"The impact of knowledge sharing behavior on organizational learning in business organizations"

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The impact of knowledge sharing behaviour on organizational learning in business organizations: the case of some firms active in the food industry sector in the region of Annaba.



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Abstract:

The study aims to identify the impact of the knowledge sharing behaviour on organizational learning in some firms active in the food industry sector in the region of Annaba. The study population consists of all workers at Mahbouba Company and Seybouse Mills Annaba. A questionnaire was designed to gather data. (82) Questionnaires were valid for statistical analysis. A set of statistical methods was used by the (SPSS 21) software to analyze collected data. The results revealed is the existence of a positive effect between dimensions of knowledge sharing behaviour and organizational learning.

Keywords: Knowledge sharing behaviour; written contributions; Organizational Communication; Personal interactions; organizational learning.

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Introduction:

In recent years, the business environment is constantly changing and becoming hyper-competitive. These changes take many forms including customer's needs, new technologies, competition conditions, social and market trends and economic change. Under this dynamic progress, organizations need to develop survival strategies in order to stay competitive and more responsive to environmental turbulences. To achieve this, there is an increasing tendency towards OL as a business strategy, which can help organization to improve their capabilities and performance to cope with change in the environment. It is seen as a major contributor to develop sustainable competitiveness. In the literature, organizational learning had begun to be paid more attention by both academics and practitioners, since the publication of Cyert and March's (1963), who considered it as an adaptation strategy and the most important aspect of understanding decision-making processes within organizations. Organizational learning is seen as the capacity within an organization that aims to improve performance based on experience (DiBella 1996, p. 363).

In the business context, the use of OL can contribute to lots of benefits in the form of business innovation (Maroofi & Kahrarian 2015; Tamayo-Torres et al 2016); organizational development (Zhou et al 2015; Wujiabudula 2016); competitive capacity (Kamya et al 2011; Makabila et al 2017).

Research Problem:

In the organizational context, OL is a complex process, and the factors affecting it are still not clearly defined. To find out, a number of studies have attempted to address this issue from different views. For example, Sheppard et al (2009) has found that the leadership style has a major role in facilitating the process of organizational learning by developing a shared vision, commitment to learning, and a collaborative culture that helps in learning. Rant (2004) tested empirically the impact of organizational structures on the organizational learning process, and the results showed that the organizational structure is the most important determinant in the success of the organizational learning process. In their study, Jiang & Chen (2017) concluded that a high level of organizational confidence has a positive impact on the organizational learning process. The study of Alas & Vadi (2006), also analyzes the influence of organizational culture on organizational learning and attitudes concerning change in the institutional context. By analyzing 38 Estonian companies, the authors found evidence that both task orientation and relationship orientation of organizational culture stimulate learning and are good agents for predicting organizational learning and attitudes during major organizational change. As far as we see, less attention has been paid to the relationship between knowledge sharing behaviour and organizational learning in organization

In the Arab context, there has been little discussion about the causal relationship between the two concepts and their importance. especially the Algerian context, and due to a lack of studies that attempt to understand the impact that the knowledge sharing behaviour can play on organizational learning, and given the fact that the organizational learning has become one of the critical driving forces for organizations to create competitive advantages. The central question to be examined in this study is: *Does knowledge sharing behaviour have an effect on organizational learning in business organizations?*

Research questions:

The study tries to answer the following questions:

Q1: Do the organizations under study have an acceptable level of knowledge sharing behaviour?

Q2: Do the organizations under study have an acceptable level of organizational learning?

Q2: Is there any relationships between knowledge sharing behaviour and its dimensions and organizational learning?

Q3: Is there any influence of knowledge sharing behaviour dimensions on organizational learning?

Importance of the research:

On the theoretical side, this study seeks to contribute to the enrichment of the library, and to increase knowledge and intellectual accumulation in the field of organizations management, by enhancing understanding of knowledge sharing behaviour and organizational learning.

On the practical side, the study draws the attention of business organizations by exploring the synergistic relationship between knowledge sharing behaviour and organizational learning. Moreover, it provides evidence that helps reduce the knowledge gap about the factors affecting organizational learning.

Research objectives:

The study aims to:

- Provide a general view of employees about the benefits of knowledge sharing and their impact on the learning process in the organizational context.
- Develop a series of testable propositions to describe the connection between the two variables of study in the Algerian food companies.

1. Theoretical Background and Literature Review:

a. Knowledge sharing behaviour:

In the literature, knowledge sharing refers to a "process of capturing, organizing, reusing, and transferring the vast and unique knowledge that resides within the organization and making that knowledge available to others" (Reid 2003, p. 43). Moreover, Knowledge sharing defined as "the process where individuals mutually exchange both tacit and explicit knowledge, and jointly create a new knowledge" (Carrillo et al 2009, p. 257). In a knowledge-sharing cycle, we distinguish between three basic types of knowledge sharing: (1) Knowledge retrieval, where the purpose of Knowledge sharing from the organization to the individual is to retrieve the existing organizational knowledge. At that time, the individual learns from the organization; (2) Knowledge exchange, where the purpose of Knowledge sharing from an individual to other individuals is to exchange the existing individual knowledge. During this process, individuals learn from other individuals; (3) Knowledge creation, where Knowledge sharing among individuals aims to generate new knowledge. As the result, knowledge created in the case of internal learning results from new combinations of existing individual, shared, or organizational knowledge (Volker et al 2003, pp. 31-32).

b. Organizational learning:

In management literature, Organizational learning is one of the concepts used to describe how organizations learn. This concept has been conceived and defined in many ways and there is no consensus on what it is/and what dimensions are included in it. In this context, Prange (1999) stress that the ways in which the concept was classified and used purports an "organizational learning jungle" which is becoming progressively dense and impenetrable. Generally, OL is a process of detecting and correcting error (Argyris 1976, p. 365). In addition, OL refers to a change in the organization that occurs as the organization acquires experience (Argote & Miron-Spektor 2011, p. 1124).

In the organizational context, understanding the process in which organizational learning occurs is the first step to understanding this last and helps organizations to develop strategies to support it. Theoricaly, OL can be proposed as a four-step process. First, knowledge acquisition; it is the process by which knowledge is acquired. Second, information distribution; it is the process by which information is exchanged from different sources, and thereby leads to new information. Third, information interpretation; it is the process by which distributed information is given one or more commonly understood interpretations. Fourth, Organizational memory, is the means by which knowledge is stored for future use (Huber 1991, p.90).

c. Interaction between knowledge sharing behaviour and organizational learning:

Organizational learning and knowledge sharing may seem complementary. On one hand, Knowledge is produced first by organizational learning and on the other hand, the outcome is shared later by the processes of knowledge sharing

(Aizpurúa 2011, p.512). In organization, Knowledge sharing enables managers to keep the individual learning flowing throughout the company and to integrate it for practical applications, which stimulates organizational learning (Yang 2007, p. 84). Given these points, the process by which knowledge is shared determines whether organizational learning occurs and, therefore, whether a knowledge-sharing process is successful (Cummings 2003, p. 4).

d. The literature review:

Nowadays, it has become clear that learning is one of the most important mechanisms that help organizations effectively respond to the changes in external environment.

In the literature, OL is a multilevel phenomenon and theorists and practitioners are not in agreement on what means or how it works. Due to the complexity of subject, many explanations have been suggested in the literature and contain different models that enrich this concept. In the Western society, Škerlavaj et al., (2007), in study aims to test a model of organizational performance improvement based on the impact of organizational learning culture in 203 Slovenian companies. The impact was empirically tested via structural equation modeling (SEM), and the results show that OLC has a positive direct impact on nonfinancial performance and financial performance, but indirect through nonfinancial performance. Also, Li el al., (2012) investigate the influence of organizational learning on customer knowledge acquirement ability. By using a number of statistical methods, the results show that OL process has significant impacts on the improvement of customer knowledge acquirement ability. In the Arab context, Abdel el al., (2019) conducted a study in private banks in the governorates of the Middle Euphrates (Karbala, Qadissiya, Babil, Muthanna and Najaf) emphasizing on organizational learning mechanisms and found that it does in fact impact firm's strategic agility.

By looking at knowledge sharing, the concept also knows an increasing growth in the body of literature. In the Western context, in a study by Radaelli el al., (2011) that aimed to explore the effect of intellectual capital on practitioners' knowledge sharing behaviour, by proposing the organizational knowledge-sharing climate as mediator in three Italian health care organizations, the results indicate that the positive effect of intellectual capital on knowledge sharing is fully mediated by the knowledge-sharing climate of the organization. Also, the study of Li & Luo (2010), which analyze the Influence of Organizational Climate on Knowledge-Sharing Behaviour in (142) IT companies in southern China. by using confirmatory factoring analysis, the authors found evidence that Organizational knowledge-sharing climate; self efficacy and outcome expectations significantly had a positive effect knowledge-sharing behaviour. In the Arab context, Sattar & Fadhil (2019) have examined the contribution of knowledge sharing in promoting organizational ambidexterity at the Universities of Tikrit and Samarra. By using

hierarchical multiple regression analysis, the results show that knowledge sharing have a significant effect in promoting organizational ambidexterity.

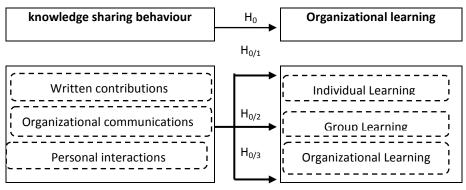
In view of all that has been mentioned so far, there is a great deal of confusion in the literature regarding organizational learning and knowledge sharing behaviour, because the two concepts have multiple dimensions and are not clearly defined. Moreover, although researches have illuminated the importance of both concepts in practice independently, little study has attempted to understand the nature of the relationship between them. In addition, experimental research was conducted in various areas of management and in many countries and cultures. However, to our knowledge, no prior studies have been done in the Algerian context, and in the field of food industries. Empirically, previous studies cannot be considered conclusive because there is dearth of empirical and quantitative evidence relating the two concepts. In order to bridge the identified gaps, the study seeks, in a developing country like Algeria, to examine whether organizational learning is affected by knowledge sharing behaviour.

2. Research Model and Hypotheses:

a. The Research Model:

The theoretical model was developed by researchers based on the investigation of the literature and guided by a relevant theory, which indicate the direction of the causal relationship between the key variables in the study.

Figure 1: the research model



Source: developed based on literature.

Our research model is illustrated in Figure 1. It contains two variables:

- The independent variable: knowledge sharing behaviour (written contributions, organizational communication, personal interactions).
- Dependent variable: organizational learning (individual learning, group learning, organizational learning).

b. Research Hypothesis:

Based on theoretical background and the literature review, the research hypotheses of this study are as follows:

Ho: There is no statistically significant effect of knowledge sharing behaviour on organizational learning at the significance level ($\alpha = 0.05$).

To examine the hypothesis, the study divides the main hypothesis into three sub- hypotheses.

H_{0/1}: There is no statistically significant effect of knowledge sharing behaviour dimensions on individual learning at the significance level ($\alpha = 0.05$).

 $H_{0/2}$: There is no statistically significant effect of knowledge sharing behaviour dimensions on group learning at the significance level ($\alpha = 0.05$).

 $H_{0/3}$: There is no statistically significant effect of knowledge sharing behaviour dimensions on organizational learning at the significance level ($\alpha = 0.05$).

3. Methodology:

a. The Population and Sample:

The population under study involves all categories of employees. It was conducted at two companies active in the food industry sector in the region of Annaba; Mahbouba Company and Seybouse Mills Annaba. From a population of (300) employees, (120) individuals were selected based on the non-random sampling method (intentional) as members of a statistical sample.

b. Data Collection and Measurement:

In order to collect data, a structured questionnaire was designed based on existing measures from the literature. The first portion composed questions regarding the demographic information, while the second portion was designed to measure the knowledge sharing behaviour (from item 1 to item 17) by scale developed by (Yi, 2009), and the third portion was prepared to measure a organizational learning (from item 18 to item 30) previously used by (Loria & Moreno-Luzon, 2014; Templeton et al., 2002). For the attitude questions, a 5-point Likert scale was used. Among a total of (120) distributed questionnaires, only (82) valid responses were received.

c. Reliability of data:

In order In order to ensure the reliability of data, Cronbach's alpha method was used to measure internal consistency of the instrument. After the test, the results showed that the Cronbach's alpha reliability coefficient for each scale was greater than the acceptable value of (0,700), which they considered generally satisfactory, and indicates that all measures have a high level of internal consistency.

4. Results:

a. Analysis of data:

Respondents' Demographic Profile:

In this survey, demographic variables include (gender, age, educational level, career position, period of experience). According to the gender variable, the sample population comprised of (68.3%) males, and (31.7%) females. As for age variable, the number of participants of less than 30 years old was (18.3%), from 30 to 49 was (36.3%) and more than 50 was about (12.2%). Educational level was asked to participants and the results show that our sample contains employees from various educational levels; less than secondary (42.7%), high-tech technician (20.7%), Licence degree (25.6%), Master's degree (8.5%), and lastly postgraduate education (2.4%). Concerning the career variable, the respondents constitute (2.4%) Managers, (3.7%) Department heads, (3.7%) Office Heads, (53.6%) Employees, (36.6%) workers. Regarding period of experience, the rate of participants with less than five years was about (20.7%), from 5 to 10 years was (37.8%) and between 10 to 15 years was about (18.3%), and more than 15 years of experience was (23.2%).

Descriptive statistics:

In order to provide information on the basic qualities of data, the researchers have employed the following descriptive statistics: (1) the Mean, (2) the Standard Deviation, (3) T-test, by using the statistical package program (SPSS 21) as follows:

Table 1. Descriptive statistics of study variables

Veriables	Mean	Std.	T-	Sig *	A. level
Variables		deviation	test		
Written contributions	3,72	1,046	32,21	0.000*	High
Organizational Communication	4,32	0,768	50,91	0.000*	High
Personal interactions	4,23	0,708	54,12	0.000*	High
Knowledge sharing behaviour	4,07	0,668	55,24	0.000*	High
Individual learning	4,18	0.862	43,91	0.000*	High
Group learning	4,38	0.681	58,41	0.000*	High
Organizational learning	4,20	0.777	48,90	0.000*	High
Organizational learning	4,21	0,702	54,31	0.000*	High

Note: t-table: 1,664; *Significant at 0.05; DF: 81.

Source: based on SPSS (21) output

b. Hypothesis Testing:

Correlation test:

In the current study, the researchers have used the Pearson Correlation Coefficient to measure the strength of a linear association between two variables as follows:

Table 2. The Correlation Matrix

Variables	1	2	3	4	5	6	7	8
WC	1							
OC	0,358	1						
PI	0,589	0,590	1					
KSB	0,812	0,755	0,854	1				
IL	0,509	0,471	0,536	0,647	1			
GL	0,277	0,516	0,399	0,510	0,781	1		
OL	0,448	0,495	0,500	0,626	0,738	0,625	1	
OL	0.487	0,561	0,555	0,686	0,946	0,844	0,869	1

^{**} Correlation is significant at the level (2-tailed).

a. Dependent Variable: organizational learning (individual learning; Group learning; Organizational learning).

b. Independent variable: knowledge sharing behaviour (Written contributions; Organizational communication; Personal interactions).

Source: based on SPSS (21) output

In the Table (2), the Pearson correlation coefficient results indicate a very weak positive correlation between each dimension of knowledge sharing behaviour and the organizational learning; WC (r= .487, n= 82, p≤0.05), OC (r= .561, n= 82, p≤0.05), PI (r= .555, n= 82, p≤0.05). Meanwhile, the Pearson correlation coefficient as a whole between knowledge sharing behaviour and organizational learning is (0.686), and the Sig (2-Tailed) value is (0.000) less than (α =0.05). This shows a strong relationship between the two variables, which means that changes in organizational learning are closely related to changes in knowledge sharing behaviour.

Model test:

In order to confirm the proposed theoretical model and validate the hypotheses, a simple regression analysis method was used to determine the effect of the independent variable and its dimensions on the dependent variable, and the results were:

Table 3. Linear Regression for the effect of knowledge sharing behaviour on organizational learning

	Organizational learning								
Model	Model Summary		ANOVA			Coefficients			
	(R)	(R^2)	df	(F)	Sig*	(B)	(T)	Sig*	
KSB	0,686	0,470	81	71,00	0.000	0,720	8,427	0.000	

a. Dependent Variable: organizational learning.
b. Predictor variable: knowledge sharing behaviour.
Note: f-table: 3, 96; *Significant at 0.05; DF: 81.

In the Table (03), the results indicate a positive and high relationship between knowledge sharing behaviour variable and organizational learning (r=0,686). Also, the R-squared value (R^2) is equal to (0,470). This means that (47%) of the total variance in OL is explained by the knowledge sharing behaviour, and the rest is due to other factors not included in this study. Meanwhile, the regression model was statistically significant at (F=71,007, DF= 81, p≤0.05). This leads to reject the null hypothesis and accept the alternative hypothesis that states the existence of a statistically significant effect of the knowledge sharing behaviour variable on organizational learning in the two companies under study. The effect of this predictor variable can be explained as follows: For knowledge sharing behaviour, the T-tests value is (8,427) and the unstandardized coefficient (B) is (0,720) at P value (0.000) less than the alpha level of 0.05, which means that for every 1-unit increase in the knowledge sharing behaviour, the OL will increase by a

value of (0,720). From the results, it can be concluded that the more companies pay attention to a knowledge sharing behaviour, this will reflect positively on improving organizational learning.

Table 4. Linear Regression for the effect of knowledge sharing behaviour dimensions on individual learning

	Individual learning									
Model	Model S	lel Summary ANOVA				Coefficients				
	(R)	(R ²)	df	(F)	Sig*	(B)	(T)	Sig*		
WC						0,241	2,650	0,010		
OC	0,616	0,380	81	15,92	0.000	0,260	2,099	0,039		
PI						0,277	1,780	0,079		

a. Dependent Variable: Individual learning.

Note: f-table: 3, 96; *Significant at 0.05; DF: 81.

In the Table (04), the results indicate a positive and moderate relationship between knowledge sharing behaviour dimensions and Individual learning (r=0.380). Also, the R-squared value (R²) is equal to (0,380). This means that (38%) of the total variance in Individual learning is explained by the KSB dimensions, and the rest is due to other factors not included in this study. Meanwhile, the regression model is statistically significant at (F=15,929, DF= 81, p≤0.05). Which leads to reject the null hypothesis and accept the alternative hypothesis that states the existence of a statistically significant effect of the knowledge sharing behaviour dimensions on Individual learning in the two companies under study? The effect of these predictor variables can be explained as follows: For written contributions, the T-tests value is (2,650) and the unstandardized coefficient (B) is (0,241) at P value (0.010) less than the alpha level of 0.05, which means that for every 1-unit increase in the written contributions, the Individual learning will increase by a value of (0,241). For organizational communication; the T-tests value is (2,099) and the unstandardized coefficient (B) is (0,260) at P value (0,039) less than the alpha level of 0.05, which means that for every 1-unit increase in the organizational communication, the Individual learning will increase by a value of (0,260). Moreover, the results also suggest that the t-tests for personal interactions have pvalues greater than 0.05.which indicate that the personal interactions had no statistically significant effect on individual learning. From the results, it can be concluded that the more companies pay attention to written contributions and organizational communication, this will reflect positively on individual learning.

Table 5. Linear Regression for the effect of knowledge sharing behaviour dimensions on group learning.

b. Predictor variables: Written contributions; Organizational communication; Personal interactions.

	Group learning									
Model	Model S	ummary	mmary ANOVA Coefficion					ents		
	(R)	(R ²)	df	(F)	Sig*	(B)	(T)	Sig*		
WC						0,037	0,482	0,631		
ОС	0,535	0,283	81	10,27	0.000	0,381	3,617	0,001		
PI						0,108	0,818	0,416		

a. Dependent Variable: Group learning.

b. Predictor variables: Written contributions; Organizational communication; Personal interactions

Note: f-table: 3, 96; *Significant at 0.05; DF: 81.

In Table (05), the results indicate a positive and moderate relationship between knowledge sharing behaviour dimensions and group learning (r=0,535). Also, the R-squared value (R²) is equal to (0,283). This means that (28,3%) of the total variance in group learning is explained by the knowledge sharing behaviour dimensions, and the rest is due to other factors not included in this study. Meanwhile, the regression model is statistically significant at (F=10,273, DF= 81, p≤0.05). This leads to reject the null hypothesis and accept the alternative hypothesis that states the existence of a statistically significant effect of the knowledge sharing behaviour dimensions on group learning in the two companies under study. The effect of these predictor variables can be explained as follows: For organizational communication, the T-tests value is (3,617) and the unstandardized coefficient (B) is (0,381) at P value (0,001) less than the alpha level of 0.05, which means that for every 1-unit increase in the organizational communication, the group learning will increase by a value of (0,381). Moreover, the results also suggest that the t-tests for written contributions and personal interactions have pvalues greater than 0.05. Which indicate that both written contributions and personal interactions have no statistically significant effect on group learning. From the results, it can be concluded that the more companies pay attention to organizational communication, this will reflect positively on improving group learning.

Table 6. Linear Regression for the effect of knowledge sharing behaviour dimensions on organizational learning

	Organizational learning.									
Model	Model S	Summary		ANOVA		Coefficients				
	(R)	(R ²)	df	(F)	Sig*	(B)	(T)	Sig*		
WC						0,161	2,260	0,027		
OC	0,655	0,429	81	19,56	0.000	0,324	3,349	0,001		
PI						0,203	1,673	0,098		

a. Dependent Variable: Organizational learning.

b. Predictor variables: Written contributions; Organizational communication; Personal interactions.

Note: f-table: 3, 96; *Significant at 0.05; DF: 81.

In the Table (06), the results indicate a positive and high relationship between knowledge sharing behaviour dimensions and organizational learning (r=0,655). Also, the R-squared value (R²) is equal to (0,429). This means that (42,9%) of the total variance in OL is explained by the knowledge sharing behaviour dimensions, and the rest is due to other factors not included in this study. Meanwhile, the regression model was statistically significant at (F=19,563, DF= 81, p≤0.05). This leads to reject the null hypothesis and accept the alternative hypothesis that states the existence of a statistically significant effect of the knowledge sharing behaviour dimensions on organizational learning in the two companies under study. The effect of these predictor variables can be explained as follows: For written contributions, the T-tests value is (2,260) and the unstandardized coefficient (B) is (0,161) at P value (0,027) less than the alpha level of 0.05, which means that for every 1-unit increase in the written contributions, the organizational learning will increase by a value of (0,161). For organizational communication, the T-tests value is (3,349) and the unstandardized coefficient (B) is (0,324) at P value (0,001) less than the alpha level of 0.05, which means that for every 1-unit increase in the organizational communication, the organizational learning will increase by a value of (0,324). Moreover, the results also suggest that the t-tests for personal interactions has p-values greater than 0.05. Which indicate that the personal interactions had no statistically significant effect on organizational learning. From the results, it can be concluded that the more companies pay attention to written contributions and organizational communication, this will reflect positively on improving organizational learning.

Conclusion:

Currently, the trend towards organizational learning has become a necessity for organizations in order to ensure survival and continuity. This study has attempted to demonstrate some aspects related to this topic, especially its relationship to the knowledge sharing behavior in the Algerian business environment. To achieve this, many hypotheses have been developed and tested to establish the impact of knowledge sharing behaviour on organizational learning. Empirically, the findings shows that knowledge sharing through written contributions and organizational communication have statistically significant effect on Individual learning, while personal interactions did not have any significant impact.

The study results also revealed that from the indicators of knowledge sharing behaviour, organizational communication had a statistically significant

effect on group learning. Further, there is no statistically significant effect for both written contributions and personal interactions in group learning.

Evaluation of the impact of knowledge sharing behaviour dimensions on organizational learning revealed that both written contributions and organizational communication had a statistically significant effect on organizational learning, while personal interactions did not have any significant impact. This requires organizations to give more attention to encouraging interaction between individuals as it helps to share knowledge and facilitates the learning process. Based on this finding, the study concludes that the knowledge sharing behaviour dimensions exert different effects on organizational learning dimensions in the organizations under study.

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