MANAGEMENT OF ORGANIZATIONAL KNOWLEDGE

Lecturer PhD. eng. Alin NIOAȚĂ, Engineering Faculty, "Constantin Brâncuşi" University, nalin@utgjiu.ro

Lecturer PhD. eng. Florin CIOFU, Engineering Faculty, "Constantin Brâncuşi" University, florin.ciofu@utgjiu.ro

ABSTRACT: Explicit knowledge management by distributing and storing knowledge in different ways promotes updating and further development of knowledge, skills and competence, namely it promotes learning. In addition, knowledge management encourages employees to share their experiences and knowledge, to teach each other in formally or informally structured activities in daily activities. In this way, knowledge management facilitates the creation of an environment that makes it possible knowledge through which are created conditions for the development of skills and competencies.

Keywords: management, organization, education, knowledge, model

Irrespective of the informational technologies more or less sophisticated that they use, organizations - as complex human social systems - have been and are always conditioned by knowledge, at least at the level of individual behavior of their members; They realize, to a greater or lesser extent the relationships between goals, means and results, as well as those between the organization and its ambience, communicate in order to interact coordinatedly and develop their own behavior ascribed to common norms and values.

Specific to the information society are, however, those organizations that rely on knowledge in a deeper sense and extended to the whole collective behavior of groups and organization on the whole. In such a framework, the foundation on knowledge becomes systematic and institutionalized in the following aspects:

- Fund of knowledge is understood as the main resource of the organization, decisive to its global strategic performance;
- Intellectual-intensive processes are not only prevalent but also essential for the operation of the organization towards achieving its objectives;
- Organization structures for individual and collective actors, requirements, roles and new responsabilities for the management of knowledge and processes related to it;
- Organizational culture consensually institutes normative landmarks for the perenniality of the values related to creativity, competence, learning, communication;
- Aspects of knowledge come to have a crucial role in affirming the identity of the organization, ensuring its integrity and coherence in terms of structure, strategy and action.

Admitting that organizations become intelligible by explaining how they are structured, respectively how they function in order to achieve their objectives, it becomes possible to identify the characteristics of knowledge-based organizations through their integration into types associated with each of the two criteria; the former be seen in the succession of organizational configurations patterns and the latter - in the succession of generations of management practices (table 1).

The typology of organizational models presented show that they have evolved towards an increase in their degree of reliance on knowledge, also understood as a progressive humanization trend, convergent with the anthropocentric orientation of information systems. While this evolution was inspired by the paradigm of organization based on control and authority, it could be supported by improving redesigning of hierarchical configurations specific to industrial capitalism, culminating in the form of matrix organization. At the end of the twentieth century, against the background of the consecration of the paradigm shift in the theory of organizations, however, become clear both the limits of hierarchy and the relevance of the alternative represented by the organization of knowledge. Instead of a rigid pyramidal structure and susceptible of predictible behavior omnipresent before, there is a variety of structural non-hierarchical forms of network type; Typical behavior for actors within them are of entrepreneurial structure, but they can combine the attributes of managerial professionalism even if the hierarchical pyramid appears to have reversed.

Tab. 1. Succession of generations of management practices

| Attributes of organization | Generation I | Generation II | Generation III | Generation IV | Generation V |
|----------------------------|--|--|---|---|---|
| | Orientation towards technology | Orientation towards projects | Orientation towards organization | Orientation towards clientele | Orientation towards knowledge |
| Strategy | Disconnected efforts of research- development | Focused on basic activity | Integration between technology and basic activity | Coordination with clients in research-development | Systems of interactive innovation |
| Forces of change | Unpredictible | Intra- organizational interdependences | Systematic effort of research-development | Generalized,rapid, discontinuous change | Dynamics of a "kaleidoscopic" type |
| Performance | Research- development as an auxiliary (support) activity | Co-participation to expenses | Risk-benefit balance | Relation beteen productivity and investments for informatization | Capacitatea Intellectual capacity and its impact |
| Structure | Functionally oriented hierarchy | Matrixal | Distributed coordonation | Professional communities | Symbiotic type networks |
| Staff | Competitive relations | Cooperare Proactive cooperation | Structured collaboration | Focus on values and potentials | Self –managed professionals |
| Functioning | Weak internal communication | Based on relations between projects | Research – development centred on basic activity | Reaction circuits; constant informing | Knowledge flows from/to outside |
| Technology | Embryonic | Based on data pe date | Based on pe information | Informatics – a competitive force | Intelligent processors of knowledge |

In order to make clearer distinctions suggested above in Figure 1 and Table 2 are shown as structure diagrams, respectively, of a grid of comparison, the main attributes of the model of hierarchical organization and of non-hierarchical alternative, illustrated by other two models :anarchical organization and the one centered on memory.

Corresponding to the functional criteria, the management practices in organizations based on knowledge are those from generation V. It became clear that, given their specific nature and configuration, irreducible to earlier forms, knowledge-based organizations can not be managed by applying the principles and methods available in the industrial age.

Managers can not, simply continue doing what they knew and used to do in the hierarchy environment, and for what they should do they need new skills; knowledge as resource and organizational process requires a dedicated management type of intervention that should be formalized and professionalized, excellence remaining, however, reserved for those who practice it as vocation.

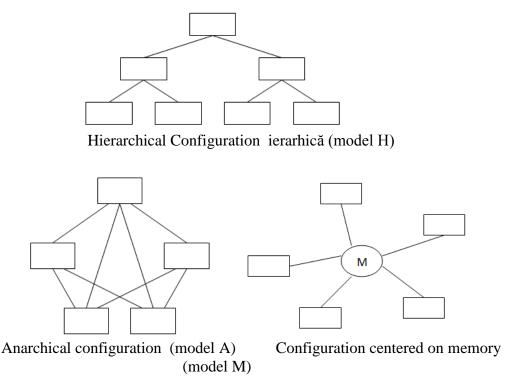


Fig. 1: Organizational models: hierarchy and non-hierarchical alternatives

Knowledge management can be defined as an approach, strategically oriented , of motivating and facilitating employment of the members of the organization in the development and use of their cognitive capacities by valorisation, subordinated to its overall objectives , of sources of information, experience and abilities of each of them.

In the organizational environment, knowledge is derived from data processed by those who hold them in effective action capacity, by assimilation and integrating understanding, followed by operating within given contexts.

Based on research aimed at developing a typology of forms of organizational knowledge, in the domain literature was proposed the takeover of a distinction initially grasped (sesizate)by epistemologist Polanyi: that between explicit knowledge (articulated), which is formalizable, accessible and communicable, on the one hand, and implicit knowledge (tacit), which is subtle, deeply personalized, unofficialized and diffusely present in the organizational context. Some additional attributes are shown in Table 3.

In their functioning, organizations build their representations about their own state of knowledge; they face the challenge of finding ways to use what they know, and the paradoxical finding that they are not altogether aware of what they know, or what they do not know. In this respect, it is considered anthological the statement made by the former CEO of Hewlett-Packard, Lewis Platt: "If Hewlett-Packard were aware of what it knows, we might become three times more profitable". Such knowledge gaps that are found both in individual subjects and in collective ones (groups, whole organization) can be typologically assigned according to table 4.

Tab. 2. Grid of comparing organizational models

| Attributes | Hierarchical organization (H) | Anarchical organization (A) | Organization centered on memory (M) |
|---|--|---|---|
| Dominant type of organizational relation | Vertical(subordination | Horizontal(interaction between homologous factors) | Many-sided collaboration |
| Dominant way of internal management | Directive | Tranzactional | Comunities of professional practice |
| Effect of the stimuli proceeding from the environment | Reaction imposed from the top of the hierarchical pyramid | Immediate reaction of the actors | Systemic self-management based on learning |
| Degree of autonomy of the organizational actors | Reduced to tactical /operational options | Advanced ,with an entropic effect for the system | Advanced, with an effect of self-development |
| Typical behaviour of the organizational actors | Reactive | Opportunist | Proactive |
| Synergy of the organizational | Based on formal rules; rigidly limited safety of functioning | Based on conjuncturally convergent interests; minimum safety of functioning | Based on common aims; high safety in functioning |

Tab. 3. Typology of forms of organizational knowledge

| Forms of organizational | Levels of manifestation of the organizational behaviour | | | | |
|--|--|-----------------------------------|--|--|--|
| knowledge | Individual | Group | Organization | | |
| Articulate knowledge (explicit) articulată (explicită) | - professional qualifications - permanent memories | - projects - cooperation rules | - organizational structure - working norms and procedures | | |
| | | | - colecții de informații si cunoștințe | | |
| Implicit knowledge (tacit) | - personal experiences -informal dimension of organization functioning | - common representations | - values of organization culture - "body spirit" | | |
| | | - cognitive maps | | | |

The foundation on knowledge makes that in the behavior of an organization be present active, new specific strategies that determine it:

- To represent inclusively and transparent the explicit and implicit knowledge accumulation at level of the individual, group or artificial supports;
- To continuously expand the knowledge base by stimulating learning and organizational innovation processes and through the capitalization of their results;
- To develop the capacity of transforming intelligently and appropriately the available knowledge into successful actions;
 - To recognize and manage their own ignorance.

The process of capitalization of intellectual assets is associated with the concept of *knowledge base* used here in an extended sense as compared to that in informatics. For organizations, the knowledge base integratingly covers both the personalized dimension of knowledge present in human carriers (individuals and groups) and its artificial dimension, present in intelligent computer systems. The conceptual structure of the knowledge base of the organization is shown schematically in Figure 2.

Tab. 4. Matrix of organizational knowledge gaps decalajelor de cunoaștere organizațională

| | Subject knows | Subject doesn't know |
|----------------------|-------------------------------------|------------------------------------|
| Subject knows | Knowledge that subject knows he | |
| | enjoins (explicit knowledge) | Knowlege that subject knows de |
| | (cunoaștere explicită) | doesn't enjoin(known gaps) |
| Subject doesn't know | Knowledge that the subject doesn't | Knowledge that the subject doesn't |
| | know he enjoins(implicit knowledge) | know he doesn't enjoin(ignored |
| | | gaps) |

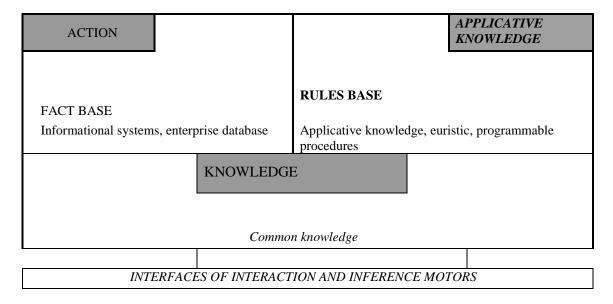


Fig. 2. Conceptual model of the knowledge base of the organization

Thus conceived, the knowledge base presents the attributes of an extended organizational memory, meant to cognitively support specific autonomous projects and to cumulatively benefit of their results.

Strategic stakes mentioned above engage organizational actors in synergisticaly articulated behaviours, ie of *co-development* (interactive generation of new knowledge), *co-learning* (mutual validation of new cognitive acquisitions), *co-management* of capitalized knowledge. They refer to organizational knowledge as a resource, but also as a process, involving location of actors who animate them in a common environment; here the dominant relations are horizontal ones (non-hierarchical), the type of interaction between omologous factors, resulting thus systemic effects of their co-evolution at the cognitive level.

The foundation on knowledge also has an inter-organizational dimension; it is typical in the contemporary society that organizations to locate and evaluate each other by watching their environment, to follow the leaders in the field, to learn from each other, to resort to imitation, to confront each other or to ally in order to create and use new ideas. In such circumstances, the extra organizational environment becomes richer in knowledge, which gives rise for organizations to a wide range of possible alternatives of development and learning from external sources, but also demanding performance standards and continuously evolving along the advance of knowledge.

It is considered that there are two directions in knowledge management. A direction that focuses on information exchange through ICT and other direction oriented towards tacit knowledge, with an emphasis on knowledge distributing and creating an organizational culture that enables the exchange of ideas.

The first direction may be closely related to studies refering to human capital, which considers knowledge as objective and measurable. The theory of human capital studies, from an economic point of view, the interest of states, companies and individuals to invest in education and training. This theory also examines the role of technology in creating competitive advantage for companies and provides a conceptual structure for exploring the factors influencing supply and demand for training. Studies on accounting intellectual capital attempt to assess the knowledge stock of companies and their competitive advantage as invisible assets. The intellectual capital of a company is made up of human capital, organizational capital and customer capital. Knowledge management is primarily linked to organizational capital that refers to working habits and procedures of the company.

The second approach to knowledge management considers knowledge as subjective entities and pays special attention to tacit knowledge. The roots of this approach can be found in the paper" Theory in practice increasing professional effectiveness "about organizational learning. It is believed that real learning or significant learning consists in modifying the governance values, the basic principles that determine organizational behavior. Highly empowering professionals with key positions of leadership do not know how to learn from mistakes. They make small adjustments to their knowledge, but rarely assess basic principles underlying their behavior. In fact both individuals and organizations create some defensive routines that prevent human beings and organizations from experiencing negative surprises, trouble and dangers.

CONCLUSIONS

In the management of the company the information flow circulates between the general meeting of shareholders and board of directors, between it and the managing committee, between it and the production departments and functional unit, between them and the company's employees.

Using information represents an important stage, whose aim is to use the information received in order to establish the necessary measures needed to improve the activity of the manager, his aids, subunits and employees. In connection with the possibility the information provides to be used, it becomes a factor of company management, of acquiring new knowledge and influencing the behavior and perceptions of the whole staff of the unit.

REFERENCES

- 1. Băcanu B Strategic Management, Economic Publishing House, Bucharest, 2001.
- 2. Cornescu V. Mihailescu I. Stanciu S., Management Organization, All Beck Publishing House, Bucharest, 2003;
- 3. S. Certo Carol Sales, Frances Owen Modern Management, Canadian Seven Editions, Ontario, 1998;
- 4. Crainer S., Key, Management Ideas, Financial Times, Hall Books, New York, 1998.
- 5. Deaconu A., Organizational behavior and human resource management, ASE Publishing House, Bucharest, 2002;
- 6. Ionescu Gh., Cazan, E., Negruță A., -Organizational Management, Economic Tribune Publishing House, Bucharest, 2001.