

Organizational Learning (OL) as a Competitive Advantage

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This paper¹ addresses different theoretical frameworks for organizational learning (OL) from two aspects: from the perspective of individuals to organizations and from the perspective of organizations to individuals. The most significant finding is intended to highlight the guidelines for each of researchers' concentrated cluster and to demonstrate that different researchers present different guidelines for processes, individual skills, and changes in the environment, teamwork, and competitiveness. The insight, gained by considering OL as a process, is not routine. It allows one to create, acquire, and transfer knowledge. This will always be limited to the internal capabilities developed during the course of the timeline and will identify skills and competencies generated in accordance with the requirements presented by different environments. OL is associated with both the change in organizational behaviors and the creation of a knowledge base.

Keywords: organizational learning (OL), organizational processes, models of competitiveness, smart organizations

Introduction

Business entities are living organisms, which are composed of interrelated subsystems and combined to generate a nucleus susceptible to external environmental impacts, such as political, cultural, technological, legal, social, environmental, and economic impacts. In turn, relationships with stakeholders, such as competitors, suppliers, higher education institutions, government institutions, non-government organizations (NGOs), consumers, and the subsequent ethical components embedded in the organizational actions, can have an effect.

According to the guidelines established at the strategic level (institutional or executive management), impacts and relationships mean changes. The actions of the organization must be focused on the objectives previously designed in accordance with the environment, mission, and vision of the company framed in a strategic thinking, if this is the way forward. This is the starting point towards the ideal continuous learning process. That is why this paper is addressing theoretical frameworks ensuring two processes of organizational learning (OL). Initially, a dimension of learning will be presented as a change, as a generator of knowledge, as an element of knowledge acquisition, and as a catalyst for changes within the individuals, and therefore within the organizations. As a result, it raises the prospect of introducing individual learning implications and finally addressing the aspect of learning regarding the teamwork. This paper aims to strengthen the aspect from

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different prisms and to know and understand the importance and implications of learning within an organization.

OL

OL is a process by which entities (whether public or private, large or small) acquire and create knowledge through their employees. Therefore, institutionalizing knowledge will enable organizations to adapt to changing environment conditions. There are two aspects of OL: from individuals to organizations and from organizations to individuals. In the first case, knowledge in key workers is made explicit, identified, documented, and institutionalized. In the second case, existing organizational knowledge is easily internalized by employees of the entities.

Only organizations that learn about themselves, their strengths, their mistakes, their successes, and failures are prepared to adapt to the ever-changing business landscapes of the present and the future.

OL has been studied by a large number of theorists and researchers from divergent disciplines and schools. Despite they have different views, they have come to similar conclusions, including the most important one: OL generates innovation and process changes, for improving the quality of lifestyles and the attitudes of staff, to include the overall organizations.

Organizations have the ability to learn from individuals within the organizations. Therefore, trainings and personal developments are fundamental elements in the development of OL. Undoubtedly, OL processes have led to movements against changes within organizations, which are driven by changes in their environment (López, 2003; Lucas, 2002; Mayo & Lank, 2003).

Argyris and Schon (1999) maintained that organizations developed OL through non-routine simple processes. They did not question the structure of the organization, its interaction with the environment, their values, or decision-making processes. Then, the second-level seeking to restructure organizations from both the individual learning and the questioning of the rationale behind the actions comes.

OL generates first the ability to create a new organizational design, because it allows one to integrate individual, organizational, and environmental factors. This requires not only changes in the structure, but also ways of thinking. The Japanese model is an example of success generated by the creation of knowledge reflected in new products, ideas, and designs.

Drucker (1999) said that companies who did not subject themselves to deep and serious exercises in creative destructions could not be flexible enough to adapt to new emerging markets and new customers. What the OL process is really searching for is to find the balance, brightness, individual talent, innovation, and teamwork to arrive at the integration between different functions.

OL had its roots decades ago and the explanation of some aspects could be found throughout the development of ideas and theories of psychological sciences. However, from the 1990s, numerous works focusing on this topic appeared. For instance, the initiator Peter Senge (1992), in his book *The Fifth Discipline: The Art and Practice of the Learning Organization*, considered OL as one of them, ultimately promoting the concept for which systems thinking was required.

It can be said that organizations seek to protect and improve their capacities while considering the exploration of other options, such as their first-place positions in the market place, their human resources, and later the relationship with the environment (customers, suppliers, and institutions).

Bolívar (2002) argued that OL worked as the “organizational memory” taking into account the fact that it

relied on processes required for the acquisition of knowledge, its dissemination, and use. It would only be possible, if there were an organizational culture and a learning process.

Schon (1975), Argyris (1977), and Fiol and Lyles (1985), from their initial researches on OL, assumed that despite this would improve future performance, there had always been problems in providing clear definitions and measurements.

Jerez (2001) stated that it was possible to identify three main approaches to understand the concept of OL: behavioral, cognitive, and behavioral and cognitive approaches. In the behavioral approach, learning is assumed to be an adjustment of organizational behaviors caused by both the internal and environmental stimuli. The cognitive approach considers the transformation of the cognitive structure, due to the integration of new information, thus resulting in improved new knowledge. Finally, cognitive and behavioral approach (Dibella, Nevis, & Gould, 1995; Dodgson, 1993; Fiol & Lyles, 1985; Garvin, 1994; Miller, 1996; Huber, 1991) addresses both the changes in the behaviors of the organization and the transformation of the cognitive structure.

According to Garvin (1994), "A learning organization is an organization capable of creating, acquiring, and transferring knowledge, and modifies their behaviors to reflect new knowledge and perceptions" (pp. 19-29). According to Steib (1997):

Organizational learning occurs when the systems and culture of the company (meaning any organization) is able to retain ideas and concepts related to improvements in behavior, production, creating, and to all other aspects of the organization, and then transfers them to new personnel. (p. 54)

Researchers, such as Ciborra and Andreu (2001), addressed OL from the focus of resources and capabilities, thereby giving it a strategic role within the organizations. Then, it takes on the responsibility for the series of transformations for which the standard resources are made available to the marketplace. As a result, they are combined and used within the organizational context of each company to produce capabilities that can be the sources of a competitive advantage, if they are scarce and difficult to imitate or substitute. Simply speaking, it establishes a direct link between the OL process and the development of nuclear or distinctive capabilities.

This view is shared by Camison (2002), who considered the essential learning for the organization was adapting, integrating, rebuilding, and reconfiguring its resources and capabilities to generate new skills, and thus responding consistently to changes in the environment. This allows maintaining a competitive advantage over time.

In conclusion, all these approaches on OL should not be considered as opposites. Instead, they must be complementary. These elements contribute to understanding the dynamics of this complex issue in terms of collecting and assimilating knowledge, thereby modifying the behaviors and cognitive structure of the organization. This enables one to build or reconfigure capabilities and skills to improve or maintain performance and results within the organizations.

Huber (1996), in his *Organizational Learning: A Guide for Executives in Technology Critical Organization*, defined OL when "an organization learns through the processing of information, increases the likelihood of future actions to improve performance" (p. 822).

The term was first used by March and Simon in 1958 in their classic book *Organization* and popularized by Senge (1992) after the publication of his book *The Fifth Discipline: The Art and Practice of the Learning*

Organization in 1992. From the 1970s and specifically during the 1980s, there had been a continuous growing interest in the study of OL. According to Shrisvastava (1983), several different theoretical perspectives were developed during this period. These can be summarized in the conceptualization of OL, an adaptive process, and a set of shared meanings. The result is the relationship between processes, outcomes, and institutional experience.

If the authors focus on the OL process of a company that handles production and distribution chains, they will realize that the process differs according to Crowther (1993). Crowther (1993) made four observations: (1) It produced other types of products, consisting of questioning and constant renewing of the current definitions of the same production lines; (2) Instead of meeting production and distribution functions, the emphasis was on learning the media, discussing decisions, and on how to change the functions of the organization or procedural chains in which it was involved; (3) There was usually a defensive attitude by persons within the organization, when assessing their knowledge base (knowledge and actualization) rather than their production or productivity, thus causing more resistance to changes; and (4) Information required to evaluate the learning process was more diverse, intangible, and difficult to define than that of the production. A dilemma in assessing the learning is that the users cannot determine what is not known, and therefore, it is not able to specify the learning.

Regardless of how the authors understand the process of OL, they must realize what OL is. Senge (1992) stated that, “intelligent organizations” were possible, because basically they were all apprentices. It is also possible that learning is not only a part of the nature but a love of learning as well. When experiencing a positive teamwork situation, belonging to a large institution which is not great from the beginning, the more assured is that OL learns to generate extraordinary results. Furthermore, Senge (1992) pointed out that a learning organization was one that continually expanded its capacity to build for the future by utilizing the integration of talents and extensive productivities.

Rojas (2001) defined learning organizations as companies with positive strategic thinking, which defined their core business in terms of value to the customers instead of the goods or services offered. Intelligent organizations are characterized with the capacities to constantly generate new ideas and reduce its work-related problems by using the natural talents within the organizations. Another tool is to utilize the reflection as a means for promoting knowledge, thereby becoming useful to the organizations.

The road to build intelligent organizations is complex. The top-down bureaucratic tradition is centuries old and has been very successful. This type of innovative organization assumes that change is difficult to implement. Sauquet (2003), based on his experiences, stated that one must first work on language, speak with subordinates, bosses, and hierarchies, and then emphasize the collective over the individual, without losing sight of the individual, when the charismatic leader’s reassurance did not help the individual or the collective. Meanwhile, one must innovate and implement the innovations not only of the individual work but also of the collective work. Learning should not be promoted by “what I am” but by “what I do” and by changing the role of line managers. Managers must know what competencies exist within components of their individual teams and identify and develop personal and professional capacities, in order to actively support themselves in their developments.

Finally, it should be noted that to create an intelligent learning organization, managers must first recognize the factors that can seriously affect OL. Ronquillo (2006), identified five factors: (1) complacency, manifested in not looking or learning from new experiences; (2) Past successes might inhibit new learning and cause inertia; (3) If decisions that were not scheduled were taken, learning levels would dramatically drop; (4)

Blindness and rigidity in decision making could lead to the failure of meeting the market needs; and (5) No time to be warned of danger signals, attributing to temporary disturbance of the environment, thereby reducing staff and autonomy of the personnel.

Dimensions of OL

Orientation to Learning

According to Slater and Naver (1995), learning orientation refers to the attitude of managers in considering learning as a key factor. It is achieved, when members of the organization understand its importance and are involved in creating a commitment to generate ideas not only for its impact, but also for its realization. This requires: commitment from managers and employees within the organization, new ideas and knowledge, openness and experimentation, and the ability to unlearn the obsolete or unnecessary².

Ahumada (2002) stated that, the turbulence of the environment, unpredictable changes, and the resulting uncertainty had provoked an organizational and strategic analysis and a questioning of the conventional understanding of differences in firm performance. The benefits of planning in the organization stem not only from the objectives and strategies, but also from the same planning process that emerges from processes derived from knowledge management and those aspects that facilitate OL as a factor of the competitiveness.

In accordance with Barney (1991), the theory of resources and capabilities assumes that there is no enough strategic asset accumulation to enable a successful adaptation to the environment. The authors need to develop new skills that facilitate incremental innovations, and in some cases, radical changes (Lado, Boyd, & Wright, 1992). This is derived from the management of intangible assets (Grant, 1996), which in turn generate distinctive competencies in organizations. Learning, as an intangible resource, is considered as a dynamic capability for excellence (Lado & Wilson, 1994) and a source of distinctive competencies within the organizations (Zander & Kogut, 1995).

According to Collis (1994) and Collis and Montgomery (1995), OL allows companies not only to constantly renew their existing knowledge bases, but also to generate new information, in order to continuously improve its processes and routines to adequately respond to changes in the environment. It also gives one the ability to anticipate changes and, often, to provoke changes through innovations, thus evolving faster than competitors.

Thus, Ulrich (1993) maintained a constant search for improved performance and results. The impact of learning on the performance of the organization had opposing views.

Fiol and Lyles (1985) argued that, regardless of the interpretations of learning, it was assumed that learning would improve future performance.

Dodgson (1993) described learning as the way firms built, supplemented, and organized knowledge and routines around their activities and within their culture to adapt and develop organizational efficiency by improving the use of the skills of the workforce.

Slater and Naver (1995) assumed that learning facilitated changes and led to improved performance. Instead, Garvin (1994) defined learning as a process that took place over time and provided for the acquisition of skills, which resulted in improved performance. The results of empirical efforts by Bontis (2002) support the premise that there is a positive relationship between OL and performance.

² Retrieved from <http://www.repository.urosario.edu.co/bitstream/10336/1162/1/BI%2022.pdf>.

Crossan (1999) argued that not all learning led to improved performance.

According to Huber (1991), "Learning does not always lead to true knowledge [...] organizations can learn incorrectly, and they can learn correctly what is wrong" (p. 530).

Tsang (1997) (as cited in Jerez, 2001) stated that the relationship between learning and performance should be established empirically rather than theoretically.

Zack (2003) stated that, in general, establishing a positive link between learning and performance was necessary, because learning was aligned to the business strategy of the company. The generation and renewal of resources and capabilities should be consistent with organizational objectives. Otherwise, learning cannot possibly have any negative impact on results (Suñe, 2004).

According to Zack (1999) and Davenport (1999), the strategic context leads the organizations with the intentions of learning and the capability of exploiting the knowledge bases of its competitors. The general vision of all members of an organization is to maintain an edge for the source of a competitive advantage and its link to the strategy and performance.

Successful organizations are those that clearly articulate their strategies to include needs (what they need to learn and share) and then to execute these strategies. These strategies provide the guidelines for the deployment of organizational resources and technological capabilities to maximize the knowledge, and thereby increasing the potential for generating values.

Nonaka and Takeuchi (1999) stated that, the essence of a strategy was to conceptualize a vision about what kind of knowledge should have and about developing the strategy and making it operational for its implementation through the management system.

According to Slocum, McGill, and Lei (1994), using learning strategies to become a leader requires the adoption of three management practices that capitalize on their skills and competitive strength. The first is to develop a strategic intent to learn new skills, the second is the commitment to a continuous experimentation, and the third is the ability to learn from failures and past events (Cardona & Calderón, 2006).

OL as Change

According to Duncan and Weiss (1979), Hedberg (1981), and March and Olsen (1976), who are concerned with the prospect of change, there are two streams of thoughts. The first is to understand that, OL is like the changes that an organization makes, in order to adapt to its environment. The second, as stated by Kim (1993), Pedler, Boydell, and Burgoyne (1991), and Swieringa and Wierdsma (1995), are the actions that institutions make to transform and change their environments.

The first type of organization, as mentioned in the above paragraphs, is concerned with survival, and great efforts have been exerted at solving the problems of everyday life, in order to ensure their permanence in the market place. The second type of organization is interested in intervening within their environment in innovative ways, in order to position new products or new services before their competitors do.

Argyris and Schon (1978), who were pioneers in OL, made a distinction between the "single learning" and the "double-loop learning". The first refers to changes and corrections made by members of the organizations based on the existing premises or rules. The second refers to changes that involve establishing new premises or rules to be applied in the organizations to initiate a reality.

McGill, Slocum, and Lei (1992) differentiated adaptive learning from generative learning. Adaptive learning is related to changes made by members of the organizations to facilitate adjustments to the climate, for

example, by using existing knowledge to solve a specific problem and continue normal operations. Generative learning is related to the changing environments through radical changes in structure, strategy, and organizational systems.

While adaptive learning seeks an accommodation to the environment, generative learning seeks to change it. Adaptive learning is for the period of a single cycle and generative learning is for the period of a double cycle. In either case, the organization learns to interact with the environment.

In the approach of Argyris and Schon (1978), like that of McGill, Slocum, and Lei (1992), the meaning of learning is change (there is no learning without a change). This approach is common in academic literature but is generally absent in organizational training programs of many institutions, where the emphasis is often on teaching and in best cases, on how to teach instead of what is taught.

OL as Knowledge Acquisition

According to Amponsem (1991) and Dodgson (1993), learning is understood as the organization's ability to acquire or create new knowledge.

Davenport and Prusak (2001), among many others, argued that the only sustainable source of the competitive advantages of a company lay in their knowledge. That is, how to use it, where to use it, and the ability to learn new things.

De Geus (1998), for example, argued that the only competitive advantage that a company had was to acquire knowledge faster than their competitors. Tissen, Andriessen, and Deprez (2000) said that knowledgeable workers were a new breed and were highly valued in the world.

Nonaka and Takeuchi (1999) argued that the reasons for the successes of Japanese companies were their abilities to create organizational knowledge and their capabilities to generate new knowledge, disseminate the knowledge among their members, and convert it into products or services.

For Nonaka and Takeuchi (1999), there are two types of knowledge: tacit and explicit. Tacit knowledge is personal, which is difficult to express through language and therefore difficult to be shared with others. As for explicit knowledge, it is verbal and systematic. It can be processed in a similar way by different people and can also be easily converted into texts or electronic files.

OL occurs, when there is an exchange of knowledge and when knowledge gets institutionalized.

Nonaka and Takeuchi (1999) also further stated that, to turn tacit knowledge into explicit knowledge, there must be an environment-facilitating dialogue, discussion, observation, imitation, practice, and experimentation. This type of environment should be promoted and practiced by senior management, resulting in behaviors that become a model for everyone.

The current crisis of many entities and the need to be more competitive result in opportunities to promote a learning environment. Taking into account the mission statement which permeates throughout the organization, one must assume that this will facilitate the interaction between personnel and provide a positive attitude in order to share knowledge.

OL as Knowledge Acquisition and Change

Garvin (2000) defined a learning organization as an entity working on the acquisition and transfer of knowledge, and their modification of the behaviors was to reflect new knowledge.

Choo (1999) suggested that organizations created new knowledge from the experiences of their employees, with the intention of applying these experiences into actions. By using this approach, learning is acquiring

knowledge, which normally occurs at the individual or collective level. It is essential that the key personnel buy into this. Finally, the work behavior of members of the organization that reflects this acquires learning, especially in strategic variables, such as productivity, profitability, innovation, or those relevant in order for the entity to lead the sector in which they operate.

According to Marquardt (1996), an organization that learns is an organization that learns collectively, transforms, or continuously changes processes to collect, manage, and better utilize its knowledge for business successes.

For Aramburu (2000), OL is associated with both the organizational behavior change and the creation of a knowledge base that supports it.

In the proposed model of OL (see Figure 1), the learning levels the authors envision for the researches are: individual, team, organizational, and inter-organizational.

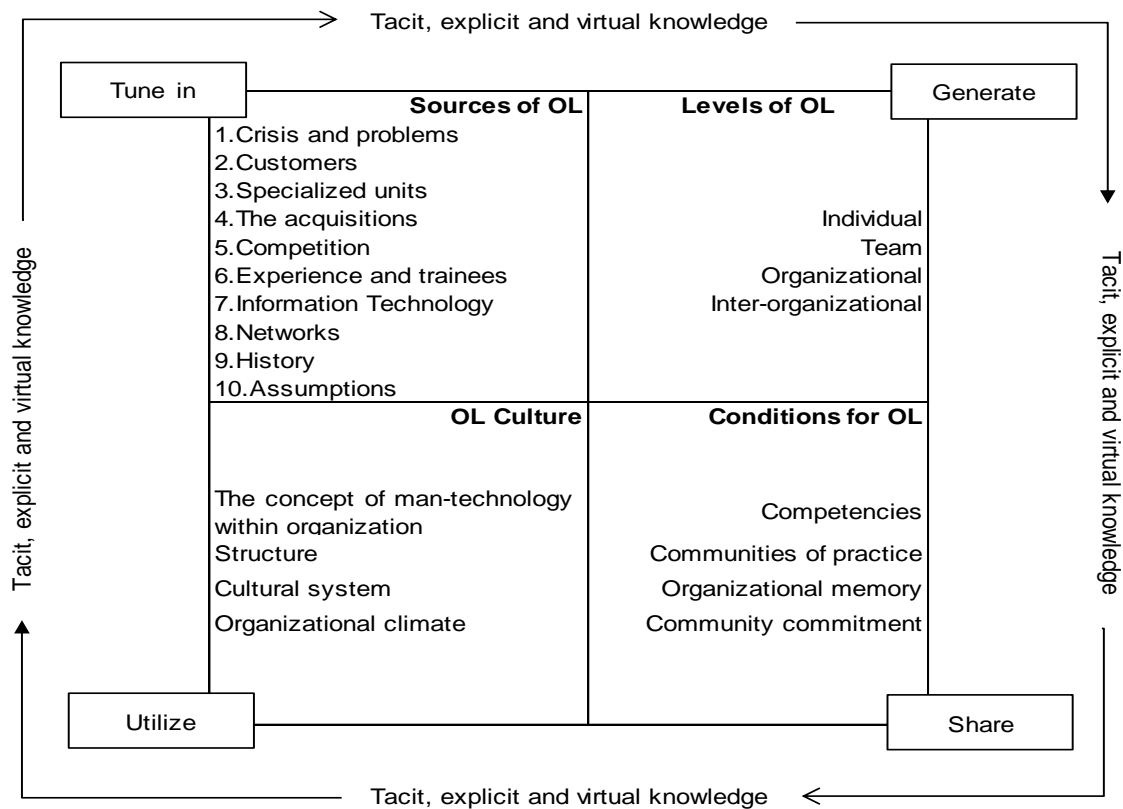


Figure 1. Levels of OL. Source: Based on Gore (1998), Argyris (1999), Muñoz-Seca (2003), Choo (1999), Kleiner (2000), and Peluffo and Contreras (2002).

OL Levels

Individual Learning

Individual learning (see Table 1) is geared towards new experiences of knowledge. People must develop their capacities, not to fill themselves with information but to learn to use processes that can change approaches, to leave out useless information, and to be open to new knowledge.

Most literatures agree that OL occurs through individuals.

Hedberg (1981), Fiol and Lyles (1985), and Kim (1993) proposed an integrated model of OL, where the individual had an important role and where mental models, which were divided into routines and frameworks, were also of central importance. These mental models can be individual or organizational.

Choo (1999) stated that, the learning ability of a person occurred, when an individual developed a new mentality, changed the way of understanding things, and faced the difficulties in different ways.

The capacities of individuals to face or create situations through the learning process form half of the definition, namely, "An organization that facilitates the learning of its members and continually transforms itself" (p. 1), which is proposed by Pedler et al. (1991).

Thus, how individuals learn has been a topic subject for continuous researches throughout this century. It has become clear that individual learning is a complex process and that each individual is capable of unlimited learning during his or her lifetime.

Therefore, while learning is central, it is clear that this is not just training.

Instead, Marsick (1987) wrote that most organizations were preparing models on work-based behaviors. This leads to a vision of learning that leads to repetitive behaviors in stable situations.

For Nonaka (1999), the creation of knowledge begins with individuals' efforts to validate or justify their beliefs and their commitments to work with the organization. Perspectives or mental models also come into personal play. The insights and intuition are highly subjective and are found in the creation of root knowledge and innovation.

Table 1

Characterizations of Individual Learning

Characterization
Requires the development of learning skills to establish clarity and certainty for everyone
Requires shared mental models
Needs of interest and confidence to share and comprehend
Is done with knowledgeable workers
Should be attached to his life and career plan
The empirical perception is a source of individual learning
Needs of autonomous actions as circumstances permit
Need to change the content of individual knowledge bases to learn to unlearn the obsolete or unnecessary
Requires sharing explicit and tacit knowledge

Notes. Source: Gold (1994), Thurnin (1994), Nonaka and Takeuchi (1999), Argyris (1999), Choo (1999), Senge (2002), Peluffo and Contreras (2002), and Muñoz-Seca (2003).

Team Learning

Team learning points to the need to create conditions and mechanisms for building teams oriented to learning. Experience shows that the intelligence quotient (IQ) of the equipments, developed in collaborative working environments of small heterogeneous groups, is potentially superior to that of individuals.

Von Krogh (2001) stated that, with individual knowledge, there was also little interest in building new knowledge. This is characterized as a transactional process and is seen as an exchange of documents or another form of explicit knowledge. Meanwhile, there exists a high interest in the creation of knowledge. Social groups create knowledge through the symbiosis or coexistence with a concept.

Throughout history, all the world's industries have struggled to create a teamwork system. These are

considered as a complex amalgam of tangible and intangible elements, such as personal relationships. Among items considered tangible are: structure and technological constraints. As for the intangibles, they include discipline, confidence, knowledge, stress, fear, and patterns of interaction. Collective skills are also defined. These collective competencies or skills are broken down within teams, when reaching individual levels. But each individual skill is meaningful only with reference to the apparent organizational competence.

A learning environment within teams, where the sky is the limit, should be provided, because one should always fight against a bureaucracy that restricts learning. This requires eliminating staffs' idea of "I know nine new things, but I will only teach you eight" and changing it to "I will teach you nine things today, and tomorrow morning, I will show you even more".

Thus, the group learns to solve problems, achieve their goals, and provide a structure and system of work that is acceptable and comfortable.

Smith (1991) had argued that managers should first become aware of the learning processes and also differentiate OL from their own perspectives.

Gold (1994) identified physical and psychosocial variables and how these variables could block learning. The physical variables, for those learning, find themselves against barriers based on areas entrusted to them. The psychosocial variables, also for those learning, find barriers arising from the culture, climate, and the relations that form parts of this barrier.

As the society had become a society of organizations, Gore (1998) suggested that individual thought tended to be increasingly shaped by such entities. Not surprisingly, organizations have become paradigms of the society. This description of organizations as cultures capable of conditioning the individual thought may suggest the end of rationality. With this format, the team learning requires the need to create conditions and mechanisms for building team-oriented learning.

According to Lopez (2003), experience showed that the IQ of the team, developed in collaborative work environments and within small heterogeneous groups, was potentially superior to that of individuals. Thus, the team learning environment is an example that addresses and allows for new knowledge and skills to be acquired by each of the members in the construction of the collective learning to serve the organization's objective.

In real teams, privileges given to "the integration of efforts" mean that members on an ongoing basis help each other share information, and thus creating a chain generating new knowledge.

According to Lopez (2003), OL is built through the team collaboration and is based on four aspects (see Table 2).

Table 2

Highlights for OL in Teams

Highlight
Stimulating a sense of shared responsibility, confidence, creativity, flexibility, commitment, and a sense of belonging
Defining objectives, opportunities, and challenges together and effectively using the knowledge and abilities to learn from others and develop new opportunities
Guiding and facilitating the integration of activities and visions and helping to host the diversity of people, but at the same time, valuing and recognizing the experience and capabilities of each other
Encouraging collaborative learning, namely, promoting goodwill of the people instead of hindering the learning between team members

Note. Source: Lopez (2003).

Lopez (2003) stated that OL was facilitated by the development of high-performing effective teams. One of the elements characterizing a high-performance team is the establishment of training plans and trainings, that is to say, learning to unlearn knowledge and skills that are useless and continuously learning to stimulate learning and training, thereby enabling the professional growth of people and in particular of the overall team.

According to Lopez (2003), one of the ways to achieve more efficient teams and get closer to the learning process is through team consolidation, by encouraging its members to consider working together, identify gaps, and develop more effective means of cooperation.

Fruin (1996) argued that productivity and efficiency depended on how work and workers were organized and managed in specific manufacturing sites. Doing this is part of the common experience. Teams are means for implementing motivation by making them individually effective and socially relevant. Thus, Fruin (1996) stated that it was a culture that would continually add or change things.

According to Argyris (1999) and Senge (2002), education does not provide one with the capacities to admit that he/she does not know the answers and that most organizations reward people who know how to defend their points of views and people who also do not investigate complex issues. This process blocks the understanding of what threatens people and the result is what Argyris (1999) calls as “skilled incompetence”, namely, teams full of people who are incredibly ready to close their minds to learning.

For Senge (2002), team learning is, after all, a process of seeing what each member knows. Thus, the team as a whole can act more efficiently than the sum of individual actions of members.

Team learning is vital, because it is the catalyst for people to begin to work together and provide solutions, resulting in a complementary fit for an organization.

According to Choo (1999), an organization, which bases its work on the team concept, will be able to develop the potential of individuals not only individually but also socially. It is very satisfying to work in a team, where everyone trusts each other and feels united by a sense of common purpose.

Senge (2002) claimed that few would choose not to be a part of a team, which had emotion, commitment, perseverance, willingness to experiment, genuine appreciation of the talents of all, and the capacities to deal with difficult issues.

The term “intelligent organizations” has been deliberately utilized to pretend to promote individuals and teams, which work and learn “in group”. Learning has no limits in space or time. Local government, universities, schools, and the unemployed may object to this type of organization by claiming that the turbulent markets or the shareholders make up the private sector.

For Daft and Weick (1984), the environments of organizations agree to less observable responses and qualifiers and something less “analytical”, with more unknown parameters and issues being less subjected to reasonable interpretations.

Lopez (2003) stated that the OL model encouraged a more participatory management and a decentralized process. Autonomous units and departments facilitate the development of goals and encourage a shared sense of responsibility. Lopez (2003) also analyzed that OL did not signify that the organization was the one who learned, but was rather the one at the level where how to effectively coordinate the efforts of the teams that make up the organization was analyzed. One should pay attention to policies implemented and should emphasize those policies, in order to create a climate that allows the continuous and collective learning to take place.

As proposed by Lopez (2003), one of the objectives to be achieved by an organization to facilitate the

learning process is “be flexible, open and create a climate of mutual trust”. In order to achieve this, one must develop a culture of openness, in which leaders, followers, and peers should show their vulnerability to each other. At this point, it should be recognized how each has contributed to the successes and failures of the organization.

Finally, the authors look at the four levels of learning, but without forgetting that the individual learner is immersed in the learning process instead of the group, the team, or the organization itself. Each of the levels of learning is mutually influenced by what happens at other levels (see Figure 2). This is because the philosophy of OL is present in every decision and every process and involves the talents and skills of all people within the organization. OL model encourages decentralization processes and a more participatory management for departments and autonomous units to facilitate the construction of goals and a shared sense of responsibility.

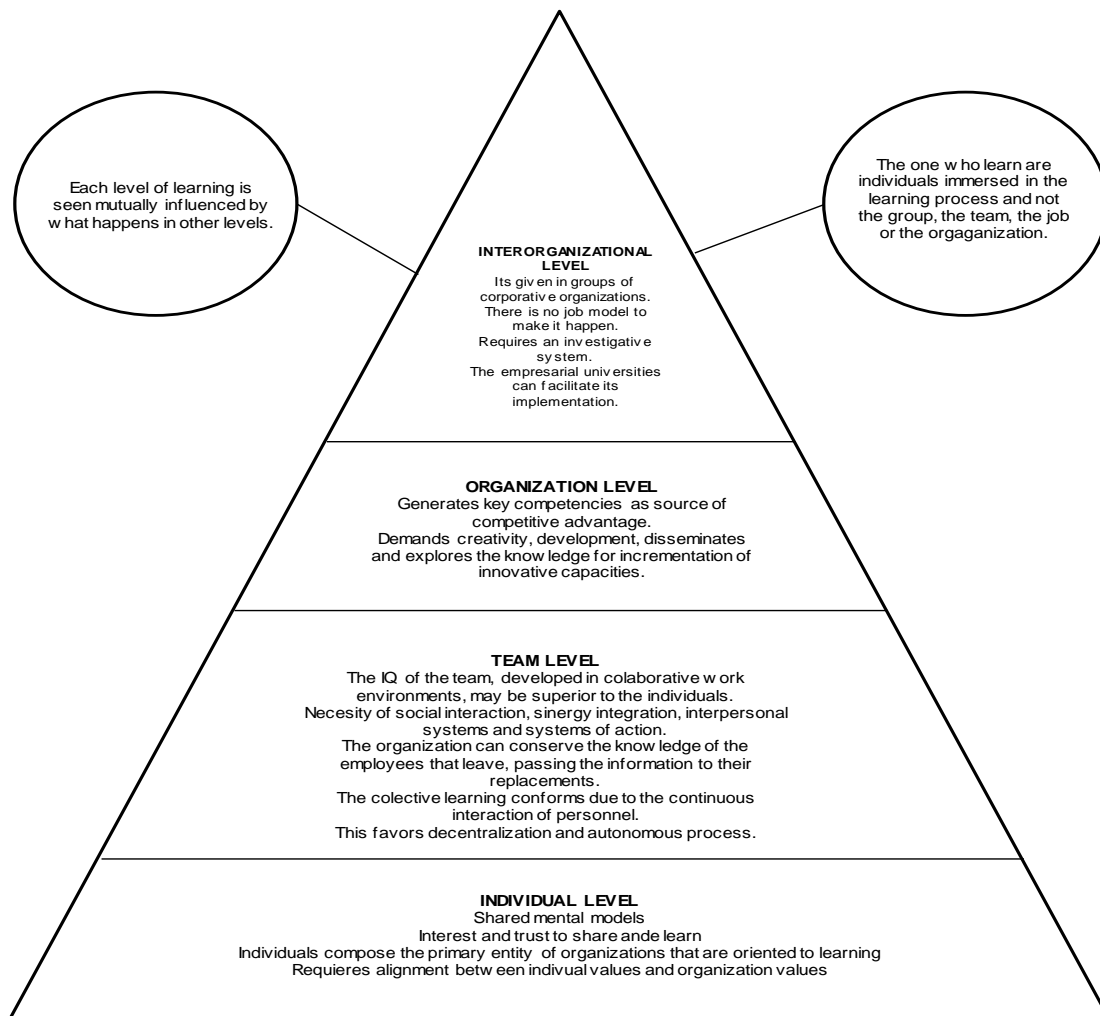


Figure 2. Hierarchy of learning levels. Source: Argyris (1999) and Be Brontis (2000).

OL

OL enables a review of the premises and assumptions from which organizations behave. An organization with a formative process and an organization that learns, as stated by Thurnin (1994), improve the knowledge

and comprehension of itself through time by facilitating and utilizing the formation of the individuals who belong to the organization.

The learning organization is an organization that facilitates the trainings of all its members and an organization that undergoes a continuous transformation.

Employers can expect a continuous improvement and knowledge learning, but employees also expect opportunities to learn. Once one has tasted it, there is a greater thirst/desire for it. Organizations must respond to these demands, if they want to maintain the momentum and fulfill their parts of the psychological contracts signed with employees.

In this regard, Nonaka and Takeuchi (1999) declared that Japanese organizations had provided for the creation of knowledge in the heart of its management concepts and that organizations wanting to compete on a knowledge base must also learn from Japanese techniques of creating knowledge. The knowledge spiral of Nonaka and Takeuchi (1999) consists of the dynamic interaction of four features:

- (1) Socialization (tacit to tacit): combining tacit knowledge and skills through observation, imitation, and practice;
- (2) Articulation (tacit to explicit): combining tacit knowledge and new ideas;
- (3) Combination (explicit to explicit): standardizing the knowledge and introducing a product or process;
- (4) Internalization (explicit to tacit): Sharing the knowledge across the organization so that they are accepted, taken for granted, and arranged as tacit knowledge.

The spiral can start at any point or at any level of the organization, but always with an individual whose personal knowledge has the potential to transform the entire organization. Once completed, as proposed by Nonaka and Takeuchi (1999), the spiral can start again, and if it continues to create knowledge, it can extend the basic wisdom of the organization.

OL is acquiring and applying knowledge, skills, values, beliefs, and attitudes, thereby enhancing the conservation and development of an organization, i.e., “connecting the existing components of knowledge”.

From the literature review undertaken in relation to the level of OL, an assumption of its characterization can be made (see Table 3).

Table 3

Highlights for OL in Teams

Characterization of OL
Generating key competencies as a source of a competitive advantage
Requiring integrated knowledge of areas of conversation or an exchange between learning teams
Requiring the generation of double-loop learning, which enables the review of the premises and assumptions from which the organization behaves
Requiring to create, develop, disseminate, and exploit knowledge to increase their innovative capacity
Should ensure the autonomy of individuals, which implies that the organization is conceived as “an autopoietic system” (created for himself)
You must create redundancy and consider the existence of information that goes beyond the immediate operational requirements of the members of the organization
It is also necessary to generate a sense of identity, knowledge, and vision for the organization, the ability to see reality, and the ability to read weak signals in the market
It is necessary to achieve the synergistic interaction between the parties that comprise aligning their efforts toward organizational objectives
OL occurs as a result of the personal and team learning
The spiral of knowledge requires the dynamic interplay of socialization, articulation, combination, and placement of tacit, explicit, and virtual knowledge

(Table 3 continued)

Characterization of OL
It is the product of a collective construction of the complex interaction between individual and collective learning
Requiring changing the mental models of the organization and its environment and constantly reviewing the assumptions that determine people’s thinking and acting
Need to be organized around similar principles and goals, when it comes to the pursuit of their overall objectives
Precise design curriculum that contains the three Cs: corporate citizenship, contextual framework, and core competencies
Requiring training the value chain
The need to understand the importance of each of the component parts of the organization. They are important, because they affect the learning process
The philosophy of OL is present in every decision and every process and involves the talents and skills of all individuals within the organization

Note. Source: Lopez (2003).

Inter-Learning

Inter-learning occurs in a group of corporate organizations. Many people talk about it, but no one has yet claimed to be able to provide a working model for the organization that learns (Gold, 1994).

According to Meister (1999), the internet business of Dell now generates \$1 million a day in customer orders, which makes the technological culture become a necessity for employees at all levels and all functions of the company. Dell University has developed a course for managers and new employees with little or no experience in using personal computers or the internet by using Microsoft internet explorer.

Dell has grown so fast. In most cases, a week after being hired, new managers are given the responsibility for hiring new staff. New managers must go online to define what policies are appropriate for a contract, and they must also know how to use voice and electronic mails and be familiar with instructions on how to use purchase order forms and other information that are maintained in policy manuals of the company in the past.

Each of the levels of learning is mutually influenced by what happens at other levels.

Table 4 presents the factors that identify or influence OL.

Table 4

Major Contributions by Researchers

Researcher	Contribution	Most representative variable
Argyris and Schon (1999)	OL is an anti-routine process	Processes
Garvin (1994)	The organization is able to create, acquire, and transfer knowledge	Knowledge and competitiveness
Drucker (1999)	Through learning, the organization can adapt to the changing environment	Changing environment
Ciborra and Andreu (2001)	OL is a system of appeal and capabilities	Individual skills
Camison (2002)	OL can maintain a competitive advantage	Competitive advantage
Dodgson (1993)	OL can improve workforce skills	Teamwork and individual skills
Zack (1999)	OL is an ability to better exploit the knowledge than the competition	Competitiveness and knowledge
De Geus (1998)	The only competitive advantage of an organization is to acquire knowledge	Competitiveness and knowledge
Nonaka and Takeuchi (1999)	To convert individual knowledge into organizational knowledge, there must be dialogue, discussion, observation, imitation, practice, and experimentation	Knowledge and organizational behavior
Choo (1999)	Organizations create new knowledge from the experiences of their employees	Individual capacities

(Table 4 continued)

Researcher	Contribution	Most representative variable
Marquardt (1996)	Learning organization is an organization that transforms or continuously changes	Teamwork and changes
Aramburu (2000)	OL is associated with both the change of organizational behavior and the creation of a knowledge base to support it	Teamwork
Nonaka (1999)	Organizational knowledge creation begins with individual effort	Individual capacities
Lopez (2003)	Team learning is a prosecuting authority that allows the new knowledge and skills acquired by individual members	Teamwork and knowledge

Note. Source: Based on the authors' own construction.

Conclusions

Numerous works have highlighted the importance of OL, in order to maintain and build a competitive advantage in a volatile world framed by the turbulence of the environment. Its key is to transform information into knowledge, making it most valuable when knowledge management and OL are correctly used.

The treatment of each of the dimensions reviewed in this paper allows for the identification of the baseline, in order to address core problems within the social environment.

The discussion of each of the dimensions addressed in this paper identifies the baseline to address core problems of a particular social environment. Each approach develops verification processes, construction, and transfer of knowledge and always assumes that the organizations and individuals at different levels tend to handle a high concentration of data. This data, according to its position and utility in the context of the level, can be classified as information due to its values. On very few occasions exists the evidence that individuals who belong to an organization reach the level of practice, where the constant is the permanent change due to the inability to unlearn and relearn and the processes mediated between individuals in the shortest time, instead of the methods, thereby raising the levels of competitiveness.

Each level of learning is mutually influenced by what happens at other levels. To clarify this, one can think of a soccer team, where each member has to have skills so as to work as a team. For a team to work efficiently, effectively, and productively, individual members will be required to assume different roles at times. Each member possesses qualities or skills that are integrated within the team dynamics, resulting in a quality team that shares knowledge for a continuous improvement.

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