

The Reality of Applying Knowledge administration Requirements in Higher Education Institutions-University of Ain Temouchent, Algeria

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Received:26/04/2025

Accepted :23/05/2025

Published :30/06/2025

Abstract

This study aimed to highlight the correlation between the requirements of the application of knowledge administration and the application of knowledge administration in institutions of higher education. In this study, we followed the descriptive approach in the theoretical aspect, while in the applied side we relied on the analytical approach using the questionnaire that was directed to professors in the Faculty of Economic, Commercial and Management Sciences (FECMS). It was concluded that there was an average application and a medium agreement on each of the statements of the requirements of the application of knowledge administration and the application of knowledge administration Knowledge, as well as a lack of correlation between the application of knowledge administration and the requirements of the application of knowledge administration in its four dimensions

Key words: Knowledge administration, Application Requirements, Knowledge administration Application, Higher Education, University Professors.

JEL Classification: I23, I28, D83, M12, O15

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واقع تطبيق متطلبات إدارة المعرفة في مؤسسات التعليم العالي - جامعة عين تموشنت، الجزائر

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تاريخ النشر: 2025/06/30

تاريخ القبول: 2025/05/23

تاريخ الإرسال: 2025/04/26

ملخص

هدفت هذه الدراسة إلى إبراز العلاقة بين متطلبات تطبيق إدارة المعرفة وتطبيقها في مؤسسات التعليم العالي. اتبعنا في هذه الدراسة المنهج الوصفي في الجانب النظري، بينما اعتمدنا في الجانب التطبيقي على المنهج التحليلي باستخدام الاستبانة الموجهة لأساتذة كلية العلوم الاقتصادية والتجارية والإدارية (FECMS). وخلصت الدراسة إلى وجود تطبيق متوسط واتفاق متوسط على كل عبارة من عبارات متطلبات تطبيق إدارة المعرفة وتطبيق إدارة المعرفة، بالإضافة إلى عدم وجود علاقة ارتباط بين تطبيق إدارة المعرفة ومتطلبات تطبيق إدارة المعرفة بأبعادها الأربعة. الكلمات المفتاحية: إدارة المعرفة، متطلبات التطبيق، تطبيق إدارة المعرفة، التعليم العالي، أستاذ جامعي

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JEL Classification: I23, I28, D83, M12, O15

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Introduction:

With the current changes, trends and contemporary intellectual forces that affect the global economy, including globalization, information and communication technology, and trends in the knowledge economy, the economic perspective and institutional interest in intangible resources (knowledge resources) are changing, along with their increasing attention as a source of wealth, survival, continuity, and excellence. As such, knowledge has become a strategic resource for distinction and progress in today's institutions that seek to acquire it. Knowledge is acquired by finding ways and means to develop mechanisms through which knowledge is generated, creating a knowledge base that helps achieve goals.

Study Problem:

Although the concept of knowledge administration is relatively new, it has proven applicable in educational institutions. Algerian Universities face numerous knowledge-related challenges, including a lack of teamwork culture, issues with participatory decision-making (where senior management makes decisions without consulting other levels), disregard for reports from lower levels, limited cooperation and experience exchange among University Departments, and a lack of encouragement for teamwork across different administrative levels.

Therefore, the main research question is: Is there a correlation between the requirements of applying knowledge administration and the actual application of knowledge administration in the FECMS at Belhadj Bouchaib University, Ain Temouchent?

This leads to the following sub-questions:

- Is there a significant correlation between administrative leadership and the application of knowledge administration?
- Is there a significant correlation between organizational structure and the application of knowledge administration?
- Is there a significant correlation between organizational culture and the application of knowledge administration?
- Is there a significant correlation between information and communication technology and the application of knowledge administration?

Study Hypotheses :

- **Main Hypothesis :** There is a significant correlation between the requirements of applying knowledge administration and the actual application of knowledge administration in the FECMS at Belhadj Bouchaib Ain Temouchent University.
- **Sub-Hypotheses :**
 - There is a significant correlation between administrative leadership and the application of knowledge administration.
 - There is a significant correlation between organizational structure and the application of knowledge administration.
 - There is a significant correlation between organizational culture and the application of knowledge administration.
 - There is a significant correlation between information and communication technology and the application of knowledge administration.

Previous Studies:

Studies in Arabic Language :

A study by researcher Fawzia Qadid (2014–2015), titled "**The Effectiveness of Knowledge Management in Higher Education in Algeria: A Field Study of the University of Algiers 3,**" examined the implementation of knowledge management processes at the University of Algiers 3. The doctoral thesis in Management Sciences (Business Administration specialization) assessed the extent to which knowledge management processes were practiced and the availability of supportive factors for their effectiveness. The study found that knowledge management at the university was ineffective, with only moderate

practice of its processes. Knowledge dissemination scored the highest (mean: 3.873), followed by knowledge acquisition (3.601), application (3.387), and creation (3.104).

Additionally, the research revealed a lack of institutional support for effective knowledge management, with an overall support score of just 119.2. Key challenges included the absence of supportive administrative leadership, an organizational culture hindering knowledge sharing, an unsuitable organizational structure, and significant deficiencies in information and communication technology. These factors collectively undermined knowledge management effectiveness at the University of Algiers 3, prompting recommendations for systemic improvements in Algerian higher education institutions.

The study by researcher Khtiri Wahiba (2019–2020), titled "Knowledge Administration in the Learning Organization: Application Requirements and Ways to Succeed – A Case Study in Some Algerian Universities," was a doctoral thesis in Management Sciences with a specialization in Business Administration. The research sought to assess the level of knowledge administration in learning organizations by examining application requirements and success strategies in Algerian universities from the employees' perspective. Adopting a descriptive-analytical approach for the theoretical framework and a survey-based analytical method for the applied aspect, the study utilized SPSS version 20 for data analysis. Key findings revealed a moderate positive correlation between knowledge administration and its requirements, as well as a strong correlation between learning organizations and these requirements. Additionally, the study confirmed the significant availability of knowledge administration requirements in some Algerian universities. It also identified statistically significant differences (at a 0.05 significance level) in employees' evaluations of these requirements, influenced largely by personal characteristic variables.

The study by researchers Nasiopoulos K. Dimitrios and Lamprini Trivella, titled "Knowledge Administration Strategy within Higher Education: The Case of Greece," was presented at the 2014 International Conference on Innovative Strategic Marketing in Madrid, Spain. The paper explored knowledge administration strategies as a vital factor for enhancing universities' effectiveness and competitiveness in a rapidly evolving global landscape. The study emphasized the need for flexible and adaptive tools that align with the demands of the knowledge society and the global market, enabling higher education institutions to thrive in a dynamic and competitive environment.

The study reached the following key conclusions:

The dynamic simulation model is of paramount importance because it demonstrates the benefits of developing a knowledge administration strategy portfolio within universities to enhance the quality of their services and to meet the demands of the knowledge society, European standards and the global market. In these external and internal circumstances, adopting a strategy to harness and manage the majority of knowledge in the best possible way is essential to satisfy faculty members with their performance.

Fourth : Leslie Whyte's study, Development of a knowledge administration strategy for academic staff (2008), aimed to critically review the historical development of knowledge management, university and institutional initiatives around knowledge management. It reached the following conclusions :

- Faculty members surveyed believed that a knowledge management strategy was necessary.
- A description of the developed knowledge management strategy detailing the elements of the strategy and the relationships between them.
- An evaluation of the knowledge management strategy.

1-The Essence of Knowledge administration:

Organizations, in their journey to survive and grow in the market, resort to knowledge and its management to improve their performance. This is due to the emergence of new challenges that compel them to compare their performance and achievements with those of other organizations.

I-1- Concept of Knowledge and Knowledge administration

I-1-1- Concept of Knowledge

- Linguistic Concept of Knowledge: Knowledge is a noun derived from the verb "to know." It refers to science and the ability to understand, distinguish, or adapt. It is, therefore, everything that is known and understood.
- Technical Concept of Knowledge: The concept of knowledge has numerous definitions and concepts developed by researchers and theorists.
 - Knowledge is defined as "continuous interconnected loops, starting from data and information and culminating in knowledge." (Ali, 2012, p. 479)
 - It is also defined as "everything that an individual acquires as a result of the continuous interaction between tacit knowledge, represented by skills, experiences, and ideas, and explicit knowledge, represented by written sciences, texts, and research available in the individual's environment or external surroundings." (Youssef, 2010, p. 32)
 - And also, "a set of experiences, skills, and information that an individual acquires through learning or practice, then seeks to generalize it to help them improve their standard of living and make appropriate decisions, enabling them to solve the problems they face or the problems of the surrounding community." (Firas, 2010, p.12)

I-1-2- Concept of Knowledge administration

- "A set of processes that help organizations share, generate, organize, store, and apply knowledge, and work to transform knowledge, including (data, information, trends, and capabilities) and services, and use the outputs of knowledge administration in designing processes, solving problems, and achieving the organization's mission." (Rasmi, 2010, p 61)
- It is also defined as "Knowledge administration is the systematic process of directing and leveraging the knowledge asset within the institution. In this sense, it refers to the knowledge of doing things effectively and efficiently, in a way that other institutions cannot imitate or replicate, to be the primary source of profit." (Aboud, 2008, p. 91)
- Knowledge administration is a process carried out by the institution, aimed at extracting, storing, and transferring the knowledge of its employees to other individuals for use through application in daily work, to improve the performance of its workers and thus improve its overall performance. (Baalia, 2022, p. 41)
- Newman defined it as a set of processes that control, create, disseminate, use, reuse, and distribute knowledge by practitioners to provide them with the necessary theoretical knowledge background to improve the quality of decisions and their implementation. (Youssef, 2010, p. 33)
- Duffy also defined it as "the systematic, integrated process of coordinating the organization's activities in light of acquiring, creating, storing, sharing, developing, and replicating knowledge by individuals and groups striving to achieve the main organizational objectives." (Al-Mahamid, 2008)

I-2- Requirements for Implementing Knowledge administration

Implementing knowledge administration requires creating an organizational environment for the organization to obtain the maximum possible benefits from knowledge, making it an environment that encourages effective knowledge administration, enabling knowledge to be stored, transferred, and applied. The following is an explanation of these requirements. (Manasriya, December 2017, pp. 218-219)

- Organizational Culture: It is the picture of the organization to society and shapes its personality. In the eyes of internal consumers—employees—and external customers—clients, suppliers... it must be unique and different. It offers a complete picture that shows common values, beliefs, ideas, and opinions about the past, present, and future of the company. The effectiveness of a knowledge management system depends on the presence of a great organizational culture supporting its use initiatives.
- Organizational Structures: It is a fundamental requirement for the success of any work, including elements that may restrict freedom of work and unleash the latent creativity of

employees. Therefore, management must adopt a flexible organizational structure that helps and encourages individuals to utilize their creativity in work, which reflects on the organization's performance.

- **Organizational Leadership:** Leadership is an essential part of adopting and implementing knowledge administration. Leaders are role models for others to learn from. Knowledge administration requires an exceptional leadership style that leads others to achieve the highest level of productivity in the organization.

- **Information Technology:** It includes all computer hardware and software used to help ensure the security of all information statistics, storage, supply, and administrative-level use, enabling them to exchange information and coordinate with each other to achieve the highest level of productivity. Today, the vast amount of information and knowledge available to organizations cannot be handled using traditional information storage and retrieval methods. It requires an integrated electronic information system that allows users to access information in a timely manner.

I-3- Requirements for Implementing Knowledge administration in Higher Education Institutions

Gill identifies six dimensions to enhance the efforts of implementing essential requirements that must be previously available in university knowledge administration systems and processes:

- **Identifying Core Competencies:** This includes universities that explicitly integrate knowledge administration into their mission statements and organizational vision. Conversely, the university must then identify the core competencies that all its employees must possess to enable them to guide the knowledge administration process in a way that supports the university's ability to perform its core functions in education, scientific research, and community service.

- **Cultural Change:** This includes identifying some procedural steps that universities can take in the short term to facilitate the prevailing cultural change, considering that achieving the future sustainability of knowledge administration processes will inevitably require tangible changes in the university's organization. The culture enables the successful adoption of the values of participation in information exchange, teamwork, creativity, and innovation, taking into account the needs closely related to the university's strategic objectives. Therefore, there appears to be a dire need for an appropriate level of support, guidance, and leadership, as the occurrence of a successful organizational transformation among the indicators of the university's culture is undoubtedly an indicator of its operational success in knowledge administration.

- **Strategic Leadership:** This includes emphasizing the need for universities to view knowledge administration as a cultural change process that requires future and long-term support from the university's administration, while providing leaders with the necessary knowledge, skills, abilities, and resources to make decisions and take decisions from a strategic perspective. Efforts must be mobilized and coordinated at the university level to improve knowledge acquisition processes and effective communication, while building capacity for relevant decision-making at the institutional level of the entire university. Therefore, universities need to employ strategic leaders who are characterized by the ability to make and deliver the required changes in a clear manner and guide the processes applied in knowledge administration to achieve the university's comprehensive vision in its future strategic plan, as desired.

- **Community Partnerships:** Essentially, universities are not organizational institutions that operate in a vacuum. They develop strong and robust relationships with local communities by forming strategic partnerships with them based on the exchange of political, economic, social, and cultural interests. From this starting point, on the surface, the importance of local community participation in driving the university's efforts to implement effective knowledge administration systems is already clear.

- **Reward & Recognition Systems:** Generally seeks to involve all employees and members of the university community at all levels in efforts and initiatives that promote cultural development, provide them with tangible material incentives, enhance their motivation, and establish a supervisory academic environment that presents and celebrates knowledge. From this moment, employee contributions to the development of knowledge administration processes must be appreciated and rewarded for their effective performance in knowledge administration, based on support criteria and accurate program metrics.

- **Knowledge Infrastructure & Technology:** Primarily refers to the non-human systems that must be used to facilitate the task of providing the necessary infrastructure for knowledge administration. These systems are usually mainly related to the technical aspect of knowledge administration, enabling universities to respond better to conditions and dynamically changing situations in the real environment. This usually includes leveraging this advanced knowledge and technical infrastructure in performing the core functions assigned to university knowledge administration systems, which specifically include the input, storage, distribution, and circulation of knowledge. (Al-Ghamdi, 2017, p. 202)

II. Field Study :

1. Study Population and sample :

The study population is the whole set of components the researcher wants to generalize the findings connected to the issue under investigation.

Given that the study population is the FECMS, which numbered 75 professors. A subset of the study population chosen in a suitable way, the study sample is the subject of the study; the findings are then applied and generalized to the whole study population. It was estimated to be 40 professors.

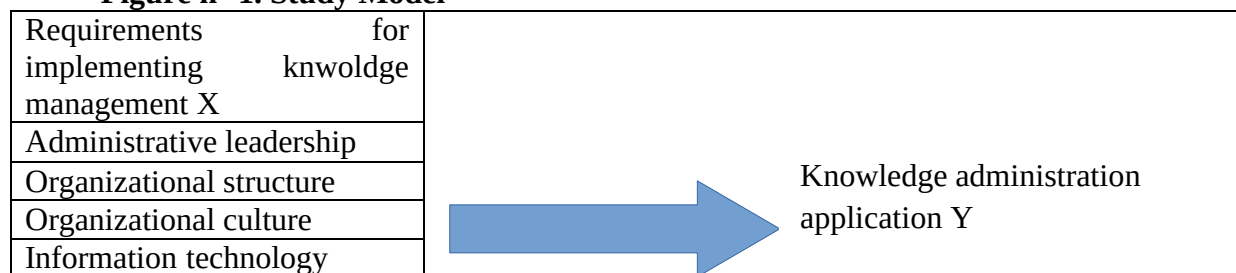
The FECMS received the questionnaire electronically and in paper form once the sample size had been decided.

2. Study Model :

a) Model and Study Tool :

This study aims to investigate the impact of knowledge sharing on ensuring the quality of higher education. The dependent and independent variables have been identified. The study variables can be represented in a form that illustrates the correlation between the study variables.

Figure n° 1. Study Model



Source: Prepared by the researchers

b) Study Tool :

The study questionnaire consists of two axes :

First : Implementing Knowledge Management, which was measured through (16) statements.

Second : Requirements for implementing knowledge administration, represented in four dimensions as shown :

Table n°1 : Statements of the Requirements for Implementing Knowledge administration Axis

Statements	Dimension
Statements 01 to 08	Administrative Leadership
Statements 09 to 16	Organizational Structure
Statements 17 to 24	Organizational Culture
Statements 25 to 32	Information Technology

Source : Prepared by the researchers based on SPSS26 program

c) Statistical Tools Used

To achieve the study objectives and analyze the collected data, several appropriate statistical methods were used, employing the Statistical Package for Social Sciences, abbreviated as SPSS26.

3. Validity and Reliability of the Study Tool

1. Validity of the Study Tool

The study tool's dependability guarantees that, under the same conditions and circumstances, it produces the same outcome if redistributed more than once. Presenting the questionnaire to a panel of professors for arbitration and to provide their views on the clarity of its statements, the suitability of each statement to the dimension it belongs to and the axis as a whole, the degree to which the statements cover each axis of the study variables, and to recommend what they consider required in changing, deleting, and adding other statements helped to guarantee the face validity of the study tool.

2. Reliability of the Study Tool

The consistency of the questionnaire guarantees that it produces the same outcomes under the same conditions if it is distributed multiple times. Conducting the Cronbach's Alpha test, as shown in the table below, was required to guarantee the consistency of the study instrument.

Table n° 2 : Result of Alpha Cronbach's Test

Overall Questionnaire	Number of statements	Reliability Coefficient
	53	0. 886
First Dimension : Administrative Leadership	08	0. 831
Second Dimension : Organizational Structure	08	0. 876
Third Dimension : Organizational Culture	08	0. 842
Fourth Dimension : Information Technology	08	0. 804
First Axis : Knowledge Requirements	32	0. 880
Second Axis : Applying Knowledge administration	16	0. 948

Source : Prepared by the researchers based on SPSS26 program.

The findings in Table No. (8.2) clearly demonstrate the two axes of the study are consistent since their values are 0.880 and 0.948. The overall questionnaire value of 0.886 also indicates a high degree of dependability. Thus, one could argue that this scale is consistent for the respondents, therefore indicating their understanding of its components. Reapplied, therefore, it can be used to produce the same outcomes estimated at 88.6%.

III. Presenting and Discussing the Results of the Field Study

The personal data of the sample people was shown after the study tool was described and its appropriateness for the research confirmed; their response outcomes were then examined. A set of suitable statistical techniques was used to also test the study hypotheses, which were then either accepted or rejected, so finally determining the nature and relevance of the correlation between the dependent and independent variables.

1. Presenting and Analyzing the Study Results

The personal data of the sample people was shown after the study tool was described and its appropriateness for the research confirmed; their response outcomes were then examined. A set of suitable statistical techniques was used to also test the study hypotheses, which were then either accepted or rejected, so finally determining the nature and relevance of the correlation between the dependent and independent variables.

Section One: Administrative Leadership (First Dimension)

Table n° 3: Mean and Standard Deviation for the First Axis - First Dimension: Administrative Leadership

No.	Statement					Total	Arithmetic mean	Standard deviation
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
	Frequency	Frequency	Frequency	Frequency	Frequency			
	Percentage	Percentage	Percentage	Percentage	Percentage			
01	0	14	2	22	2	40	3.30	1.018
	0	35	5	55	5			
02	4	12	8	16	0	40	2.90	1.057
	10	30	20	40	0			
03	0	14	8	18	0	40	3.10	0.900
	0	35	20	45	0			
04	2	12	14	12	0	40	2.90	1.122
	5	30	35	30	0			
05	8	10	10	12	0	40	2.65	1.317
	20	25	25	30	0			
06	10	6	2	22	0	40	2.90	1.104
	25	15	5	55	0			
07	4	8	2	26	0	40	3.25	0.961
	10	20	5	65	0			
08	4	6	16	14	0	40	3.00	0.714
	10	15	40	35	0			
Total						40	3.00	0.714

Source : Prepared by the researchers based on SPSS 26 program.

Analysis :

The table above makes it obvious that the general mean of the responses from the study sample at the FECMS at Belhadj Bouchaib University - Ain Temouchent on the first dimension, Administrative Leadership, is 3.00, indicating an average degree of assessment of its statements. The 0.714 standard deviation shows a low degree of dispersion.

Section Two: Organizational Structure (Second Dimension)

Table n°4: Mean and Standard Deviation for the First Axis - Second Dimension: Organizational Structure

No.	Statement					Total	Arithmetic mean	Standard deviation
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree			

	disagree							
	Frequen cy	Frequen cy	Frequen cy	Frequen cy	Frequen cy			
	Percent age	Percent age	Percent age	Percent age	Percenta ge			
09	4	4	18	10	4	40	3,15	1,075
	10	10	45	25	10			
10	4	4	8	20	4	40	3,40	1,128
	10	10	20	50	10			
11	4	8	12	10	6	40	3,15	1,210
	10	20	30	25	15			
12	2	10	12	12	4	40	3,15	1,075
	5	25	30	30	10			
13	2	4	14	20	0	40	3,30	0,853
	5	10	35	50	0			
14	10	6	4	16	4	40	2,95	1,413
	25	15	10	40	10			
15	4	6	12	18	0	40	3,10	1,008
	10	15	30	45	0			
16	2	10	10	16	2	40	3,15	1,027
	5	25	25	40	5			
Total						40	3,17	0,812

Source : Prepared by the researchers based on SPSS 26 program.

The table above makes it obvious that the general arithmetic mean of the responses of the study sample members in the FECMS at Belhadj Bouchaib University - Ain Temouchent about the second dimension, "Organizational Structure," was 3.17, indicating an average degree of assessment of its statements. A standard deviation of 0.812 shows a poor dispersion.

Third: The Third Dimension, Organizational Culture

Table n°5: Arithmetic Mean and Standard Deviation for the First Axis, the Third Dimension, Organizational Culture.

No.	Statement					Total	Arithme tic mean	Standar d deviatio n
	Strongl y disagree	Disagre e	Neutral	Agree	Strongl y agree			
	Frequen cy	Frequen cy	Frequen cy	Frequen cy	Frequen cy			
	Percent age	Percent age	Percent age	Percent age	Percent age			
17	4	12	4	18	2	40	3,05	1,176
	10	30	10	45	5			
18	2	12	6	16	6	40	3,35	1,167
	5	25	15	40	15			
19	4	8	12	12	4	40	3,10	1,150
	10	20	30	30	10			
20	4	6	12	16	2	40	3,15	1,075
	10	15	30	40	5			
21	4	12	14	10	0	40	2,75	0,954
	10	30	35	25	0			
22	4	8	18	10	0	40	2,85	0,921

	10	20	45	25	0			
23	4	2	14	20	0	40	3,25	0,954
	10	5	35	50	0			
24	2	4	6	24	4	40	3,60	0,982
	5	10	15	60	10			
Total						40	3,14	0,725

Source : Prepared by the researchers based on SPSS 26 program.

Its is obvious from the table above that the overall arithmetic mean of the responses of the study sample members in the FECMS at Belhadj Bouchaib University, Ain Temouchent with regard to the third dimension, organizational culture was 3,14, which reflects a moderate level of evaluation of its statements. A low degree of dispersion is indicated by the standard deviation of 0.725.

Fourth : The fourth dimension, information and communication technology

Table n° 6 : The arithmetic mean and standard deviation of the first axis, the fourth dimension, information and communication technology

No.	Statement					Total	Arithme tic mean	Standar d deviation
	Strongl y disagree	Disagre e	Neutral	Agree	Strongl y agree			
	Frequen cy	Frequen cy	Frequen cy	Frequen cy	Frequen cy			
	Percent age	Percent age	Percent age	Percent age	Percent age			
25	4	14	8	10	4	40	2,90	1,194
	10	35	20	20	10			
26	0	14	10	12	4	40	3,15	1,027
	0	35	25	30	10			
27	2	4	14	14	6	40	3,45	1,037
	5	10	35	35	15			
28	2	10	14	10	6	40	3,10	1,057
	5	25	35	25	10			
29	0	2	2	26	10	40	4,10	0,709
	0	5	5	65	25			
30	0	14	6	16	4	40	3,25	1,056
	0	35	15	40	10			
31	0	14	6	16	4	40	4,05	0,677
	0	35	15	40	10			
32	0	2	2	28	8	40	3,65	0,975
	0	5	5	70	20			
Total						40	3,46	0,637

It is clear from the table above that the overall arithmetic mean of the responses of the study sample members in the FECMS at Belhadj Bouchaib University - Ain Temouchent regarding the fourth dimension, Information and Communication Technology, was 3.46, which reflects a moderate level of evaluation of its statements, with a standard deviation of 0.637 indicating a low degree of dispersion.

Fifth: The Second Axis - Application of Knowledge administration

Table n°7 : Arithmetic Mean and Standard Deviation of the Second Axis - Application of Knowledge administration

No.	Statement					Total	Arithme tic	Standar d
	Strongl	Disagre	Neutral	Agree	Strongl			

	y disagree	e			y agree		mean	deviation
	Frequen cy	Frequen cy	Frequen cy	Frequen cy	Frequen cy			
	Percent age	Percent age	Percent age	Percent age	Percent age			
33	4	4	6	24	2	40	3,40	1,081
	10	10	15	60	5			
34	4	6	22	8	0	40	3,75	1,104
	10	15	55	20	0			
35	6	10	8	12	4	40	2,95	1,260
	15	25	20	30	10			
36	0	16	12	10	2	40	2,95	0,932
	0	40	30	25	5			
37	4	2	16	18	0	40	3,20	0,939
	10	5	40	45	0			
38	4	4	10	18	4	40	3,35	1,122
	10	10	25	45	10			
39	4	4	4	18	10	40	3,65	1,252
	10	10	10	45	25			
40	4	6	10	20	0	40	3,15	1,027
	10	15	25	50	0			
41	4	2	8	26	0	40	3,40	0,982
	10	5	20	65	0			
42	4	10	14	2	0	40	3,50	0,987
	10	15	60	5	0			
43	4	2	6	22	6	40	3,60	1,128
	10	5	15	55	15			
44	4	2	18	16	0	40	3,15	0,921
	10	5	45	40	0			
45	4	6	14	12	4	40	3,15	1,122
	10	15						
46	4	2	12	20	2	40	3,35	1,027
	10	5	30	50	5			
47	4	8	4	22	2	40	3,25	1,149
	10	20	10	55	5			
48	4	2	6	26	2	40	3,50	1,038
	10	5	15	65	5			
Total						40	3,33	0,804

The table above clearly shows that the general arithmetic mean of the study sample members in the FECMS at Belhadj Bouchaib University-Ain Temouchent regarding the second axis "Application of Knowledge administration" was 3.33, which indicates a moderate level of evaluation of the statements contained therein, with a standard deviation of 0.804 indicating a low degree of dispersion.

General Questionnaire Analysis:

Relying on the general arithmetic mean of the replies of the study sample members in the FECMS at Belhadj Bouchaib University-Ain Temouchent about all the statements of the questionnaire, which is estimated at 2.68 with a standard deviation of 0.329. Their agreement with what said in this questionnaire was moderate.

2. Hypotheses Testing :

First : Main Hypothesis :

We used straightforward linear regression. Statistical linear model, this one estimates the correlation between two quantitative variables: the independent variable, "requirements for implementing knowledge administration," and the dependent variable, "implementation of knowledge administration." A linear statistical equation produced by this model can either clarify the correlation between the two variables or project the value of the dependent variable given knowledge of the independent variable.

Table n° 8: Results of Simple Linear Regression for the Main Hypothesis

Model	Sum of Squares	Degrees of Freedom (DF)	Mean Square	F-Value	Significance Level (sig)
Regression	0,000	1	0,000	0,000	0,987b
Error	25,220	38	0,664		
Total	25,220	39			
Variable		Standard Error	Beta (β)	t-value	Significance Level (sig)
Constant	3,346	,870		3,848	
Requirements for Implementing Knowledge administration	-0,005	0,270	-0,003	-0,017	0,987

- Dependent Variable: Implementation of Knowledge administration
- Correlation Coefficient: 0.003
- Determination Coefficient : 0.000

Analysis of Results:

Based on the computed F-value of 0.000 with a probability value of 0.987, which exceeds the significance level of 0.05, the table indicates the validity of the model for testing the hypothesis. The table also reveals a 0.3% correlation coefficient between the two variables—requirements for implementing knowledge administration and implementation of knowledge administration—indicating a very weak positive correlation between them. With a coefficient of determination (R^2) of 0.000, 100% of the variance in the implementation of knowledge administration in the FECMS at Belhadj Bouchaib University is not connected to the influence of the criteria for implementing knowledge administration but rather results from other elements. With a probability value of 0.000, the computed t-value is 3.848, below the significance threshold of $\alpha = 0.05$. It is 0.003.

The alternative hypothesis is rejected and the null hypothesis is accepted since the significance level of 0.987 exceeds the significance level of $\alpha = 0.05$. At a significance level of 0.05, this indicates no statistically significant correlation between the criteria for applying knowledge administration and the application of knowledge administration in the FECMS at Belhadj Bouchaib University, Ain Temouchent.

The regression equation can be expressed as:

$$Y = 3.346 - 0.005X$$

Second: Sub-Hypothesis 1

Hypothesis Testing Method:

We employed straightforward linear regression. A statistical linear model, this one predicts the correlation between two quantitative variables—the independent variable, "administrative leadership," and the dependent variable, "implementation of knowledge administration." A linear statistical equation produced by this model can either clarify the

correlation between the two variables or project the value of the dependent variable given knowledge of the independent variable.

Table n° 9: Results of Simple Linear Regression for Sub-Hypothesis 1

Model	Sum of Squares	Degree of Freedom (DF)	Mean Square	f-Value	Significance Level (sig)
Regression	5,158	1	5,158	9,770	0,003b
Error	20,062	38	0,528		
Total	25,220	39			
Variable	$\square$	Standard Error	Beta (β)	t-Value	Significance Level (sig)
Constant	1,803	0,502		3,590	0,001
Administrative Leadership	0,509	,0163	0,452	3,126	0,003

– Correlation Coefficient : 0,452

– Determination Coefficient : 0,205

– **Dependent Variable : Knowledge administration Application**

Based on the computed F-value of 9,770 with a probability value of 0,003, which is below the significance level of $\alpha=0,05$, the table above makes clear that the validity of the model for testing the hypothesis is confirmed. The same table also makes clear that the correlation coefficient between the two variables (Administrative Leadership; Knowledge Application Management) is 45.2%, suggesting a positive and moderate correlation between them. The determination coefficient is also 0.205, which indicates that 20.5% of the variation in the application of knowledge management at the FECMS at Belhadj Bouchaib University is caused by other elements.

With a probability value of 0.001, the computed t-value was 3.590, below the significance level of $\alpha=0.05$. The coefficient value was 0.4523. The null hypothesis is rejected and the alternative hypothesis is accepted since the significance level was computed to be 0.003, which is lower than the significance level of $0.05 = \alpha$. This alternative hypothesis claims that there is a statistically significant correlation between the leadership of administrators and the application of knowledge administration in the FECMS at Belhadj Bouchaib Ain Temouchent University at a level of significance of 0.05.

And the following regression equation can be reached:

$$Y = 1.803 + 0.509x$$

Third : Section on Sub-Hypothesis 2

It states that:

To test the hypothesis, the simple linear regression method was used, which is a linear statistical model that estimates the correlation between one quantitative variable, the independent variable (organizational structure), and another quantitative variable, the dependent variable (application of knowledge administration). This model results in a linear statistical equation that can be used to interpret the correlation between the two variables or estimate the value of the dependent variable when the value of the independent variable is known.

Table n°10 - Results of Simple Linear Regression for Sub-Hypothesis 2

Model	Sum of Squares	Degree of Freedom (DF)	Mean Square	f-Value	Significance Level (sig)
Regression	70,27	1	0,277	0,432	0,520b
Error	24,943	38	0,656		
Total	25,220	39			

Variable	$\square$	Standard Error	Beta (β)	t-Value	Significance Level (sig)
Constant	3,002	0,522		5,748	0,000
Organizational Structure	0,104	0,160	0,105	0,650	0,520

- Correlation Coefficient: 0.105,
- Coefficient of Determination: 0.011
- **Dependent Variable: Application of Knowledge administration**

The table above makes it obvious that the calculated F-value of 0.423 with a probability value of 0.520, which exceeds the significance level of 0.05, establishes the model's validity for testing the hypothesis. The same table also makes it obvious that the correlation coefficient between the two variables—organizational structure and application of knowledge administration—is 0.105, suggesting a weak positive correlation between them. The coefficient of determination is also 0.011, which indicates that 1.1% of the variation in the application of knowledge management in the FECMS at Belhadj Bouchaib University results from the influence of organizational structure; the remaining 99.9% results from other elements. The computed t-value was 5.748 with a probability value of 0.000, below the significance level of $t = 0.05$, and the coefficient value was 0.105.

Since the significance level was estimated at 0.520, which is greater than the significance level of $\alpha = 0.05$, the alternative hypothesis is rejected and the null hypothesis is accepted, which states that there is no statistically significant correlation between organizational structure and the application of knowledge administration in the FECMS at Belhadj Bouchaib University, Ain Temouchent, at a significance level of 0.05.

And the following regression equation can be reached:

$$Y = 3.002 + 0.104x$$

Fourth: Sub-Hypothesis 3 states:

To test the hypothesis, the simple linear regression method was used. It is a statistical linear

model estimating the correlation between two quantitative variables: the independent variable (organizational culture) and the dependent variable (application of knowledge administration). A linear statistical equation produced by this model allows one to either estimate the value of the dependent variable given knowledge of the independent variable or interpret the correlation between the two variables.

Table n°11: shows the results of the simple linear regression model for sub-hypothesis3.

Model	Sum of Squares	Degree of Freedom (DF)	Mean Square	f-Value	Significance Level (sig)
Regression	0,070	1	0,070	0,106	0,747b
Error	25,150	38	0,662		
Total	25,220	39			
Variable	$\square$	Standard Error	Beta (β)	t-Value	Significance Level (sig)
Constant	3,514	0,578		6,077	0,000
Organizational Culture	-0,058	0,180	-0,053	-0,352	0,747

- Dependent Variable: Application of Knowledge administration
- Correlation Coefficient: 0.053
- Coefficient of Determination: 0.003

The table above makes it obvious that the calculated F-value of 0.106 with a probability value of 0.747, which exceeds the significance level of 0.05, confirms the model's validity for

testing the hypothesis. The same table also makes it obvious that the correlation coefficient between the two variables—organizational culture: application of knowledge administration—is 5.3%, suggesting a rather weak positive correlation between them. The coefficient of determination is also 0.003, which indicates that 0.3% of the variation in the application of knowledge administration in the FECMS at Belhadj Bouchaib University results from organizational culture influence; the remaining 99.7% results from other elements. With a probability value of 0.000, the computed t-value was 6.077, below the significance level $\alpha = 0.05$. It was 0.053.

The alternative hypothesis is rejected and the null hypothesis is accepted since the significance level was projected at 0.747, which exceeds the significance level $= 0.05$. At the 0.05 significance level, the null hypothesis claims no statistically significant link between organizational culture and the use of knowledge administration in the FECMS at Belhadj Bouchaib University of Ain Temouchent.

The following regression equation can be derived:

$$Y = 3.514 - 0.058X$$

Fifth: Sub-hypothesis 4, which states:

To test the hypothesis, simple linear regression was used. This is a statistical linear model that estimates the correlation between one quantitative variable (the independent variable, information and communication technology) and another quantitative variable (the dependent variable, the application of knowledge administration). The model results in a linear statistical equation that can be used to interpret the correlation between the two

variables or estimate the value of the dependent variable when the value of the independent variable is known.

Table n°12 : shows the results of the simple linear regression model for sub-hypothesis4.

Model	Sum of Squares	Degree of Freedom (DF)	Mean Square	f-Value	Significance Level (sig)
Regression	8,743	1	8,743	20,162	0,000b
Error	16,478	38	0,434		
Total	25,220	39			
Variable	$\square$	Standard Error	Beta (β)	t-Value	Significance Level (sig)
Constant	5,900	0,581		10,147	0,000
Information and Communication Technology	-0,743	0,166	-0,589	-4,490	0,000

- Dependent Variable: Application of Knowledge administration
- Correlation Coefficient: 0.589
- Coefficient of Determination: 0.347

Based on the computed F value of 20.162 with a probability value of 0.000, which is below the significance level $= 0.05$, the table above makes clear the model's validity for testing the hypothesis. The same table also makes it obvious that the correlation coefficient between the two variables, information and communication technology and the application of knowledge administration, is 58.9%, suggesting a moderate positive correlation between them. With a coefficient of determination of 0.347, information and communication technology accounts for 34.7% of the variance in the application of knowledge administration in the FECMS at Belhadj Bouchaib University; the remaining 65.3% is caused by other elements. With a probability value of 0.000, the computed t value was 10.147, which is below the significance level of 0.05. -0.589 was the coefficient value.

Since the significance level was estimated at 0.000, which is less than the significance level $= 0.05$, the null hypothesis is rejected and the alternative hypothesis is accepted. The

alternative hypothesis states that there is a statistically significant correlation between the organizational structure and the application of knowledge administration in the FECMS at Belhadj Bouchaib University of Ain Temouchent at the 0.05 significance level.

The following regression equation can be derived:

$$Y = -5,9 - 0,743x$$

Study Findings :

- At a significance level of 0.05, administrative leadership and the application of knowledge administration in the FECMS at Belhadj Bouchaib University of Ain Temouchent show a statistically significant relationship.
- At a significance level of 0.05, there is no statistically significant link between organizational structure and the application of knowledge administration in the FECMS at Belhadj Bouchaib University of Ain Temouchent.
- At a significance level of 0.05, there is no statistically significant correlation between organizational culture and the application of knowledge administration in the FECMS at Belhadj Bouchaib University of Ain Temouchent.

Study Recommendations:

- To enhance, grow, and invest the knowledge stock accessible to human resources, keep pace with administrative techniques, approaches, and practices connected to knowledge administration and regard it as a great wealth that enhances success or transforms failure into success.

- Concentrate on conducting a succession of seminars, lectures, workshops, training courses, and conferences in the area of knowledge administration to raise awareness and the culture of knowledge administration and share information and experiences in this domain.
- It is necessary to link universities with research centers and major databases to contribute to building and developing knowledge.
- Encourage and motivate the use of information and communication technologies and the investment of knowledge systems in decision-making to accomplish work at a high level of performance, and thus the growth of knowledge administration characteristics in the long term.
- Establishing efficient communication networks calls for attention to the infrastructure and technology as well as resource allocation—both financial and intellectual.

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