Organizational Learning: concepts and capitalization's process

EL HARRAK Adil[1]

[1](Management, Professor at Faculty of legal, economic and social sciences of Mohammedia/ University Hassan II, Morocco)

Abstract:
Organizational learning is a complex concept both in its definition and in its implementation. It is undoubtedly due to its complexity due to the two components that constitute it, which are "learning" which comes from the word "learn" and "organizational" which comes from "the organization" or "firm". Indeed, those who learn faster are those who have the ability to memorize and understand for a short time the maximum of knowledge. Hence the birth of the concept of "learning capacity". The latter encompasses at the same time the notion of attention (individual / collective) and cognitive capacity (individual / collective). At the organizational level, the collective also has an "attention" that depends on the attentions of all its members, and a cognitive capacity strongly influenced by individual cognitive abilities. It should be noted that group attention and collective cognitive ability are often less than the sum of all individual attentions and cognitive abilities. Because it's easier to focus on working alone than with a group. In this article, we will focus on the concepts of organizational learning and its processes while trying to capitalize on the most well-known ones in the field.
Key Word: *Organizational learning, knowledge management, learning capacity, cognitive skills*

I. Introduction

Organizational learning is a complex concept both in its definition and in its implementation. It is undoubtedly due to its complexity due to the two components that constitute it, which are "learning" which comes from the word "learn" and "organizational" which comes from "the organization" or "firm". For the latter, several authors and researchers have been working to understand how it works for several years or even centuries, and it is still a mystery to them. For the function of learning, it can be defined as the fact of acquiring and assimilating new knowledge that can later become skills. As a result, those who learn faster are those who have the ability to memorize and understand for a short time the maximum of knowledge. Hence the birth of the concept of "learning capacity". The latter encompasses at the same time the notion of attention (individual / collective) and cognitive capacity (individual / collective). At the individual level, attention, according to the AQNP[1], "is a complex cognitive function that refers to the ability to be alerted to one's environment and to maintain one's attention over a period of time appropriate for one's age. Attention also refers to the ability to focus on a given task despite what is going on around it." It is different from one individual to another and it is limited and depends on the socio-cultural environment in which the individual evolved. While the cognitive ability of the individual is dependent on the process of building his brain since his schooling age. Thus, it depends on the quality of the initial training received and the socio-cultural environment in which it has evolved and continues to evolve.

At the organizational level, the collective also has an "attention" that depends on the attentions of all its members, and a cognitive capacity strongly influenced by individual cognitive abilities. It should be noted that group attention and collective cognitive ability are often less than the sum of all individual attentions and cognitive abilities. Because it is easier to concentrate on working alone than with a group, just as it is easier to meditate individually than with several people. In this article, we will focus on the concepts of organizational learning and its processes while trying to capitalize on the most well-known ones in the field.

II. Organizational Learning "OL"

Defining learning is not an easy task. Because there is no single definition. Indeed, any acquisition of knowledge or skills, whether at school, university or within the firm, is learning. And any actor can be a source of learning (family, friends, communities, the firm, the media... etc.). On the other hand, according to HannyToxopeus[2] (2007), we can only speak of learning when we perfectly master the application of the

knowledge acquired. In the psychological field, learning has gained importance since the beginning of the twentieth century in many fields (cognitive, educational, social psychology). Indeed, for psychologists, they define learning as a relatively lasting change in behavior that is the result of experience. Depending on the psychology of learning, there are different forms of learning and different ways of learning. But we will limit ourselves to the most well-known approaches that have influenced the field of learning, namely: behaviorism, constructivism (cognitivism) and social-constructivism.

Behaviorism (classical) is a concept invented by John B. Watson in 1913[3] to deal with "mentalist approaches"[4]. According to his theory, only measurable behaviors should be considered in a learning process. Indeed, the individual receives stimuli from his environment and then acts according to the stimuli received (S-I-R: Stimuli - Individual - Response). According to Watson, when the individual receives stimuli, we cannot observe what is happening inside (in his brain), so we should not be interested in it. On the other hand, importance must be given to the relationship between the environment (S) and the response (R), and in which cases (S) influence (R) must be studied. Thus, the new behaviors manifested in (R) give us an idea of the success of learning.

Constructivism, on the other hand, is a learning theory developed by Jean Piaget to counter behaviorism which, as presented in the previous paragraph, delimits learning between the two stimuli-response factors. However, according to Piaget, the brain of each individual does not play the role of a storekeeper of knowledge, and when we ask him to return the stored knowledge to us, he does not give it to us without modification. This is how we speak of a "reconstruction" of knowledge. For the author [5], intelligence is not innate, on the other hand, it is built with experience. Thus, when a brain receives new knowledge, it tries to find a place for it among the already existing data through the comprehension system. And when the brain uses its knowledge, it takes into consideration all of its stock knowledge, updated, rebuilt, redesigned even integrating lived experiences. As a result, any stimulus that pushes the individual to think, reason, analyze and understand gives rise to learning.

The third theory that we will develop is that of social-constructivism. Largely inspired by Piaget's work on constructivism, Vygotsky[6] developed a theory to better promote learning, which is the interaction of the individual with others and the sharing of their experiences. Thus, what the individual can learn alone tomorrow, will learn with the group today. As a result, it is not the individual alone who will have succeeded in learning, but also all the members of the group and with them the collective and the organization itself, from which the organizational learning comes.

This notion of organizational learning, although it is treated by several authors, remains often neglected by the majority of business leaders. The study of the concept of organizational learning calls on several areas of expertise such as firm management, innovation, social psychology, individual and collective cognition ... etc. Hence the complexity of dealing with this subject in a direct way. Firms, for their part, have only begun to give more interest to this concept when their environment becomes increasingly complex. This requires more of an enormous organizational adaptability. Thus, to preserve its competitive positioning, the firm must develop its skills and update its knowledge in tune with the evolution of its environment to become a "learning firm", but how could this happen?

Indeed, the organizational learning mode is similar to the individual learning mode. A company learns when it puts in place procedures and programs that allow the acquisition of new knowledge and skills. The peculiarity for her is that she can only learn through her own individuals. Hence the importance of the existence of a learning culture within the company. According to Peter Senge[7], this organizational learning culture is the mental model that builds employee behavior. In his absence, the company cannot learn despite the will of its employees. In other words, the set of knowledge and skills of individuals does not necessarily give the knowledge and competence of the company. Since putting all the pieces of an aircraft together does not allow the aircraft to take off, but it requires a set of factors (program, systems, processes, links and practices in addition to the pilot). We will see in the following, how we can combine individual skills and knowledge to obtain organizational ones, and how to transform individual learnings into organizational learning.

The literature on organizational learning is very extensive. It constitutes the perception of the authors who have dealt with this theme. Nevertheless, we were able to retain the five currents that we considered the best known and most influential in the business world. Before developing them, we will present below a table that brings together some definitions of the concept of organizational learning.

<p style="text-align:center">**Table no 1:** Definitions of Organizational Learning[8]</p>

Authors	Definitions of Organizational Learning
Cyert and March (1963)	Adaptation of the organization to its environment
Argyris and Schön (1978)	The process by which members of an organization detect "errors" and correct them by changing their theory of action
Duncan and Weiss (1979)	Knowledge of causal links between company actions and environmental reactions
Kolb (1984)	Knowledge creation from organizational action
Fiol and Lyles (1985)	Process of improvement of actions thanks to new knowledge allowing a deep understanding of the company and the environment
Bennis and Nanus (1985)	Means by which the organization increases its survival potential through its ability to negotiate changes in the environment
Levitt and March (1988)	The process by which organizations codify past interference and turn it into routines
Huber (1991)	Process by which a unit of the enterprise (person, department, group) acquires knowledge potentially useful to the organization and through which the enterprise expands its repertoire of possible behaviors
Dodgson (1993)	Process by which companies build, develop and organize their knowledge according to their actions and cultural characteristics
Weick and Roberts (1993)	The process by which interactions between individuals are multiplied and coordinated
Ingham (1994)	Social processes of interactions producing new knowledge and skills
Koening (1994)	A collective phenomenon of acquiring and developing skills that changes the management of situations and the situations themselves

Through this non-exhaustive table, we can see that there are as many definitions of the concept of organizational learning as there are authors they have treated it. And everyone approaches the subject in their own way. There are those who speak of an adaptation of the firm to its environment versus those who recommend a behavioral change within the firm and between individuals, and there are those who define organizational learning by the process of acquiring, developing and organizing new knowledge. Their only thing they have in common is to make the organization a "learning firm". Leroy and Ramanantsoa (1997)[9] have made another clarification by proposing three major learning configurations. They distinguished between firms that learn from their environment, those that learn from themselves, and those that learn from other organizations.

From these aforementioned definitions, we propose our own definition of the concept of AO which is as follows: "It is any new and permanent appropriation of knowledge, practices, behaviors, skills and expertise[10], at the individual, collective and organizational level for the benefit of the firm, in order to allow the development of learning capacities in the individual, the group and the firm. These abilities can be cognitive or organizational[11] And any learning that does not allow the development of the skills aroused is considered as a temporary adaptation of individual, collective and organizational behavior in relation to a given context [12]».

III. Capitalization of learning processes

The learning process is the set of steps and actions to be done or undertaken to act on organizational behavior and subsequently establish new organizational routines that complement or replace existing routines. It should be noted that each author speaks of a process of AO of his own. Nevertheless, they all meet at the level of three main stages which are the collection of information and knowledge, the interpretation of the data collected and the reaction based on the new knowledge acquired.

Thus, in what follows, we will present the contributions of the main authors of organizational learning, while focusing on how can we learn, both at the individual and organizational levels. We will then deduce the prerequisites necessary to have the desired learning. For each school presented, we capitalized on the AO process in the form of a simple to remember and implement diagram, while emphasizing individual and collective learning capacity.

IV. Learning process according to Chris Argyris and Donald A. Schön[13]: Learning loops

According to Argyris and Schön, the firm is composed of a set of individuals who act on its behalf [as if it were the firm that acts]. Therefore, when individuals learn a few things, in reality it is the organization that learns. The only condition is that individuals, in carrying out actions that facilitate learning, must act on behalf of the organization and not for their own interests. This learning takes the form of new knowledge and skills tacitly held in individuals or stored in reports and files or any other medium that can be consulted at any time.

Through this knowledge archived in the memories of individuals or in the various media, the organization finds an answer or a solution to any problem posed, this is what Argyris and Schön call "theories of

action". They can take two forms. The first called, "the declared theory", which explains what one wants to do, is the initial intention that precedes the act. And the second form called, "the theory of use", which represents what is actually done. From this definition we can deduce that "the declared theory" is explicit and "the theory of use" is tacit. It should be noted that there is often a discrepancy between "the declared theory" and "the theory of use". Indeed, there is always a discrepancy between what is declared and what is actually achieved. This is due to the consideration, at the time of execution, of new parameters imposed by the company environment. As if the individual updates what he is going to do as the execution progresses in order to adapt with certain external requirements.

For this, Argyris and Schön have defined three types of productive organizational learning, namely:
1. Learning that leads to development in the performance of organizational tasks;
2. Learning that allows the company to review its values in relation to work;
3. Learning that pushes the organization to develop its abilities and abilities to learn.

For the first type of learning, the authors speak of a simple loop learning. Indeed, it is a learning based on the modification of the action without modifying the values behind this action. In other words, it changes the way of doing and acting without asking the question of why to do it. It is results-oriented learning. The most important thing is to achieve the objectives and maintain a high level of performance according to the standards and values defined by the organization. According to this type of learning, it is a question of correcting a problem that frequently arises in the same way and for a long time. It often involves operational issues.

The second type of learning leads to what the authors call, double-loop learning. For this type, it is a question of questioning the values of the theory of use. That is, the organization can change its guiding values on which it has been based. Thus, to have a learning in double loops, it is necessary to make the link between the actions, the values and the strategy of the company. This is often not an easy task for the organization, especially when the values related to its existence are affected. Added to this is the phenomenon of resistance by individuals and groups. On a practical level, the objective of double-loop learning is to find solutions to the problems encountered in a definitive way. That is why we must seek to know the reasons that gave rise to these problems and not to tackle directly and only the problematic situations. But to get there, it requires a change in conception, routines and values, which often poses difficulties for the firm. By solving these problems, the firm will undoubtedly improve its learning capabilities and learning skills to reach the third type of learning, which is triple-loop learning, also called "learning to learn".

Figure no 1: The organizational learning process according to Argyris and Schön
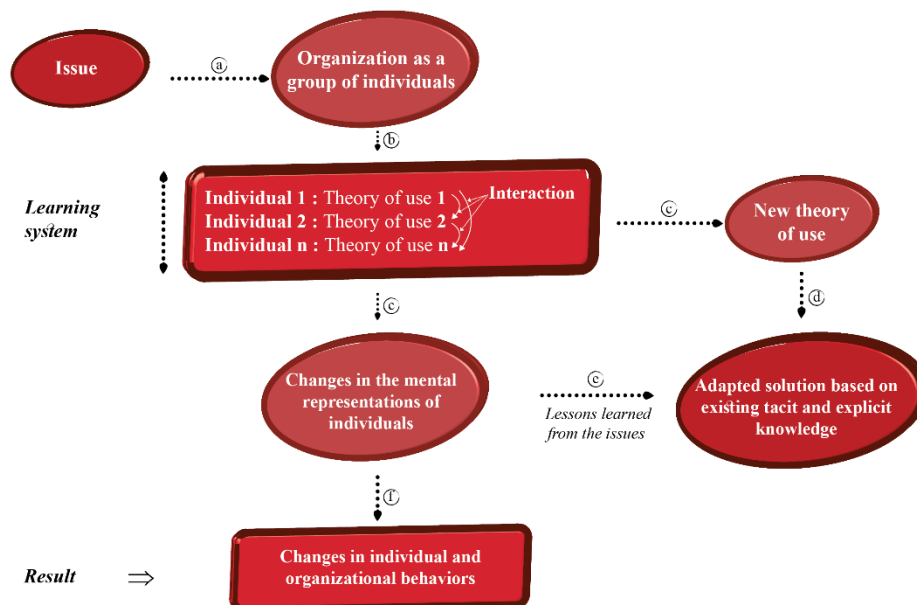
Source: Diagram designed by Professor Adil El Harrak

1. The learning process at Agryris and Schön begins with the appearance of a problem in an organization;
2. The organization, to solve the problem, acts through the individuals who compose it. Everyone, based on the knowledge at their disposal (tacit/explicit), will propose a theory of use, which will be questioned in the learning system;
3. At this stage, a new theory of use will emerge thus modifying individual mental representations, which are in turn influenced by other factors;
4. The new theory of use serves as a basis as a solution to the problem posed;
5. Once the problem has been solved, it is now necessary to integrate the lessons learned from the situation (problem/resolution) into mental representations. A kind of capitalization of experiences;
6. Thus, one can only speak of an AO if new mental representations influence and change individual and organizational behaviors later

V. Learning process according to Peter Senge: The fifth discipline[14]

According to Peter Senge, organizational learning is the way in which a group of people, working collectively, try to increase their capabilities to achieve results that align with defined objectives. This desire to always do better has a double impact. First, on the organization through the accumulation of know-how of several years. This allows the organization to produce what it really wants. Indeed, the more the quantity produced increases, the better the product is and the time required for its production is reduced. This is the effect of experience as defined by the learning curve or experience curve. Then, on the individual himself. For he becomes more active in carrying out his usual work, and he derives satisfaction from it.

According to Peter Senge[15], what differentiates the learning organization from traditional organizations is access to intelligence across five disciplines, namely, personal mastery, mental models, shared vision building, team learning and systems approach.

Personal Mastery: Organizations can only learn when their people learn, it is the only way for them to have new knowledge. But, to encourage individuals to learn continuously, it is necessary to develop in them "personal mastery". It is a psychic state, beyond spiritual openness, where the individual has perfect self-control. Indeed, the discipline of personal mastery challenges individuals to continually clarify and improve their personal vision and objectively see reality through the continuous pursuit of knowledge and learning.

Mental models: Mental models are a set of images and representations that allow us to better understand the world around us and that influence our action and therefore push us to make decisions. The reality is that we are not aware of the impact that these mental representations have on our behaviors. And it is, in a way, our role to develop the ability to make the link between these mental models and their impact on our actions.Thus, the discipline of "mental models" consists of having an introspective individual vision to challenge all images, representations and prejudices about the outside world. This discipline is complementary to that of personal mastery. Indeed, for organizations to learn through their individuals, they must encourage them to get rid of old mental models in order to be able to act objectively in the face of new situations.

The construction of the shared vision: Peter Senge starts from the idea that if an organization can inspire all its individuals through an idea for several years, it is because it has the ability to share the image it seeks to create of itself so that everyone the world engages instead of following. When there is a genuine shared vision, individuals excel in their work and learn, not because they were asked to, but because they want to. The problem that arises is that some business leaders do not share their personal visions with their employees, which can result in internal conflicts or simply lack of understanding.

Team learning: Team learning is a set of processes allowing the alignment and the development of the capacities of all the members of a group in order to create the expected results. This alignment works as follows. First, a team begins to work by "dialogue," and in doing so, group members detect individual behaviors and mental models that interfere with their learning. So they agree before they even start work. This means that the cognitive and behavioral dissonances between them have been spotted and eliminated. Thus, they will be able to develop all their abilities by sharing a unique vision and learning together. This gives doubly positive results, first for the organization and necessarily for the members of the group.

Systems thinking: Peter Senge considers the discipline of systems thinking (5th discipline) to be the cornerstone of organizational learning. It is the discipline that brings together all other disciplines by merging them into a cohesive whole that reflects the theory of practice within organizations. It allows us to understand the phenomena in their entirety. Indeed, in a complicated environment, even problematic situations are complicated. This is why it is necessary to opt for a method of analysis which is also complicated. This method is based on a global vision of the situation by making interconnections between the events produced and the decisions taken previously. Because in practice, there is a general and widespread tendency to think that the causes and their effects are always close in time. However, a problem that appeared immediately may be the consequences of

one or more decisions taken a long time ago. These decisions were solutions at the time of their adoption, but in reality they were only a "ticking time bomb". For example, reducing the research and development budget will bring immediate cost reductions, but it can impact the competitiveness of the firm in the long term. Thus, systemic thinking will allow the recognition and understanding of feedback and give it its fair value, because the real consequences of a decision come later and in a progressive way.

Figure no 2: The process of organizational learning according to Peter Senge
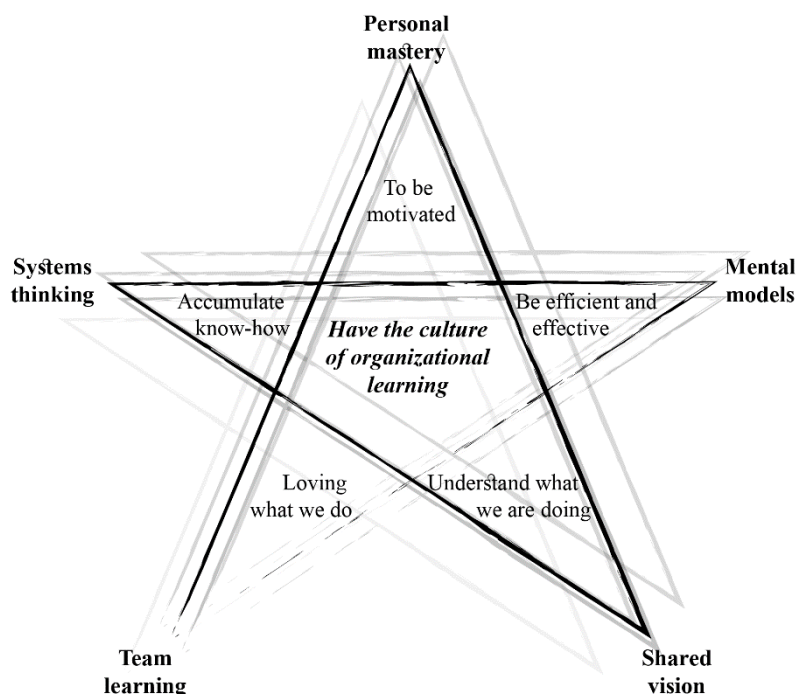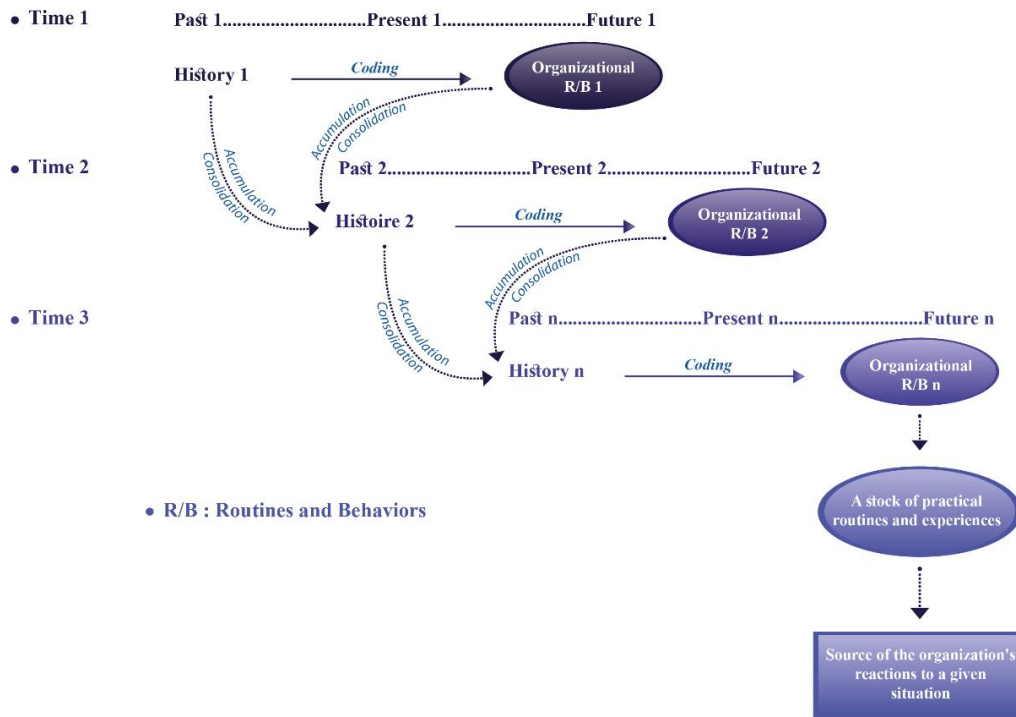

Source: Diagram designed by Professor Adil El Harrak

VI. Learning process according to Barbara Levitt and James G. March[16] : Learning by routines

According to Levitt and March, organizational learning can be defined on the basis of three principles relating to the study of organizations. First, routines as the basis of the behaviors of individuals within organizations. This means that the organizations in their practices, do not make the optimal choice, but they work on pre-established procedures according to the situations. What becomes over time a routine that is done in relation to a given situation. Second, organizational action always depends on its history. Indeed, routines are more interpretations of the past than anticipations of the future. And third, organizations are often oriented towards their already set goals. That is, their behavior depends on the results they observe in comparison with those desired, and they act accordingly

In such a framework, organizations learn by encoding history into the organizational routines[17] that guide their behaviors. These routines are independent of the individuals who practice them and they are able to survive despite the turnover that there may be in the organization. These routines can develop or improve or change completely to new routines. For Levitt and March, there are several considerations that can intervene in this point. First, there is the firm's own experience which pushes it to modify, improve or change its way of working. And there is also the search of the organization in a panoply of routines and practices (internal/external) until it finds the best one. The degree of intelligence of firms is measured through their dynamics of organizational change. Thus, the smart / learning company is one that can develop its ability to learn quickly and regularly.

Figure no 3: The organizational learning process according to Levitt and March

Source: Diagram designed by Professor Adil El Harrak

According to the aforementioned model, the organization accumulates and consolidates its routines and behaviors through the coding of its history and lived experiences. Thus, over time, she has a stock of routines and practical experiences, and she only has to choose which ones are best suited to a given situation.

VII. Learning process according to GEORGE P. Huber[18] : Voluntary and involuntary learning

For George P. Huber, we cannot speak of organizational learning in a structure, in the absence of four founding elements, which we find globally in several works. It is about the acquisition of knowledge, its sharing, its interpretation and its memorization. For Huber, he distinguishes five main sources for learning.

Huber and the five sources of learning.

1°/- First source:there is learning at the birth of the organization. Indeed, the creators of the company have advance knowledge of the new structure, its environment and how it intends to approach the market. And they transmit this initial knowledge to their new collaborators who, in turn, add their knowledge acquired from their studies and experiences. It should be noted that knowledge at birth strongly determines and directs learning in the future.

2°/- Second source:it is experimental learning. It is the acquisition of knowledge through experience. Indeed, the firm can also acquire new knowledge intentionally or unintentionally[19], by evaluating the results recorded in relation to the actions taken initially. As she can have knowledge through her self-assessment. It is first a question of making the diagnosis of a given problem, then, of studying the proposed solutions with the members of the company, and finally, of establishing a schedule for the implementation of a optimal solution. Experimental learning, according to Huber, can also be done through repetitive changes attacking different targets each time (the structure, the processes, the field of activity, the objectives, etc.). Thus, the firm will develop its ability to adapt and will be able to confront changes in its environment.

3°/- Third source:it is learning through the experiences of others[20]. Huber refers to this as the "second hand" experience.

4°/- Fourth source:recruiting new blood into the "Graft" organization. Indeed, organizations increase their stock of knowledge by recruiting new employees who possess knowledge that does not exist internally.

5°/- Fifth source:learning through research, which can take place in three stages. First, the analysis of the change in the business environment. If the gap between the company and its environment becomes greater, the organization risks its existence in the medium term. Then, the focus of the search on the discrepancy detected

based on previous searches. And finally, the control of the performance of the organization after the correction of the discrepancy.

Huber and knowledge sharing. According to the author, we can only speak of learning when there is a sharing of the knowledge acquired. Indeed, all the components of the organization develop new knowledge whether it is inside each unit or following relations with services outside the company. And often this new knowledge is not shared, especially since it remains tacit. This leads to the observation that in the majority of cases, organizations do not know what they know, with the exception of certain data codified in a weak computer system that cannot detect what knowledge is held by whom. On the other hand, when all the knowledge is shared by everyone, its retrieval will be easier for those who seek it and consequently individuals will be willing to learn, which will undoubtedly have repercussions on the learning of the organization. But this is not automatic, as it will depend on the degree of interpretation and understanding of the knowledge shared by individuals.

Huber and the interpretation of knowledge. For Huber, organizations can only develop their interpretations of knowledge by taking into consideration the four elements listed below.

1°/- Firstly:the individual cognitive map within the organization. Indeed, this cognitive map can be a mental representation or a belief structure that each individual has one, specific to him. It allows him to form and build his own interpretations of knowledge. But if we let it (everyone interprets it in their own way), the organization can never have meanings that match its strategic vision, and therefore cannot learn.

2°/- Second:the richness of the means of communication used for sharing knowledge (such as "face to face", audio communication or audio-visual conferencing, etc.), is an essential element in producing a common sense of knowledge between a transmitter and a receiver because of its impact on the change of mental representations of individuals.

3°/- Thirdly:knowledge overload. If the knowledge to be interpreted exceeds in quantity the cognitive capacity of the individuals and the group of the organization, the interpretations will be less effective. Therefore, the impact on the individual cognitive maps that receive ambiguous perceptions, is the production of non-uniform interpretations to the organization.

4°/- Fourth:non-learning (individual) has an impact on learning (organizational). Indeed, the notion of non-learning "Unlearning''[21], as defined by Hedberg, is a process through which learners dismiss knowledge or forget it. Which can be done intentionally. Because the fact of forgetting is not often linked to the loss of memory, but sometimes following a voluntary disinterest in knowledge. Consequently, the organization which cannot learn new behaviors, can never know the constraints related to these behaviors, which decreases its stock of potential behaviors.

Beyond the sharing and interpretation of knowledge. It should be noted that each company is strongly threatened by losing all its accumulated knowledge, its lived experiences, its established routines, etc., if it does not formalize and store them. The stakes are high, it is about losing the memory of the firm. According to Huber, most research shows that the majority of organizations do not value their history and therefore their memory. In fact, the problem is much more complex. Because there are several factors that come into play. On the one hand, the personnel who leave the company (turnover) have a large stock of knowledge and know-how which is not often capitalized. On the other hand, the absence of a vision for the future leads the organization to neglect and not to formalize and store certain knowledge that is used in the present.

Diagram no 4: The process of organizational learning according to George P. Huber "ASIM"
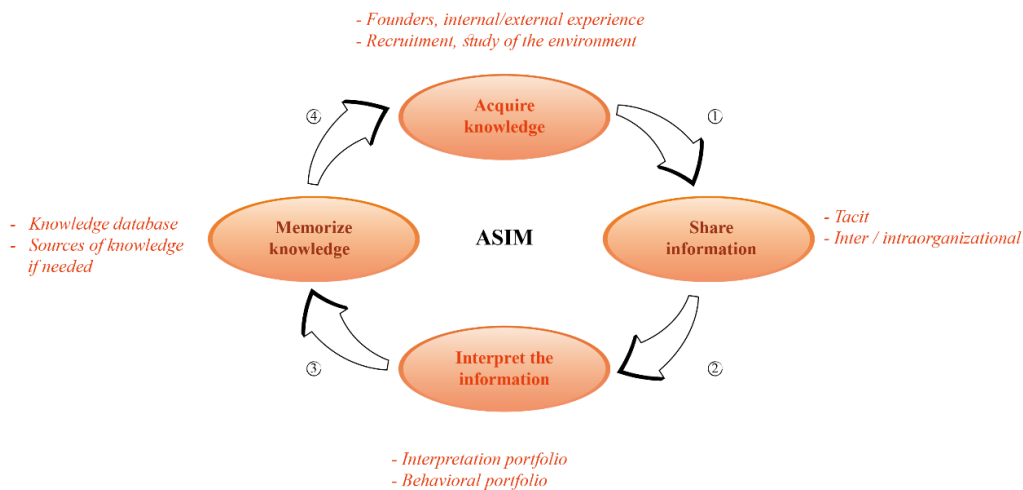
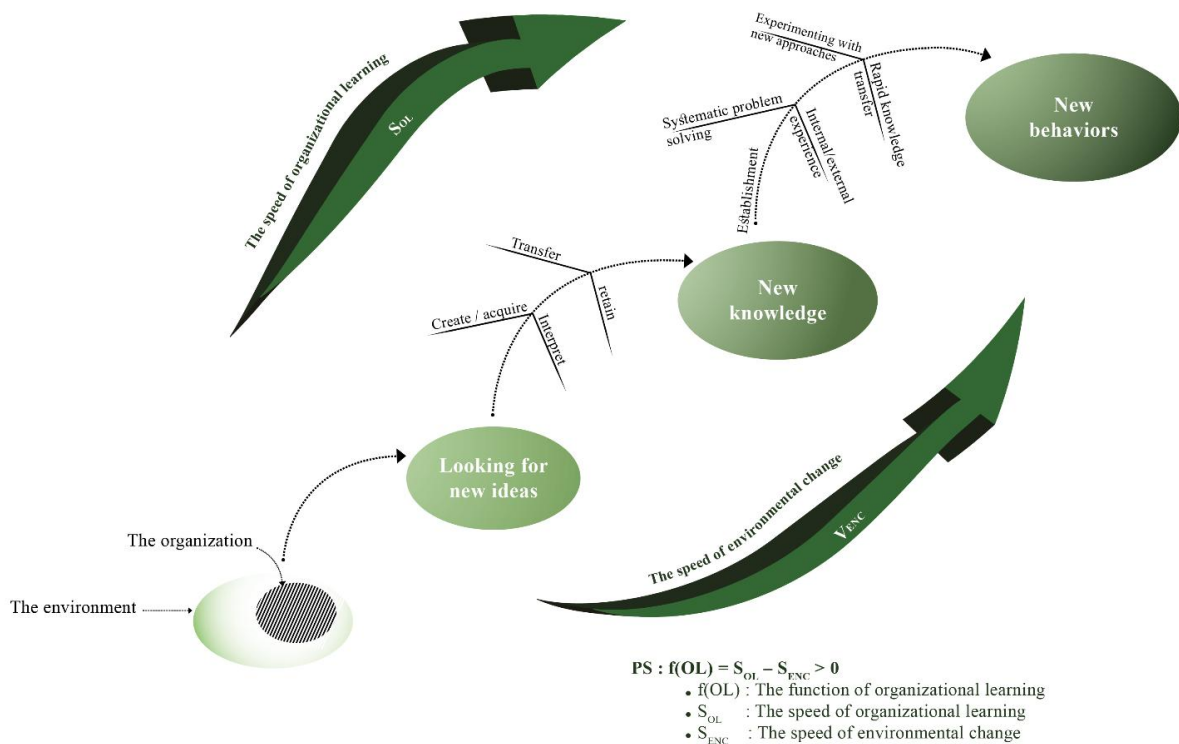**Source:** Diagram designed by Professor Adil El Harrak

VIII.   Learning process according to David A. Garvin [22]: The speed of learning

According to this model, the organizational learning of an organization can only be developed when it creates, acquires and transfers knowledge and consequently changes its behavior. Indeed, if you want organizational learning, you have to look for new ideas inside and outside the company. Whatever these ideas, they are always at the origin of new performances of the company. On the other hand, ideas alone cannot create learning organizations without support for change on all dimensions (operational, cultural, organizational, managerial, etc.) so that the work is done as it should be.

Companies that have succeeded in implementing an organizational learning system, according to Garvin, are those that have been able to translate new knowledge into new organizational behaviors as quickly as the change in their inebriation. Because it is not enough to react, but it must be done at the right time. This is only possible through the implementation of the following five constituent elements of learning:

1.   Systematic problem solving
2.   Experimenting with new approaches
3.   Learning through experience and company history
4.   Learning through the experiences of others
5.   The rapid and efficient transfer of knowledge throughout the organization

Diagram no 5: The process of organizational learning according to David A. Garvin

$$PS : f(OL) = S_{OL} - S_{ENC} > 0$$

- $f(OL)$: The function of organizational learning
- S_{OL} : The speed of organizational learning
- S_{ENC} : The speed of environmental change

Source: Diagram designed by Professor Adil El Harrak

By analyzing the process proposed by Garvin, we find a similarity with that of Huber. Nevertheless, for Garvin the main driver in the process of organizational learning remains the search for new ideas (internal/external), which are often a source of organizational performance. Thus, as shown in the diagram above, the new ideas found are transformed into new knowledge, which, in turn, are transformed into new behaviors. But that's not enough to say that the company is really learning. Because this learning must be at a speed at least equal to the change in the environment. Otherwise, the organization is doomed to disappear.

IX. Conclusion

In view of the above, we can conclude that learning (individual, collective or organizational) first involves the acquisition of new knowledge and new skills, then comes the stage of understanding, the

assimilating and interpreting the knowledge acquired, and finally, putting into practice the new skills acquired. Thus, with the effect of experience (the learning curve), individuals appropriate new knowledge and integrate it into their daily behaviors, until they become routine. This is how organizational routines are formed.

Thus, like individuals, organizations also have skills and know-how which are only organizational routines. According to Nelson and Winter [23]: "The routinization of the activity in an organization constitutes the most important form of storage of specific operational knowledge of the organization". Indeed, from the moment an organization has a stock of knowledge and skills, it begins to have its own behaviors that it groups together in a "behavioral repertoire" of the organization. As a result, the firm's actions can only be predictable from the moment they are chosen from the repertoire aroused.

As far as we are concerned, we consider as organizational routine any behavior (individual, collective or organizational), tacit or explicit, physical or cognitive, which is repetitive in the same way for a long time within the firm, and whose purpose is to have the same results. What constitutes for us a major danger and an imminent risk for the firm, insofar as it must face the future threats of the environment with behaviors of the past, having for one and only reason, that they gave their fruits. previously. We also consider that when a firm lets itself be imprisoned by its old behaviors, it is the moment when it stops learning, and consequently stagnates or retreats. By this, we do not encourage firms to crush their old learning, on the contrary, over time, this constitutes the memory of the firm, which is in many cases a source of pride, attachment and motivation for individuals. But, to mitigate the risk incurred by the firm "captive" of its past, we believe that we must not stop learning, whether on an individual, collective or organizational level. Thus, the firm that never stops learning is called a "learning organization". How to become a learning organization? How else to learn? And what are the prerequisites for becoming a learner? We will answer these questions in a new research. we believe that we must not stop learning, whether on an individual, collective or organizational level. Thus, the firm that never stops learning is called a "learning organization". How to become a learning organization? How else to learn? And what are the prerequisites for becoming a learner? We will answer these questions in a new research. we believe that we must not stop learning, whether on an individual, collective or organizational level. Thus, the firm that never stops learning is called a "learning organization". How to become a learning organization? How else to learn? And what are the prerequisites for becoming a learner? We will answer these questions in a new research.

Bibliography

1. Bernard Guilhon and Jean-Louis LEVET, From economic intelligence to the knowledge economy, Economica, 2003
2. Patrick Conjard and Bernard Devin, Training-organization: an approach to building a learning organization, ANACT
3. François Kerlan, Guide for GPEC, Eyrolles, 2007
4. IRMA Becerra-Fernandez and RAJIV Sabherwal, Knowledge Management; systems and processes, ME Sharpe, Inc, 2010
5. Ikujiro Nonaka and Hirotaka Takeuchi, Creative Knowledge; the dynamics of the learning company, De Boeck, 1997
6. S.Duizabo and N.Guillaume, The issue of knowledge management in companies, DMSP Research Center, 1997
7. Ministry of Public Service, France, The transmission of knowledge; methodological guide Collection Point Phare
8. Alain KERJEAN, New behaviors in the company Les Echos, 2000
9. Martin RoulleauxDugage, Organization 2.0. knowledge management; new generation, Eyrolles, 2008
10. SALTET, Jérôme/GIORDAN, André, Learning to learn, Librio, 2007
11. ROJOT, Jacques/ROUSSEL, Patrice/VANDENBERGHE, Christian, Organizational Behaviour: Volume 3, De Boeck, 2009
12. BAUDRIT, Alain, Collaborative Learning, De Boeck University 2007
13. KERJEAN, Alain, Learning through experience, ESF 2006
14. DRUCKER, Peter F./NONAKA, Ikujiro/GARVIN, David A., Knowledge management
15. Organization Editions 1999
16. THEVENET, Maurice/BOURION, Christian, Local management, a question of emotional learning, Editions ESKA 2006
17. BUCK, Jean-Yves, Knowledge and skills management in practice
18. Organization editions 2003
19. FILLOL, Charlotte, The Learning Company: Knowledge Management in Question?
20. The Harmattan 2009
21. FERRARY, Michel/PESQUEUX, Yvon, Knowledge Management
22. Economica 2006
23. Chris Argyris, Donald A. Schön, "Organizational Learning: Theory, Method, Practice" DeBoeck Edition 2002
24. Bruce Britton "Organizational Learning in NGOs: Creating the Motive, the Means and the Opportunity", INTRAC 2005
25. YvonPesqueux "Organizational learning, knowledge economy: fashion or model? » LIPSOR 2010
26. Claire BEYOU, "Knowledge Manager", LIAISONS edition, 2003.
27. Gilles Balmisse, "Guide to knowledge management tools; overview, choice and implementation", Vuibert edition, 2005.
28. Jean-Yves Prax, "The guide to knowledge management; concepts and practices of knowledge management", DUNOD 2000 edition.
29. Karl Erik Sveiby, "Knowledge management; the new wealth of companies, knowing how to take advantage of the intangible assets of your company" MAXIMA 2000 edition.
30. René-Charles Tisseyre "Knowledge Management Theory and practice of knowledge management", edition HERMES sciences publications 1999
31. Solveig FernaguOudet, "Organization of work and development of skills: building professionalization" Harmattan 2006 edition.
32. Konwledge Management And E-Learning, Jay Liebowitz, DSc and Michael S. Frank, PhD, CRC Press AN AUERBACH BOOK 2011;

33.   INFORMATION MODELING KNOWLEDGE BASES XXII, AnneliHeimbürger University of Jyväskylä, Finland, Yasushi Kiyoki Keio University, Japan, TakehiroTokuda Tokyo Institute of Technology, Japan, HannuJaakkola Tampere University of Technology, Finland and Naofumi Yoshida Komazawa University, Japan, IOS Press 2011;
34.   Individuals and Interactions: An Agile Guide, Ken Howard & Barry Rogers, Pearson Education 2011;
35.   Knowledge Retention. Strategies and Solutions, Jay Liebowitz, CRC Press AN AUERBACH BOOK 2009;
36.   Intelligent information systems and knowledge management for Energy, KOSTAS METAXIOTIS, Information science reference 2010.
37.   Software Architecture Knowledge Management: Theory and Practice, Muhammad Ali Babar • TorgeirDingsøyr Patricia Lago • Hans van Vliet, Springer 2009;
38.   Daniel Belet, "Becoming a real learning company: best practices", editions of Organizations, 2003.
39.   MeinolfDierkes, "Organizational learning", seminar held at the Paris School of Management, June 1995
40.   Patrick Conjard and Bernard Devin, "Organization training: an approach to building a learning organization", ANACT, 2004

References

[1].   AQNP, Association Québécoise des NeuroPsychologues, http://aqnp.ca/la-neuropsychologie/les-fonctions-cognitives/#Attention
[2].   HannyToxopeus, President of the Public Service Professional Association of Canada APEX "An Introduction to Learning Organization Concepts", Prepared for the Learning Policy Directorate of the Public Service, Canada Public Service Agency, 2007.
[3].   John B. Watson, Psychology as the Behaviorist Views it, 1913. http://psychclassics.yorku.ca/Watson/views.htm
[4].   The mentalist approach considers that only the mind can be the means for understanding cognition.
[5].   Jean Piaget, "La construction du réel chez l'enfant", Paris, Delachaux and Niestlé, 1937.
[6].   Marc Trestini, "Complex Systems Theory Applied to Modeling Next-Generation Digital Learning Environments." University of Strasbourg, 2016. P.30
[7].   Peter M. Senge, "The Fifth Discipline: the art and practice of the learning organization", Crown Publishing Group edition, 2010
[8].   Frédéric LEROY, "Organizational learning: a critical review of literature", Groupe ESC Nantes Atlantique, 1997.
[9].   Frédéric LEROY, "Organizational learning: a critical review of literature", art.cit.
[10].   By "expertise" we mean the opinion, analysis and estimation of an expert.
[11].   In this context, the word "organizational" comes from the verb "organize" and not from "the organization" (firm). And by organizational capabilities we mean any knowledge or know-how related to the execution, management and control of the tasks to be performed in a given workplace.
[12].   Definition of the concept of "organizational learning" proposed by Professor Adil El Harrak, author of this article.
[13].   For this paragraph, we have based ourselves mainly on the book by Chris Argyris and Donald A. Schön, "Organizational Learning: Theory, Method, Practice", Edition De Boeck University, 2002, as well as on the articles of several authors who have been interested in the work of the two authors, in particular, Smith, M. K. (2001) "Chris Argyris: theories of action, double-loop learning and organizational learning", the encyclopedia of informal education, 2012 and Jacques Leplat, "Organizational learning. Theory, method, practice of Argyris and Schön", Interdisciplinary perspectives on work and health, revues.org, 2002.
[14].   For this paragraph, we have based ourselves primarily on Peter M. Senge's book, "The Fifth Discipline: the art and practice of the learning organization," Crown Publishing Group, 2010 and Currency/Doubleday edition, 1990. In addition to books and articles that have detailed Senge's approach. Notably: Peter Senge, Art Kleiner, Charlotte Roberts, Richard Ross, George Roth and Bryan Smith, "The Dance of Change: The Challenges to Sustaining Momentum in Learning Organizations", Currency/ Doubleday, 1999, Lloyd Raines, "Looking both ways through the windows of senge's five disciplines", MCC, Lloyd@integral- focus.com, 2009, Pascale-Marie Deschamps, « Peter Senge: Collective intelligence is built in shared action", Enjeux Les Echos, 2014, An interview with Peter Senge http://www.solonline.org/?page=InterviewPeterSenge.
[15].   Peter M. Senge, "The Fifth Discipline: the art and practice of the learning organization", op.cit
[16].   For this paragraph, we have relied primarily on the work of Barbara Levitt and James G. March as well as other articles and books that have focused on the work of authors, including Barbara Levitt and James G. March, "Organizational Learning," Annual Review of Sociology, Vol. 14, 1988, pp. 319-340. Martin Schulz, "Organizational Learning," in: Companion To Organizations, Joel A. C. Baum (editor), Blackwell Publishers, 2001. David Cayla "Organizational Learning Between Adaptive Process and Directed Change", Economics and Finance. University Panthéon-Sorbonne - Paris I, 2007.
[17].   The lessons learned from the experience are accumulated and kept in their routines despite the departures of the individuals who were at the origin of these experiences. Whether it's rules, procedures, technologies, beliefs or culture, all of these elements are preserved through socialization and control. And they are later recovered in the structure of organizational memory.
[18].   For this paragraph, we have relied mainly on the work of GEORGE P. Huber "Organizational Learning: The Contributing Processes and the Literatures", ORGANIZATION SCIENCE, 1991, and "Organizational learning: a guide for executives in technology–critical organizations", International Journal of Technology Management, 1996.
[19].   When a firm seeks to acquire certain knowledge through its experience, it is said to be "intentional", and when during its activity, it acquires other knowledge that it did not initially seek to know, these are called "unintentional" "unintentional". ». Example: the inventor of post-it notes (Spencer Silver), while researching very strong glues, he discovered a glue with low adhesive power. It is this glue that will make the success of post-it notes later, while he was not looking for its chemical formula.
[20].   See authors Levitt and March above.
[21].   George P. Huber, "Organizational Learning: The Contributing Processes and the Literatures", op.cit, p.104.
[22].   For this paragraph, we have relied primarily on the work of David A. Garvin alone or with other authors, including, "Building a Learning Organization," Harvard Business Review, 1993 and, David A. Garvin, Amy C. Edmondson, and Francesca Gino, "Is Yours a Learning Organization?", Harvard Business Review, 2008, David A. Garvin, "Learning in Action: A guide to putting the learning organization to work", Harvard Business School Press, 2000.
[23].   Nelson and Winter, quoted in, Pierre-André Mangolte, "Le concept de routine organisationnel entre cognition et institution", doctoral thesis, University Paris Nord, 1998.