

## Study of the Learning Organization's Response to Organizational Change Areas and Features: A Case Study of the Faculty of Economic, Commercial, and Management Sciences at Tiaret University .

دراسة مدى استجابة المنظمة المتعلمة لمجالات و معالم التغيير التنظيمي –  
دراسة حالة كلية العلوم الاقتصادية، التجارية وعلوم التسيير  
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### Abstract :

This study aimed to examine the relationship between the dimensions of transformational leadership and digital transformation support in the university of Tiaret , from the perspective of faculty members and teaching staff. To verify the hypotheses, a questionnaire was used as a data collection tool, with a sample size of 144 employees from the College of Economic, Commercial, and Management Sciences. Out of the distributed questionnaires, 61 were returned, with 83 being discarded and 19 excluded, resulting in 42 valid questionnaires for analysis. The data was analyzed using SPSS software, and the results indicated that the practice of transformational leadership in the Algerian university was moderate. Furthermore, there was a significant positive correlation between the practice of transformational leadership and support for digital transformation.

**Key words:** Transformational leadership, digital transformation, Algerian university.

**JEL classification:**M12 , I23

**1.Introduction:**The world is currently witnessing profound and extensive changes in various fields, especially in knowledge, technology, and management. Change has become an inevitable and necessary requirement for all types of organizations. The intended change should be based on scientific foundations to create a learning organization that relies on knowledge and intellectual capital. Utilizing learning is considered one of the most important means to engage individuals in the process of change, as it is the best method when an organization seeks to implement new work methods. Therefore, it is a means to bring about change, achieve organizational continuity, and a vital requirement to ensure work quality, keep up with developments, and establish the foundations of the knowledge society.

**1.1.Research Problem:** In this research, we aim to answer the following problem: To what extent does the learning organization respond to organizational change areas in the Faculty of Economic, Commercial, and Management Sciences at IbnKhalidun University, Tiaret?

### **1.2.Hypotheses:**

Main Hypothesis: The elements of the learning organization respond significantly to organizational change areas.

**Significance of the Study:** The importance of this study lies in enriching the concepts related to two variables: the learning organization and organizational change. Furthermore, it highlights the importance of understanding the contribution of the learning organization in bringing about change in an institution.

### **1.3.Study Objectives:**

- To understand the contribution of both the learning organization and organizational change.
- To measure and identify the relationship between the variables.
- To provide recommendations and suggestions for institution leaders.

## **2.Fundamentals of Change Management**

### **2.1. Concept of Organizational Change**

**a.Definition of organizational change:** It refers to the radical or gradual transition from the current state to a new state that differs from its predecessor or the existing state. The change may involve

improving or developing the nature of work or the organization's activities to achieve goals more effectively (**Hamoud & Al-Shamaa, 2000, p. 367**).

Also, it can be defined as "the transition from an unsatisfactory state to a better state that operates according to the variables that have occurred or emerged. This transition is governed by a law that establishes a relationship between the goal, the means, human energy, and the balance between these pillars (**Khabbizi, 2000, p. 36**)."

Based on the previous definitions, organizational change can be defined as "a planned and deliberate process that represents a modification from the current state to a future state in order to achieve adaptation and interaction with the surrounding environment."

**b.Characteristics of Change:** The following key characteristics of the change process can be highlighted (**Amari, 2022, p. 19**) :

-Change is inevitable, necessary, and essential rather than exceptional.

-Change is a continuous process and cannot be considered as a one-time event because it is ongoing.

-Change is a managerial responsibility and is among the main tasks of different managerial levels, from top management to lower-level management, with the primary commitment lying with top management.

- Change is an optimistic movement.

-Change is a comprehensive process that encompasses various areas, and any change in the organization's systems affects other subsystems to varying degrees.

**c. Areas of Change:**

Any change in the organization undoubtedly affects its other parts. Therefore, it is a complex and multidimensional process. It is essential to identify the areas of change that need attention and study. The common areas in the change process include human change, organizational structure, technology, and organizational culture.

**-Human Change:** The human resource is the vital and general element in the organization as it represents the dynamic element within it. Therefore, change focuses on individuals with the aim of developing their skills, which can be achieved through understanding

and perceiving individual behavior. Subsequently, efforts are made to develop it to align with the organization's needs. The effectiveness and efficiency of targeted changes are directly linked to the degree of contribution from individuals working in the organization. Their contribution continually enhances the success and effectiveness of the change process. Failure of individuals to respond to change can hinder the organization's continuity (**Hamoud, Organizational Behavior, 2002, p. 191**).

In this regard, change includes (**Al-Salmi, 1983, pp. 257-258**):

**\*Physical Change for Individuals:** This involves replacing some employees or substituting them with others.

**\*Qualitative Change for Individuals:** This focuses on enhancing skills, developing capabilities, or modifying behavioral patterns through training systems or the application of organizational rewards and penalties.

**-Structural Change:** This refers to the input that brings about changes in the organizational structure. Organizational structures are among the areas that undergo frequent changes within an institution. They determine how tasks, responsibilities, and authorities are distributed among workers and controlled. Sometimes, organizations resort to internal changes that accompany changes in the organizational structure, as well as substructures, such as job redistribution, defining responsibilities, task delegation, determining the scope of supervision and internal relationships, redistributing certain authorities, or eliminating and merging organizational units. It also involves identifying decision-making sources, degree of centralization and decentralization, and the systems followed in the institution, such as reward systems, performance evaluation, and control systems (**Amari, 2022, p. 55**).

**-Technological Change:** The developments in the organizational environment have pushed organizations to adopt information technology as a strategic and crucial means for their survival and continuity. There are various definitions that address this concept, such as "the creation, assembly, storage, modification, and rapid transformation of information achieved through computers and related means (**Khabbizi, 2000, p. 127**)."

The term technological change is used to describe the gradual change in the quality and quantity of ideas implemented. It refers to

"the institutions' response to various dimensions of technological developments related to change, which contribute to increased productivity and improved quality. Contemporary technological advancements are among the most influential requirements for change in institutions, particularly through the use of various means of development and technical updates (**Hamoud, Organizational Behavior, 2002, p. 186**)."

**-Change in Organizational Culture:** The culture of an organization is defined as "the collection of core principles invented, discovered, or developed by the group while solving its external adaptation and internal integration problems, which have proven to be effective and are then taught to new members as the best way to perceive, understand, and deal with problems (**Al-Madhoon & Al-Jazrawi, 1959, p. 397**)."

Since culture is a combination of values, beliefs, assumptions, meanings, and expectations shared by the members of an organization, it often requires redirecting the behavior of employees and addressing their problems. This means attempting to formulate a new organizational culture that aligns with the organization's goals and the desired change process (**Al-Rizki, 2022, p. 71**).

Cultural change is considered one of the most challenging tasks for organizations, especially when the culture is strong and deeply ingrained in people's minds. It usually takes a long time, and radical change is rare; it tends to be a gradual process.

### **3.The Learning Organization:**

The widespread adoption of the learning organization has become a contemporary phenomenon in achieving effective success dimensions, aiming for continuous improvement and effective development.

**3.1.Concept of the Learning Organization:** There is difficulty in providing an exact definition of the learning organization, as evident in its studies. However, Senge defined it as "an organization where everyone is engaged in diagnosing and discussing their own problems and searching for solutions, where people experiment with their capabilities and skills to create change and improvement, and where they develop their skills and knowledge to achieve their goals (**Al-Malakawi, 2009, p. 165**)."

According to Bateman, it is "an organization that is skilled in creating, acquiring, and transferring knowledge and in modifying

behaviour to reflect new knowledge and insights (**Bateman & Snell, 2002, p. 301**)."

From this, we can deduce that a learning organization is one that can continuously facilitate, encourage, and provide learning for all its employees at all levels.

**3.2.Characteristics of a learning organization:** include (**Najm, 2005, p. 390**):

-Rapid and easy transfer of knowledge with the ability to anticipate and address changes in the environment.

-It is a purposeful and planned process that aims to modify individuals' behavior by making learning deeply ingrained in their minds, improving their performance, and enhancing the organization's effectiveness and efficiency.

-It is a continuous process that does not stop at a certain stage of individuals' and the organization's life but continues throughout their lifespan.

-It focuses on the organization's memory, seeking to refine and renew it through acquiring new knowledge.

-It happens in all organizations and work settings, whether formally or informally, with variations in terms of speed and proficiency.

-It provides learning opportunities for all individuals in the organization, not limited to specific groups.

- It is an outcome of internal and external experiences and experiments within the organization.

- It defined by the qualitative measurement of skills, competence, and the quality of outputs.

-It is based on understanding and acquiring information through practical or theoretical means.

- It is an institution with an environment characterized by trust, collaboration, open communication, value for diversity, critical thinking, and encouraging individuals to ask questions and engage in discussions about all learning issues. It also encourages participation in problem-solving, decision-making, utilizing their abilities and skills to bring about the desired improvements and changes (**Hameshiri, 2013, p. 401**).

**3.3. The building elements of a learning organization:** the challenge facing organizations today is finding the best way to

transform a traditional organization into a learning organization. The important building elements include **(Salehi & Boukhmakm, 2018, pp. 98-99):**

**a. Collaborative culture:** This culture allows employees to work even if they make mistakes and learn from them. This type of culture is characterized by high levels of friendship and cohesion. Pham noted that collaborative culture is suitable to be one of the elements of a learning organization. Culture influences cognitive collaboration, which begins with identifying the required knowledge, then the relationship between knowledge levels, and creating a socially interactive environment.

**b. Transformational leadership:** Transforming a traditional organization into a learning organization requires changing complex and intricate organizational systems. This naturally requires leadership that can initiate and successfully carry out this transformation. Successful transformation is difficult without a leader who possesses the ability, wisdom, and courage to undertake this change. Transformational leadership is described as "motivating subordinates by appealing to ethical values and higher ideals," and transformational leaders in a learning organization focus on developing the learning and thinking skills of knowledgeable individuals.

**c. Organizational learning:** There is a close relationship between the fields of a learning organization and organizational learning. Organizational learning improves the processes performed by the organization by utilizing information and better assimilating it. It is the means through which individuals in organizations constantly discover that they shape the reality they operate in. They can change that reality through integrated interaction driven by knowledge and new experiences which can lead to continual change in behaviour and work results.

**d. Information Technology:** It is defined as "the tools used to build information systems that help management use information to support their decision-making needs and operational processes in the organization **(Idris, 2005, p. 152).**

From this, we can infer that information technology is the process of processing, transmitting, storing, and retrieving information in verbal, visual, drawn, and digital forms through computers and wired and wireless communication technology in order to facilitate access

to information, exchange it, and make it available to everyone (**Khabbizi, 2000, p. 122**) .

#### **4. Case Study of the Faculty of Economic Sciences, Commerce, and Management Sciences at IbnKhalidoun University, Tiaret**

##### **4.1. Questionnaire Design and Study Community**

**a. Description of the Study Tool:** We relied on a questionnaire designed to serve the objectives of the study, which was distributed to a group of the Faculty of Economic Sciences, Commerce, and Management Sciences at IbnKhalidoun University, Tiaret, in order to assess the extent of the learning organization's responsiveness to areas of organizational change.

-To ensure the validity of the study tool, it was presented to a group of specialized professors, and the questionnaire was reviewed to make it clear and easily understandable. The study tool consists of three axes, as follows:

- **Axis 01:** It includes 04 paragraphs related to personal information about the demographic characteristics of the sample, such as gender, age, educational level, and experience.

- **Axis 02:** It includes 19 paragraphs related to areas of organizational change, including human change, technological change, structural change, and organizational culture change.

-**Axis 03:** It includes 16 paragraphs related to the elements of the learning organization, including historical culture, transformative leadership, technology, and organizational learning.

**b. Study Community Boundaries and Sample Testing:** A total of 131 questionnaires were randomly distributed to the sample of the study, which represents the employees of the Faculty of Economic Sciences, Commerce, and Management Sciences.

##### **c. Study Phases:**

- **Study Method:** In our study, we adopted a descriptive-analytical method, where data was collected and analyzed once within a specified timeframe.

**4.2. Statistical Analysis:** To study and analyze the questionnaire, we relied on the statistical software version 20.0. We used various statistical methods according to the study requirements. In the questionnaire, Axes 02 and 03 were distributed using the Likert five-point scale, ranging from the highest weight (5 points) to the lowest weight (1 point).

**a.Reliability of the Study Tool:** The reliability of the questionnaire refers to the extent to which this tool is suitable for generalization. It means obtaining the same results when the questionnaire is distributed multiple times under the same conditions. The stability of the questionnaire's results was verified through the Cronbach's alpha coefficient, as shown in Table 01.

**Table 01:** Cronbach's Alpha Coefficient for Validity and Reliability

Axis		Alpha Kronbach	Total	
First axis	Human change	0.805	0.825	0.818
	Technological change	0.776		
	Structural change	0.848		
	Organizational culture change	0.784		
Second axis	Historical culture	0.811	0.812	
	Transformational leadership	0.907		
	Information technology	0.742		
	Organizational learning	0.867		

**Source:** Prepared by the researchers based on the outputs of SPSS V.22.0

According to the table above, the Cronbach's alpha coefficient shows a high percentage for the study axes in the questionnaire, ranging from 0.907 to 0.742. This is a high percentage that exceeds 0.60, representing the reliability of the questionnaire used in the study. The stability percentage for Axis Y of the study was recorded at 82.5% and 81.2%. This means that if the same questionnaire is repeated on the same sample, the results will be consistent with an accuracy exceeding 81%. This indicates the validity of the questionnaire for the study and analysis.

**b.Description of the Study Sample:**

Variables		Occurrences	percentage
Gender	Male	89	67,94%
	Female	42	32,06%
Age	Under30	22	16,79%
	Between 30 and 40	58	44,27%
	Between 40 and 50	38	29,01%

	Over50	13	9,92%
<b>Educational level</b>	Secondary	29	22,14%
	University	68	51,91%
	Post graduate studies	34	25,95%
<b>Experience</b>	Under 5 years	23	17,56%
	5 to 10 years	29	22,14%
	11 to 15 years	51	38,93%
	Over 15 years	28	21,37%

**Source:** Prepared by the researchers based on the outputs of SPSS V.22.0

### 4.3. Statistical Analysis of the Study Data

Analysis of Response Trends for Study Axes: We will proceed to analyze the response trends for each dimension according to each axis, and the results will be evident through the following two tables.

Analysis of Axis Variables: Organizational Change Areas

**Table (02) :** Analysis of Organizational Change Areas

Dimensions	The arithmetic mean	The standard deviation	The arrangement general direction	Availability level
Human change	2.4671	1.12067	04	Medium
Technological Change	2.47786	1.15279	03	Medium
Structural Change	2.9939	1.15479	02	Medium
the change in organizational culture.	3.8416	1.07490	01	Medium

Organizational Change Areas	2.94511	1.1257875	//	Medium	Medium
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source: Prepared by the researchers based on the outputs of SPSS V.22.0

- The table above, indicating the analysis of the human change dimension, reveals the following:

The mean scores for the human change dimension ranged between (1.9771 and 2.8931), with an overall average of 2.4671, which is a moderate value.

The statement "First" recorded a percentage of 42.7% for the option "Strongly Disagree," while the lowest percentage was recorded for the option "Strongly Agree" at 1.5%. The sample's average response for this item was 1.97, with a standard deviation of 1.09. The average direction of the sample's responses indicated "Disagree."

The statement "Fifth" recorded a percentage of 29.00% for the option "Neutral," while the lowest percentage was recorded for the option "Strongly Agree" at 3.10%. The sample's average response for this item was 2.42, with a standard deviation of 1.12. The average direction of the sample's responses indicated "Agree."

It is noticeable that the majority of statements were inclined towards "Agree," except for three statements that leaned towards "Disagree." This indicates that human resources play an effective role in change, and the employees of the college are receptive to it and capable of achieving its goals. This is because the college has the best human competencies. The statement "The institution works on attracting individuals with suitable competencies to achieve the institution's goals" ranked first.

- The above table indicates the analysis of attitudes towards technological change.

It is evident from the table that:

The mean scores for the dimension of technological change ranged between (1.9008 and 2.8931), with an overall average of 2.47786, indicating a moderate average value. The standard deviation is estimated to be 1.152796, indicating a considerable variability.

The sample participants had a neutral attitude towards the college's interest in the development, improvement, and training of

employees. Most of the statements tended towards "Disagree," indicating a weakness in the college's technological infrastructure.

It is evident from the above table, indicating the analysis of the direction after the organizational structural change, that: After the structural change, all expressions tended towards neutrality, which confirms that the internal organizational climate is neither feasible nor conducive to change.

From the above table indicating the analysis of the direction after the change in organizational culture, it is evident that:

Within the dimension of organizational cultural change, the means ranged between (3.1145 and 4.4198), with an overall average of 3.8416, which is a moderate value. The majority of statements showed a direction towards 'Agree,' except for the sixteenth statement, where it recorded a percentage of 37.4% for the option 'Agree' and the lowest percentage for the option 'Strongly Agree' at 9.9%. The average response of the sample for this item was 3.11, with a standard deviation of 1.22. This confirms that the current organizational culture unifies employee behavior and supports organizational change. Changing values, beliefs, and interpersonal relationships within the organization positively affect individuals. It is illogical to ignore the organizational culture when considering organizational change. The average direction of the sample responses was 'Neutral.'

Analysis of the variables of the second dimension: Learning Organization Elements

**Table number (06):** Analysis of Learning Organization's Response

Dimensions	The arithmetic	The standard deviation	The arrangement	general direction	Availability level
Historical culture	2.4671	1.01317	02	Medium	Medium

Transformational leadership	3.24047	1.26278	04	Medium	Medium
Information technology	3.4293	1.20019	03	Medium	Medium
Organizational learning field	3.5457	1.11532	01	Neutral	Medium
Learning Organization's Response	3.170642	1.147865	//	Medium	Medium

**Source:** Prepared by researchers based on SPSS V.22.0 outputs

The analysis of the Historical Culture dimension indicates the following:

The average scores for the Historical Culture dimension ranged between (3.2061 and 4.5267), with an overall average of 2.94085, which is considered moderate. The statement "Twenty-first" recorded a percentage of 61.8% for the option "Strongly Agree," while the lowest percentage was recorded for the options "Strongly Disagree," "Disagree," and "Neutral" at 1.50%. The average response of the sample for this item was 4.52, with a standard deviation of 0.74. The overall direction of the responses was "Strongly Agree." The statement "Twenty-third" recorded a percentage of 29.8% for the option "Agree," while the lowest percentage was recorded for the option "Neutral" at 14.5%. The average response of the sample for this item was 3.20, with a standard deviation of 1.37. The overall direction of the responses was "Neutral."

It is noteworthy that the employees' perspectives generally aligned with the element of Historical Culture, as the sample's direction was predominantly "Strongly Agree," with some variations in the other options, including "Agree" and "Neutral," in the statement "The management emphasizes the principles of cooperation and role exchange among employees."

From the above table, it is evident that the arithmetic means of the Transformational Leadership domain ranged between (3.0229 and 3.626), with an overall average of 3.240475. The standard deviation is moderate, estimated at 1.26278.

The twenty-sixth statement ranked first, with a percentage of 31.3% for the option "Agree," while the lowest percentage was recorded for the option "Strongly Agree" at 11.5%. The average response of the sample for this item was 3.02, with a standard deviation of 1.27. The average direction of the sample's responses indicates a "Neutral" position. This suggests that employees have a neutral perception regarding the statement "Management works towards implementing new working methods." This confirms the partial implementation of transformational leadership style in the faculty.

It is evident from the above table indicating the analysis of the direction of the Information Technology (IT) field that: Within the field of Information Technology, the arithmetic means ranged from (2.3817 to 4.1371), with an overall average of 3.4293, indicating a moderate value. The sample's direction was predominantly "strongly disagree," as the 29th statement recorded a percentage of 43.5% for the option "strongly agree," while the lowest percentage was for the option "disagree" at 3.1%. The average response of the sample for this item was 4.13, with a standard deviation of 1.05. The average direction of the sample's responses was "strongly disagree," while the other statements showed varied responses.

The table above indicates the analysis of the direction of the Organizational Learning field. Within the Organizational Learning field, the arithmetic means ranged from (2.5649 to 4.122), with an overall average of 3.5457, which is a moderate value. The sample's inclination was towards "Agree," indicating a strong confidence among employees in the college, their support for collaboration and collective learning. All statements had an agreeable direction except for the "Thirty-Fifth" statement, which recorded a percentage of 36.6% for the option "Disagree." The lowest percentage was for the option "Strongly Agree" at 5.3%. The average response of the sample for this item was 2.56, with a standard deviation of 1.11. The average direction of the sample's responses was "Neutral"

**4.4.Hypothesis testing and result extraction:** were conducted by testing the assumptions of the study and categorizing the results

according to the dimensions of the independent axis and their impact on the dependent variable.

**a.Main Hypothesis: The elements of a learning organization drive organizational change.**

To answer the main hypothesis, it can be divided into four sub-hypotheses, starting with studying the individual impact of axes 11 and 12 on axes 13, 14, and  $axe\ 2$ . Then, a holistic impact study was conducted without excluding any axis.

To answer the study's hypothesis, relying on estimating the multiple regression equation, and at a significance level of 5%, the following results were obtained:

0.201axe1 4	0.089 axe13 +	0.286axe1 2	0.166 axe11 +	1.70 +	Axe3=
Sig=0.01	Sig= 0.012	Sig=0.00	Sig= 0.012	Sig= .000	
T= 3.79	T= 2.81	T= 4.31	T= 2.54	T= 7.08	
		Sig f= 0.000		R <sup>2</sup> =0.684	N=131

The above equation and the results obtained from SPSS 22.0 outputs indicate a statistically significant effect of axe11, axe12, axe13 and axe14 on axe2. The change in the independent variables, respectively by one unit, can lead to a change in axe2 by 0.166, 0.286,0.089,0.201

The obtained model demonstrates both overall and partial validity, with  $R^2=0.684$ , indicating that the explanatory variables have a substantial impact on interpreting the dependent variable by 68.4%. The Fisher's significance value achieved statistical significance with  $Sig\ f = 0.000$ . Regarding the partial validity, the t-test for the model's parameters was statistically significant, as shown below:

$$\left\{ \begin{array}{l} (sig_{t11} = 0.000 < 0.05) \\ (sig_{t12} = 0.012 < 0.05) \\ (sig_{t13} = 0.000 < 0.05) \\ (sig_{t14} = 0.012 < 0.05) \end{array} \right.$$

Therefore, it is possible to accept the hypothesis H1, which indicates that there is a statistically significant effect at a 5% level for the organizational change dimensions on the elements of the learning organization.

To analyze the impact according to each dimension, the main hypothesis can be divided and studied into four sub-hypotheses.

**b.Sub-hypothesis 1: The extent of response of the learning organization to human change.**

To answer, the following possibilities can be considered:

H0: There is no statistically significant effect at a 5% level for technological change on the learning organization. H1: There is a statistically significant effect at a 5% level for technological change on the learning organization.

By relying on estimating the simple regression equation at a significance level of 5%, the following was obtained:

$$\begin{array}{rcl}
 0.416 \text{ axe11} & 1.33 + & \text{Axe2=} \\
 \text{Sig}=0.00 & \text{Sig} = 0.000 & \\
 \text{Sig f} = 0.000 & \text{R}^2=0.623 & 
 \end{array}$$

It is evident from the above equation and the obtained results from SPSS 22.0 outputs that there is a statistically significant effect of axe11 on axe2. A one-unit change in axe11 can lead to a change in axe2 by 0.416.

The obtained model has both overall and partial validity reached  $R^2=0.623$ , indicating that the explanatory variable has a significant impact on explaining the phenomenon at 62.3%. The Fisher's significance value achieved significance at  $\text{Sig f} = 0.000$ . As for the partial validity, it reached ( $\text{sig}_{t1} = \text{sig}_{t2}=0.000 < 0.05$ )

Therefore, it is possible to accept the hypothesis H1, which indicates that there is a statistically significant effect at a 5% level for the human change on the learning organization.

**c.Sub-hypothesis 2:The extent of the learning organization's responsiveness to technological change.**

To answer, the following possibilities can be proposed:

H0: There is no statistically significant effect at a 5% level of technological change on the learning organization. H1: There is a statistically significant effect at a 5% level of technological change on the learning organization.

By relying on the estimation of the simple regression equation and at a significance level of 5%, the following results were obtained:

$$\begin{array}{rcl}
 0.356 \text{ axe12} & 1.90+ & \text{Axe2=}
 \end{array}$$

Sig=0.00 T=5.78	Sig= 0.000	
	T=8.28	
Sig f= 0.000	R <sup>2</sup> =0.683	N= 131

From the above equation and the obtained results from SPSS 22.0 outputs, it is evident that there is a statistically significant effect of axe12 on axe2. A one-unit change in axe12 leads to a change in axe2 by 0.356.

The model obtained has both overall and partial validity reached  $R^2=0.454$ , indicating that the explanatory variable has a substantial impact on the phenomenon, accounting for 45.5%. indicating that the explanatory variable has a significant impact on explaining the phenomenon at 45,5%. While the random variable percentage reaches 54,5% (This means that the impact through this model is weak.)

Additionally, the Fisher significance value reached, (  $\text{sig}t_{12} = \text{sig}t_2 = 0.000 < 0.05$ ).

Therefore, it is possible to accept the alternative hypothesis H1, which suggests that there is a statistically significant effect of technological change on the learning organization at a 5% significance level. However, this effect is weak.

#### **d.Sub-hypothesis 3: The extent of response of the learning organization to structural change.**

To answer, the following possibilities can be considered:

H0: There is no statistically significant effect at a 5% level for structural change on the learning organization.

H1: There is a statistically significant effect at a 5% level for structural change on the learning organization.

By relying on estimating the simple regression equation at a significance level of 5%, the following was obtained:

0.410 axe13	1.867 +	Axe2=
Sig=0.00	Sig= 0.000	
T=5.59	T=8.40	
Sig f= 0.000	R <sup>2</sup> =0.441	

It is evident from the above equation and the obtained results from SPSS 22.0 outputs that there is a statistically significant effect of axe13 on axe2. A one-unit change in axe13 can lead to a change in axe2 by 0.410.

The obtained model has both overall and partial validity, with an R2 value of 0.441. This means that the explanatory variable has a significant essential impact on explaining the phenomenon by

41.1%, while the random variable accounts for 58.9%. The Fisher's significance value achieved significance at Sig f = 0.000. As for partial validity, it reached ( $\text{sig}13 = \text{sig}2 = 0.000 < 0.05$ )

Therefore, it is possible to accept the hypothesis H1, which indicates that there is a statistically significant effect at a 5% level for structural change on the learning organization.

**e.Sub-hypothesis 4: The extent of response of the learning organization to cultural change within the organization.**

To answer, the following possibilities can be considered:

H0: There is no statistically significant effect at a 5% level for cultural change within the organization on the learning organization.

H1: There is a statistically significant effect at a 5% level for cultural change within the organization on the learning organization.

By relying on estimating the simple regression equation at a significance level of 5%, the following was obtained:

$$\begin{array}{rcl} 0.245\text{axe14} & 2.07+ & \text{Axe2=} \\ \text{Sig}=0.00 \text{ T}=3.82 & \text{Sig}= 0.000 & \\ & \text{T}=7.75 & \\ \text{Sig f}= 0.000 & \text{R}^2=0.318 & \text{N}= 131 \end{array}$$

It is evident from the above equation and the obtained results from SPSS 22.0 outputs that there is a statistically significant effect of axe14 on axe2. A one-unit change in axe14 can lead to a change in axe2 by 0.245.

The obtained model has both overall and partial validity, with an R2 value of 0.318. This means that the explanatory variable has a significant essential impact on explaining the phenomenon by 31.8%, while the random variable accounts for 68.2% (This means that the impact through this model is weak.). The Fisher's significance value achieved significance at Sig f = 0.000, This indicates the overall validity of the model. As for partial validity, it is observed that ( $\text{sig}14 = \text{sig}2 = 0.000 < 0.05$ ).

Therefore, it is possible to accept the hypothesis H1, which indicates that there is a statistically significant effect at a 5% level for cultural change within the organization on the learning organization. However, the effect is weak.

**5.Conclusion:**

In the face of accelerating changes, institutions that seek to survive, sustain, and grow must not remain static in the face of these variables. They need to adapt to this change and maintain their current position. The success of change is closely linked to the manager's perception and ability to manage and control it, instilling confidence and optimism in the minds of the workers. This can only be achieved through the transformation into learning organizations that operate in a turbulent and rapidly changing environment.

In conclusion, we have reached several results that can lead to the following recommendations:

### **6.Results:**

-Learning is supposed to lead to changing the principles, culture, and working methods of the organization.

-A learning organization should modify its organizational culture to create motivation for work and increase commitment to adopting educational behavior.

-Organizations should not rely solely on external environmental factors for change. Instead, they should integrate change within their culture, eliminate old working methods, and replace them with more advanced and effective ones through learning that leads to change.

-Building a learning organization requires embodying its foundations, such as organizational learning, transformative leadership, and information technology.

### **7.Recommendations:**

Based on the above results, the following recommendations can be made:

-The organization should form work teams to encourage teamwork.

-Emphasize the principle of cooperation and role exchange among employees.

-Involve employees in the change process and encourage them to contribute creative ideas for change.

-Work on having advanced means to facilitate the rapid and accurate dissemination of information to all employees.

-Provide employees with time for learning, and work on attracting competent individuals.

-Keep up with technological advancements and conduct training courses for the benefit of employees.

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