

The Impact of Organisational Learning of Human Capital on Organisational Loyalty: a field Research in Sonatrach Company

أثر التعلم التنظيمي لرأس المال البشري على تحقيق الولاء التنظيمي: دراسة ميدانية على شركة سوناطراك

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ملخص:

الهدف من هذه الدراسة هو تحديد أي من أبعاد التعلم التنظيمي الأكثر تأثيراً على الولاء التنظيمي للموظفين بشركة سوناطراك في الجزائر، تناول البحث الحالي التعلم التنظيمي كمتغير مستقل، والولاء التنظيمي كمتغير تابع، ولتحقيق هذا الهدف تم جمع البيانات باستخدام استبيان يضم 20 عبارة خاصة بموضوع الدراسة. وعينة من 68 موظف من الإدارة العليا والوسطى بشركة سوناطراك في الجزائر. وقد تم تحليل البيانات التي تم جمعها باستخدام برنامج SPSS. V22.

واهم نتيجة توصلنا إليها أن التعلم التنظيمي لو تأثير في تعزيز الولاء التنظيمي للموظفين في سوناطراك. كما أن تصورات المستجيبين لدرجة ممارسة التعلم التنظيمي هي متوسطة، لذا يجب على شركة سوناطراك تعزيز هذه الأبعاد واستخدامها في عملية التعلم التنظيمي لتحقيق الولاء التنظيمي للموظفين.

الكلمات المفتاحية: رأس المال البشري، التعلم التنظيمي، التعلم الفردي، التعلم الجماعي، الولاء التنظيمي.

تصنيفات O15,I21,M54 :Jel

Abstract:

The aim of this study is to identify any of the dimensions of organizational learning that are more influential in the organisational loyalty of the sonatrach employees. The current research dealt with organizational learning as an Independent variable, and Organisational loyalty as a dependent variable. To achieve this aim, the data was collected using a questionnaire includes 20 sentences related to the subject of the study. And a sample of 68 higher and middle management level employees of Sonatrach in Algeria. The collected data was analysed using SPSS.V22.

We found that impact of learning organisational on organisational loyalty among sonatrach employees. Also, the respondents' perceptions of the degree of organizational learning practice are medium, so the sonatrach company must enhance these dimensions and use them in the organisational learning process to enhance organisational loyalty.

Key words: Human capital, Organisational Learning, Individual Learning, Group Learning, Organisational Loyalty.

JELClassification : O15,I21,M54.

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Introduction:

The world is witnessing rapid developments in various fields, where management works in modern organizations to adopt strategies to meet the needs of employees and to develop an effective work environment that generates a sense of belonging of employees, an increase in their incentive to work, a sense of organizational stability and a lack of desire to leave work, and therefore a good investment must be made in The human resource for achieving organizational loyalty that affects the quality of workers 'job performance, their behavior, their motivation and commitment to work, their colleagues, and the organization in which they work. Among the strategies that seek to achieve organizational loyalty is organizational learning that helps the organization make learning a realistic reality in organizations through which the employee feels that he is a subject of concern on the part of the organization, he does his best to perform the tasks assigned to him and to him and achieve the best performance.

Therefore, this research relies on the interest in human capital, its development and progress by linking it with organizational learning with the aim of creating organizational loyalty.

✓ Research questions:

What is the impact of organizational learning on the organizational loyalty of Sonatrach employees in Algeria ?

✓ Methodology research:

to address the subject of our study and to answer the question that we relied on:

--Descriptive and analytical method: it allows us to collect the theoretical data and information that enables us to study organizational learning and loyalty in organization;

--A case study method: by exploiting field data and designing the form and attempting to demonstrate the hypotheses presented, the theory is dropped on the field side

✓ Objective research

The objectives of the study were to find out the impact of organisational learning on organisational loyalty among Sonatrach employees and to find out the various factors underlying organisational learning and organisational loyalty.

The findings of the research conclude that there is a significant impact of organisational learning on organisational loyalty among Sonatrach employees.

The underlying factors of organisational learning emerged from this study are group learning, Individual learning , organisational learning .The underlying factors of organisational loyalty emerged from this study are Standard loyalty, Emotional loyalty, Constant loyalty.

✓ The scientific importance of the study:

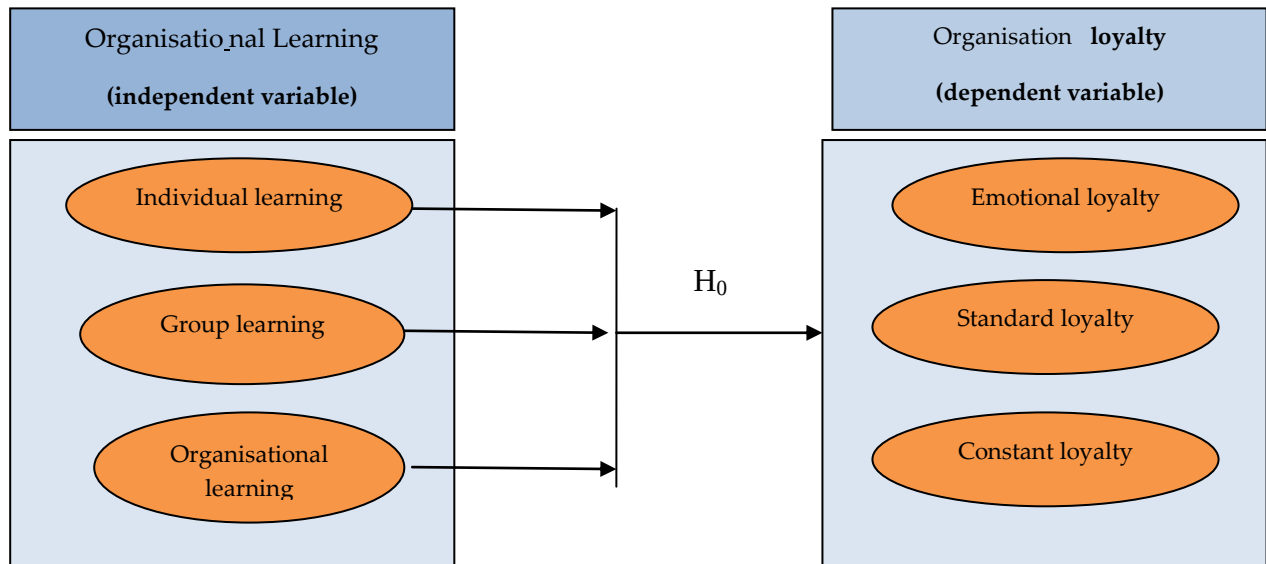
This lies in the subject addressed, because as organizational learning is one of the most important topics of the attention of management scholars still under study and its relationship to organizational loyalty, by defining the role of organizational learning in enhancing organizational flexibility.

-Practical importance: lies in the aspect that will be applied in algerian university with the aim of exploring the relationship between organizational learning and organizational loyalty.

✓ **Hypothesis framed :**

- H_0 : There is no significant impact of organisational learning on organisational loyalty among of Sonatrach employees.

Figure 01 : the scheme of Hypothesis search



Source: : prepared by researchers

1. **Organisational learning** : independent variable is includes three dimensions are Individual learning ,group learning,organisational learning .
2. **Organisational loyalty** : dependent variable is includes three dimensions are Standard loyalty, Emotional loyalty, Constant loyalty.

1 Literature review:

1.1 Human capital and organisational learning :

Human capital presents the picture of the context knowledge of individuals clustered in the organizations composite capacity to reveal the optimum solution from its distinct employees. The amount of employee's talent, talents, experience and expertise is known as Human Capital .The homogeneity between human capital and miscellaneous defined variables can be followed back to several courses of study, including organizational learning by Bontis in 2002,the economic human capital theory by Schultz in 1961&Ducharme in 1998 (Muhammad & Naintara, 2013, p. 77).Organizational learning has been recognized as a significant element enabling businesses to achieve competitive advantages and enhance the efficiency of their organisations. (Noruzy & Al, 2013, p. 1066). Organizational learning can expand the organizational knowledge base and develop capabilities and skills, which encourages new ideas and behaviors (Noruzy & Al, 2013, p. 1080). Organizational learning originates in organizational attitudes, processes and management activities, happens by organizational patterns and acts on information or expertise and ultimately modifies future organizational actions and efficiency Integrating (Chunling & Al, 2019, p. 03).

The development of a learning culture in an organization involves the continuous education of its members. This process takes place by converting individual memory, which is the accumulated knowledge of an individual, into organizational memory, which takes the form of goals, or standard procedures (Wu & Al, 2019, p. 7820).

Organizational learning is a series of dynamic , complex and integrated processes that are focused on current organizational knowledge and experience. It helps establish fundamental skills and alignments with shared experience, and reduces challenges, and also improves possible solutions among employees in achieving organizational objectives. (Belle, 2016, p. 34).

It is well documented that competent employees can achieve the organization's productivity and benefit. Organizational ownership affects organizational learning culture and ultimately impacts the success of the top management team. It is necessary to institutionalize individual learning to improve organizational learning (Kivipöld & Hoffman, 2016, p. 54).

A two-year research by Wilson and Hartang studied leaders of non-competing multinational firms and found that organizational learning only controlled 35 %of the overall scenario. At the individual stage, however, 13 % of the learning took place through the community and 11 %. Operational and empirical learning was 29 % efficient whereas knowledge-based research was just 12 % efficient (Wilson, 2015, p. 599)

On the other hand, Learning takes place in two cycles. First is individual learning, which is the basis of learning in organisations (Santos & Steil, 2015, p. 17) . Secondly, the social phases of individual learning, combined with group learning to occur in organizational learning, are referred to. This cycle involves direct comprehension (in individual learning), interpreting and converging (in group learning), and formalization (in organizational learning); (Campbell & Armstrong, 2013, p. 43).

Through the learning cycle, organizations can extend their knowledge base, strengthen the ability to use information and establish effective strategies and processes for managing change in challenging environments (Fernández-Mesa & Alegre, 2015, p. 150)

1.2 Organisational loyalty :

Organizational loyalty is an important development principle that has been largely ingotten by neo-classical economics. It is a concept identified in terms of the identification of an person with a group, in particular the identification of an individual worker with his or her firm or company Organizing. An person can be recognized as identifying with a group when he considers the possible alternatives of choice in terms of their effect on the group, rather than in terms of his own self-interest in making a decision. It is also important that the person internalizes the priorities of the organisation. This should be remembered that loyalty to the organization does not mean blindly following all members of the same organisation. Organizational loyalty is founded on a 'we' and 'they' distinction. (KAZUHIRO & ARAI, 1995, p. 21).

Identification with the 'we,' which may be a family, a company, a city, or a nation, allows individuals to experience satisfaction (gain utility) from successes of the unit thus selected. Thus organizational identification becomes a motivation for employees to work actively for organizational goals. (Simon, 1991, p. 28). Further, health problems, emotional exhaustion, and job burnout that are the consequences of high levels of work stress have been found to be negatively related to employees' organizational loyalty (Chen & Al, 2003, p. 75).

Therefore, having an essential trait of corporate loyalty is indeed a basic practice of organisation. The behaviors of some employees that indicate loyalty are described in the

written job description of the employee (such as following orders, working safely, enforcing rules, maintaining the quality of the production and caring for the assets of the company), but some of these behaviors are not written in job descriptions (such as working late to complete a project, engaging in extracurricular activities) (Mehdad & Atefe, 2016, p. 04).

Furthermore, the purpose of attracting, helping and retaining employees was to establish learning strategies that centered on the concept of information that existed "just in time, just enough, and just for me." Satisfaction and performance desirability will be low in the organization if its structure does not encourage learning (Marie-Pierre & Al, 2015, p. 638). Satisfaction and performance desirability will be low in the organization if its structure does not encourage learning (Hasson & Al, 2013, p. 66).

Lim studied the relationships among organizational loyalty, job satisfaction, and learning organization culture in one Korean private organization (Lim, 2010, p. 12), the study results showed that there was a substantial gap between the rates of organizational learning, measured on the basis of hospital ownership forms. In private hospitals, the level of adult, group and organizational learning is higher across all forms of ownership styles assessed (Ghahraman & Al, 2018, p. 306).

A learning organisation and improving training programs are some of the critical factors required to enhance learning, strengthen knowledge management, increase individual and organizational performance and retain a competitive edge. This means that organizational learning can increase the degree of organizational loyalty between employees and can produce positive results in the work. Based on the above topic, (Hanaysha, 2016, p. 292) .

Although a variety of literature has identified basic aspects of organizational learning, a more comprehensive understanding of the mechanism for its effects is required. So we use the positive impact between organizational learning and organizational loyalty as our basic model in this paper to further refine the moderated mediation model.

2 Data collection and measurement scale :

The Study was based on Sonatrach employees in Algerian. The main purpose of the study was to see the impact of organisational learning on organisational loyalty among employees.

For this purpose data was collected from the Sonatrach employees in various colleges and institutes. The research was based on primary data. The instrument for data collection was a self-designed questionnaire which was administered personally to the employees working to collect data. The questionnaire was based on 5.point (Likert) scale ranging from 1= Strongly Disagree to 5= strongly agree.

In this study, Judgmental (non-probability) sampling technique was used. A sample of sonatrach employees was selected for the purpose of this study.

3 Analysis and interpretation of data :

Statistical Software SPSS version 22 was used for data analysis. He item to the total correlation was used to determine the internal consistency of the questionnaire; Cronbach's alpha was used to measure their responsibility for the measurement scale. Factor analysis was used to determine the factors underlying organisational learning and organisational loyalty.

Regression Analysis was used to determine the impact of Organisational learning (independent variable) on organisational loyalty (dependent variable).

4 Results :

After studying the data of 68 higher and middle management level employees of Sonatrach in Algeria by applying

The following statistical tools were found: Constancy measure The consistency of all factors in the questionnaire was checked for total correlation by item. This correlation of each item with the total was measured And the computed value was compared to the standard value. Only those factors /statements have been accepted The value of which was more than the standard value

Table 01 : Récapitulatif de traitement des observations

Récapitulatif de traitement des observations			
		N	%
Observations	Valide	67	98,5
	Exclue ^a	1	1,5
	Total	68	100,0

a. Suppression par liste basée sur toutes les variables de la procédure.

Source: prepared by researchers based on the outputs of SPSS program.

Table 02 : Alpha Kronbach Stability Test.

Statistiques de fiabilité	
Alpha de Cronbach	Nombre d'éléments
,829	20

Source: prepared by researchers based on the outputs of SPSS program.

The measure's reliability total was tested using SPSS software and the Alpha value of the Cronbach was found to be 0.829 The validity of the face was tested, and it was found high.

Table 03 : Alpha Kronbach Stability Test to erase organizational learning

Statistiques de fiabilité	
Alpha de Cronbach	Nombre d'éléments
,844	8

Source: prepared by researchers based on the outputs of SPSS program.

Organisational learning : The measure's reliability was tested using SPSS software and the Alpha value of the Cronbach was found to be 0. 844 The validity of the face was tested, and it was found high.

Table 04 : Alpha cronbach Stability Test to erase organizational loyalty

Statistiques de fiabilité	
Alpha de Cronbach	Nombre d'éléments
,823	9

Source: prepared by researchers based on the outputs of SPSS program.

Organisational Loyalty: The measure's reliability was tested using SPSS software and the Alpha value of the Cronbach was found to be 0.823. The validity of the face was tested, and it was found high.

5 Testing with hypothesis:

H₀: organisational learning has no significant impact on organisational Loyalty of university professor.

Table 05: Regression analysis was applied between independent variable and dependent variable

Coefficients^a

Modèle	Coefficients non standardisés		Coefficients standardisés	t	Sig.
	B	Ecart standard	Bêta		
1 (Constante)	2,221	,341		6,522	,000
axe1	,398	,113	,400	3,516	,001

a. Variable dépendante : axe2

Source: prepared by researchers based on the outputs of SPSS program.

Regression analysis was applied between organisational learning (independent variable) and organisational Loyalty (dependent variable) among university professors. The results of regression indicate that independent variable (organisational learning) has significant relationship with dependent variable (organisational loyalty) signified by the coefficient of Beta factor of organisational learning is 0.400 and T value is 3,516 is significant at 0.01 significant level hence it can be said that organisational learning is having significant impact on organisational loyalty.

The null hypothesis that there is no significant impact of Organisational learning on organisational loyalty is not accepted which means that there is significant impact of organisational learning on organisational loyalty among sonatrach employees.

Table 06 : Coefficient of determination R of the interpreted variable

Récapitulatif des modèles^b

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	,480 ^a	,230	,194	,65503

a. Prédicteurs : (Constante), organisationnel, group, individual

b. Variable dépendante : axe2

Source: prepared by researchers based on the outputs of SPSS program.

It is clear from the table that the effect value of the independent variable explains 23 % of the variance in the dependent variable, the remaining percentage 67% represents the rest of the element that are not included in the model, and since the correlation coefficient is 48%, this indicates that the relationship between the independent and dependent variable is Fairly medium.

Table 07 : Analysis of variance in the multi-direction ANOVA.

ANOVA^a

Modèle	Somme des carrés	ddl	Carré moyen	F	Sig.
1 Régression	8,087	3	2,696	6,283	,001 ^b
Résidus	27,031	63	,429		
Total	35,118	66			

a. Variable dépendante : axe2

b. Prédicteurs : (Constante), organisationnel, group, individual

Source: prepared by researchers based on the outputs of SPSS program.

We note from the table that the value of Fisher is 6,283; With a probability of 0.01, less than 5%, the hypothesis H_0 is rejected. And we say that there are no statistically significant differences in the mean levels of organizational learning for the sample members according to the dimensions of organizational loyalty at the level of significance. It is clear from the table that the impact between independent variable (organizational learning) and the dependent variable (organisational loyalty).

5.1 Factor analysis (personal data) :

The raw scores of 03 items were subjected to factor analysis to find out the factors that contributed towards personal data. After factor analysis, three factors are identified.

1. **Age group** (3.44): This factor has emerged as the most important determinant of employee loyalty with 71% of variance. From the analysis, it appears that the sonatrach employees are mostly middle-aged. Because the highest age ratio between (30-year 39) is 57.4% and through the data the age variable appears on the age diversity in the members of the study sample, and this is explained by the extent of the sonatrach's dependence on the average age group, in which the individual has the element of experience that he needs in the institution and benefit him.
2. **Years of Experience** (3.42): This factor has emerged as the most important determinant of employee loyalty with 31% of variance. We find 22.1 % of them less than 5 years, while we find that 32.4% of the respondents have their experience within the field (05 -10), but for individuals whose experience reached between (10 -15))

Their percentage was set at 22.1% of the total sample population, while the percentage of respondents ranged from 22.1% with more than 15 years of experience, and therefore most sonatrach employees have less than 5 years of experience .

3. **Gender** (1.40): This factor has emerged as the most important determinant of employee loyalty with 21% of variance Through the analysis, 57.4% of the study sample are male, and 41.2% the study sample are female, an increase in the percentage of male workers in the sonatrach in exchange for a decrease in the proportion of female workers. This is due to the nature of the activity

5.2 Factor analysis (organisational learning):

The raw scores of 09 items were subjected to factor analysis to find out the factors that contributed towards organisational learning After factor analysis, three factors are identified. The factors were Individual learning , group learning,organisational learning .

1. **Group learning** (3.651): This factor has emerged as the most important determinant of employee loyalty with 76% of variance. The major elements constituting this factor include ; Mutual and honest discussion helps team members to learn and benefit from the experience of others at the university (3.57),Take your decisions into consideration when participating in the performance of task fo rces in your organization (3.50). It also appears from the table that the arithmetic averages came with a high degree, which confirms sonatrach dependence on group learning.
2. **Organisational learning**(3.595): This factor has emerged as an important determinant of employee loyalty with 92% of variance.The major elements constituting this factor include; The Sonatrach seeks to develop its competencies and to rely on new administrative methods (3.55), The sonatrach maintains methods to solve the problems it has previously encountered (3.50).
3. **Individual learning** (3.367): This factor has emerged as an important determinant of employee loyalty with 59% of variance. The major elements constituting this factor include; soanatrach-level dealings rely on the concept of mutual confidence (3.67), Sonatrach devotes time to individual learning in order to support the efforts of individuals to reach the best performance (3.59).The sonatrach organisation is working to update programs to develop the skills of employees (3.50).

5.3 Factor analysis (organisational loyalty):

The raw scores of 9 items were subjected to factor analysis to find out the factors that contributed towards organisational loyalty. After factor analysis, three factors are identified. The factors were Standard loyalty, Emotional loyalty,Constant loyalty.

1. **Standard loyalty** (3.647): This factor has emerged as the most important determinant of employee loyalty with 97% of variance. The major elements constituting this factor include; My commitment is very big towards my work and my colleagues at the university (3.85),This organisation deserves my fidelity and loyalty to it(3.46),I'm going to feel job alienation if I leave this organisation (3.24).
2. **Emotional loyalty** (3.494): This factor has emerged as an important determinant of employee loyalty with 59% of variance. The major elements constituting this factor include; I am interested in changing the negative feelings of other people about the sonatrach inside and outside it(3.69), I feel that the Sonatrach where I work is part of my life and it is difficult to get away from it(3.49), If I get a job offer that is better than my job, I won't leave the current sonatrach(3.46).
3. **Constant loyalty** (3.336): This factor has emerged as an important determinant of employee loyalty with 28% of variance. The major elements constituting this factor include;my stay in sonatrach is a very necessary matter(3.27), I 'm afraid I'm leaving sonatrach because of the difficulty in finding another job(3.25), The most important

reason for my continued work in this organisation is that it offers benefits that are not available in other organisations(3.22).

6 Analysis and discussion :

The results indicated the evidence that there is a significantly strong link between organisational learning and organisational loyalty on employees. The higher the organisational learning the better the organisational loyalty on employees therefore it is concluded as a result from the study that companies should strive to develop and train their employees to be able to perform better so it can attain its goals in an efficient way with a more rapid pace.

Accordingly, investing in human capital, especially in the field of organisational learning , means the method or mechanism by which the organization can allocate a certain amount in order to form its human system in a scientific, expert, efficient and sound manner, which contributes to achieving its goals during the period of the plan and this requires the existence of the elements of investment in These resources and knowing the rationale and how to use them also requires an advance plan that determines the purpose of the investment. From the above, the most important results can be clarified as follows:

- The highest age ratio between (30-year 39) is 57.4% and through the data the age variable appears on the age diversity in the members of the study sample, and this is explained by the extent of the sonatrach's dependence on the average age group, in which the individual has the element of experience that he needs in the institution and benefit him.
- While we find that 32.4% of the respondents have experience in the field (05-10), and therefore most of Sonatrach's employees have more than 5 years of experience, and this indicates that the Sonatrach Foundation seeks to attract new competencies with experience.
- an increase in the percentage of male workers in the sonatrach in exchange for a decrease in the proportion of female workers. This is due to the nature of the activity.
- Sonatrach seeks to develop its competencies and adopt new management methods, maintains methods to solve the problems it has previously encountered , and this indicates the company's reliance on organizational learning.
- The major elements constituting this factor include; soanatrach-level dealings rely on the concept of mutual confidence between their employees , Sonatrach devotes time to individual learning in order to support the efforts of individuals to reach the best performance .
- The sonatrach organisation is working to update programs to develop the skills of employees while the company allocates more than 1 of its capital for the training of employees, while reached its capital for the year 2018 (287419 millions DA). And allocated an estimated (3346 millions DA) to the training and this indicates its investment in its human capital.
- Sonatrach invests in human capital through organizational learning, and this explains why group learning represents the largest proportion of its employees' training and development, in addition to organisational learning and individual learning.

- Human capital is more important than financial capital and other elements of production.
- In sonatrach company the employees Loyal and committed to organisation's success, look their for ways to improve work at job ,and speak positively about the job to friends , and are the factors has emerged as an important determinant of organisational loyalty .
- There is a new movement in some sectors, where competition has reached high levels, but this movement is not sufficient given the existence of markets that have not exhausted all their potentials, and with regard to Sonatrach, there is a development to adopt investment in human capital as a strategic dimension; And making it imperative; In order to obtain competitive advantages, the most important of which is human capital and how to invest in it to achieve organisational loyalty and retain employees.

7 CONCLUSION:

The objectives of the study were to find out the impact of organisational learning on organisational loyalty among sonatrach employees and to find out the various factors underlying organisational learning and organisational loyalty. The findings of the research conclude that there is a significant impact of organisational learning on organisational loyalty among sonatrach employees.

The underlying factors of organisational learning emerged from this study are group learning, Individual learning ,organisational learning .

The underlying factors of organisational loyalty emerged from this study are Standard loyalty, Emotional loyalty, Constant loyalty.

Organisational learning contributes a lot when it comes to performance. It not only helps in enhancing employees skills and abilities but also increases their potential to work more efficiently, effectively and aggressively. The desire of employees to get promoted and get higher level of salaries leads and to need a way so that they can perform better and contribute more towards the firm and avail the opportunity to get promoted which in terms is related to organisational loyalty .

Group learning emerged as an important determinant of employee loyalty with 76% of the variance, and this explains why Sonatrach company relies more on organisational learning in order to train and develop employees, with the aim of preserving them and not leaving the company, in addition to organisational learning and individual learning.

- Based on the findings of the study, it recommends the following:

1-The results related to the respondents' perceptions of the degree of organizational learning practice As medium, therefore, the Sonatrach company must reinforce these dimensions, use them in the process of organizational learning and create a healthy regulatory environment that is established to build learningable organisations.

2- In view of recent global changes, such as: - The phenomenon of globalization, specialization and trade Globalization, the Sonatrach company has become facing an internal and external challenge, and it is subject to rapid changes, and for these institutions to align with Variables, they must adopt modern and developed management concepts to keep up with these Changes, and among these concepts is the concept of the organizational learning process; Even These organizations are becoming more able to adapt rapidly to global

variables.

3- The necessity of reviewing laws, regulations and legislations capable of inducing changes Organizational, social, cultural, and educational impact on the behavior of individuals And groups within institutions, which hinder the introduction of models and administrative methods Cutting edge.

4- The necessity of seeking to encourage openness and flexibility in organizational and human relations Between management and workers, by holding regular meetings, seminars, And self-constructive criticism and reward the distinguished and creative, in order to achieve organizational loyalty.

5- In the new knowledge-based economy, human capital has become the most important source of competitive advantage, the most valuable asset, and the most important factor of production.

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ANNEXES

Annexe 1: A questionnaire

A questionnaire

In the context of the completion of scientific research on the subject of "the impact of organizational learning in enhancing organizational loyalty to university professors" through the study of the dimensions of addressing the variables of this research, please ask that you reply to the phrases of the questionnaire to help us obtain objective results that will allow us to achieve the objectives of the study.

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personal data :

. **Gender :** ☐ Male ☐ Female

. **Age group :** ☐ Less than 30 years ☐ Between 30 and 39 years
 ☐ Be tween 40 and 49 years old ☐ More than 50 years old

. Years of Experience: ☐ Less than 5 years ☐ Between 5 and 10 years
 ☐ Between 10 and 15 years ☐ More than 15 years

The first axis: organizational learning

Phrase number	Phrase	Strongly Disagree	Disagree	neutral	agree	strongly agree
Individual learning						
A1	sonatrach-level dealings rely on the concept of mutual confidence					
A2	Sonatrach is working to update programs to develop the skills of employees					
A3	Sonatrach devotes time to individual learning in order to support the efforts of individuals to reach the best and the best performance					
Group learning						
B1	Mutual and honest discussion helps team members to learn and benefit from the experience of others at the organisation					
B2	Take your decisions into consideration when participating in the performance of task forces in your organization					
Organizational learning						
C1	Sonatrach has systems which measure the difference between actual and expected performance					
C2	Sonatrach maintains methods to solve the problems it has previously encountered					
C3	Sonatrach seeks to develop its competencies and to rely on new administrative methods					

The second axis : organizational loyalty

Emotional loyalty						
D1	I feel that Sonatrach where I work is part of my life and it is difficult to get away from it					
D2	If I get a job offer that is better than my job, I won't leave the current sonatrach					
D3	I am interested in changing the negative feelings of other people about the university					

	inside and outside it					
Standard loyalty						
E1	I'm going to feel job alienation if I leave this university					
E2	My commitment is very big towards my work and my colleagues at the organisation					
E3	This organisation deserves my fidelity and loyalty to it .					
Constant loyalty						
F1	The most important reason for my continued work in this organisation is that it offers benefits that are not available in other organisations					
F2	My stay in sonatrach is a very necessary matter.					
F3	I 'm afraid I'm leaving sonatrach because of the difficulty in finding another job.					

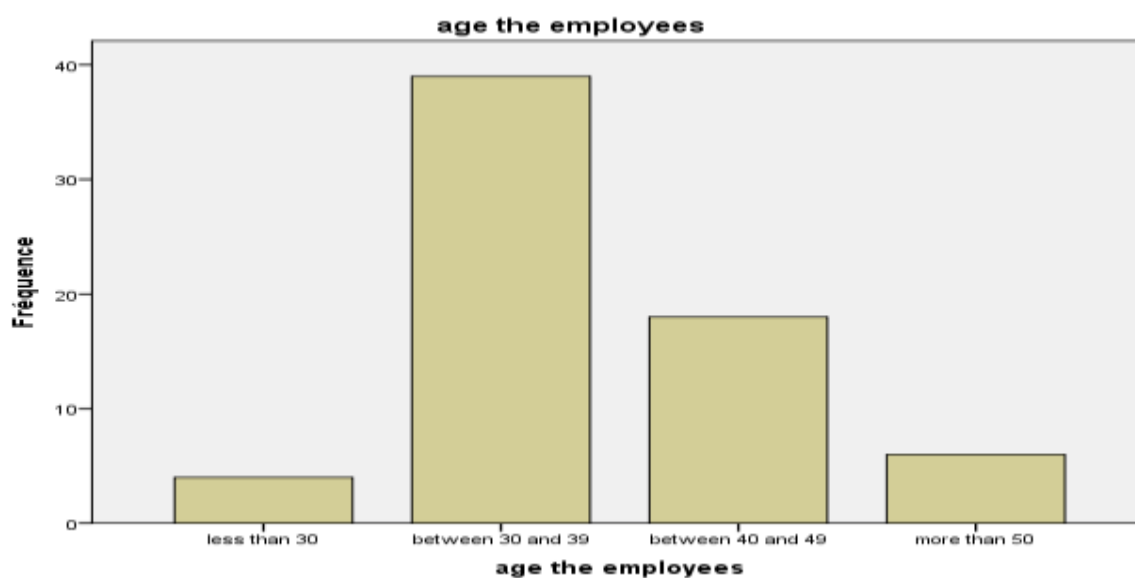
Annexe 2 : Statistiques descriptives

Statistiques descriptives				
	N	Moyenne	Ecart type	Variance
age the employees	67	3,39	,738	,544
experience the employees	67	3,45	1,077	1,160
University-level dealings rely on the concept of mutual confidence	67	3,12	,977	,955
The sonatrach company is working to update programs to develop the skills of professors	67	3,55	1,019	1,039
The sonatrach devotes time to individual learning in order to support the efforts of individuals to reach the best and the best performance	67	3,67	,960	,921
Mutual and honest discussion helps team members to learn and benefit from the experience of others at the university.	67	3,57	1,104	1,219
Take your decisions into consideration when participating in the performance of task forces in your organization	67	3,50	1,034	1,070
The sonatrach has systems which measure the difference between actual and expected performance	67	3,75	1,146	1,313
The university maintains methods to solve the problems it has previously encountered	67	3,56	1,062	1,128

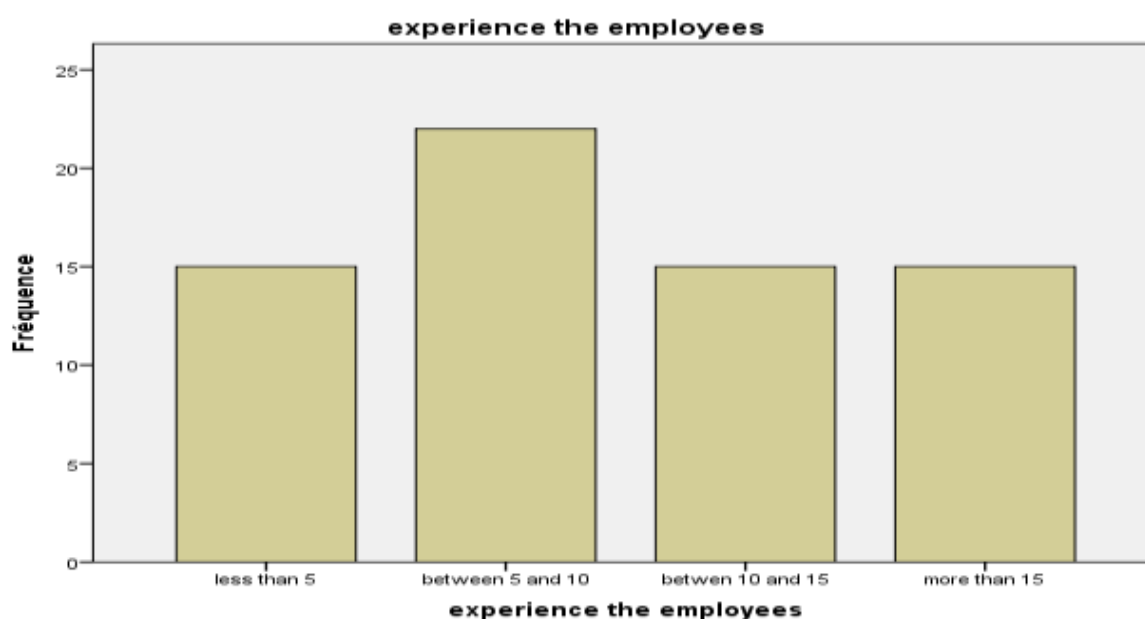
The sonatrach company seeks to develop its competencies and to rely on new administrative methods	67	3,96	1,147	1,316
I feel that the university where I work is part of my life and it is difficult to get away from it	67	3,49	1,248	1,557
If I get a job offer that is better than my job, I won't leave the current university	67	3,46	1,428	2,040
I am interested in changing the negative feelings of other people about the university inside and outside it	67	3,79	,826	,683
I'm going to feel job alienation if I leave this university	67	3,24	1,232	1,518
My commitment is very big towards my work and my colleagues at the university	67	3,85	,942	,886
This company deserves my fidelity and loyalty to it	67	3,46	1,005	1,010
The most important reason for my continued work in this company is that it offers benefits that are not available in other universities	67	3,22	1,213	1,471
My stay in sonatrach is a very necessary matter	67	3,47	1,067	1,139
I'm afraid I'm leaving sonatrach because of the difficulty in finding another job.	67	3,25	1,126	1,267
N valide (liste)	67			

genre the employees					
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide		1	1,5	1,5	1,5
	male	39	57,4	57,4	42,6
	femal	28	41,2	41,2	100,0
	Total	68	100,0	100,0	

age of employees					
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	less than 30	4	5,9	6,0	6,0
	between 30 and 39	39	57,4	58,2	64,2
	between 40 and 49	18	26,5	26,9	91,0
	more than 50	6	8,8	9,0	100,0
	Total	67	98,5	100,0	
Manquant	Système	1	1,5		
Total		68	100,0		



experience the employees					
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé
Valide	less than 5	15	22,1	22,4	22,4
	between 5 and 10	22	32,4	32,8	55,2
	between 10 and 15	15	22,1	22,4	77,6
	more than 15	15	22,1	22,4	100,0
	Total	67	98,5	100,0	
Manquant	Système	1	1,5		
Total		68	100,0		



Statistiques descriptives				
	N	Moyenne	Ecart type	Variance
axe1	67	2,9179	,73229	,536
axe2	67	3,3831	,72945	,532
Individual learning	67	2,7811	,77101	,594
Group learning	67	3,2463	,87201	,760
Organisational learning	67	2,8358	,95940	,920
N valide (liste)	67			