The Dissemination of Knowledge in Organizations as a Result of Multicultural Learning

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Abstract

The access to information means power. The organizations must learn continuously, must innovate in order to face the increasing competition. Today, the successful company is a learning organization. The dissemination of knowledge is a critical factor for the learning organization. The companies have created systems to ensure proper learning and smooth transfer of information. In this paper I showed which systems organizations are using in order to create, to manage and to disseminate the knowledge. I showed that the organizational structure is adapting to the learning organization; also the technology is a factor that stimulates the organizations to innovate. The ability of the companies to administrate the technological progress is hindered by the capability of the companies to capture and to control the tacit knowledge.

Keywords: *knowledge dissemination, multicultural learning, technology transfer*

JEL classification: M14, M16

1. Technological progress and multicultural learning

The links between the technology transfer and learning processes that occur within receiver organizations refers to new perspectives, new knowledge and new structures that result as effects of these interactions (Rogers 1995).

Learning manifesting as a process with several phases which happens when a group of individuals "significant for the organization, for example, the users of the new technology, begin to rely on a new concept to work with other concepts (for example. In the process of innovation and technology transfer). The diffusion / dissemination of knowledge is influenced by the configuration and the quality of learning processes and specific roles of facilitate / mediate of transmission of knowledge can decisively influence the degree of communication and learning in organizations.

The concepts of "single-loop learning" and "double loop learning, have a great importance for learning processes taking place in technology transfer. If the first describes an individual-environment relationship in which it's avoiding the light of feedback which could significantly questioned assumptions, paradigms and his beliefs and would force him out of "comfort zone" psychological, the second

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concept involves the individual' s willingness to question just their views and stimulate others to do so. Or, in the technology transfer, which by definition is a creative process, "double loop learning", which derives from the paradigm that open communication and information distribution and power in the organization can lead to better recognition, defining and solving problems seems to be the best approach.

"Double loop learning" was a framework which deliberately seek contradictions and errors in order to solve them. The detection of inconsistencies and errors lead at learning, at the change itself of the operated framework (basic assumptions, core beliefs, paradigmatic framework) for both the individual and the organization. This gives organizations the process of changing properties such as flexibility, in-depth understanding of phenomena, heuristic capacity and the ability to set priorities and objectives and accelerates innovation processes, minimizing the trauma caused by transition.

Moreover, the "double loop learning" determines five functional characteristics of organization: absorption capacity, diversity of knowledge, redundant creative knowledge, regenerative learning and creative tension that facilitates five critical processes for conducting performance conditions for technology transfer respectively (Klempa 1993):

- Application of new knowledge for innovative projects;
- Transfer of knowledge;
- Common understanding;
- Ability to diagnose sources of problems and engaging in systematic process to achieve a new vision for the future of the organization.

To emphasize the importance of adopting processes involved to "double loop learning" for the success of the diffusion / implementation of new technologies in Table 1. is presented the dichotomy learning processes in organizations, in terms of "single-loop learning 'Vs.' Learning double loop "where Klempa designates organizations that manifests" single loop learning "as" adaptable "and those characterized by" double loop learning "as" innovative. Strategic leadership is also responsible for the dissemination of knowledge (Nastase, 2010).

Table 1 The dichotomy of learning processes in organizations

Innovative organization-"“double loop learning"	Adaptive Organization - "single loop learning"
Great diversity of knowledge, sharing expertise	Minimum diversity of knowledge; concentration of expertise
"Meta-knowledge - allows handling of incomplete knowledge, introspection,	Lack of meta-knowledge, insight minimal monotone way of thinking
Focusing on the causes that produce systematic patterns	Focus on events that occur on a reactive attitude change
Generative learning focuses on the systematic sources of behavior	adaptive learning focused on survival

High absorption capacity, all the functions contribute to solving problems, the balance	Minimal absorption capacity;
Intrinsic motivation / creative motivation	Extrinsic motivation/problem solving

Source: Hutu, C.A.,. *Schimbări, schimbare, competiţie,* Ed. Economică, Bucharest, 2003, p. 133

2. The dissemination of knowledge

The third meta-power considered by Klempa's model is the dissemination of knowledge in the receiver organization of technology, a phenomenon characterized by the organization's vision of how information processing: acquisition, processing, storage, retrieval. The treatment of information should facilitate the central work of the system (such as decisional process) and, from this point of view, a proper structuring of the organization will consider the same extent all the roles and relations, and political phenomena that

The dissemination of knowledge can be facilitated through the creation of interdependent specialists or groups of specialists who develop specific mechanisms to deal with the diversity of opinions and conflicting viewpoints. Unlike the conventional systems which address how information processing knowledge in explicit, formal and systematic organizations "that creates knowledge" recognize and sustained concern for creativity and innovation as key sources of competitive advantage (Nonaka 1991). Information processing mechanisms used by the latter to articulate meaningful conversation cyclic tacit knowledge (dependent on a certain context and including cognitive dimensions such as mental models / paradigms, beliefs and perspectives) to explicit knowledge, allowing either an innovative approach shared with others, and vice versa, from explicit knowledge to tacit knowledge, which facilitates the integration of new information within the organization (internalization)[2].

Thus, continuously develop a "regenerative spiral of knowledge" that creates the potential to broaden the knowledge base of the organization. The structures and practices that contribute to the creation and development of "knowledge spiral", include the redundancy (duplication of information and awareness of managerial responsibility) and the continuous stimulation of the members of organization of what is considered" normal ("double loop learning "). This type of dissemination of knowledge is named by Klempa" "the dissemination network", and is presented in Table 2 as opposed to "knowledge dissemination through the hierarchy that characterize vertical organizations, pyramidal.

[2] P.F. Drucker, *The Coming of the New Orgo1nization.* Harvard Business Review. No. 66. (1988): 45-53; Huber G.P.The Nature and Design of Post-industrial Organizations. Management Science. No. 30(8). (1984): 928-951.

Table 2 The dichotomy ways of disseminating of knowledge in organizations

Dissemination through the network	**Dissemination through the hierarchy**
Multidirectional information flows: visible information and simultaneous information	Vertical information flow; "parochial" treatment of information
Intraorganizational dependent extended; uses of intensive communications technologies	Intraorganizational dependent extended; minimal use of communications technologies
Sub-networks formed to solve the critical operational tasks	Division of labor to solve formal operational tasks
Facilitates continuous learning – regenerative spiral of knowledge	Inhibits further learning, there isn't a "regenerative spiral of knowledge"
The individual knowledge is transformed into knowledge for organization	The knowledge base of the organization is extended thought the individual knowledge
Homogenized knowledge level throughout the organization	Knowledge is isolated by the position or by the function
Knowledge is appreciated for the value of general uses	Knowledge is appreciated like a source

Source: Hutu, C.A., *Schimbări, schimbare, competiţie,* Editura. Economică, Bucharest, 2003, p. 133

3. Barriers to international technology transfer

As long as developed countries will continue to finance the research-development activity, the global stock of world technology will increase. The new technologies and knowledge will reach to developing countries that almost did not do research and development. By imitating and copying they will be able to benefit from the inventions of the most advanced countries. The practice experience has shown that if the technology moves freely between the developed countries, these technologies have a limited impact on developing countries.

Patents and patents apply to technology transfer between developed countries. In the case of the developing countries, the technologies that are developed in developed countries may not be appropriate. Developed countries have more physical and human capital than poor countries. If technologies created in developed countries are specific to the mix of factors from these countries, they may not be appropriate for poor countries. For example, the developed countries are located in temperate climates and the agricultural technologies for developing countries are not always suitable for developing countries located in the tropics.

Searching and developing activity that is growing is not supported in developing countries since the market is not sufficiently developed to allow further development of the new discoveries widely and property rights are not adequately protected. The inventor of a new product or new technologies that benefit the

producers in developing countries, it is almost impossible for him to persuade manufacturers to pay for his invention and thus to obtain a benefit. This application of laws weakens the motivation to create useful technologies for poor countries.

The technological suitability says that the technologies used in developed countries can be used in poor countries but poor countries may decide to do so. An alternative explanation that is not easily transferable technology from poor countries is that developing countries are not able to use technology developed in rich countries.

The limits imposed by the patent system on technology transfers have a maximum period (usually between 10 and 20 years). Thus, there is a period of time before the technology can move freely to developing countries.

The experience has shown that there are other problems associated with the international technology transfer. Together with the knowledge encoded in a scheme or technical manual exists so-called "tacit knowledge" - small details about the operation of the technology, gathered in the mind of an engineer, during the years of experience and as a result of contact with other people. The users of a new technology often do not know the size of the tacit knowledge, so that only codified knowledge transfer can lead to costly failures.

The existence of tacit knowledge complicates the technology transfer. The recognition of the importance of tacit knowledge facilitates understanding of the phenomenon. Firstly, the existence of tacit knowledge makes it more difficult to transfer technology between developed and poor countries than between developed countries. Secondly, the successful transfer of a single technology can lead to significant externalities, such as the stock of tacit knowledge will increase, encouraging more easily the transfer and other technologies. These externalities explain how countries like South Korea and Taiwan have managed, over several decades, to advance and reach near the top of the pyramid technology.

The transfer of technology to developing countries must adapt to a particular social environment and the usefulness of these technologies to the host country depends on the functioning of local incentives. The social environment is important in terms of ability to further develop technologies to replace the old technologies and introduce new technologies. The existence of a well-developed competitive environment is a stimulating factor for the development of new technologies.

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