalize tacit knowledge. Through communities of practice, members can deepen their expertise by analyzing and discussing the occurred issues with experts in their field. This type of communities can be seen as a tool of knowledge development and sharing, encouraging the ideas and insights exchange and expertise transfer.

The development of knowledge has assumed a set methods, values, ideas and norms. Knowledge is developed in the context of its application, negotiating the different interest of the knowledge users, and is distributed through the society. Knowledge is developed close to the end user and the diffusion of knowledge takes

place as part of its application to solve specific problems, rather than publishing articles in scientific journals.

The process of knowledge development requires negotiating the interest of multiple users and stakeholders of knowledge. At the same time the participants of knowledge development are increasingly reflexive due to their negotiation of what stands for knowledge and taking into account the points of view of other participants.

4.2 Organizational learning

Collaboration in communities of practice and also knowledge development require organizational learning. The concept of organizational learning can describe the internal learning process that take place within and between the participating communities.

Organizational learning can be defined as "collective acquisition of knowledge among a set of organizations" [8]. Organizational learning can be achieved by a strategic alliance of two or more organizations changing their organizational repertoire of possible joint activities. This type of learning utilizes a set of capabilities to build new knowledge and a function to access such knowledge. Also the social production of organizational rules based on experience leads to a changed organizational behavior. Organizational learning is related to individual learning, but is influenced by organizational factors, like organizational procedures.

Organizational learning implies changes in the organizational beliefs and cognitive system, not only changes in the behavioral patterns. Organizations can learn by using their capabilities and learn by feedback from their stakeholders. They can analyze and change their learning strategies to meet the needs of the changing contexts, form communities and partnerships in order to learn from others.

The efficiency of organizational learning is dependent on the collaboration process and the dialogue, through which different cultures can be understood and shared concepts can be constructed. In order to forest collaborative learning, organizations need to include collaborative strategies and to ensure adequate procedures and communicative capacity.

5. CONCLUSIONS

The communities of practice are emerging in knowledge-based organizations. They can enhance the efficiency of production and can improve the innovative processes. In these conditions, both knowledge creation and exchange processes play an important role. First of all, managers have to understand what the communities of practice are and how they work. Second, we all have to realize that the communities of practice induce knowledge development and define the challenges of the knowledge economy.

Communities of practice are developed around things that matter to people. As a result, their practices reflect the members understanding of what is important. Outside constraints can influence this understanding, but even then, members develop practices that are their own response to these external influences. In this sense, communities of practice are fundamentally self-organizing systems.

To develop the capacities to create and retain knowledge, organizations must understand the process by which learning communities evolve and interact. The role of the communities of practice within organizations is to transfer shared knowledge into organizational knowledge. The organizations of the future are organizations that learn

to release the creative power of project communities, knowledge networks or open source teams. In the context of knowledge-based economy, communities of practice represent the center of the innovation movement.

The organizational behavior field is interested in studying organizations as complex social systems. Most of the theories from this field explore individual and collective human behavior within organizations and their central activities try to identify the determinants of intra-organizational cooperation. Managing collective intelligence within an organization implies combining all tools, methods and processes that can lead to connection and cooperation among individual intelligences.

The contribution of the paper is mostly theoretical, presenting a conceptual analysis, and also a practical use of knowledge within communities of practice. The research is based on the sociological literature, with emphasis on the theory of organizational behavior.

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