

SOCIETY AND TECHNOLOGICAL EVOLUTION: CHALLENGES AND OPPORTUNITIES

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Abstract

Starting from the assumption that, the organizational learning process influences, in a positive way, the innovative environment and that it shows positive effects on individual, group and organizational performance, this paper deals with the analysis of companies that provide knowledge-intensive products. Referring to the initial information obtained through an adequate survey that is still being performed since May 2009, the main goal is to identify the ways to an organizational learning, measure its importance and identify the effects on the social and economic development. Our reflexion study handles two Portuguese knowledge-rich-organizations, based on the metropolitan area of Lisbon. The paper has the following methodological structure: in the first chapter we will make a theoretical contextualization about the organizational learning; in the second chapter we will handle the data recovered using the SPSS statistics software and, afterwards, presenting the main results. Finally, starting from the main conclusions achieved, we will give clues to an ongoing reflection.

Keywords: Organizational learning, knowledge, information, knowledge-based capital

JEL Classification: J24; L22; O33

1. Introduction, objectives and methodology

Technologies' development, along with its dissemination, has radically caused changes to happen, as far as working relationships and production methods are concerned. The spreading of inventions and the consequent innovations that followed have happened in a rapid and increasing way. Such reality is connected to the ability to use and interpret information, in its scientific or tacit form. Due to this fact, the development of business organizations depends directly on the cognition and on the intellect which becomes easier when the human mind establishes a connection with the mind of the information and communication technologies.

Having as background the philosophical concepts and objectives of the *learning organizations*, our reflexion study handles two portuguese organizations, based on the metropolitan area of Lisbon. These are knowledge-rich-organizations which offer added value services on the healthcare sector. Our main objective is to find out if, according to the staff, these organizations offer a learning organization environment. The identification of these organizations has to do with the characteristics and relevance of the *learning organizations*, within the information society and the knowledge-based economy. This happens because, when this kind of organizations is revived by the fuel that drives citizenship and social responsibility to happen, they become a major instrument to the

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social and economic building and cohesion. They also firmly assure a long reliability of their organizations and the appealing to the different stakeholders. Globally speaking, our intention is to confront the old with the new organizational concept paradigm and to analyse if the tendency of these organizations is to insist on its traditional philosophy or, on the other hand, if they are willing to change, as a way to respond to the markets' demands and to the spreading of different technologies.

In order to pursuit those objectives, the paper has the following structure: on part two we will be contextualizing the whole paper's issue and we will be analysing the concepts that lead to its development; on part three we will be reflecting upon the era of knowledge, also comparing the Industrial era paradigms with the ones from the era of knowledge and on part four we will be doing an empirical implementation through the "Case Analysis" study. It is our intention to establish a behavioural benchmark for these organizations and also to provide clues for a future and ongoing reflection, which contributes to this issue's development.

2. The knowledge's era

In a near future, the differences between the (i) white-collar workers and the blue-collar workers, (ii) the knowledge workers and the other workers and also between (iii) knowledge-based business organizations and the rest of the organizations will be less significant. Therefore, an effective action regarding the available resources must be taken, namely those who have the artificial intelligence sciences as their background, as a way to avoid organizations to be neutralized by similar emerging organizations. This happens because the latter have already been created, aware of the need for a reckless spirit, to find a way to react to the economic, social and business turbulence. Due to this, currently one of the *relevant* organizational *issues* is connected to the knowledge dissemination which, for its part, depends on the internal communication of the organization. However, as Koivuaho and Laihonen (2006) stand out for, the communication is of major importance when the information is meant to be transferred to the person and/or to the organization that needs it. Thus, in order to spread out information and knowledge, an assertive interaction, as well as the presence of knowledge that has been previously gathered within the organization, is absolutely necessary. Such fact enhances the importance that collective and organizational learning has. Simultaneously, the information and knowledge dissemination promotes the staff socialization process, since that the organizational learning has very much to do with mixing up different kinds of tacit and explicit knowledge (Pereira, 2008), in order to stand up for the competitive advantage. This is where interaction along with taking action (which base of support can be found within the organizational culture) allows the collective learning to be improved. According to this, Serabia and Serabia (2005) find that the people's skills are essential to the knowledge use. Similarly, Bourhis, Dubé and Jacob (2005) find that the new abilities and skills are the essence for the organizations' performance and for the knowledge dissemination, fact that has also been supported by Cohen and Levinthal (1990).

However, the era of knowledge, which is a result from accumulated progress, gives little importance to the restrictions caused by the traditional organizational paradigms. Following such fact, the cultural and organizational environment is meant to replace the *imposing approach* for the *stimulation approach*. Due to this, Kluge *et al.*

(2002: 33) believe that it is urgent to tear down the individual barriers that are preventing the knowledge development from happening and they also believe that these have to do with motivation. They believe that a motivated staff creates and shares knowledge but, according to them, imposing techniques lead to demoralization and discouragement. Thus, a business cooperation network among the staff and the creation of multidisciplinary teams, as well as formal and informal meetings, should be implemented and encouraged, since they are an excellent way to expand knowledge within organizations. Nevertheless, the relevance given to knowledge is much bigger as bigger is the importance given to talent, skills, intellect, intangible assets, training, learning throughout life and to the organization as a learning lab (Pereira *et al*, 2997). Based on this reality and paraphrasing Serrano & Fialho (2005: 3), during the era of knowledge one is searching for the “*global man*”, *the integrated man*, because under such perspective this man gets involved with his work and tries to develop creative processes, as opposed to tasks’ specialization. As it happens in the information society, the worker behaves himself differently when compared to the specialized worker. Because he possesses different experience, ideas, know-how and knowledge, the new worker profile distinguishes the *multifunctional* worker from the *multi-qualified* one (Serrano & Fialho (2005: 29) because: while the first is capable of operating with more than one machine that has similar features, the second develops and integrates different abilities and skills. Due to this, the multifunctional worker is part of an adding perspective, while the multi-qualified one is part of an integrated perspective. Thus, each one of the skills distinguishes the paradigms from the industrial era or the post-industrial era paradigm and the era of knowledge paradigm.

There are relevant differences between the two paradigms. The *Industrial Era* paradigm is more predictable, hierarchic, bureaucratic, repellent to change, individual, centralized, ruled and controlled from top to bottom. It is based on specialization, rigid structures and focuses on tangible assets. On the other hand, the *Era of Knowledge* paradigm is based on values that are essentially different from those of the *Industrial Era* paradigm. Thus, the certainty and the predictability of the *Industrial Era* paradigm gives place to the turbulence, uncertainty and unpredictability of the new paradigm. In the same way, the individual character inherent to the job, the creativity and motivation gives place to group work and networks development, thus stimulating the interaction and sharing process among the different members of the organization. According to the new paradigm, the need for a learning process throughout life is also implemented and encouraged, as opposed to an idea of learning for life. Thus, the support and cooperation that exists between the organization and its different members is regarded as a privilege which may act as a way to increase the knowledge levels. According to this principle, Nonaka (1991) believes that knowledge is the essence that will make the organization function effectively. However, in order for this to happen, it will be required from the organization to mix the strategy and vision aspects together, because, while the first is a long term structural one, the latter is much more cyclical and may be expressed in everyday demands. Thus, having an environment where they feel a responsible freedom exists, people will feel at ease, they will share and take part without being afraid of getting somehow punished. Therefore, according to McGhill and Slocum (1993:76), the organizations, specially those identified as *learning organizations*, should firstly learn how to motivate and continuously encourage experience, cooperation and interaction

among the several workers, which implies a change in the organizational paradigm. Also Lundvall and Borrás (1997) focus their attention on the skills from individuals, from business organizations, from regions and countries to a learning process throughout life, taking into account the positive external aspects concerning the organizational performance. Therefore, knowing *why* is becoming more relevant than knowing *how*, which requires a continuous learning process, as well as a change in the organizations' philosophy. This is how the emerging of the *learning organizations* and its development can be explained (Mayo and Lank, 2000; Mumford, 1997; Nieminen, 2005). This is where we can find knowledge, not only in its explicit, but also in its tacit form. The first kind of knowledge can be structured and documented, while the latter has to do with senses and experience. However, as knowledge has its origin in the people's minds, a big part of it is never really coded. That is why, when no knowledge is shared, a part of the content is lost. Trying to avoid such ineffectiveness, the new organizational philosophy of the *learning organizations* plays a decisive and strategic role.

3. Empirical analysis

3.1. Introduction, objectives and methodology

According to our goals, we have strategically chosen the primary information. Therefore, we have created a survey meant to be filled up from May until October 2009. This questionnaire was meant to all the staff from the organizations which have been the subject of analysis in this paper. Initially, the survey was given out in paper. Because of a reduce number of people who actually answered it, we decided, afterwards, to make it available online, trying to make it easier for people to answer it, also keeping anonymity and confidentiality safe. Nevertheless, despite all the efforts, we only received a total number of 290 answered questionnaires, which merely represents 15% of the workers from the two organizations.

The survey is only composed by close-ended questions. The intention was to give the worker the opportunity to show his/her feelings towards the questions that were asked. However, for this first approach, we selected only four questions that will be handled according to age group, education, professional and income levels. The adoption of this methodology is due to the need of trying to avoid possible bias in answers, since that, at times, workers tend to react more emotionally than rationally, thinking about negative aspects that they had to deal with, in terms of age group, as well as in terms of the educational, professional and incoming aspects.

Since it is our goal to analyse the *learning organizations* in loco, we are in charge of the data analysis, because these are two organizations that share the same profile, objectives and mission. Out of the 290 received questionnaires, 45 of the respondents did not indicate gender, 76 are male and 169 are female.

3.2. The organizations' characterization

Out of the 290 questionnaires received, the education level of the staff is something that can be analysed, since that 78,4% of the respondents have a University degree. Moreover, we have registered a high number of workers who have not only a University degree but also a further level of education, because this value surpasses the number of 17%, of those who have answered to this survey, according to Table 1:

Table 1: Staff distribution according to education level

Education level	Abs. Freq. (n)	Rel. Freq.(%)	Accumulative Freq. (%)
1st grade (4th years schooling)	3	1,0	1,0
2nd grade (6th years schooling)	9	3,1	4,1
3rd grade (9th years schooling)	34	11,7	15,9
Secondary School (12th years schooling)	45	15,5	31,4
Bachelor / Under Degree	21	7,2	38,6
University Degree	128	44,1	82,8
M.B.A./Master/PhD	50	17,2	100,0
Total	290	100,0	

Source: The Authors

Table 2: Staff distribution according to age group

Age	Abs. Freq. (n)	Rel. Freq. (%)	Valid Rel. Freq. (%)	Accumulative Freq. (%)
Till 25 years	34	11,7	12,5	12,5
From 26 to 35 years	100	34,5	36,6	49,1
From 36 to 45 years	79	27,2	28,9	78,0
From 46 to 55 years	48	16,6	17,6	95,6
From 56 to 60 years	8	2,8	2,9	98,5
Over 60 years	4	1,4	1,5	100,0
Total (sub)	273	94,1	100,0	
No answer	17	5,9		
Total	290	100,0		

Source: The Authors

We have also noticed the fact that only 15,9% of the respondents have showed an education level below the 3rd grade (which means 9 years of schooling), which corresponds to the current compulsory school attendance. According to our opinion, the high number of workers with a University degree, with a Masters or with a PhD Doctor is not something to be surprised about, taking into account the objectives and missions of these organizations. It is to assume that such reality and organizational behaviour would be the needed guarantee for a natural spreading of knowledge within the organization, namely as far as tacit knowledge is concerned. Simultaneously, it allows a more effective use of the tangible knowledge within the organization, which means that the property values are less important and, thus, its organizational competitiveness increases.

Table 3: Staff admission by calendar year

Admission's year	Abs Freq.	Rel Freq.	Valid Rel. Freq.	Accum. Freq.	Years in the Organization
1962	1	,3	,4	,4	46
1966	1	,3	,4	,7	42
1970	1	,3	,4	1,1	38
1971	1	,3	,4	1,4	37
1974	1	,3	,4	1,8	34
1976	2	,7	,7	2,5	32
1978	2	,7	,7	3,2	30
1980	5	1,7	1,8	4,9	28
1981	1	,3	,4	5,3	27
1982	1	,3	,4	5,7	26
1983	2	,7	,7	6,4	25
1984	3	1,0	1,1	7,4	24
1985	2	,7	,7	8,1	23
1986	1	,3	,4	8,5	22
1987	2	,7	,7	9,2	21
1988	4	1,4	1,4	10,6	20
1989	3	1,0	1,1	11,7	19
1990	2	,7	,7	12,4	18
1991	2	,7	,7	13,1	17
1992	1	,3	,4	13,4	16
1993	2	,7	,7	14,1	15
1994	2	,7	,7	14,8	14
1995	15	5,2	5,3	20,1	13
1996	41	14,1	14,5	34,6	12
1997	14	4,8	4,9	39,6	11
1998	19	6,6	6,7	46,3	10
1999	13	4,5	4,6	50,9	9
2000	21	7,2	7,4	58,3	8
2001	10	3,4	3,5	61,8	7
2002	10	3,4	3,5	65,4	6
2003	12	4,1	4,2	69,6	5
2004	26	9,0	9,2	78,8	4
2005	21	7,2	7,4	86,2	3
2006	13	4,5	4,6	90,8	2
2007	17	5,9	6,0	96,8	1
2008	9	3,1	3,2	100,0	0
Total - Sub.	283	97,6	100,0		
No answers	7	2,4			
Total	290	100,0			

Source: The Authors

As far as staff age is concerned, according to Table 2, we can see that 78% of the workers are less than 45 years old. It seems that such reality functions as a relevant indicator of the youthful of the workers of these organizations. Such fact becomes even clearer, due to the 22% of the staff that is 46 years old or more. Therefore, we believe that the existence of eventual blockings to organizational change and implementation of new

principles, values and organizational behaviours, as well as the implementation of new information technologies and communication, cannot be related to the advanced age of the workers, as it seems to be a usual thing in everyday life of the less competitive organizations. Apart from the relevant young age and academic education level of the workers, it is also possible to notice that 46,3% of the staff has been working in this organization for less than 10 years. Moreover, only about 30% of the staff has been working in this organization for less than 5 years, according to Table 3.

Table 4: Year the worker started doing his/her current task

Year of start*	Abs Freq.	Rel. Freq.	Valid Rel. Freq.	Accumulative Freq.	Years in the current task
1970	1	,3	,4	,4	38
1978	1	,3	,4	,7	30
1979	1	,3	,4	1,1	29
1980	3	1,0	1,1	2,1	28
1985	1	,3	,4	2,5	23
1986	1	,3	,4	2,8	22
1987	1	,3	,4	3,2	21
1988	2	,7	,7	3,9	20
1989	2	,7	,7	4,6	19
1991	1	,3	,4	4,9	17
1992	1	,3	,4	5,3	16
1993	1	,3	,4	5,7	15
1994	1	,3	,4	6,0	14
1995	8	2,8	2,8	8,8	13
1996	29	10,0	10,2	19,1	12
1997	7	2,4	2,5	21,6	11
1998	20	6,9	7,1	28,6	10
1999	11	3,8	3,9	32,5	9
2000	22	7,6	7,8	40,3	8
2001	8	2,8	2,8	43,1	7
2002	10	3,4	3,5	46,6	6
2003	18	6,2	6,4	53,0	5
2004	27	9,3	9,5	62,5	4
2005	29	10,0	10,2	72,8	3
2006	22	7,6	7,8	80,6	2
2007	33	11,4	11,7	92,2	1
2008	22	7,6	7,8	100,0	0
Total - SUB	283	97,6	100,0		
No answers	7	2,4			
Total	290	100,0			

Note: * Year the worker started doing His/her current task. Source: The Authors

These are some indicators of the organizational internal stability, also showing an accumulated individual and organizational experience. However, besides the years of professional experience within the organizations, it is important to stand out that 53% of the staff has been doing the same task for, at least, 5 years and that 72,8% of the workers has, at least, been in the same job for three years, according to Table 4.

According to such indicators, should these organizations be willing to be sensitive and prone to the *learning organizations'* philosophy, they already have, within them, the human resources with an extensive level of tacit knowledge that can be put into motion and ultimately become an advantage for *stakeholders*.

The organizations that are being analysed are big-sized organizations, only taking into account the number of workers within them. They are capital-intensive and, according to their business activity, they go for intangible and high cognitive investments. The majority of their staff has a University degree or even a further education level and the most relevant professional positions are: Chart for executive staff, Chart for medical staff, Chart for nursing staff, Chart for Health advanced technician, Chart for Diagnosis and Treatment technician, Chart for advanced technician, Chart for teaching staff, Chart for professional technician, Technical Chart, Administrative Chart, General Services Chart, Chart for auxiliary staff, according to Table 5.

Table 5: Staff distribution by professional chart

Professional chart which you belong to	Abs Freq.	Rel. Freq.	Valid Rel. Freq.	Accumulative Freq.
Manager staff	12	4,1	4,2	4,2
Medical staff	26	9,0	9,0	13,1
Nursery staff	70	24,1	24,2	37,4
Health advanced technician	16	5,5	5,5	42,9
Diagnosis and Treatment technician	18	6,2	6,2	49,1
Advanced Technician	17	5,9	5,9	55,0
Teaching staff	9	3,1	3,1	58,1
Professional technician	1	,3	,3	58,5
Technical	2	,7	,7	59,2
Administrative	29	10,0	10,0	69,2
General Services	3	1,0	1,0	70,2
Auxiliary	60	20,7	20,8	91,0
Other	26	9,0	9,0	100,0
Total – Sub	289	99,7	100,0	
No answers	1	,3		
total	290	100,0		

Source: The Authors

As for the monthly net income, it is possible to see that 119 of the workers, that is, about 41% of the staff, gets an income inferior to 1000 Euros. On the other hand, only 17,5% of the workers show that they receive incomes superior to 2000 Euros, according to Table 6.

Table 6: Staff distribution according to income level

Monthly net income	Abs Freq.	Rel. Freq.	Valid Rel. Freq.	Accumulative Freq.
Until 500€	35	12,1	12,2	12,2
From 500 to 1000€	84	29,0	29,4	41,6
From 1001 to 1500€	89	30,7	31,1	72,7
From 1501 to 2000€	28	9,7	9,8	82,5
From 2001 to 2500€	28	9,7	9,8	92,3
Over 2500€	22	7,6	7,7	100,0
Total - SUB	286	98,6	100,0	
No answers	4	1,4		
Total	290	100,0		

Source: The Authors

3.3. The survey's questions

For this paper, apart from receiving information from the workers regarding values such as anxiety, happiness, sharing and satisfaction towards the organization, we have only selected the following questions:

- *The organization values learning and personal development.*
- *The organization offers means to the workers' self-development.*
- *The organization values the individual performance of each worker.*
- *The evaluation system within the organization promotes a further training/learning.*

Selecting these questions has to do with the fact that they are relevant to knowing the workers' opinion towards the internal feeling that exists in the organizations. Thus, if the *learning organizations* are focused on implementing ethical behaviours for a general respect of the person itself, for the valuing of the learning and personal development, for the support and incentive given to interaction, sharing and team work, it was our goal to verify if, within the organizations that are being analysed, such values are present in everyday life. Therefore, with question number one, we expected to see if, within the organization, there was a certain concern in valuing personal development and learning, as a way to get better results in productivity and competitiveness. We believe that this is a relevant question, because when it is experienced, it becomes a way to unite different elements and to lead them to share common goals. It also makes the internal socialization step easier and allows an improvement, as far as the effectiveness of using knowledge is concerned, namely in the tacit knowledge, since that verbalization and other forms of communication keep spreading within the group and within the organization, making the organizational and property values to become more important. The second question - *The*

organization offers means to the workers' self-development – is meant to be a consequence of the previous question. It also intends to analyse whether the everyday-life principles of the organization are related to the principles seen in organizations which are under the learning process. With question number three, we try to analyse the workers' possibility of being creative and helpful in their job or if the organization motivated group performance. Many times, the organizational culture is still very static and its responsible keep thinking that innovation is something that is inherent. Having this thought in mind, they become more worried about the individual than with the group as a whole, eliminating the possibility for teamwork, for dialogue, for interaction, for sharing. With question number four, we intended to see if the organizations implemented incentive and learning instruments, as it happens in the current evaluation system.

3.4. Data analysis

When handling the collected data, the results are somewhat curious. The organizations show some sensitivity towards the implementation of the *learning organizations'* philosophy, though this is not completely visible due to the staff behaviour, their creative and decision-making freedom and also because of the increasing interest in fully appreciate group work and interaction between teams. Anyway, globally speaking, there is a sensitivity, concern and motivation towards the implementation of an ongoing learning process which aims to keep improving effectiveness in using knowledge. Also common practices are oriented to a clearer tacit knowledge, as a way to take advantage of the scientific knowledge, notwithstanding the concern related to coding and/or socializing the tacit knowledge. However, it is possible to see that the workers manifest themselves negatively to the asked questions, since they answer them, in most cases, choosing *Disagree* and *slightly disagree* in high percentages. Thus, as far as question number one is concerned, we have noticed that in every age group the workers find that, in a number superior to 40%, organizations do not value learning and personal development, adopting answers such as “Disagree” and “Slightly disagree” as major options to show discontent (see appendix I). When this happens, the workers' feeling within the organization is one of divergence, having serious and negative effects on their productivity. When analysing the answers according to education level, excluding those with the 1st and 2nd stages of basic education who represent only 4% of the respondents, we can see that the answers are considerably negative, since they go up to 44%, 38%, 42% e 34% for those with the 3rd stage of basic education, complementary studies, University degree and M.B.A/Masters or PhD Doctors, accordingly, which represents 88,6% of the respondent staff.

We understand that the workers' attitude reveals an uneasiness and discomfort feeling and it does not make their interest towards the *learning organizations'* objectives easier. Similar results may be found during the analysis according to the level of net income, since that 81,4% of the respondents – staff getting an income between 500 and 2500 Euros – manifest themselves negatively with numbers such as 40% and 53,6%. The feeling that most workers share may be confirmed by the high level of the workers' discontent, since that 34,2% and 39,1% of male and female respondents, accordingly, claim they are discontent with the organizations, according to Table 7. The anxiety feeling among workers can also be confirmed, since that 50,0% of male respondents and 55,1% of female respondents refer having that feeling, according to Table 8.

Table 7: Discontent among the organization workers

Gender	Answer	Abs. Frequency (N)	Rel. Freq. (%)	Valid Freq.	Accumulative Freq.	
Do Not show	Valid	Totally agree	2	4,4	4,5	4,5
		Agree	20	44,4	45,5	50,0
		Partially Agree	10	22,2	22,7	72,7
		Disagree	12	26,7	27,3	100,0
		Total	44	97,8	100,0	
	No answers	1	2,2			
	Total	45	100,0			
Male	Valid	Totally agree	3	3,9	4,1	4,1
		Agree	23	30,3	31,1	35,1
		Partially agree	29	38,2	39,2	74,3
		Disagree	19	25,0	25,7	100,0
		Total	74	97,4	100,0	
	No answers	2	2,6			
	Total	76	100,0			
Female	Valid	Totally agree	16	9,5	9,5	9,5
		Agree	50	29,6	29,8	39,3
		Partially agree	66	39,1	39,3	78,6
		Disagree	36	21,3	21,4	100,0
		Total	168	99,4	100,0	
	No answers	1	,6			
	Total	169	100,0			

Source: The Authors

The existence of such feelings, that lead to less positive values within organizations, make the interaction process and the voluntary and unconditional sharing more difficult to the tasks and common goals of the organization. They also become obstacles to communication and creativity. Globally speaking, we believe that it is possible to see the existence of an environment which is less prone to the appreciation of learning and personal development. It seems to us that, within the organizations, there is no expressed sense of motivation, as far as learning and personal development is concerned. Such reality will naturally have direct consequences upon the worker's experience, attitude and behaviour, also showing negative impacts towards the worker's productivity. According to the values analysed, we understand that the information flow comes from hierarchy status, instead of coming from the networks. Thus, the New Paradigm from the Era of Knowledge, as far as these organizations are concerned, is still not very spread out, despite the visible effort regarding it. As for the rest of the questions, as far as the staff feelings are concerned, the answers' orientation is as negative as in the first question. The disagreement rates are high, notwithstanding the age group, education level, professional experience and incomes, according to appendixes Nos. I to III. Moreover, we stand out the fact that respondents who are between 36 and 45 years old,

representing 27,3% of the staff, stated that the organizations value the individual performance of each worker. This value leads to a low satisfaction level regarding the organization, according to the 42,1% and the 46,8% of male and female respondents, accordingly, and as the Table 9 shows. Such reality makes the worker to be less prone to accept the principles from the new organizational paradigms.

Table 8: Anxiety feeling within the organization

Gender	Answer	Abs Frequency (N)	Rel Freq.(%)	Accumulative Freq.
Do not show	Totally agree	8	17,8	17,8
	Agree	21	46,7	64,4
	Partially agree	13	28,9	93,3
	Disagree	3	6,7	100,0
	Total	45	100,0	
Male	Totally agree	12	15,8	15,8
	Agree	26	34,2	50,0
	Partially agree	35	46,1	96,1
	Disagree	3	3,9	100,0
	Total	76	100,0	
Female	Totally agree	27	16,0	16,0
	Agree	66	39,1	55,0
	Partially agree	58	34,3	89,3
	Disagree	18	10,7	100,0
	Total	169	100,0	

Source: The Authors

Therefore, developing a group identity and experiencing interaction, sharing and dialog becomes more difficult and the results are limited. In such environment, the dissemination of knowledge, namely tacit knowledge, has to struggle with strong obstacles. Thus, due to the high percentages expressing a negative feeling, it seems to us that the work within the organizations is not yet very creative, which turns out in a smooth organizational learning process. The kind of answer shows that the workers' motivation is very low, as opposing to the high motivation towards skills and professionalism, as it happens in the *learning organizations'* philosophy. According to this, we believe that the new culture which is oriented and willing to change is not being instilled, which contradicts the philosophy orientation of the new organizational culture and the *learning organizations'* attitude. According to the results from the questionnaires, it is not understood that the organizations have the intention to implement the learning procedure, which does not meet the need to implement a cooperating, attending and discussing environment, as a way to promote the dissemination of knowledge. Thus, the networks, the partnerships, the team work and multitasking, connected to the need for new assets' creation, for a new individual's sense of responsibility, for a new kind of flexibility, versatility and *empowerment*, are crucial aspects but that seem to be absent within the organizations' democratic experience. Through the different answers, we have realized that the feeling among workers is a negative one, having a more significant presence in the more strategic levels of the organizations, that is, for those who have

higher education levels, for those who get a more pleasant income and for those with more experience and more accumulated tacit knowledge. Due to such facts, there is the need to, accurately, take action as far as motivation policies are concerned, which means implementing strategies that are oriented to absorbing the *learning organizations'* goals.

Table No. 9: Worker's level of satisfaction

Gender	Answer	Abs. Frequency(N)	Rel. Freq.(%)	Valid Freq.	Accumulative Freq.	
Do not show	Valid	Totally agree	9	20,0	20,5	20,5
		Agree	18	40,0	40,9	61,4
		Partially agree	17	37,8	38,6	100,0
		Total	44	97,8	100,0	
	No answers	1	2,2			
	Total	45	100,0			
Male	Valid	Totally agree	5	6,6	6,7	6,7
		Agree	38	50,0	50,7	57,3
		Partially agree	28	36,8	37,3	94,7
		Disagree	4	5,3	5,3	100,0
		Total	75	98,7	100,0	
	No answers	1	1,3			
Total	76	100,0				
Female	Valid	Totally agree	17	10,1	10,1	10,1
		Agree	73	43,2	43,2	53,3
		Partially agree	66	39,1	39,1	92,3
		Disagree	13	7,7	7,7	100,0
		Total	169	100,0	100,0	

Source: The Authors

4. Conclusion

The development of the economic and social organizational sector depends on the cognition levels and on the accumulated level of knowledge. It also depends on the philosophy, the goals and mission of each organization, notwithstanding the nature of its objectives: a more social or a more profitable orientation. However, in the current competitive environment, all of the organizations are struggling with turbulent situations, where certainty gave place to uncertainty. That is why organizational learning is so important. It acts as a way of socialization and convergence, but also as a way to improve individual, group and organizational performance and to, simultaneously, contribute to a better allocation of the available property resources. Nevertheless, when analysing the organizations within their context, one can see that they show aspects that are less consistent with the mandatory philosophy of the learning organizations, because: it cannot be confirmed the presence of a consistent environment of group experience, sharing and interaction, since that the individual achievement is more important than group achievement. Also the learning incentive is more individual-oriented and not so much group-oriented and it is mainly based on the incentive and appreciation of the

individual performance of each worker. Therefore, we believe that the organizational learning is only partial and that the ineffectiveness's may be significantly high. Due to such fact, the communication that exists within the organization faces obstacles and its noises contribute to the lack of quality of the products. Moreover, its negative contribution tells a lot about the personality level and future achievements of the organizations. Under such principle, the organizations seem to believe that their performance equals the result of all the individual performances. This indicates that tacit knowledge is underestimated; that is why organizations insist on under-using their property resources. Apart from the direct negative effects that this has on the organizations' performances, the negative external consequences this has on *stakeholders* and on the social cohesion is still unknown.

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Annex on line at the journal Website: <http://www.usc.es/economet/eaat.htm>

Appendix

Appendix I: The organization values learning and personal development

Age	Answer	Abs. Freq	Rel. Freq	Accumulative Freq.
Do not show	Totally agree	4	23,5	23,5
	Agree	8	47,1	70,6
	Partially agree	5	29,4	100,0
	Total	17	100,0	
Till 25 years	Totally agree	7	20,6	20,6
	Agree	12	35,3	55,9
	Partially agree	12	35,3	91,2
	Disagree	3	8,8	100,0
	Total	34	100,0	
From 26 to 35 years	Totally agree	18	18,0	18,0
	Agree	43	43,0	61,0
	Partially agree	33	33,0	94,0
	Disagree	6	6,0	100,0
	Total	100	100,0	
From 36 to 45 years	Totally agree	18	22,8	22,8
	Agree	32	40,5	63,3
	Partially agree	25	31,6	94,9
	Disagree	4	5,1	100,0
	Total	79	100,0	
From 46 to 55 years	Totally agree	7	14,6	14,9
	Agree	22	45,8	61,7
	Partially agree	13	27,1	89,4
	Disagree	5	10,4	100,0
	Total	47	97,9	
	No answers	1	2,1	
	total	48	100,0	
From 56 to 60 years	Totally agree	3	37,5	37,5
	Agree	2	25,0	62,5
	Partially agree	2	25,0	87,5
	Disagree	1	12,5	100,0
	Total	8	100,0	
Over 60 years	Totally agree	1	25,0	25,0
	Agree	2	50,0	75,0
	Disagree	1	25,0	100,0
	Total	4	100,0	

Source: The Authors

Appendix II: The organization offers means to the workers' self-development

Education level	Answer	Abs. Freq.	Rel. Freq.	Valid Freq	Accumulative Freq.
1st grade (4th years schooling)	Agree	2	66,7	66,7	66,7
	Partially agree	1	33,3	33,3	100,0
	Total	3	100,0	100,0	
2nd grade (6th years schooling)	Totally agree	3	33,3	33,3	33,3
	Agree	4	44,4	44,4	77,8
	Partially agree	2	22,2	22,2	100,0
	Total	9	100,0	100,0	
3rd grade (9th years schooling)	Totally agree	5	14,7	14,7	14,7
	Agree	15	44,1	44,1	58,8
	Partially agree	13	38,2	38,2	97,1
	Disagree	1	2,9	2,9	100,0
	Total	34	100,0	100,0	
Secondary School (12th years schooling)	Totally agree	6	13,3	13,3	13,3
	Agree	21	46,7	46,7	60,0
	Partially agree	16	35,6	35,6	95,6
	Disagree	2	4,4	4,4	100,0
	Total	45	100,0	100,0	
Bachelor / Under degree	Totally agree	3	14,3	14,3	14,3
	Agree	9	42,9	42,9	57,1
	Partially agree	8	38,1	38,1	95,2
	Disagree	1	4,8	4,8	100,0
	Total	21	100,0	100,0	
University Degree	Totally agree	10	7,8	7,9	7,9
	Agree	58	45,3	45,7	53,5
	Partially agree	48	37,5	37,8	91,3
	Disagree	11	8,6	8,7	100,0
	Total - Sub	127	99,2	100,0	
	No answers	1	,8		
	total	128	100,0		
M.B.A./ Master/PhD	Totally agree	10	20,0	20,0	20,0
	Agree	23	46,0	46,0	66,0
	Partially agree	13	26,0	26,0	92,0
	Disagree	4	8,0	8,0	100,0
	Total	50	100,0	100,0	

Source: The Authors

Appendix III: *The evaluation system within the organization promotes a further training/learning*

Monthly net income	Answer	Absol. Freq. (n)	Rel. Freq.(%)	Valid Freq (%)	Accumulative Freq. (%)
No answers	Agree	4	100,0	100,0	100,0
Until 500€	Totally agree	11	31,4	31,4	31,4
	Agree	16	45,7	45,7	77,1
	Partially agree	7	20,0	20,0	97,1
	Disagree	1	2,9	2,9	100,0
	Total	35	100,0	100,0	
500 to 1000€	Totally agree	17	20,2	20,2	20,2
	Agree	33	39,3	39,3	59,5
	Partially agree	28	33,3	33,3	92,9
	Disagree	6	7,1	7,1	100,0
	Total	84	100,0	100,0	
1001 to 1500€	Totally agree	18	20,2	20,5	20,5
	Agree	38	42,7	43,2	63,6
	Partially agree	25	28,1	28,4	92,0
	Disagree	7	7,9	8,0	100,0
	Total - Sub	88	98,9	100,0	
	No answers	1	1,1		
	total	89	100,0		
1501 to 2000€	Totally agree	6	21,4	21,4	21,4
	Agree	5	17,9	17,9	39,3
	Partially agree	10	35,7	35,7	75,0
	Disagree	7	25,0	25,0	100,0
	Total	28	100,0	100,0	
2001 to 2500€	Totally agree	1	3,6	3,6	3,6
	Agree	13	46,4	46,4	50,0
	Partially agree	9	32,1	32,1	82,1
	Disagree	5	17,9	17,9	100,0
	Total	28	100,0	100,0	
Over 2500€	Totally agree	3	13,6	13,6	13,6
	Agree	10	45,5	45,5	59,1
	Partially agree	5	22,7	22,7	81,8
	Disagree	4	18,2	18,2	100,0
	Total	22	100,0	100,0	

Source: The Authors