

The role of e-management on the quality of higher education - Study of the University of Tissemsilt-

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Abstract:

This study aims to explore the impact of E-management across three dimensions (administrative, educational, and office activities) on the quality of higher education. A descriptive-analytical approach was adopted, and data were collected through a questionnaire distributed to 778 teaching staff members. A total of 257 questionnaires were distributed, with 83 retrieved and 64 deemed valid for the study. The statistical analysis was conducted using SPSS V27 software. The findings reveal that E-management significantly affects the quality of higher education, and there is a statistically significant relationship showing the contribution of E-management applications (administrative, educational, office) to improving the quality of higher education. Additionally, the results indicate statistically significant differences in respondents' answers regarding the level of E-management application and the quality of higher education based on variables like experience and Academic Degree, except for Gender

Keywords: Higher Education Institutions, Office activities, E-management, Teaching Staff

Jel Classification Codes: L86 ‘M15 ‘H83

INTRODUCTION:

With rapid technological advancements, institutions striving for growth and innovation face significant challenges, particularly the increasing spread of the internet and the digital era. Consequently, it has become essential for institutions to adopt advanced, flexible administrative strategies that align with these swift changes, enabling them to adapt to environmental shifts and improve their performance to achieve excellence.

In this context, E-management emerges as a modern administrative style, developed due to the increased use of computers and the development of networks, and the information revolution. It allows institutions, including higher education institutions, to leverage E-management applications through innovative tools provided by information and communication technology. These tools are effective in storing and sharing information online, making traditional management insufficient to meet the requirements for institutions to remain competitive and apply quality standards.

The transition to E-management has become a necessity for higher education institutions, driven by global developments, scientific and technological advancements, and the demand for improved quality in higher education. Adopting E-management applications is a necessary step to enhance performance and increase efficiency in utilizing human and material resources. Converting traditional management into E-management presents a genuine opportunity to improve the efficiency of institutions and effectively address traditional administrative challenges.

To achieve these goals, higher education institutions must continuously work to improve internal operations and ensure that each department, faculty, and employee strives to enhance their performance, aiming to foster quality in higher education and adopt E-management applications.

Study Problem:

Like many other countries, Algeria is gradually attempting to implement the principles of E-management across various sectors, including administration, distance learning, and communication. The higher education sector is considered one of the most strategic, requiring improved management to enhance education quality through the application of information and communication technology in administration.

Based on the above, the following problem can be posed: How can the application of E-management contribute to improving the quality of higher education?

To answer this problem, we propose the following statistical hypothesis: There is an impact of E-management on the quality of higher education at the University of Saïda.

Sub-hypotheses:

- There is a statistically significant impact of **the dimensions** of E-management on the quality of higher education.
- There are statistically significant differences in the application of E-management attributed to variables (Gender, experience, Academic Degree).

- There are statistically significant differences in the application of higher education quality attributed to variables (Gender, experience, Academic Degree).

Study Objective:

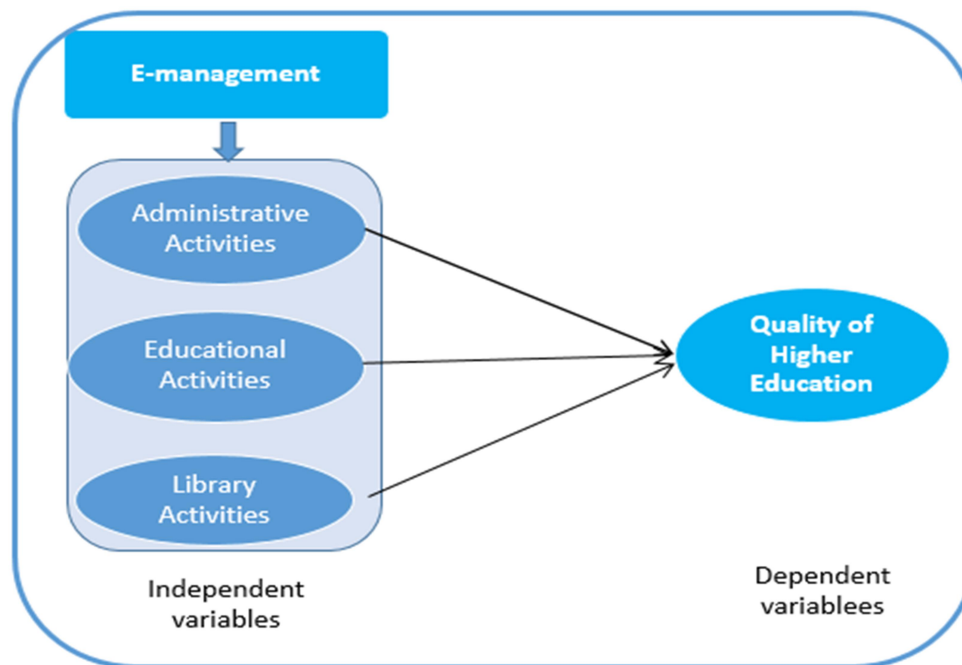
The study aims to investigate the current state of E-management implementation in Algerian universities and examine the differences in the perspectives of the sample regarding the application of E-management in these universities based on variables such as Gender and years of experience. It is hoped that the results of this study will help to assess the reality of E-management application, support its spread in educational institutions, and provide information that may assist university officials in identifying shortcomings in the current implementation of E-management. Moreover, the study aims to promote the expansion of electronic data management within these institutions, which will positively impact their performance and help them achieve their goals.

Study Methodology:

To achieve the research objective, address the study problem, and test the validity of the proposed hypotheses, we relied on the descriptive method to present and describe both E-management and the quality of higher education, along with their related concepts and variables. In addition, the analytical method was used to examine the role and significance of the study's variables.

We also employed the case study approach, which is one of the methods used in the descriptive-analytical methodology. Data and information were collected by distributing 257 electronic questionnaires to the sample (university professors), of which 83 were returned, with 64 being valid for the study. The data were analyzed and interpreted using linear regression with the SPSS V27 statistical software package.

Figure (1): Study structure



.Source: Prepared by the researcher based on previous studies

THEORETICAL ASPECT:

First: E-Management:

The concept of e-administration emerged as a result of significant developments in the modern world, with the introduction of information and communication technologies (ICT) in public administrations, especially with the shift from paper-based operations to electronic work. E-administration is defined as "an integrated electronic system based on information and communication technology to transform traditional manual administrative work into integrated electronic work." To the tasks that are performed through modern digital technologies in this field, without online administration, the provision of services, public sector intervention, and high-quality operations at low cost, which represent online administration, cannot be achieved." (Neringa & Karolina , The Impact of Electronic Application Management on the Efficiency of Administrative Processes, 2022)

While Al-Salami knew it It is defined as a process that focuses on the activities and tasks of an administrative institution, relying on all modern technological tools to achieve goals, reduce routine work, simplify procedures, and ensure the fast and accurate completion of tasks and transactions. (Alaa , 2013)

Accordingly, there are several definitions. Ridwan defines E-management as "the execution and implementation of educational services and transactions provided to external clients, such as students, electronically through the use of information technology, knowledge, communications, and the internet.

Amer also defined it as "an integrated electronic system that relies on communication and information technologies to transform manual administrative work into tasks executed using

modern digital technologies." (Enes, The role of electronic management in achieving the quality of educational service at Taibah University in Medina from the viewpoint of the external customer, 2018)

Al-Salmi also defined it as a term composed of two words: "management" and "electronic." Management is the process of organizing tasks within the limits of available resources and overseeing the guidance of employees to accomplish them in order to achieve specific goals. Its core functions include planning, organizing, directing, and controlling. (Saad, Electronic management, 2017, p. 10)

According to the Organisation for Economic Co-operation and Development (OECD), E-management is defined as "the use of information and communication technology, particularly the internet, as a tool to achieve better management." (Oum Al-Saad , 2023)

Based on the previous definitions, we can conclude that E-management is a concept that relies on the use of information and communication technology to improve the management of services and operations, whether in the public or private sectors, including universities. It aims to transform traditional activities into electronic formats to simplify procedures and save time and effort through the use of computers and the internet. E-management represents a significant advancement in the business world, enhancing efficiency and effectiveness in service delivery, facilitating communication, and reducing bureaucracy.

Dimensions of E-management: E-management has multiple dimensions, and we will mention a few of them:

1- Administrative Activities:

Tracking student attendance and absences can be streamlined through a specialized computer-based system, where student absences are recorded for each session automatically. This allows administrators to know the attendance status of each student. Students and teachers can be notified of absences, along with the date and session number, making it easier for them to stay informed and enhancing transparency in university operations. (Barbash , 2024)

Extracting, analyzing, and evaluating student results accurately and with minimal effort can be achieved by leveraging modern technology and using computers. Electronic solutions can be implemented to store results and easily retrieve them. Computers can also analyze data and correct errors quickly and efficiently.

Displaying student results and performance levels in charts through electronic tables makes it easier for concerned parties to identify weak areas and work on improving them more effectively.

Communication within university institutions: Email is one of the main services within the framework of E-management in universities. It facilitates communication between different university departments, professors, and students.

2- Educational Activities

In the age of the internet and computers, the professor's role is associated with four broad areas: instructional design, the integration of technology into education, encouraging student interaction in the learning process, and developing students' self-directed learning to harness their capabilities in their own educational process. Additionally, the professor has many other roles, such as delivering lectures with the aid of computers, the World Wide Web, and various auditory and visual technological tools. Afterward, students are tasked with using this technology as resources for research and completing assignments. Furthermore, the professor must prepare students to use these tools and interact with them by encouraging questions and inquiries, explaining how to use them in their studies, clarifying any unclear points, and answering all questions and queries. The professor should also encourage students to use technological tools independently, innovate, and create necessary educational programs such as web pages, collaborate with other students on writing and university research, and conduct discussions via email. (Harouch, 2015)

3- Library Activities :

The application of electronic management in university libraries offers better services through modern methods and tools, primarily computers and the internet. These services include:

- a. Keeping records and using them to produce bibliographic research services.
- b. Cooperative programs within local information networks among a group of university libraries.
- c. Automated lending systems.
- d. Automated searching with direct connections.
- e. Automated indexing and classification.
- f. Automated control of periodicals.
- g. Electronic distribution of thesis content.
- h. Access to global university library catalogs.
- i. Subscription to periodicals, especially electronic ones, as there are thousands of periodicals available on the internet. Some websites provide comprehensive information about periodicals on various topics, particularly regarding subscription methods.
- j. Utilizing internet services to offer advanced services such as current awareness and selective information dissemination. Electronic publishing in thousands of journals, references, books, patents, reports, and other sources of information published online in various languages daily. (Oum Al-Saad , 2023)

Second/ Quality of Higher Education :

The concept of quality in higher education is comprehensive and evolving, and it can be defined in various ways depending on the context and specific objectives. Among these definitions, some may include striving for excellence, setting quality standards, focusing on continuous improvement, and providing services of acceptable quality relative to cost.

In the context of some regulations, the term quality in higher education refers to the mechanisms and means employed by higher educational institutions to ensure that the required standards are met in research, teaching, and infrastructure.

Furthermore, quality in higher education can be defined as the continuous focus on achieving outstanding performance by higher educational institutions, with the goal of gaining the trust of the community in the quality of the outcomes they provide. In the midst of the ongoing digital transformation worldwide, electronic management is considered an advanced use of technology to improve administrative performance and facilitate internal and external communication. Quality in higher education aims to ensure the provision of outstanding education that meets the needs of students and the demands of the labor market. This is reflected in how electronic management is used to enhance the quality of higher education by improving administrative processes and facilitating educational and academic operations. This interaction contributes to creating an educational environment characterized by efficiency and effectiveness in achieving educational and learning goals. (Chaouki & Ali , 2020)

In the last five years, the quality of higher education in Algeria has received unprecedented attention due to various educational issues affecting the educational systems. These issues include declining educational standards, decreased student motivation to learn, and the deterioration of educational resources. Educational resources have increasingly relied on electronic devices such as computers, the internet, and 3D imaging, among others.

The impact of using technology and electronic tools in managing and organizing higher education has led to a relationship between electronic management and the quality of higher education.

PRACTICAL ASPECT:

After discussing the theoretical aspects of the study variables—electronic management and the quality of higher education—we will now focus on a field study at Dr. Moulay Tahar University in Saida. This study aims to examine the effect of electronic management on the quality of higher education.

1- Descriptive study of the sample

1-1- Statistical description of the study sample

Table (1): Statistical description of the study sample

		Number	Percentage
Gender	Male	33	50.8

	Female	31	47.7
Experience	Less than 5 years	8	23.4
	From 6 to 10 years	15	64.1
	More than 10 years	41	12.5
Academic Degree	Maître Assistant	16	25
	Maître de Conférences	25	39.1
	Professeur	23	35.9

Source: Prepared by the researcher using SPSS V27

1-2- Validity and reliability of the study tool:

Reliability of the questionnaire means stability in the results of the questionnaire and not changing them significantly if it is redistributed to the sample members several times during specific time periods. We used the Cronbach's alpha method to measure the reliability of the questionnaire.

Table (2) : Cronbach's alpha reliability factor for all study variables

Axes	Variables	Cronbach's Alpha Coefficient	
E-Management	Administrative Activities	0.914	0.964
	Educational Activities	0.865	
	Office Activities	0.957	
Quality of Higher Education			0.981
All study Items			0.980

Source: Prepared by the researcher using SPSS V27

Based on the results of the table above, it is clear to us that the value of Cronbach's alpha coefficient for the two axes is: 0.964 and 0.981. As for the value of Cronbach's alpha coefficient for all questionnaire statements, it reached 0.98, which is a high stability rate, indicating that the questionnaire statements are characterized by internal consistency and reliability. Therefore, they are suitable for study, analysis and drawing conclusions.

1-3- Normality Test

H₀: The sample follows a normal distribution.

H₁: The sample does not follow a normal distribution

Table (3): Kolmogorov-Smirnov Test

Kolmogorov-Smirnov			Axes
Sig	Degree of Freedom	Statistics	
0.20	64	0.093	E-Management
0.048	64	0.111	Quality of Higher Education

Source: Prepared by the researcher using SPSS V27

From the table above, it is clear to us that the value of the moral significance of the E-management axis is (0.20), which means accepting the null hypothesis H₀, which states that the sample follows the normal distribution. As for the value of the moral significance of the higher

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education quality axis, it was estimated at (0.048), which means rejecting the null hypothesis H₀ and accepting the alternative hypothesis H₁, i.e. the sample does not follow the normal distribution, but since the value is close to the significance level (0.05) and the sample is larger than 30, the distribution approaches the normal distribution according to the theory of central limits.

1-4-Study of the direction of respondents' opinions:

Studying the opinions of respondents to know the level of application of Saida Saida University - Algeria, e-administration and the quality of higher education.

Table (4) : Trend of respondents' opinions

Variables		mean		Standard deviation		Degree of agreement
E-Management	Administrative Activities	3.8402	3,622	0.79210	0.790	High
	Educational Activities	3.4409		0,7292		Acceptable
	Office Activities	3,7083		1,0375		Acceptable
Quality of Higher Education		3.527			0.879	High

Source: Prepared by the researcher using SPSS V27

It is clear from the results of the table above that the general trend of the respondents' opinions was in the direction of agreeing according to the five-point Likert scale. Accordingly, Saida University in Algeria applies E-management and the quality of higher education to a very acceptable degree.

2- Testing Hypotheses and Differences

In this section, the hypotheses and differences will be tested, their results will be analyzed and discussed.

2-1- Testing Hypotheses

2-1-1- Main Hypothesis

H₀: There is no effect of E-management on the quality of higher education

H₁: There is an effect of E-management on the quality of higher education

This hypothesis was tested by simple linear regression analysis (REGRESSION) and analysis of variance (ANOVA)

Table (5): shows the results of the simple linear regression test between E-management and the quality of higher education

Independent variable	Dependent variable				
	Quality of Higher Education				
E-Management	R	R ²	Regression coefficient	Constant	Sig

	0,763	0,582	0.839	0.476	0.000
Quality of Higher Education	$\hat{Y}=0.476+0.839x$				

Source: Prepared by the researcher using SPSS V27

From the table above, we conclude that the value of the correlation coefficient is $R= 0.577$, which indicates the existence of a positive, medium direct correlation between the axis of electronic management and the axis of the quality of higher education. Also, the value of the coefficient of determination is $R^2 = 0.577$ which means that 57.7% of the change in the quality of higher education is due to electronic management.

Table (6): ANOVA Model Between The Quality Of Higher Education and E-management

Model	sum of squares	Degree of freedom	Mean squares	Fisher F	Sig F
Regression	27.580	1	27.580	84.430	0.00
Residuals	20.253	62	0.327		
Total	47.833	64			

Source: Prepared by the researcher using SPSS V27

Through the ANOVA table, we notice that the value of the F statistic is statistically significant at 0.05, as it was equal to 0.00, and thus this model is accepted in predicting the relationship between E-management and the quality of higher education. This is what makes us reject the null hypothesis H_0 and accept the alternative hypothesis H_1 , which is: There is a statistically significant effect of E-management on the quality of higher education.

2-1-2-Sub-Hypothesis:

H_0 : There is no statistically significant effect of the dimensions of E-management on the quality of higher education

H_1 : There is a statistically significant effect of the dimensions of E-management on the quality of higher education

This hypothesis was tested by simple linear regression analysis (REGRESSION) and analysis of variance (ANOVA)

Table (7): Shows the results of the simple linear regression test between the dimensions of E-management and the Quality Of Higher Education

Dependent variable	Independent variable	Const	R	R ²	sig	Non-standardized regression coefficients
Quality of Higher Education	Administrative Activities	0,325	0,765	0,586	0.000	0,300
	Educational Activities					0,376
	Office Activities					0,208
Multiple Regression Equation		$\hat{Y} = 0,325 + 0.300X_1 + 0.376X_2 + 0.208X_3$				

Source: Prepared by the researcher using SPSS V27

From the above table, we conclude the regression equation as follows: The value of the correlation coefficient is $R = 0.765$, which indicates the existence of a strong direct relationship between the dimensions of E-management and the quality of higher education. The value of the coefficient of determination is $R^2 = 0.586$ which means that 58.6% of the change in the quality of higher education is due to the dimensions of E-management. The slope values of the multiple regression line were (0.208; 0.376; 0.300), meaning that the dimensions (administrative activities, office activities, educational activities) have a positive impact on the quality of higher education.

Table (8): ANOVA model between the quality of higher education and E-management

Model	sum of squares	Degree of freedom	Mean squares	Fisher F	Sig F
Regression	28,023	3	9,341	27,822	0.00
Residuals	19,809	59	0,336		
Total	47,833	62			

Source: Prepared by the researcher using SPSS V27

Through the ANOVA table, we notice that the value of the F statistic is statistically significant at 0.05, as it was equal to 0.00, and thus this model is accepted in predicting the relationship between the dimensions of E-management and the quality of higher education. This is what makes us reject the null hypothesis H_0 and accept the alternative hypothesis H_1 , which is: There is a statistically significant impact of the dimensions of E-management on the quality of higher education.

2-2- Study Of Differences :

The impact of personal variables of the research on the application of (E-management and the quality of higher education)

2-2-1- Testing the impact of the variable (Gender, Experience, Academic Degree) in the application of E-management

H_0 : There are no statistically significant differences in the application of E-management attributed to the variables (Gender, Experience, Academic Degree).

H_1 : There are statistically significant differences in the application of E-management attributed to the variables (Gender, Experience, Academic Degree).

This hypothesis was tested by testing the one-way analysis of variance ANOVA ONE WAY

Table (9): ANOVA analysis in the application of E-management

		Somme des carrés	ddl	Carré moyen	F	Sig.
Gende r	Inter- groupes	7,704	30	0,257	1,022	0,475
	Intragroupe s	8,042	32	0,251		
	Total	15,746	62			

Experi ence	Inter- groupes	20,746	30	0,692	2,012	0,027
	Intragroupe s	11,000	32	0,344		
	Total	31,746	62			
Acade mic Degree	Inter- groupes	27,889	30	0,930	2,879	0,002
	Intragroupe s	10,333	32	0,323		
	Total	38,222	62			

Source: Prepared by the researcher using SPSS V27

Considering the results obtained in the ONE ANOVA WAY table, for the variable type, its significant value is Sig=0.475, which is a value greater than 0.05, so there are no statistically significant differences in the application of E-management attributed to the variable (Gender).

As for the two variables (Experience, Academic Degree), their significant values were Sig(0.027-0.002) respectively, which are less than 0.05, so there are statistically significant differences in the application of E-management attributed to two variables (Experience, Academic degree).

2-2-2- Testing the effect of the variable (Gender, Experience, Academic Degree) in the application of the quality of higher education

H₀: There are no statistically significant differences in the application of higher education quality attributed to the variables (Gender, Experience, Academic Degree).

H₁: There are statistically significant differences in the application of higher education quality attributed to the variables (Gender, Experience, Academic Degree).

This hypothesis was tested by one-way ANOVA test

Table (10): ANOVA analysis in the application of electronic management

		Somme des carrés	ddl	Carré moyen	F	Sig.
Gende r	Inter- groupes	7,768	31	,251	,976	,526
	Intragroupe s	8,217	32	,257		
	Total	15,984	63			
Experi ence	Inter- groupes	28,818	31	,930	9,394	,000
	Intragroupe s	3,167	32	,099		
	Total	31,984	63			
Acade mic Degree	Inter- groupes	34,568	31	1,115	9,732	,000
	Intragroupe s	3,667	32	,115		

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	Total	38,234	63			
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Source: Prepared by the researcher using SPSS V27

Considering the results obtained in the ONE ANOVA WAY table, for the Gender variable, its significant value is Sig=0.526, which is a value greater than 0.05, so there are no statistically significant differences in the application of higher education quality attributed to the variable (Gender). As for the two variables (Experience, Academic Degree), their significant values were Sig(0.00-0.00) respectively, which are less than 0.05, so there are statistically significant differences in the application of higher education quality attributed to two variables (Experience, Academic Degree).

STUDY RESULTS AND DISCUSSION

After addressing the theoretical aspect of the concepts related to E-management and the quality of higher education through definitions, and stating the reasons for the transformation and importance. Also, the most important principles and standards were addressed, and the relationship between E-management and the quality of higher education was clarified, in addition to analyzing previous related studies.

Through the field study that was conducted at the level of Saida University, and this is to know the impact of E-management on the quality of higher education from the point of view of the faculty, the focus was on three dimensions of E-management: administrative activities, educational activities, and office activities to know the extent of the impact of each dimension on the quality of higher education. The results obtained showed that: - There is an application of electronic management in higher education in Algeria, which will lead to the spread of education, improve its level and reduce costs. Contributing to improving the quality of higher education using electronic management allows for the provision of a flexible educational environment and the continuous improvement of the role of the professor, teaching methods and artificial intelligence for education and achieving the highest possible levels in practices and operations, and thus obtaining highly efficient outputs.

- There is a significant impact of E-management on the quality of higher education in Algeria, and this is consistent with several studies, including: (Khanshour & Ababsa, 2020) and (Bouamama & Bouhada, 2020) (Al-Jabri & Hussein, 2023). In addition to the above, the results showed the presence of statistically significant differences at the significance level (0.05) in the application of E-management and the quality of education at Saida University attributed to the functional variables: (Academic Degree, Experience) with the exception of the Gender variable, i.e. there is a difference in the opinions of the study sample between those with Academic Degrees and those with Experience in the application of E-management and the quality of education, while Gender did not have an impact on the opinions of the study sample.

BIBLIOGRAPHIE

Barbash , A. (2024). The impact of electronic management on administrative activity (the electronic administrative contract as a model). *Law Journal; volume 13; Issue 1*, 25-51.

- Chaouki , N., & Ali , O. (2020). Quality Assurance in Higher Education: Concept and Principles An analytical study in the light of Resolution 2004 of 29 December 2014. *Scientific Horizons Magazine*, volume 12, issue 4, 617-631.
- Neringa , V.-V., & Karolina , P. (2022). The Impact of Electronic Application Management on the Efficiency of Administrative Processes. *Economies*, 10(08), 1-16.
- Neringa , V.-V., & Karolina , P. (2022). The Impact of Electronic Application Management on the Efficiency of Administrative Processes. *Economies*, 10, 180. <https://doi.org/10.3390/economies10080180>, 1-16.
- Alaa , A. A.-S. (2013). *Information Management Systems*, Publisher: Arab Organization for Administrative Development. Cairo, Egypt: Arab Organization for Administrative Development.
- Al-Jabri, S., & Hussein, A. (2023). E-management and its relationship to the quality of services in Palestinian universities. *Peace Journal for Humanities and Social Sciences*, volume 7, issue 1, 07(01), 69-102.
- Bouamama , M., & Bouhada , C. (2020). The effect of using electronic administration on the quality of services administration on the quality of servicesA field study at the Algeria Post Corporation of MEDEA province. *Journal of the Academy of Social Sciences Research*, volume 1, issue 2, 104-125.
- Enes, A. (2018). The role of electronic management in achieving the quality of educational service at Taibah University in Medina from the viewpoint of the external customer. *Scientific Journal of Business Research and Studies -Volume 32 - Issue 4*, 32(4), 155-230.
- Enes, A. (2018). The role of electronic management in achieving the quality of educational service at Taibah University in Medina from the viewpoint of the external customer. *Scientific Journal of Business Research and Studies -Volume 32 - Issue 4*, 32(4), 155-230.
- Gaffour , F. (2021). The role of electronic administration in activating the principle. *Economic and Management Research Journal*, 15(1), 89-106.
- Harouch, R. (2015). Using e-management to improve the quality of educational services in Algerian universities. *Algerian Journal of Social and Human Sciences*, volume 2; issue 4, 11-59.
- Khanshour , d., & Ababsa , T. (2020). The contribution of e-management to improving thequality of higher education services in AlgeriaBetween reality and hope. *Scientific Horizons Magazine*, Volume: 12 Issue: 02, 357-377.
- Mary, s. (2000). Risk factors in enterprise wide information management systems projects. *Special Interest Group on Computer Personnel Research Annual Conference*, 06 Apr 2000 (pp. 180-187). University Edwardsville: ACM Press.
- Oum Al-Saad , A. H. (2023). The role of e-management in developing the performance of higher education institutions - Misurata University. *Journal of Economic Studies -Volume 6, Issue 3*, 108-128.
- Saad, G. y. (2017). *Electronic management*. Jordan: Al-Yazouri Scientific House for Publishing and Distribution.
- Saad, G. y. (2017). *Electronic management*. Jordan: Al-Yazouri Scientific House for Publishing and Distribution.