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The Impact Of Making Organizational Sense On Lean Management : A Descriptive Analytical Research In The Iraqi Ministry Of Education

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Abstract:

The idea of organizational sense industry involves how members of organizations reach to understandings about the environment through different behaviors, and how these understandings represent the basis for the nature of subsequent reactions. The organizational sense industry variable represents the independent variable. The lean management approach has become a comprehensive thought applied in all fields and business activities. In order to achieve the best performance through the best outputs. The research aims to highlight the level of general awareness of the educational administrations regarding the nature of the sense making in the institution of the Iraqi educational sector. The research problem is what is the impact level of organizational sense making on solidifying lean management practices in the Iraqi Ministry of Education? The descriptive analytical approach was used to describe and analyze the main research variables. The research sample consisted of 215 participants in middle and top administrative leaders in the education directorates of the Ministry of Education. A group of statistical methods are used, which are the (Amos.V25) program, and the (SPSS) program. Findings revealed the existence of a weakness in the overall base of organizational cultures for the ministry's education directorates in defining the criteria for understanding what is agreed upon or disagreed upon related to the nature of formal and informal behavior in different performance approaches.

Paper type: Research paper.

Keywords: Keywords: organizational sense making, lean management, Iraqi Ministry of Education.

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1. Introduction:

Since the end of the 20th century and the beginning of the new millennium, the literature on management and organizations has grown significantly. Over the years, theories have been developed that introduce frameworks which define the process of meaning-making. Specialists adopt such theories to observe and interpret complex events and prepare responses to clarify meaning on a wider scale. The organizational sense making offers a unique perspective for organizations. The organizational sense making bases on the main idea which is how do members of organizations understand their environment through different behaviors? How does this understand form a basis for subsequent reactions? and how do reactions change the environment in ways that require a new understanding? Organizational sense making is the independent variable in this research.

Due to the constant changes and developments in the business environment, the concept of lean manufacturing has become a comprehensive approach which applied in all fields and business activities, including service, medical, and educational sectors. Its main goal is to achieve better performance through better outputs. This in turn led to create the concept of value-added culture and transform it into the concept of lean management which consider one of the modern trends in organizational management. It aims to benefit from its application results to improve practices, increase resource efficiency and enhance productivity. The dependent variable in current research is lean management.

1.1 Literature Review:

There are many research that studied the organization sense. Sandberg and Tsoukas (2014) suggested that it is exploring and clarifying the source of creating sensations in the organization. The study seeks to identify the main limitations of the sense-making perspective, which require addressing them to enhance it. Sheng (2017) seeks to identify sense-making that defines innovation of superior exploratory and exploitative products in turbulent environments through combinatorial capabilities. The outcomes of the study refer to the need to examine other potential internal cover capabilities. Cova et al. (2018) show that the first goal is a career-oriented community of workers and the goal was created to serve a leisure–oriented community of enthusiasts. The study's outcomes show that it can build unethical customer behavior based on the context. Meyer (2019) presented that the study aims to demonstrate how to combine a sensory-making perspective with large-scal dynamics. The study came out with results, most notably that creating senses and ideas related to legislation and awareness in bridging the gap. In regard to the studies that deal with lean management, Tupamahu et al. (2019) refer that the study aims to demonstrate the impact of lean management as a method for achieving competitive advantage at the strategic level in the companies surveyed. The study's results show that lean management has an important role in achieving strategic competitive advantage. Abdul Bari and Youssef (2021) presented that the study sought to demonstrate the impact of leadership as one of the lean management mechanisms in achieving entrepreneurial orientation at the strategic level. The most prominent results were the existence of correlations between lean leadership and strategic leadership, as well as evidence of the influence relationships between the two variables. Joseph (2021) refers that the main objective of the study is to determine the role of lean management in achieving strategic agility in the researched organization. The outcomes of the study show that the administration does not care much about specific criteria for performing the previous work steps to be a context followed by new employees at the university

Abu Asi (2021) shows that the study's aim is to identify the role of lean management and its role in achieving balanced institutional performance at Al-Aqsa University, Gaza Strip. The study came out with results, most notably the presence of statistically significant differences regarding the reality of applying lean management at Al-Aqsa University.

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The research problem is represented in the main question (What is the impact level of organizational sense-making on consolidating lean management practices in the Iraqi Ministry of Education?). The research aims to highlight the level of general awareness in the mindset of working educational administrations about the nature of organizational sense-making in the leading institution of the Iraqi educational sector, which has special importance. The research problem arises from the cognitive aspect. The researcher has reviewed numerous literature that studied the relationship between organizational sense making and lean management. This clearly shows the nature of the knowledge gap. Based on the scientific incompleteness of the organizational sense making, which represents the mediator role in the current research. Furthermore, many of its mysteries are still using theoretical frameworks. Furthermore, there is still much debate about the nature of the concept and how ~~to~~ adopt it in its integrated theoretical form. Many experts have pointed out that the theoretical study of the sense making process still needs to build the general meaning of the concept completely.

On the field level, the researchers have relied on their experience to follow up and observe many indicators of the educational reality. They reviewed the size of financial allocations in Iraq's federal budgets for many years, where the education budget did not exceed 5% of Iraq's federal budget. Through reviewing local and international publications and statistics, it became apparent that Iraq needs thousands of schools to address the decline in educational outputs, as well as cover the training and development needs of teaching staff. Iraq and the world faced the pandemic circumstances that highlighted the size of gaps in the informational, administrative, and specialized technical. These gaps imposed on educational administrations complex challenges and problems. All the factors mentioned formed the basis through which the research problem is manifested in its field framework, which can be expressed through the following questions:

- What is the impact level of the organizational sense making on solidifying lean management practices in the Iraqi Ministry of Education?
- What is the awareness level of the research sample on organizational sense making?
- What is the level of lean practices in educational administrations? And what is the level of interested and implementation of them?
- What is the nature of the relationship between the variables?

The research objectives include answering the research questions that emerged from the research problem, which are summarized in:

- Building a theoretical framework that provides a clear vision of the main and sub-research variables by tracing the cognitive and intellectual efforts presented by the authors and researchers to identify the precise concepts of these variables and understand the type and nature of the intellectual and cognitive interaction between them.
- Highlighting the level of general awareness in the mindset of working educational administrations about the nature of the organizational sense making industry in the leading institution of the Iraqi educational sector, which is of special importance.
- Defining the working administrations in the organization under study on the most prominent aspects of agile administrative activity and the possible mechanisms to follow in order to depart from the traditional work that has always been the general performance image of the ministry for long periods.
- Forming a base of analytical and statistical indicators that highlight the nature and level of the impact of organizational sense making on adopting lean management in the organization under study.
- Presenting research proposals that researchers can adopt to cover areas that have not been fully covered in the current research.

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2. Material and Methods:

2.1 Research population and sample:

The research selected a group of employees by using the stratified random sample method. The sample consisted of 215 employees of different positions (general manager, deputy general manager, department manager, section head). Table 1 shows the number of distributed and received questionnaires, and it also reveals that the final sample used for statistical analysis was 215.

Table 1: The research sample and the number of distributed and retrieved questionnaires

	Research Community	No.	Number of distributed questionnaires	Number of received questionnaires
1-	General Manager	10	10	10
2-	Deputy General Manager	12	12	10
3-	Department Manager	57	57	55
4-	Section Head	145	141	140
	Total	224	220	215

2.2 Research design:

The research uses the descriptive-analytical method, which is considered one of the approved methods for providing comprehensive and accurate information that helps in analyzing phenomena.

The research includes three aspects that covered the theoretical aspect of the research within the field of the independent variable (organizational sense making), which is represented in four sub-dimensions, and the dependent variable (lean management), which is represented in five sub-dimensions. The research focused on one of the important ministries in Iraq, represented by the Ministry of Education and a number of its directorates. The research took place from June 2022 to the beginning of May 2023 to complete the research.

2.3 Description of the research sample:

The description of the research sample includes (gender, age, educational attainment, years of service, and job position). These information identify the intended research sample, which is shown in Table 2 as follows:

Gender: The number of males is 152, which represents 71% of the sample. The number of females is 63, which forms 29% of the sample. This ratio is considered unbalanced because it is not consistent with the nature of the Ministry of Education, which accepts the female gender more than other ministries. Additionally, this percentage disagrees with the personal characteristics of the female and her closeness to the educational role at the social and human levels.

Age: The ages of the participants were distributed into five groups, the ratio of participants under 30 years is 15.the 5%, ratio of participants between 30 and 40 years is 28.8%, the sample includes 14.8% of participants between 40 and 50 years, and it has 22.3% of participants between 50 and under 60 years old, and finally 18.6% are 60 years old or older.

These percentages indicate that the largest proportion of the sample is within the age group that combines experience and a certain level of physical ability to perform. It is within the middle-aged group. Therefore, this adds more credibility and accuracy to the nature of the results that were collected from field research observations.

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Education: The percentage of holders of preparatory certificates was 1.4%, while the percentage of diploma holders was 11%, and bachelor's degree holders were 69.3%. The percentage of holders of the higher diploma was 3.3%, while the percentage of participants who held master's degrees was 10.2%, and PhD holders were 4.2%. The mentioned percentages indicate that the respondents have a good level of education that allows them to understand the variables under investigation and comprehend the phrases in the questionnaire related to important dimensions and elements such as strategic orientation, the nature of lean practices, or organizational sense-making. On the other hand, the results show that there is a low number of participants who got postgraduate degrees in administrative positions. This does not align with the level of expansion in postgraduate programs in–Iraqi universities–or in outside Iraq, which have been widely opened in recent years.

Years of service: this section shows that 1.4% of the sample have less than five years of experience. It also reveals that 12% of the sample have years of service between 5 and 10 years. The data states that 34% of participants have years of service between 11 and 15 years. It also refers that 14.4% of respondents have experience years between 16 and 20 years. The data shows that 13.5% of respondents have years of service between 21 and 25 years. Finally, 24.7% of participants have 25 years of service or more. These percentages align with the nature of the official and legal career path. Moreover, those who hold advanced positions must go through multiple job stages, as reflected in the research sample. Additionally, the majority of the sample has good experience that helps them to provide actual opinions that align with the overall performance of the ministry over time, which increases the reliability of the field research results.

Job position: The percentage of general managers and their assistants is 4.6% for each category. The percentage of department managers is 25%. The highest percentage is %65 for the section head. This indicates that the highest percentage is for the leadership that is closest to reality and most capable of diagnosing the work situation in an actual way rather than being based on a set of theoretical bases.

Table 2: Description of the research sample

Description of the sample	Details	No	Percentage
Gender	Male	152	%70.7
	Female	63	%29.3
Age	Less than 30	33-33	%15.5
	30- less than 40	62-62	%28.8
	40- less than 50	32	%14.8
	50- less than 60	48	%22.3
	60 and more	40	%18.6
Education	Preparatory	3	%1.4
	Diploma	25	%11
	Bachelor's	149	%69.3
	Higher Diploma	7	%3.3
	Master's	22	%10.2
	PhD	9	%4.2
Years of service	less than 5	3	%1.4
	10-6	26	%12
	15-11	73	%34
	20-16	31	%14.4
	25-21	29	%13.5
	26 and more	53	%24.7

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Job position	General Manager	10	%4.6
	Deputy General Manager	10	%4.6
	Department Manager	55	%25.8
	Section Head	140	%65

2.4 Instruments :

2.4.1 Documents and records :

A set of documents are collected about the Ministry of Education and its affiliated directorates (the research community) in order to study the organizational structures of the directorates and to determine the level and number of targeted leaders and other data required by the field research.

2.4.2 Questionnaire:

The questionnaire is the main tool used in the research to collect data and gather the opinions of the Ministry of Education leaders. A Likert scale with 5 levels was used, ranging from "strongly agree" to "strongly disagree". The questionnaire includes the following parts:

The first part of the questionnaire includes demographical information about the research sample, such as gender, age, education, job title, years of service, and job position. The purpose of this part is to describe the research sample.

The second part includes the main three aspects of the research, which are (organizational sense making, lean management) and their procedural definitions, as well as their sub-dimensions and paragraphs. The variable measures in the questionnaire were designed from multiple sources, as shown in Table 3.

Table 3: Main aspects , sub-dimensions, and sources of the adopted scale

Variables	**Sub variables**	**Sources**
Organizational sense making	Strategic vision Institution mission Strategic goals Values	- Malik & Abdallah (2020)
Lean administration	Workplace organization Continuous improvement Standard work Multi-skilled workers Six Sigma	- Gálová et al. (2018) -Sinha & Matharu (2019).

2.5 Validity and Reliability:

2.5.1 Validity:

A) Trustee Validity: This test aims to verify the relevance of each item to its field. After formulating the questionnaire, it is distributed to a group of experts in the field to take their recommendations about the questionnaire.

B) Content Validity: This refers to the clarity of each item in terms of meaning, formulation, and logical design, covering the important aspects of its field. The Cronbach's Alpha equation was used to test this validity. After applying this equation, the results were shown in Table 4. These results confirm the validity and applicability of the scale.

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Table 4: Results of the Cronbach's Alpha equation for testing content validity

Axes	Strategic orientation	Lean administration	Total
Cronbach Alpha	0.784	0.912	0.85
N of Item	14	30	61

2.5.2 Reliability:

The reliability of the scale is tested using the Split Half method. This method involves finding the correlation coefficient between the items of the scale. The items are either divided into even and odd items or divided in half. The correlation coefficient is corrected using the Spearman-Brown equation. After applying this method using SPSS software, the results showed that the Cronbach's Alpha value for the first part was 0.897 and for the second part was 0.912. The items were divided into 23 for the first part and 23 for the second part, and the correlation coefficient value was 0.795, which is higher than the assumed value of 0.5. Additionally, the correlation coefficient was corrected using the Spearman-Brown equation, and its value was 0.886. These results indicate that the questionnaire is highly stable and can be used at different times for individuals, yielding consistent results.

2.5.3 Data analysis:

To measure and test the study hypotheses, a set of statistical methods were used. Methods are the Amos.V25 program for structural equation modeling, and the SPSS.V25 statistical software for ready-made statistical analysis. The used methods include mean score to determine the level of response, and standard deviation to determine the level of agreement and homogeneity in the sample's opinions. Coefficient of variation is used to compare the degrees of variation between two or more sets of values from their means as well as multiple linear regression is used to express the relationship between two variables and estimate previous values and predict future values.

2.6 The research model:

The conceptual framework aims to clarify the logical relationships between the main variables and their related sub-variables. The dimensions of the variables were chosen based on previous intellectual studies. This framework combines the quantitative and qualitative aspects of these relationships according to the following variables, as shown in Figure 1.

1- The independent variable (organizational sense making is represented by (contexts, language, identity, cognitive frameworks, emotion, organizational policy, and technology);

2- The dependent variable (lean management), is represented by (workplace organization 5s, continuous improvement, standard work, multifunctional workers, and Six Sigma).

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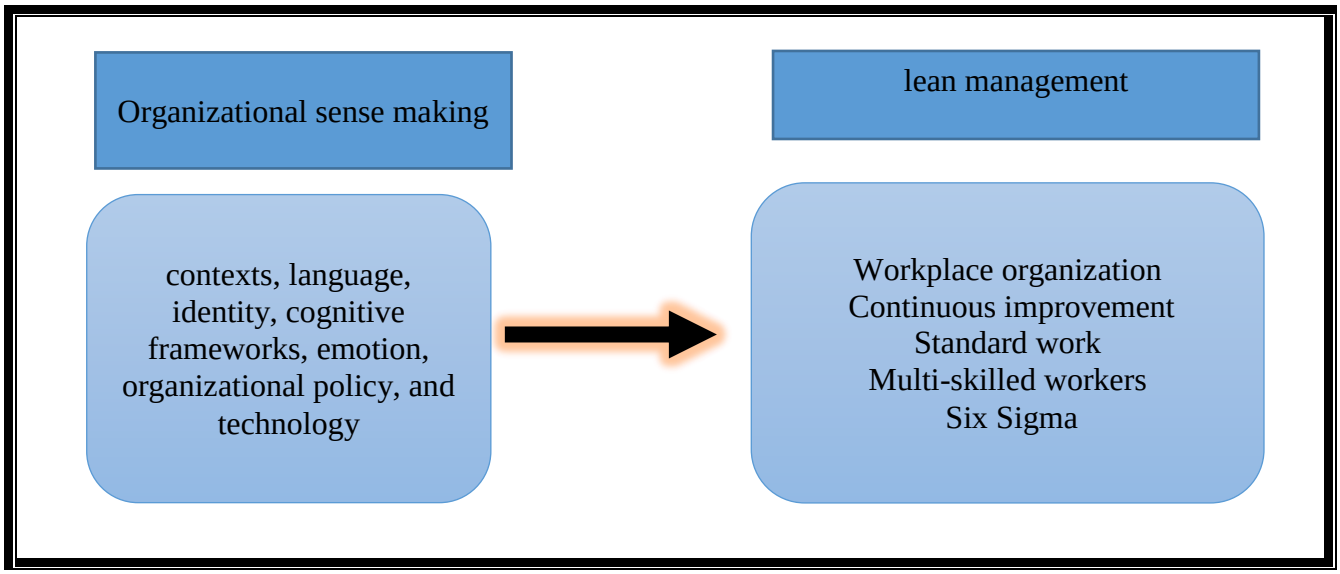

Figure 1. The research model

2.7 Research hypotheses:

There is an impact of the organizational sense making on lean management, 5 sub-hypotheses emerge:

1.organizational sense making has a statistically significant impact on the dimension of workplace organization.

2.organizational sense making has a statistically significant impact on the dimension on continuous improvement.

3.organizational sense making has a statistically significant impact on the dimension on the standard work.

4.organizational sense making has a statistically significant impact on the multi-skilled workers dimension.

5.organizational sense making has a statistically significant impact on the Six Sigma dimension.

2.8 Sense making:

Despite the spread of idea of sense making in a lot of literature, there is a great discrepancy in how to define it. Scholars point out that there is no single theory for "sense making". Gephart (1999) defined sense making as a process based on the mechanisms of dialogue and building understandings through which people consolidate a picture of the nature of environmental variables and the mechanisms for dealing with them according to the required organizational behaviors. Gioia and Chittipeddi (1991) view that it is a dialogue and comprehension processes that involve a diverse range of communications, both oral and written, formal and informal, as well as searching for information, taking notes to diagnose the surrounding environment, and preparing the required responses. Likewise, Gioia et al. (1994) defined sense making as a set of activities, such as environmental scanning, represent the main tasks of management, which determine the nature of regulatory and strategic decisions.

According to these definitions, the researchers believed that the features of the organizational sense making are summarized in the following points:

- Organizations operate in environments that are characterized by chaos and constant change.
- People initially develop interpretations of their environment by observing and making assumptions based on the set of signals that are sent by the environment.
- People and organizations act on the basis of these interpretations and assumptions.

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The organizational sense making can be defined procedurally as the process by which individuals give meaning to their collective experiences and the continuous improvement of mental images that justify the actions taken by them.

2.8.1 Dimensions of sense making:

In the context of determining the dimensions of the organizational sense-making variable, the visions multiply and expand to include a lot of ideas. However, this research will adopt a group that its intellectual frameworks are ~~is~~ consistent with the nature of the environment tested in the field side. These dimensions can be explained in the following points:

Contexts: Context analysis is a method for analyzing the organization's environment. It focuses mainly on the overall business environment, and take into account the entire business environment and the internal and external environments (Arenius, 2002).

Language: language is a set of reviews that are made by several people inside the organization with the important communication process that has become read or heard by several groups of listeners ~~for~~ individuals or organizations (Lewis, 2002).

Identity: It is the advantages that the organization uses for the purpose of distinguishing itself positively from others, and these advantages extend around what is required and what is ideal for a specific type of organization (Abdul-Ilah, 2014).

Cognitive frameworks: the frameworks concerned with unifying the efforts of workers in order to exchange information within the thinking minds in the organization, in a way that enables them to benefit from the intellectual capabilities and expertise available to the organization and individuals at all levels (Goldsmith et al., 2018).

Emotion: it is the ability to direct a person's self through his actions and emotions and what the individual possesses of thoughts, feelings, conscience, and skills in order to achieve the desired goals (Al-Masoudi, 2002).

Organizational policy: it is the behavior of a directed strategic nature, through which the individual seeks to achieve special benefits that conflict with the interests of others or conflict with the goals of the organization (Faiq and Al-Shammari, 2017).

Technology: it refers to the applications of knowledge to solve human problems, and it represents a set of processes, machines, methods, procedures, and equipment used to produce goods and services (Salman, 2005).

The researchers examine the views and intellectual treatments of the concept of organizational sense making and its dimensions. It clearly highlights the modernity of the concept and its ramifications as well as its intellectual importance in a series of research developments in the world of administrative thought.

Hence, the general educational administrations in Iraq should inevitability deal with modern intellectual data more seriously and with a higher level of interest in light of the global development of this important and essential sector in the life of human societies, and it is thus required, and in practice, to adopt modern ideas in spreading the concept of creating an organizational sense and explaining what this is. The concept and its impact on the individual and collective data of the members of these organizations.

2.9 Lean management:

The topic of lean management has gained the interest of researchers, specialists, and global organizations in various fields. It represents the most consistent approach with the modern environmental, economic, and productive trends. It is defined as an organized method to achieve better execution of work through mutual respect and trust between the leader and individuals in order to achieve near-perfect ratios (Jasim, 2016). Ligungblom (2020) defined lean management as an approach that gives the departments of educational organizations the ability to sense the expected changes in the field of teaching and educational work at the level of

the internal and external environments and the speed of response to them. Alabi (2021) viewed that it is the ability of the organization to move quickly and easily in order to response to unexpected changing situations. It is also the ability of the company to gain flexibility and speed that give it the ability to change its business as a result of its possession of the real ability to make decisions in time. Furthermore, Abu Asi (2021) defined it as the ability of the facility to perform administratively, which is characterized by rapid response and speed of adjusting the work method in a commensurate manner with the requirements of change, which is a practice that focuses on values, flow, polarization, perfection, teamwork and its many benefits. The researchers define lean management procedurally as an organized approach consisting of a number of principles, advanced practices, and methods that aim to minimize the used resources in production to the maximum extent possible, with the goal of increasing customers' value, as well as eliminating all types of waste and losses in terms of time, effort, and materials.

2.9.1 Dimensions of lean management :

The dimensions of lean management can be summarized as follows:

Tools: The most prominent basic tools or techniques of lean management can be highlighted as follows:

Workplace organization (5S): This dimension is one of the important tools or techniques that contribute to achieving growth for industrial organizations. It refers to five components that start with the letter S, which are sorting, set in order, sweep and shine, standardize, and sustain (Al-Shibawi, 2016).

Continuous Improvement: The concept of continuous improvement is derived from the Japanese term Kaizen, which is a philosophy that emphasizes continuous improvement throughout the organization's production process. The first part "Kai" means change, and "Zen" stands for the better, so the combination of these two elements gives us the phrase change for the better (Al-Gharabawi, 2015).

Standard work: is defined as the best way to do work. It also refers to the standardization of execution procedures in the workplace to ensure customer satisfaction. This method shows what, where, when, who, and how tasks should be performed to ensure the best results (Krichbaum, 2008).

Multi-skilled workers: it refers to the employees who perform more than one task or operation in the work environment (Sinha and Matharu, 2019).

Six Sigma: is defined as an integrated set of modern management, statistical tools, and thinking methods that add a fundamental change in customer satisfaction, process productivity, value provided to stakeholders and shareholders by improving processes, quality levels, and attempting to reduce variation and defects between the organization's processes (Al-Abadi and Jaber, 2020).

Discussion of results:

3.1 Results:

3.1.1 Organizational sense making:

Table 5: Ranking of sub-dimensions for the strategic orientation variable

#	Dimensions	Mean	Standard deviation	Coefficient of variation	Rank
1	Contexts	3.65	0.89	0.25	Sixth
2	Language	3.81	0.81	0.21	First
3	Identity	3.32	0.89	0.27	Seventh
4	Cognitive frameworks	3.60	0.89	0.25	Fifth
5	Emotion	3.83	0.76	0.20	Second
6	Organizational policy	3.58	0.90	0.25	Fourth
7	Technology	3.68	0.87	0.24	Third
	The organizational sense making variable	3.64	0.86	0.24	VI

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Table 5 shows that the organizational sense making has mean of (3.64) degrees, with a standard deviation of (0.86) and a coefficient of variation of (0.24). As for the dimensions of the sub-variable, language ranked first with (M=3.81, Std = 0.86) and a coefficient of difference (0.24). The dimension identity came in the last order with (M=3.32, Std=0.89) and a coefficient of variation (0.27). Findings confirm the existence and importance of the variables that the research addressed in the mentality of the participants, as well as it is an indication of an important reality that reflected in the answers of the approved questionnaire.

3.1.2 Lean management variable:

This aspect consists of five dimensions, which are (workplace organization/ 5S, continuous improvement, standardized work, multi-skilled workers, and Six Sigma). The dimensions of lean management characteristics can be explained by using tools of descriptive statistics which are mean, standard deviation, and coefficient of variation. Table 7 shows the descriptive statistical values for the dimensions of the lean management variable.

Table 6: Ranking of dimensions for the lean management variable

	Dimensions	Mean	Standard deviation	Coefficient of variation	Rank
1-	Workplace organization 5s	3.65	0.84	0.23	Second
2-	Continuous improvement	3.89	0.82	0.21	First
3-	Standard work	3.26	1.01	0.31	Third
4-	Multi-skilled workers	3.28	0.97	0.30	Fourth
5-	Six Sigma	3.58	1.32	0.37	Fifth
	Lean management variable	3.53	0.99	0.28	

Table 6 shows that the weighted mean of lean management is (3.53), i.e., higher than the standard mean and it is within the category of good agreement. The standard deviation is (0.99), and it refers to an agreement among the answers of the participants, with a coefficient of variation of (0.28). In terms of the sub-dimensions, Continuous Improvement ranked first. This indicates the Ministry's follow up to all developments in the educational reality at the global and regional levels, and Ministry tries to adopt development mechanisms, such as updating curricula or introducing modern educational programs such as interactive methods, etc. However, it still needs more effort in this field. On the other hand, the Six Sigma dimension ranked last. It is close to the reality of educational work in Iraq, as most of the frameworks are still within the traditional description or at least most of them are under this approach. Therefore, the culture of zero defects is almost non-existent in the nature of educational outputs, which is still far from the reality of the Iraqi environment. However, we cannot be far away from such approaches and must open up to them with initial simple and primitive steps that start with disseminating the culture until it reaches actual implementation processes.

3.2 Testing the correlation between organizational sense making and lean management:

This study aims to test the hypotheses that measure the effect of the explanatory variable (organizational sense making) on the response variable (lean management) using the multiple linear regression model.

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There is an impact of the organizational sense making on lean management, 5 sub-hypotheses emerge:

1. Organizational sense making has a statistically significant impact on the dimension of workplace organization.

Table 7 shows the results of the multiple linear regression (MLR) analysis of the dimensions of the organizational sense making on the workplace organization 5S. The constant value α was 0.667, which means that when the organizational sense making is zero, the value of workplace organization will not be less than this value.

Table 7: MLR results of the effect of organizational sense making on the dimension of workplace organization 5S

Independent variable dimensions	**Sign.**	**F**	**R^2**	**α**	**β**	**Dependent variable dimension**
Contexts	.000	33.214	.443	0.0667	.222	workplace organization 5S
Language					.269	
Identity					.090	
Cognitive frameworks					.151	
Emotion					.190	
Organizational policy					.170	
Technology					.157	

Table 7 shows that the value of β for the context dimension was 0.222. This indicates that the change in one unit of this dimension will lead to a change in the workplace organization 5S dimension by the same value. Moreover, the value of β for the language dimension was 0.269. This means that a one-unit change in this dimension leads to a change in the workplace organization 5S dimension by this value. The value of β for the identity dimension was 0.090. This refers to that a one-unit change in this dimension leads to a change in the 5S workplace organization dimension by this value. The value of β for the cognitive frameworks dimension was 0.151. It means that a one-unit change in this dimension leads to a change in the workplace organization 5S dimension by the same value. Similarly, the value of β for the organizational policy dimension was 0.170. This indicates that a one-unit change in this dimension leads to a change in the 5S workplace organization dimension by this value. The value of β for the technology dimension was 0.157. This means that a one-unit change in this dimension leads to a change in the workplace organization 5S dimension by the same value. The coefficient of determination R^2 scored 0.443. This confirms that 44% of the variations in the workplace organization 5S are explained by the organizational sense making, while 56% of the changes are due to other factors not included in the regression model. Finally, the F value was 33.214 with a significance level of 0.000. This means that the F value is greater than the tabulated F value. This indicates that organizational sense making affects the workplace organization 5S dimension. Therefore, the first sub-hypothesis is accepted.

2. Organizational sense making has a statistically significant impact on continuous improvement.

Table 6 shows the results of the multiple linear regression (MLR) analysis of the dimensions of the organizational sense making on continuous improvement. The constant value α was 1.195, which means that when the organizational sense making is zero, the value of continuous improvement will not be less than this value.

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Table 8: MLR results of the effect of organizational sense making on the dimension of continuous improvement

Independent variable dimensions	Sign.	F	R^2	α	β	Dependent variable dimension
Contexts	.000	27.685	.398	1.195	.179	Continuous improvement
Language					.352	
Identity					.076	
Cognitive frameworks					.105	
Emotion					.128	
Organizational policy					.150	
Technology					.042	

Table 8 reveals that the value of β for the context dimension was 0.179. This means that a one-unit change in this dimension leads to a change in the continuous improvement dimension by the same value. Moreover, the value of β for the language dimension was 0.352. This indicates that a one-unit change in this dimension leads to a change in continuous improvement dimension by this value. The value of β for the identity dimension was 0.076. This refers to a one-unit change in this dimension leads to a change in the continuous improvement dimension by this value. The value of β for the cognitive frameworks dimension was 0.105. This means that a one-unit change in this dimension leads to a change in the continuous improvement dimension by the same value. Similarly, the value of β for the organizational policy dimension was 0.105. This indicates that a one-unit change in this dimension leads to a change in the continuous improvement dimension by this value. The value of β for the technology dimension was 0.042. This means that a one-unit change in this dimension leads to a change in the continuous improvement dimension by the same value. The coefficient of determination R^2 scored 0.398. This confirms that 39% of the variations in the continuous improvement are explained by the organizational sense making, while 61% of the changes are due to other factors not included in the regression model. Finally, the F value was 27.685 with a significance level of 0.000. This means that the F value is greater than the tabulated F value. This indicates that organizational sense making affects the continuous improvement dimension. Therefore, the second sub-hypothesis is accepted.

3. Organizational sense making has a statistically significant impact on the standard work.
Table 7 shows the results of the multiple linear regression (MLR) analysis of the dimensions of the organizational sense making on the standard work. The constant value α was 1.195, which means that when the organizational sense making is zero, the value of standard work will not be less than this value.

Table 9: MLR results of the effect of organizational sense making on the dimension of standard work

Independent variable dimensions	Sign.	F	R^2	α	β	Dependent variable dimension
Contexts	.000	8.897	.175	1.409	.157	Standard work
Language					.015	
Identity					.105	
Cognitive frameworks					.203	
Emotion					.111	
Organizational policy					.030	
Technology					.018	

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Table 9 shows that the value of β for the context dimension was 0.157. This means that a one-unit change in this dimension leads to a change in the standard work dimension by the same value. Moreover, the value of β for the language dimension was 0.015. This indicates that a one-unit change in this dimension leads to a change in standard work dimension by this value. The value of β for the identity dimension was 0.076. This indicates that a one-unit change in this dimension leads to a change in the standard work dimension by this value. The value of β for the cognitive frameworks dimension was 0.203. This means that a one-unit change in this dimension leads to a change in the standard work dimension by the same value. The value of β for the emotion dimension was 0.111. This refers that a one-unit change in this dimension leads to a change in the standard work dimension by the same value. Similarly, the value of β for the organizational policy dimension was 0.030. This indicates that a one-unit change in this dimension leads to a change in the standard work dimension by this value. The value of β for the technology dimension was 0.018. This means that a one-unit change in this dimension leads to a change in the standard work dimension by the same value. The coefficient of determination R^2 scored 0.175. This confirms that 17% of the variations in the standard work are explained by the organizational sense making, while 83% of the changes are due to other factors not included in the regression model. Finally, the F value was 8,897 with a significance level of 0.000. This means that the F value is greater than the tabulated F value. This indicates that organizational sense making affects the standard work dimension. Therefore, the third sub-hypothesis is accepted.

4. Organizational sense making has a statistically significant impact on the multi-skilled workers

Table 10 shows the results of the multiple linear regression (MLR) analysis of the dimensions of the organizational sense making on the multi-skilled workers. The constant value α was 1.103, which means that when the organizational sense making is zero, the value of multi-skilled workers will not be less than this value.

Table 10: MLR results of the effect of organizational sense making on the dimension of multi-skilled workers

Independent variable dimensions	**Sign.**	**F**	**R^2**	α	**β**	**Dependent variable dimension**
Contexts	.000	20.623	. 330	1.103	.190	Multi-skilled workers
Language					.059	
Identity					.104	
Cognitive frameworks					.342	
Emotion					.092	
Organizational policy					.148	
Technology					.063	

Table 10 shows that the value of β for the context dimension was 0.190. This indicates that a one-unit change in this dimension leads to a change in the multi-skilled workers dimension by the same value. Moreover, the value of β for the language dimension was 0.059. This means that a one-unit change in this dimension leads to a change in multi-skilled workers dimension by this value. The value of β for the identity dimension was 0.104. This indicates that a one-unit change in this dimension leads to a change in the multi-skilled workers dimension by this value. The value of β for the cognitive frameworks dimension was 0.342. This means that a one-unit change in this dimension leads to a change in the multi-skilled workers dimension by the same value. The value of β for the emotion dimension was 0.092. This refers that a one-unit change in this dimension leads to a change in the multi-skilled workers dimension by the same value. Similarly, the value of β for the organizational policy dimension was 0.148. This indicates that a one-unit change in this dimension leads to a change in the multi-skilled workers dimension by this value. The value of β for the technology dimension was 0.063.

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This means that a one-unit change in this dimension leads to a change in the multi-skilled workers dimension by the same value. The coefficient of determination R^2 scored 0.330. This confirms that 33% of the variations in the multi-skilled workers are explained by organizational sense making, while 67% of the changes are due to other factors not included in the regression model. Finally, the F value was 20.623 with a significance level of 0.000. This means that the F value is greater than the tabulated F value. This indicates that organizational sense making affects the multi-skilled workers dimension. Therefore, the fourth sub-hypothesis is accepted.

5. Organizational sense making has a statistically significant impact on Six Sigma Table 11 shows the results of the multiple linear regression (MLR) analysis of the dimensions of the organizational sense making on Six Sigma. The constant value α was 2.122, which means that when the organizational sense making is zero, the value of (2.122will not be less than this value.

Table 11: MLR results of the effect of organizational sense making on the dimension of Six Sigma

Independent variable dimensions	**Sign.**	**F**	**R^2**	α	**β**	**Dependent variable dimension**
Contexts	.000	14.723	.260	2.122	.108	Six Sigma
Language					.101	
Identity					.180	
Cognitive frameworks					.255	
Emotion					.064	
Organizational policy					.150	
Technology					.267	

Table 11 shows that the value of β for the context dimension was 0.108. This indicates that a one-unit change in this dimension leads to a change in the Six Sigma dimension by the same value. Moreover, the value of β for the language dimension was 0.101. This means that a one-unit change in this dimension leads to a change in Six Sigma dimension by this value. The value of β for the identity dimension was 0.180. This indicates that a one-unit change in this dimension leads to a change in the Six Sigma dimension by this value. The value of β for the cognitive frameworks dimension was 0.255. This means that a one-unit change in this dimension leads to a change in the Six Sigma dimension by the same value. The value of β for the emotion dimension was 0.064. This means that a one-unit change in this dimension leads to a change in the Six Sigma dimension by the same value. Similarly, the value of β for the organizational policy dimension was 0.150. This indicates that a one-unit change in this dimension leads to a change in the Six Sigma dimension by this value. The value of β for the technology dimension was 0.267. This means that a one-unit change in this dimension leads to a change in the Six Sigma dimension by the same value. The coefficient of termination R^2 scored 0.260. This confirms that 26% of the variations in the Six Sigma are explained by the organizational sense making, while 74% of the changes are due to other factors not included in the regression model. Finally, the F value was 14.723 with a significance level of 0.000. This means that F value is greater than the tabulated F value, indicating that organizational sense making affects the Six Sigma dimension. Therefore, the fifth sub-hypothesis is accepted.

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3. Conclusion:

The results of the field study indicated a state of weakness in the overall base of organizational cultures of Ministry and directorates about defining criteria for understanding what is agreed upon or disagreed upon and related to what formal and informal behavior is in the various performance indicators. Despite the limited of available capabilities, the departments determined an important and strategic goal represented in transforming the work in the ministry and its directorates into a digital format and adopting modern technological mechanisms, which ~~are~~ ~~is~~ a very important goal. The field study shows that despite the state of great development witnessed by governmental organizations in general, the Ministry of Education is still far from important features to performance, which includes the simplification of work procedures, as routine procedures that are shrouded in a lot of complexity remain the dominant feature to the details of general performance in the Ministry of Education. The results indicated that the Ministry of Education and all the details of its operating employees are still consolidating the concepts of lean management and identifying many adoptions in this framework, most notably Six Sigma and spreading the cultures of this important and modern approach that is adopted in many operating organizations. The statistical tests prove ~~of~~ the main and sub research hypotheses. Thus the effect of the organizational sense making variable on the lane management in the Minster of Education is achieved.

Authors Declaration:

Conflicts of Interest: None

-We Hereby Confirm That All The Figures and Tables In The Manuscript Are Mine and Ours. Besides, The Figures and Images, Which are Not Mine, Have Been Permitted Republication and Attached to The Manuscript.

- Ethical Clearance: The Research Was Approved By The Local Ethical Committee in The University.

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تأثير صناعة الحس التنظيمي على الإدارة الرشيقة - بحث تحليلي وصفي في وزارة التربية العراقية

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مستخلص البحث:

تتضمن فكرة صناعة الحس التنظيمي كيف يصل أعضاء المنظمات إلى تفاهمات حول البيئة من خلال السلوكيات المختلفة ، وكيف تمثل هذه الفهمات الأساس لطبيعة ردود الفعل اللاحقة. يمثل متغير الصناعة بالمعنى التنظيمي المتغير المستقل. أصبح نهج الإدارة الرشيقة فكرة شاملة مطبقة في جميع المجالات وأنشطة الأعمال. لتحقيق أفضل أداء من خلال أفضل المخرجات. يهدف البحث إلى إلقاء الضوء على مستوى الوعي العام لدى الإدارات التربوية بشأن طبيعة صنع المعنى في مؤسسة القطاع التربوي العراقي. تبلورت مشكلة البحث في التأثير الرئيسي لمستوى الحس التنظيمي على ترسيخ ممارسات الإدارة الرشيقة في وزارة التربية والتعليم العراقية ؟. تم استخدام المنهج الوصفي التحليلي كطريقة بحث لوصف وتحليل متغيرات البحث الرئيسية. تكونت عينة البحث من 215 مشاركاً من القيادات الإدارية المتوسطة والعليا في مديريات التربية والتعليم التابعة للوزارة. تم استخدام مجموعة من الأساليب الإحصائية تتمثل في برنامج (Amos.V25) وبرنامج (SPSS). كشفت النتائج عن وجود ضعف في القاعدة العامة للثقافات التنظيمية للوزارات والمديريات فيما يتعلق بتحديد معايير فهم ما يتم الاتفاق عليه أو الاختلاف عليه فيما يتعلق بطبيعة السلوك الرسمي وغير الرسمي في مناهج الأداء المختلفة.

نوع البحث: ورقة بحثية، مستلة من أطروحة دكتوراه
الكلمات الرئيسة: صناعة الحس التنظيمي، الإدارة الرشيقة ، وزارة التربية العراقية.