

# Hot context for organizational learning

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## ABSTRACT

The organizational learning, studied in resource-based view, is a strategic resource (Wernerfelt 1984, Prahalad et Hamel 1990, Doz 1990, Teece 1998, Weartherly 2003). Thus, “learning to learn” (Argyris et Schön, 1978), being a learning organization (Senge 1990, Edmondson et Moingeon 1998, Moilanen 1999, Heraty 2005), and encouraging organizational learning become major issues in management sciences. This contribution aims at fixing and explaining hot organizational learning context dimensions. This approach presents a double interest. First, it enables the validation of the dimensions deduced from literature. Second, this analysis suggests a framework for hot context that emphasized managerial leverages.

The first part of our contribution synthetizes the organizational learning literature and particular analyses its context. It reveals three implicit dimensions in literature : cultural, organizational and social dimension.

We have backed up our questioning with a qualitative study of two business units of the public company Electricité de France (EDF). This firm is subjected to many changes in its environment : the opening of European and French electricity markets. EDF has to adapt itself to this context by developing learning capabilities, bringing about synergies between departments and creating a hot context for organizational learning. The collection data has been done at two different times during a nine month period and insures data triangulation : 36 interviews, 7 days of observation and many internal documents. The interviews have been recorded and transcribed. In order to facilitate the data processing, the thematic analysis has been done with N\*Vivo software.

The empirical study validates the three dimensions identified from literature relevance and brings further information. We have drawn four dimensions of a hot context : an individual, an organizational, a social and a managerial dimension. The individual one includes the literature cultural dimension but also identity, emotional and fonctionnal aspects. It corresponds to individual self motivation and theory in use that facilitates sharing and cooperation in the firm. The organizational dimension integrates both organizational and specific learning structures such as guild and coaching. It is set apart from the managarial dimension, which is the support and the influence of the managerial staff. Finally, the social dimension is the result of the interaction of the three previous dimensions. In this way, it constitutes a *sine qua non* condition to the organizational learning process. Beyond our analysis, we suggest a framework to understand hot context, its dimensions, and develop managerial leverages.

## **Introduction**

In the last thirty years the profusion of research and the abundance of literature testify the revival of interest for management sciences and resource-based view theory for the organizational learning. Source of competitive advantage, it takes on from now a strategic character (Wernerfelt 1984, Prahalad et Hamel 1990, Teece 1998). Thus “learn to learn” (Argyris et Schön 1978), becoming a learning organization (Senge 1990, Moilanen 1999, Heraty 2005) or favorising organizational learning become major problematics of management sciences, for researcher as much as for practitioners.

This article aims at understanding and explaining the features of a hot context for organizational learning, i.e. we are trying to establish and explain the dimensions of organizational context that facilitates the organizational learning process. The interest of such an approach is double : to validate the dimension revealed in literature and to drive a dimensional analysis of the determiners of the favorable organizational learning climate in order to precise the managerial leverages that follow from that.

Our research proceeds in two steps. The first part synthetizes the organizational learning literature, particularly about the organizational context. Our approach consists in developing three implicit dimensions : the cultural dimension, the organizational dimension and the social dimension. In the second part we rely on a qualitative study done over nine months in Electricité de France nuclear and commercial branches.

Our empirical study validates the relevance of the three dimensions revealed by our analysis of literature and brings additional elements. Thus we have drawn four dimensions of organizational context : the individual, the organizational, the managerial and the social dimensions.

### **1. Organizational learning and organizational context**

Learning is a concept originally developed for the individual. We had to wait until Simon’s work in the fifties to have it transposed to the organization, opening a way to a revival of researches (Koenig 1994).

Numerous theories are proposed by authors, each one focusing on a precise element of the phenomenon (Leroy 1998) : the learning object (information, knowledge, competencies), the learning subject (individual, organization), the learning trigger (error, innovation, environment change) or on the process itself (socialization, codification). The first part aims at synthetizing all these researches, focusing particularly on the organizational context dimensions, implicit in literature.

## **1.1. Organizational learning : definitions and foundations**

The concept of organizational learning has been studied in many areas (Easterby-Smith 1997) : psychology, organizational development, management or sociology. Those different approaches ensure a larger understanding of the complex phenomenon that is learning : *“It contends that while various literatures are revealing in particular aspects of organizational learning, a more complete understanding of its complexity requires a multi-disciplinary approach”* (Dogdson 1993). The management sciences experience various researchs, notably from Argyris and Schön (1978, 1993, 1994), Levitt and March (1988) and Nonaka et Takeuchi (1991, 1995).

### **1.1.1 Definitions**

Several definitions can be found in learning literature. For Argyris and Schön (1978), organizational learning is the cognitive process enabling the members of an organization to detect mistakes and to correct them by changing their action theory. Thus, an organization learns when it acquires information, no matter the way (knowledge, understandings, practices). Levitt and March (1988), in a behaviorist perspective, underline the notion of routine. The organizational learning is then considered as the process enabling organizations to codify past ingerance and to transform them into routines. To learn, an organization should integrate history consequences to its processes. Senge (1990), focusing on the learning subject, gives a more general definition *“in learning organizations, individuals improve at each moment their capacity to create the expected results, new ways of thinking”*. Koenig (1994) formulates a definition commonly repeated : *“collective phenomenon of acquisition and elaboration of competences, that, more or less deeply, change management situations and situations themselves”*.

Behaviorist and cognitivist approaches of learning tend to be overpassed to offer a common vision : *“learning can be understood as an organizational behavior adjustment responding to environment change, as a transformation of the organizational knowledge corpus or as an interaction between individuals within the organization”* (Leroy 1998). If some theoreticians try to show the convergence between approaches (Shrivastava, 1983, Huber, 1991, Edmondson et Moingeon, 1998), two differences remain : one on the learning subject and the other one on the foundation of learning.

### **1.1.2. The subject of learning : individual or organization ?**

The aim of such an interrogation is to understand what brings to learning its organizational nature. Two answers are possible : learning has an organizational character when the learning subject is the organization itself or when the individual learning deals with the organization and spreads through it.

The first perspective infers a holist vision that totally dissociates individual learning from organizational learning, the last one being the result of an organization work, reified and existing by itself. Organization does not have its own brain but has information systems, cognitive systems and a memory (Hedberg 1981). Those research widely use routine and organizational memory notions, which are not dismissed from the individualist approach. This second perspective puts the individual in the center of organizational learning : the organization exists through the individuals that compose it and doesn't have the ability to learn by itself. Organization members learn and this individual learning becomes an organizational in two ways : socialization and routine diffusion. Argyris and Schön are precursors precisig since 1978. Thus, they raise the organizational learning paradox : the organization is composed of individuals and individual learning is necessary to organizational learning ; however the organization is able to learn independently of each individual but not of the whole. Therefore, even though the individual is the only one that can learn, he belongs to a learning system in which individual knowledge is exchanged and transformed.

The individual as a source of organizational learning is henceforth established and accepted (Argyris and Schön 1978, Hedberg 1981, Shrivastava 1983, Cohen 1991, Simon 1991, Kim 1993, Nonaka 1994, Ingham 1995) and holds in this contribution. It is not though synonymous of a perfect identification between individual and organizational learning. The distinction between holism and individualism doesn't resolve the questioning about the foundation of organizational learning : routine or socialization.

### **1.1.3. Two foundations for organizational learning**

The notion of routine, repertoire of organizational knowledges and standard procedures responding to a given situation, is used as much in organization working studies, in deciding to make process as in learning (Veblen 1899, March and Simon 1958, Cyert and March 1963, Argyris and Schön 1978, Levitt and March 1988, Lazaric 2000). In a holist perspective, organizational learning based on the routines, corresponds to learning by adaptation of the organization to its environment (*adaptive learning*, Cyert and March 1963, Shrivastava 1983, Levitt and March 1988). Learning takes on an incremental characteristic and is carried out by routine adjustments, that keeps on evolving with past experiences and

environment change. In an individual perspective, defensive routines (Argyris and Schön 1978) recover “defensive routines are the policies or actions we put in place to prevent ourselves and our organizations from experiencing embarrassment or threat. “ (Argyris 1993). Tinged with those defensive routines, learning can only be restricted and non productive : in single loop. The routine diffusion by exchanges and socialization (Levitt and March 1988) is for a part of literature, founding of organizational learning. The socialization process not only ensure the routine diffusion but also the organizational learning (Argyris and Schön 1978, Huber 1991, Nonaka and Takeuchi 1994, 1995). Nonaka and Takeuchi research lead to relatively close conclusions from those of Argyris and Schön, despite differents postulates : interaction is needed in creation and diffusion of knowledge. The relationships between the different entities of organization are essential in an efficient and productive learning process, dialog and listening ensuring both better understanding of individuals and knowledge transmission.

Organizational learning can that way be conceived as an adaptation of organizational routines to its environment or as the product of socialization. The interest of such a literature synthesis in two complementary approaches is to reveal two essential dimensions of the organizational context. The routine underlines past influence, experiences and individual behavior, elements grouped together under the cultural dimension whereas socialization emphasizes the social dimension of learning.

## **1.2. The dimensions of organizational context : cultural, social and organizational**

The literature study on the organizational learning testifies of the existence of the two cultural and social dimensions, respectively built on routines and socialization notions. The transversal analysis of organizational learning work and related fields (knowledge management and learning organization), attests the necessity to consider a third dimension : the organizational dimension. From then on, the objective is to precise the outlines from each dimension and to explain their roles in organizational learning.

### **1.2.1. The cultural dimension**

The cultural dimension underlines the importance of the individual values and beliefs on learning. We can point out the three major elements : the influence of past experiences on behavior, the difficult challenge of individual actions or the necessity of collective aims.

First, in learning by adaptation, previous experiences prevail and past appropriate solutions are reused in different situations (Cangelosi and Dill 1965, Shrivastava 1983, Levitt and

March 1988). The main obstacle lies in the difficulty of changing routines and of making them evolve, even at very slow rhythm. The cultural dimension, stamped of inertia and resistance to changes slows learning.

Second, in a more individual perspective, the organization is characterized by conflicts, coalitions and decisions that generate difficult and unpleasing situations. By nature, individuals avoid conflicts, hide their opinions and try not to be implicated (Argyris and Schön 1978). They create defensive routines, automatic reflexes ensuring their “*protection*” and slowing learning. Those routines push interindividual relationships to a statu quo, hide mistakes and difficulties (Argyris 1993). The natural tendency of avoiding or hiding is led by experiences and mental models of individuals. Defensive routines can though be avoided or destructed by developing dialog and links between the perceptions of individuals : by the creation of shared vision and perspective.

Finally, the shared vision consists in collective objectives that organization and individuals expect to achieve : it can be mainspring of adhesion and commitment of employees but needs an active cooperation. The aim is not to impose a vision to the members of the organization, but rather to make personal visions suitable with the organizational vision. The interest is to federate the actors around collective goals, that bring sense, meaning motivation. Stimulated by the management staff, vision ensures cohesion between the employees and coherence between individual and organizational actions. The organizational culture, based on a sharing of decisions, responsibilities and rewards, sets up an essentiel adhesion vector (Schein 1996). The cultural dimension can be a brake and a catalyst to organizational learning : a brake because of the habits and defensive routines reenforcement, a catalyst by the federation around shared objectives that carry sense. The deployment of those organizational interests need sharing and exchange, within the organization. From that moment, the cultural dimension directly depends on the social dimension.

### **1.2.2. The social dimension**

The social dimension covers exchanges, relationships and dialogs between individuals in the organization. The dimension is essential in the two founding theories : the researchs of Nonaka and Takeuchi and Argyris and Schön. Nonaka and Takeuchi study organizational learning by the dynamical process of creation and diffusion of organizational learning, called “knowledge spiral”, by two dimensions : the epistemological dimension (explicit versus tacit) and the ontological dimension (individual, group, organization, interorganization). The knowledge spiral is composed of four distinct phasis in continuous interaction that ensure both the transition from tacit to explicit and from the individual to the collective.

The socialization corresponds to the transition from tacit to tacit, to the sharing of experiences that can't be diffused by the language. The diffusion is made by imitation, observation or practice. Externalization is the articulation process of the tacit knowledge in explicit concepts. The tacit knowledge is not necessarily conscious, that way it is hardly put into words. This operation implies putting into words what can't be expressed. The most powerful tool is the figurative and symbolic language that is to say the metaphor, analogy : to perceive the thing or the object symbolically imaging something else. The combination consists in the articulation of explicit knowledge in new explicit knowledge. That step corresponds to a new combination of existing information with various media : documents, meeting and IT's. Eventually the internalization transforms the explicit in tacit. Explicit knowledge spreads in the organization and becomes implicit by integrating habits, routines and employee's mental models. The diffusion takes place in practice, by "learning by doing". Formal or informal, done thanks to the tacit or explicit language or thanks to IT, interaction between individuals is a necessary condition to organizational learning.

Organizational learning needs "productive" argument, freed from defensive routines (Argyris and Schön 1978). More precisely, that argument depends on each individual's ability to identify their mistakes and to adopt a transparent behavior. This consists in explaining their thinkings and opinions without any lie or dissimulation (Argyris and Schön 1978). The productive learning (in double loop) implicates a transparent socialization of the organizational members, that may reveal the implicit values in actors actions. Without such a sharing and such an opening, learning is slowed or stopped by defensive routines. The difference between learning in single and double loop is indeed that key element : the single loop is characterized by lack of dialog whereas the double loop is induced by sharing. The social dimension, that ensures interindividual exchanges, plays an essential role in the organizational learning development. The organization should make possible and facilitate those exchanges. We groupe these elements under the "organizational dimension" terminology for the learning context.

### **1.2.3. The organizational dimension**

The organizational dimension integrates the organizational elements that may favor organizational learning, such as the organizational structure or the management staff. An evolution of structure is often necessary to promote socialization (Duncan and Weiss 1979, Shirvastava 1983, Nicolini et al. 1995) A flexible organizational structure, decentralized, federated around teams is better armed to facilitate exchanges and transversality. The headship plays a determining role : it sets the organizational structure and can therefore arbitrate between internal and external constraints and the building of an adequate climate

of learning, offering learning opportunities to the members of organization (Garratt 1990). This change implies an evolution of the management staff role. The middle management, henceforth knowledge engineers (Nonaka 1995), see their profession and their competences evolve. The new management, called “middle-top-down” positions the middle management in the heart of the organization. It guides and supports learning. More precisely its role consists in ensuring the adequacy between headship vision (or dream) and the field reality as lived by basis employees. In that context, new abilities are required : first encourage personal visions, communication and in the same time guaranty the shared vision, second support fellow-workers in their self-reflexion and their perceptions of issues (Senge 1990).

The organization structure and the management staff are therefore determiners of the organizational learning process. Furthermore, they influence interactions (social dimension) and so convergence between the individuals.

The synthesis of literature brought out dimensions of the organizational context, that are likely to favorise or to penalise organizational learning : the cultural, social and organizational dimensions. Those 3 dimensions are complementary and interdependant. They influence each other and from their interaction arises a favorable context to organizational learning. Underlining those three dimensions, implicit in literature, reveals a new aspect and brings a new questioning for which we try to give an answer in the next part : does the empirical study validate those dimensions or does it rise out new ones ? The interest is double : confirm empirically the dimensions and complete the literature elements. In order to answer this interrogation, a methodology enabling us to check, precise and complete literature dimensions, has to be built. For that purpose, we use a qualitative methodology through a study led within two EDFs branches : the nuclear and the commercial.

## **2. Methodology**

The purpose of that contribution is to understand what are the organizational context dimensions that favorise the organizational learning process. A qualitative methodology seems to be the most relevant. Before precisising the data collect, the current context of EDF has to be recalled.

### **2.1. Presentation of the EDF case study**

The firm has been undergoing massive changes of its environment over the last few years : the European market opening, the national professional market opening and in 2007 the national private market opening. Those events put again in the balance EDF's monopolistic position in France. In that moving context, EDF decides of new strategies :

development of customer loyalty and subsidiarization at a national level and expansion in Europe and the world at an international level. The major problematic of the organization is to adapt itself to its environment, that is to say develop learning abilities, facilitate synergies and at last create a hot organizational learning context. That appears in F. Roussely speech, former CEO : “that our offices in Europe and in the world benefit from standardized management methods from a global purchase policy and from a better diffusion of our best practices by instituting headship or offices as competence centers for the whole group” (Octobre 1998). That new policy of EDF group implies a structure adjustment and a deep organizational change. The purpose is to make the public, technical and sometimes qualified as bureaucratic firm evolve toward a more flexible, reactive and decentralized organization. Several reforms are done, the two most important being the set of an organization structured in areas in 1999 and then in trade branches in 2002. Trade branches are transverse structures that support one of the firm activities : electricity production, commercialization or transportation. The interest of such trade branches lies in their transversality favorable to synergies and to knowledge sharing. The field choice was focused on two trade branches : the nuclear branch and the commercial branch.

## **2.2. Data collect and processing**

The data collect to apprehend hot context for organizational learning went off in two successive phasis over a nine month period. The first phasis consists in interviews in the firms (six interviews with an average duration of 1h15). The aim was to apprehend the firm functioning, the different works and to spot relevant actors for our research. The interest was also to integrate ourselves to the firm by making days of observation and collecting internal documents. A collaboration contract has been signed, authorizing us to participate to meetings and to lead interviews within the firm. The choice of the studied branch closes this first part of collect. As the field accessibility was not problematic, the choice was made in accordance with two major criteria : the strategic place of the branch in the firm and the organizational learning studies possibilities. First, those two activities are essential to EDF : electricity is mainly produced by the nuclear parc, and the commercial branch takes on a strategic aspect in the current national market opening context. Second, each of these two branches gives us a favorable field to analyze organizational learning : sharing belongs to the nuclear branch culture and current changing of the commercial branch makes an interesting context for learning study. That is why we have chosen to study the nuclear and commercial branches.

The second phasis of the collect is a data triangulation recommended in case studies (Eisenhardt 1989, Yin 2003) : 30 semi-conducted interviews of an average of 1h30, within

the two branches and also seven days of non participating observation and the collect of numerous internal documents. The interviews were applied to two class of actors, at all hierarchic levels : the “classical” actors of the branch (director agency, customer advisor, salesman, nuclear technican..) and the actors in charge of learning and knowledge management in the branch (director, trainers and accompanist). The semantical saturation has guided our choices, that is to say that “*no new ideas can emerge from new data*” (Romelaer 1999). The purpose of the interviews, based on an interview guide, was to figure out the dimensions that may facilitate organizational learning development. The questions delt with the working context, organizational context, sharing and knowledge exchange. The non participating observation has enabled us to attend five days in agencies and two days in a nuclear plant, giving us a privileged contact with the actors. Informal exchanges, rich to our study, have been collected on a log book, filled after each day and each interviews. The secondary sources are aslo taken into account (reports, projet specifications...). The 36 interviews were recorded and transcribed. The analysis of thematical contents was made with N\*Vivo software that facilitates the data processing. The thematic dictionary used to code the interviews was built by confrontation with theory and field. We can quote for example some general themes : the branch context, the working context, the individual dimension or the organizational one.

### **3. Results : four dimensions for hot organizational learning context**

The analysis of collected data within EDF gives an answer to our questioning : it validates the relevance of the three dimensions revealed in our literature analysis. It aslo enables to precise their outlines and brings some complementary elements to the first part. We draw four dimensions of the organizational context, decisive in organizational learning : the individual dimension that integrates the cultural element mentioned above, the managerial dimension that distinguishes itself from the organizational and the social dimension. Eventually we propose a multidimensional framework of hot organizational learning context.

#### **3.1. The individual dimension**

The individual dimension corresponds to motivations and underlying values of individual actions, ensuring cooperation and sharing in the organization. That is to say that individuals can be a source of organizational learning if only some conditions are fulfilled : the individual must create and must be in a hot context learning. That dimension emerges in our field without being so dissociated from literature. The individual dimension integrates

the cultural elements underlined in the first part of this contribution and the coding of that dimension was guided by complementary references (Szlusanki 1991, 1996, Kane et alii 2004, Dameron et Josserand 2005). The analysis reveals three axis of the individual dimension : identification, emotion and function. First, identification can be defined as a “*social building negociated in interactions with a group following a double mecanisms : autocategorization and social comparison*” (Dameron and Josserand 2005). Social identity theories set down that the individual builds its personal identity (personal recognition) of which his social identity is a part “*a sens of belonging to a social aggregate*” (Kane and alii 2004). Identification to a work is based on the representation that the individual has of that work. The actors of a same work federate themselves around values and a culture that characterize it. In the nuclear branch, identification and culture are strong : “*its is cultural to exchange*”. The federative element is essentially the nuclear plant “*Often people consider that it's their machines, their communal room. They are at home, it is a sanctuary. There is pride, a lot of pride. There is a big implication. People work in this job have chosen it. My best memory...is the noble work of operator, that's the one that pilotes*”. The study reveals that the identification is not necessarily linked to the work, but can also come from the firm itself. The explanation lies in the specificities of the EDF firm, in which the public service values are still very present : “*when I entered EDF, it was a public firm, to offering a service to the population...repairing with something of...utopia may be, but with help to the client...really repairing...the distribution of electricity and gaz, everything was commitment to the client; satisfaction without profitability. The actors have a kind of pride to belong to EDF and have a strong feeling of identification*”. Current changes, previously evoked, strongly shake the individual identification to its work and to the firm. It is not any more in adequation with the picture they have of it.

Second, the study of our interviews underlines the importance of the emotional links between the different members in the organizational learning dynamic. Sharing and cooperation are more easily done with well-known individuals seen as “*nice*” and with whom “*we've a lot in common*”. The relationships must be “*fair*” to last. That is to say “*to take as much as to give*”. The essential part of the emotional link is trust: “*what counts is trust between people*” or “*all of that is trust*”. A lot of reluctances take their source in this lack of trust “*we can't share without trust*”. As the sharing of its knowledge is often seen by the actor as a “*depossession*” or a power loss, the friendship and then trust constitute two sine qua non conditions for lasting sharing.

Finally the functional dimension brings out the interest that represents the cooperation for an individual. In a way, this dimension characterizes the personal interests research and the opportunism of the actors. It can be evaluated by the disparity of knowledge between the different members and their interdependance. The more the actors can take

profit from cooperation the more sharing would be practised “*there is exchange of knowledge because the nuclear team is a kind of mosaic : each has his own abilities and different knowledge*”. An interesting element is drawn by the coding : the functional dimension can be individual and organizational. In other terms, the functional dimension isn't necessarily linked to individual objectives. The individual can as much integrate the community because of its own interest as for organizational goal (facilitate integration of new arrivals or improve the results of his team). The functional dimension isn't only characterized by its individual aspects i.e. opportunism, as the matter of fact, can take on a collective and uninterested character. The individual motivations, emotion or identification to its work or its firm are the source of this behavior. To benefit from these behaviors, the firm, by its structure and mechanisms must take actions to favorise and to feed the individual dimension.

### **3.2. The organizational dimension**

The organizational dimension corresponds to organizational actions that a firm can institute to create a hot context to learning. Two essential aspects are brought out from it at EDF : the organizational structure and the specific learning structures.

First, the importance of the organizational structure, underlined in literature, is confirmed in our study. It corresponds to the organizational and hierarchy flexibility, a cut in team size and opening to other teams, other experts or other firms, in brief to the learning opportunities that it offers. Those elements facilitate contacts between individuals and favorise sharing and knowledge diffusion.

Second, the organizational dimension finds expression in the instauration of specific learning structures in order to promote tacit knowledge diffusion and intergeneration experience sharing. Two structures coexist in EDF : guilds and coaching based on the same principle of complete and easier professional training. Historically, the nuclear branch is precursory in that domain : it recommends this kind of practice since the opening of the nuclear plants in the eighties and it integrates it in the new arrival's training. The nuclear works are principally constituted of know-how and knacks that need experience “*there is always a specific gesture...and that is difficult to explain in training...all that is experience*”. For that kind of learning, guilds are the best practice : “*in EDF you quickly discover that it is necessary, that you can't make it by yourself. You need guild*”. That training is one of the pillar of knowledge management and organizational learning in the nuclear branch. The headship has decided to make it the main axis of training and professionalization of the commercial branch. This method is now integrated in the commercial standards : an agency director “*To me guild is fundamental. We have appointed senior salesmen to help their younger salesmen improve their performance. They enjoy to be trained by elders that show*

*them that they can succeed. It is a strong element in the firm that we need to practice and develop*". Lastly, we can mention the last learning structure developed in EDF : the "challenge". There is a double objective : promote the best practices sharing between units and motivate customers advisors. Those initiatives ensure exchanges at every level : in the team, to extract best practices, in units to select level and at the national level for consolidation. Then they are evaluated, classified in order to elect the best ones and to reward customers advisor. The challenge brings a sharing logic, favors exchanges and creates a hot context for organizational learning. Thus, the firm has several options to institute an organizational structure adapted to learning. That doesn't mean they must forget the individual dimension : without emotional, functional or identity motivation, those structures lose their efficiency. The interaction between those two dimensions creates a hot context, interaction that must be managed by the firm.

### **3.3. The managerial dimension**

The managerial staff plays an essential role in the development of a hot organizational learning context. It relays the headship policy and supports the individual and organizational dimension evolution. More particularly, the management staff is vital in the instauration of learning structures and the actors' identification to the firm "*he shakes our hand because a manager that doesn't shake hands...and just tells us what is wrong, it doesn't fit*". The firm and the management staff should create that way an environment in which individuals and organizational dimensions can interact, catalysed by management : "*the idea is to institute exchange at every level, I think that it comes from headship that at one point gives a sign. It is the manager's role to relay that will. So, it is in every day communication*" (a manager). That attention of the firm as a direct influence on the development of organizational learning. This interest concretely becomes a knowledge management policy. The adherence of hierarchy to that policy and more generally to the organizational goals in favor of sharing and knowledge diffusion influences the individual in his actions and interactions. The managerial dimension acts directly upon the organizational dimension and can favorably push the individual dimension. Those three independent dimensions need interaction between individuals and with the management staff. Those interactions, source of organizational learning, constitute the social dimension widely specified in literature.

### **3.4. The social dimension**

The social dimension covers exchanges and interactions between individuals, which are source of learning. Numerous actors of EDF see those interactions as the foundation of learning : “*We’re alone at work, but if we don’t exchange with the others, we’ll be in trouble to evolve and learn. For sure we’ve to interact*” (a manager) ; “*According to me, exchange with fellow-workers is essential...because if you’re alone all day long, it’s boring. We’re a good team, and there are always discussions about our work*” (a customer advisor) ; “*there are always experts, there is no superman. It’s the combination of our knowledge that improves the performance of the team*” (nuclear agent).

Sozialisation arises from the individual, the organization and the management staff. Social dimension results of the interaction between those three dimensions. It constitutes the foundation of a hot context for organizational learning. In this way, social dimension is required for organizational learning, associating individuals in a favorable climate for learning in terms of management and organizational structure.

The results of our study can be depicted by this figure :

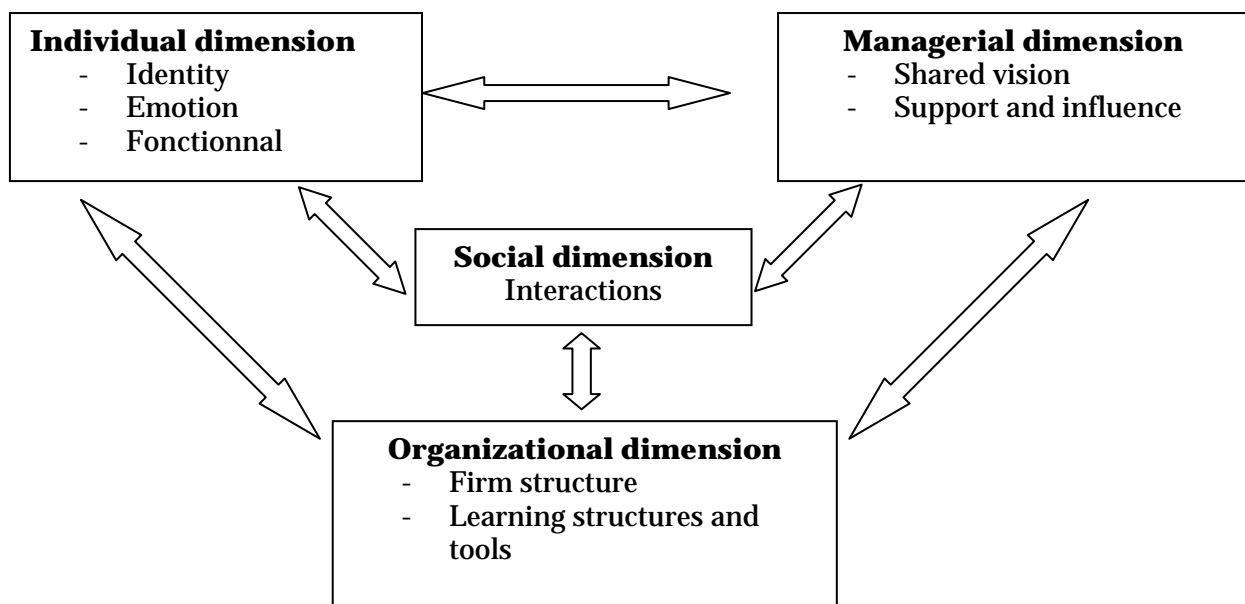


Figure 1 : Hot organizational learning context

The interest of this multidimensional framework is to bring out guidelines for managers. Managerial leverages are more or less easy to found and always need headship reflection.

The first point consists in promoting sharing and favorizing the rise of a learning culture. Indeed, the identity and emotional aspects are directly influenced by individual values, beliefs and organizational shared vision. Those actions need a strong commitment, for many years, of the headship, but also an acculturation to exchange and sharing. The headship should use other leverages, more efficient in short term and facilitating the development of this learning culture.

The second point is a structural one. The organizational structure evolution towards a “*transversal and open*” (Midler 1993, Kalika et alii 2000) firm favorises the rise of the learning organization. The major idea is to decentralize and flexibilize the organizational structure. The set up of learning structures is also a main action : easy to develop, they present many advantages. First, they value the actors who have been chosen ; second, they favorise intergeneration sharing of explicit and tacit knowledge and contribute to the performance of employees.

The last point corresponds to the set up of favorable elements to social dimension. Particularly, these elements can be technical, with the integration of ITC – e-learning, datawarehouses – and human, with the development of communities of practice and networks. The headship should take actions consistent with its objectives : knowledge management policy, supported by discourses, concrete actions and management staff. Those points should be part of a global and coherent policy, in order to take profit from the interaction and interdependence between the individual, organizational, managerial and social dimensions.

## CONCLUSION

The study of hot organizational context is consistent with a major issue of management sciences : learn and adapt itself to its environment. More precisely, our questioning dealt with the dimensions of a hot organizational learning context and led to a qualitative study on nuclear and commercial branches in EDF.

This contribution confirms the three dimensions revealed by our analysis of literature and brings some complementary elements. We have drawn four dimensions of a hot context : an individual, an organizational, a social and a managerial dimension. The individual one includes the literature cultural dimension but also identity, emotional and functional aspects. It corresponds to individual self motivation and theory in use that facilitates sharing and cooperation in the firm. The organizational dimension integrates both organizational and specific learning structures such as guild and coaching. It's set apart from the managerial dimension, which is the support and the influence of the managerial staff. Finally, the social dimension is the result of the interaction of the three previous dimensions. In this way, it

constitutes a *sine qua non* condition to the organizational learning process. Beyond our analysis, we suggest a framework to understand hot context, its dimensions, and develop managerial leverages.

This study has implications for future researches : a comparison between the nuclear and the commercial branches could show up contingency factors or the primacy of one dimension. Also, we could lead our study in other firms, in order to overcome the limits of our analysis : two case studies in one organization, which has specific features.

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