

The Impact of E-Business Elements in Improving the Quality of Management Performance in the Ministry of Higher Education and Scientific Research of Jordan

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Abstract

This study aimed to identify the elements of the electronic administration in the Ministry of Higher Education of Jordan, also aimed to determine the effect of the elements of electronic management applied in the ministry in improving the quality of management performance which has been a questionnaire consisting of (26) question, and distributed to a random sample of the staff at ministry by (100) subject to statistical analysis ,the most important results that there is the impact of the use of the elements of the electronic administration in improving the quality of management performance in the ministry, as they were the most important recommendations of the study work on activating the elements and other technology in the ministry through increased government support her so that the ministry can buy devices and technological to help the improve the quality of management performance in the ministry.

Introduction:

The Ministry of Higher Education and Scientific Research of Jordan periodically to develop their performance and develop the performance of its employees , through bringing the latest modern technology place the means of the old administration , which is working on the implementation of administrative processes in the best possible way and that works to improve the performance which can be measured through the accuracy of the results quality The speed of delivery of information to recipients of the service and the speed of execution of transactions provided to the Ministry of citizens and organizations .

The problem of the study:

- Problem of the study appear in the following questions :
 1. Does affect electronic management used by the Jordanian Ministry of Higher Education in improving the quality of management performance in which elements ?
- One of these main problem can be derived following sub- problems :
 - A.Do communications networks used in the ministry impact in improving the quality of management performance in Jordanian Ministry of Higher Education .
 - B.What is the impact of the necessary software to support e-management at the ministry in improving the quality of management performance.
 - C. Is the electronic leaders used in the ministry impact in improving the quality of management performance Jordanian Ministry of Higher Education .

Objectives of the study:

Through the study the problem and the main axes , the study aims to achieve the following .

- 1- To identify the elements of the electronic administration in the Ministry of Higher Education and Scientific Research of Jordan .
- 2- To determine the effect of the elements of the electronic administration in improving the quality of management performance in the Ministry of Higher Education and Scientific Research of Jordan .

The Importance Of Study:

The importance of the study of the importance of research on the subject of electronic management and the role of the elements of electronic management in achieving the quality of work and improve managerial performance in general in the Jordanian Ministry of Higher Education , so the importance of the study appear in the extent to which the elements of the electronic administration in improving the quality of management performance in the ministry , so what It enhances the level of services provided by the Ministry of the citizens and thus increasing reliability in managerial performance in the ministry.

Previous studies:

- 1- **Al- ootom, Eptisam,(2015) entitled " The impact of information technology to improve the level of performance of employees in the Ministry of Higher Education and Scientific Research of Jordan.**

The purpose of this study was to investigate the effect of the use of information technology in the Ministry of Higher Education of Jordan to improve the administrative performance of the staff where, researcher has used the descriptive analytical method to achieve the objectives of the study, may be a study population consisted of a random sample of employees in the Ministry of Higher Education of Jordan of (45) individuals, as was the use of statistical package program SPSS for data analysis and hypothesis testing, and was the most important statistical methods used is to test one way anova, it was the most important results of the study that there is a significant effect for statistical information technology used in the ministry of higher education to improve the administrative performance of the employees. As they were the most important recommendations that the Ministry of Higher Education is working to develop Electronic systems and existing programs even have help in the development of employee performance.

- 2- **Awamleh khaled (2014), entitled " The Impact of Information Systems in the electronic services in Jordan outputs".**

This study aimed at detecting This study aimed to uncover the impact of information systems in e-government services in Jordan outputs, in addition to the proposal model shows the relationship between the information the government of Jordan and e-services systems outputs, but the purpose of achieving the objectives of the study, the researcher used the descriptive approach, and the sample of the study sample class consisted of 350 individuals from various government ministries and official departments, as well as the researcher to design and implement a questionnaire after the confirmation of the validity and reliability, and after the collection of data through the main study tool, a questionnaire, has been the analysis of the data by the statistical program (SPSS) within the program Statistical Package for Social Sciences. Can summarize the key findings of the study in the following points: ranged averages for all fields of study between (4.59 - 4.39) and substantially estimate, which indicates the presence of the impact of the output of D information systems in the Jordanian government e-services.

- 3- **Battah Naser (2015), " The impact of management information systems to improve management performance" An Empirical Study on Managing Directors in the Jordanian insurance companies".**

This study aimed to identify the impact of management information systems (MIS) to improve the administrative performance of the staff of the administrative departments in the Jordanian insurance companies has been the study sample Managers administrators or Deputy Managing Director to identify, The researcher distributed (52) questionnaire by (2) a questionnaire to each company's number (26) Insurance Company, has been used as a researcher style simple to get to know the impact of management information systems to improve management performance in the Jordanian insurance companies decline, the study concluded that there is a positive impact of the resources of networks and communications and material resources to improve the administrative performance of the administrative staff in the insurance companies Jordan, was the most important recommendations that the insurance companies to make greater efforts in the infrastructure of management information systems development.

- 4- **Al- Mansi, Ibraheem , Bani Saeed Amany (2015), entitled " The Impact of Networking and Communications Resources to Improve the Quality of Services Provided to Customers in the Jordanian Insurance Companies".**

This study aims to identify the level of availability of networking and communications resources in the Jordan Insurance companies, and their impact on improving the quality of service provided to customers, The researcher has designed a questionnaire and distributed to a sample study in computer departments staff in the Jordanian insurance companies of (26) companies, was recovery (60) questionnaire are analyzed, was the most important findings of the study is that there is high for networking and communications resources in the Jordan Insurance companies level. The study also concluded that there is the effect of the resources of networks and communication to improve the quality of service provided to customers.

The study sample :

Independent variable : a variable that affects the dependent variable in this study , the independent variable is the components of the electronic administration in the Ministry of Higher Education and Scientific Research of Jordan (networking and communications , electronic steering , Electronic Command) .

The dependent variable : a variable that is affected by the independent variable in this study, it is (the quality of management performance in the Ministry of Higher Education and Scientific Research of Jordan) .

Hypotheses :

The main hypothesis :

Electronic management elements affect the improvement of administrative performance and quality in the Jordanian Ministry of Higher Education and Scientific Research

- From this premise the main hypotheses sub derive the following :
- Communications networks used in the ministry impact in improving the quality of management performance .
- E leadership in the ministry used to improve the quality of administrative performance impact.
- Affect the software needed to support e-management at the ministry in improving the quality of management performance

The study methodology: Adopts this study descriptive analytical approach in data collection and statistical analysis to arrive at the results of the study and achieve their goals, has been to rely on sources of information gathering by the following:(al-najjar,2013).

-Secondary Sources: where were collected preliminary information from reference books and theses and publications related to the subject of the study.

Primary sources: the questionnaire was developed study addresses related to Electronic management as a variable level of independent and improve the performance quality of the employees in the Ministry of Higher Education as the dependent variable variables.

The researcher used in the study tool measure consisted of five grades (1-5) of the answers, according to a Likert scale Quintet (Likert Scale) (sekran,2014), which is composed of five degrees to determine the degree of approval of the study sample on each paragraph of the study tool, and convert categorical scale to the amount of data that can be measured statistically, was given the relative weights shown in table (1).

Table (1)
 Degrees Likert scale Quintet (Likert Scale) used in the study tool

The degree of the scale	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The degree of approval	5	4	3	2	1
The relative weight	%100-81	%80-61	%60-41	%40-21	%20-0

As it has been the use of the Statistical Package for the program for the humanities and social sciences SPSS, in order to analyze the data and test hypotheses.

The study population and appointed: The study consists of workers in the Jordanian Ministry of Higher Education and Society, The sample of the study consisted of a random sample representative (100) individuals were distributed to employees random sampling method.

Community and a sample of the study: The study population consisted of all employees of the Ministry of Higher Education of Jordan , scientific research personnel , while the study sample is represented administrative staff who work in different areas of administrative work , such as Diwan staff and personnel , accounting, information technology and archives and other other administrative functions , has been selected A random sample of the study population by 100 Administrative officer or head of department or head of department or deputy them.

The study tool :

A questionnaire was developed dealing with areas of study and number (4) fields and by (26) question, questions have been questionnaire distributed to areas of study are as follows:

1. the field of networking and communications by (6) questions .
2. The field of electronic driving by (6) questions .
3. software by (6) questions .
4. improving the quality of management performance in the Ministry of Higher Education (8) questions.

Tool's study tests:

The study tool consists of (26) Question of them (18) Question measure the first field which the existence of Electronic management in the Ministry of Higher Education and Scientific Research, The second field is improving the performance quality of employees in the Ministry and consists of (8) questions.

- 1- **Cronbach's alpha test:** give this test an explanation of the consistency of the questionnaire and thread paragraphs internally, and show the strength of the resolution and coherence of its clauses, so that, if returned, one of them answered the same questionnaire the same conditions gave the same results, and if the ratio of Cronbach's alpha of 60% or more, this indicates thread resolution, stability and consistency internally well (molhatra,2004,p268).

The following table shows Cronbach's alpha coefficient for fields of study individually and for the tool fully.

Table (2)

Internal consistency coefficient Cronbach's alpha for fields of study and the tool as a whole.

Field title	Questions number	Reliability coefficient (Internal consistency)
Electronic management used in the Jordanian Ministry of Higher Education.	18	%78
Improve performance quality of the ministry.	8	73%
Total	26	81%

Is evident from the above table that there is a large internal consistency between the paragraphs of the questionnaire individually and between full-resolution where the percentage of 81% Cronbach's alpha tool for the study in general, and this confirms the strength and coherence of the questionnaire and internal coherence and stability.

- 2- **Content Content Validity :** intended to honesty over the expression of the paragraphs of each area of study for the area to which it belongs, it has focused attention on making sure that every area of study accurately representative of a group of paragraphs that concern them, and that these paragraphs already measure this area (Sekaran, 2003), was measured sincerity resolution content by measuring the relationship between each paragraph and the area to which it belongs by using the Pearson correlation coefficient Pearson Coefficient of Correlation), it has adopted the correlations in excess of (30%), and the significance statistical task at the significance level ($0.05 \geq \alpha$) table (3) of these relations.

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Table (3)

Special measuring the content of the paragraphs of the areas of study sincerity Pearson correlation coefficients.

	FIELD	Questions Number	Paragraphs Correlation Coefficient	The Level Of Significance
First Field	Electronic management used in the Jordanian Ministry of Higher Education.	18	<i>0.666</i>	<i>0.000</i>
Second Field	Improve performance quality of the ministry.	8	<i>0.565</i>	<i>0.000</i>
	Total	26	0.526	<i>0.000</i>

The previous table shows, the results of the Pearson correlation coefficient between the vertebrae and fields of study variables, and the review and the levels of significant correlation coefficients values prove the existence of a statistically significant relationship at the significance level ($0.05 \geq \alpha$) between field paragraphs, which indicates the presence of structural sincerity of these paragraphs..

Data analysis and hypothesis testing:

- Analysis and discussion of the main field which is the first Electronic management and the results of its components: (networks and communications, electronic leaders, programs).

-Discuss the results of a sample survey on trends in the level of **networks and communications** used in ministry.

Table (4) shows the results of the statistical analysis of the arithmetic averages and standard deviations of the variable extent of electronic management(**networks and communications**) in the Jordanian Ministry of Higher Education:

TABLE (4)

	Paragraph	MEAN	S.D
1-	There in the company's Internet network is characterized by high quality specifications in terms of speed and capacity , to withstand the volume of work.	4.23	0.65
2-	There networks operate under a unified system uses which represents a set of conventions and protocols that are used in understanding and interaction between computers.	4.09	0.73
3-	The ministry is concerned with providing maintenance and technical support required for the intranet in order to ensure better working between the sections of the ministry and its subsidiaries quality.	3.97	0.68
4-	There are staff specialists in the field of networking and messaging information who design modern systems work whenever the need arises.	3.92	0.61
5-	The company is interested extranet technology to link the interests within the company (director of branches, marketing manager) parties from outside the ministry.	3.89	0.75
6-	Extranet systems for operating insurance company to coordinate and exchange of business documents through electronic exchange of ministry data.	3.82	0.71
	Total field	3.88	0.69

Shown in Table No. (4) above that there is great interest in the topic of networking and communications in the ministry by providing intranet networks connecting sections ministry among themselves and through the extranet network linking the ministry's external environment , it has been more paragraphs acceptance is the paragraph which states that " no in the company's Internet network is characterized by high quality specifications in terms of speed and capacity , to withstand the volume of work which , " with a mean (4.23) and a standard deviation (0.65) , and that is what enhances the quality of management performance in the ministry and improves its level .

- Analyze and discuss the results of the second sub- hypothesis : ' lead software used in the Ministry of Higher Education and Scientific Research of Jordan in improving the quality of management performance .

And Table 5 shows the averages and deviations Trends sample study on the software used in the ministry variable.

Table (5)

	Paragraph	MEAN	S.D
1-	Are database management process through programs for computers manages all the processes related to data and retrieve data in the ministry.	4.00	0.76
2-	There is a technical and technical support from specialists in the field of information technology teams working on the maintenance and development of software and updated.	3.97	0.68
3-	It is applied to group software , which allows for more than one employee to use the same program to perform certain tasks systems .	3.90	0.55
4-	The ministry oriented management programming all administrative activities of the company and complete it electronically to ensure the quality of work .	3.88	0.44
5-	It is put into a system called Workflow, which allows automates the programming documents and information flows between the various teams in the ministry.	3.87	0.25
6-	The Ministry updates and programming of electronic programs for the company on the latest international programming languages whenever the need arises .	3.77	0.62
	Total field	3.94	0.35

Is evident from Table 5 that there is a degree of approval of the large study sample all the second area vertebrae were all averages ranging between (4.00 - 3.77) and indicates that the interest is clear by the Ministry subject matter needed to develop managerial performance in software, so that it is relying on the base an upgraded and updated data is working on the latest programming languages to serve the organization and execution of work and improve managerial performance needs to be implemented by the ministry so as to achieve the wishes of the citizens and the institutions that deal with the ministry, it has been indicated by the paragraph which states that "are database management process through programs for computers manages all operations.

Related data and retrieve data in the ministry ", he ranked first with a mean (4.00) and a standard deviation (0.76) , and Paragraph that the process of database management in the ministry is a subject very important and that the composition of huge data serve decision makers decisions in the ministry Base easily , thereby enhancing the improvement of administrative performance of the Ministry in general.

- Analyze and discuss the results of the third sub- hypothesis : " lead the electronic leadership in the ministry to improve the quality of management performance in it."

And Table 6 shows the averages and standard deviations of the trends of the study sample used electronic driving around in the ministry variable.

Table (6)

	Paragraph	MEAN	S.D
1-	Enjoy the top management of the ministry competence and ability to deal with information and communication technology to achieve the goals in a letter.	4.10	0.63
2-	The management using the email correspondence between the administrative levels of management in the ministry.	4.08	0.77
3-	Decision-making process in the ministry relies on electronic information transmitted from the bottom of the hierarchy to the top management .	4.00	0.78
4-	Senior management delegating powers to the lower levels of administration to get rid of the bureaucracy at work.	3.95	0.44
5-	It is published plans to be decided by senior management electronically between employees .	3.93	0.55
6-	Electronic leadership in the ministry depends on qualified leaders cyber system.	3.90	0.58
	Total field	3.95	0.44

Is evident from Table 6 that there is a degree of approval of the large study sample on all third area vertebrae were all averages ranging between (3.90 - 4.10) and indicates that the interest is clear by the Ministry subject of the electronic driving and the importance of the presence of directors with expertise and functional and qualified to work in the light of information technology, said the presence of the leaders want to work and prefer to work with the administration and technology workers in the ministry encourages teamwork and encourage them to achievement and development due to the presence of E-management is aware of the volume of work and the size of the required achievement completion, has been indicated by the paragraph which states that he "enjoys the senior management at the Ministry of Higher Education and Jordan's competence and ability to deal with information and communication technology to achieve the goals in a letter," it was ranked first with a mean (4.10) and a standard deviation (0.63)), and interprets this paragraph that administrative leaders in the ministry is one of formatted and capable leaders to act in the light of electronic administration and that all instructions and claims are using information technology and the implementation of the work is done by using information technology and this enhances the quality of management performance in The ministry develops.

- Analyze and discuss the results of the field of improving the quality of management performance in the Ministry of Higher Education and Scientific Research of Jordan .

And Table 7 shows the averages and standard deviations of the trends of the study sample on improving the quality of administrative performance used in the ministry variable.

Table (7).

	Paragraph	MEAN	S.D
Improving Performance quality			
1-	There is interest by the ministry to meet the customer's wishes with regard to services relating to higher education.	4.55	0.61
2-	The client is the follow-up treatment provided by the ministry as soon as received and received electronically.	4.20	0.55
3-	Attention to cultural differences between customers , which urges the company to disclose in detail about the ministry services.	4.11	0.43
4-	Customers are informed of the full details of the procedures to deal with the ministry .	4.08	0.58
5-	The ministry update their information electronically published continuously until published information be accurate , clear and modern.	4.01	0.77
6-	Portals provide related educational services and accurate information about the conditions and requirements of higher education .	4,00	0.82
7-	The receipt of the replies to the transactions via mobile phone and via e-mail reduces the cost of obtaining the services of the ministry .	3.86	0.33
8-	It is activated portals for the provision of transactions carried out the transaction through Internet.	3.76	0.52
	Total	4.09	0.66

The table shows that the sample of the study trends of high importance all the direction of the paragraphs relating to the level of improving the quality of management performance in the Jordanian Ministry of Higher Education, and ranged between (4.07 - 3.76), and a review of the order of paragraphs, it is evident that paragraph, which states that "there is interest by the ministry to meet the desires customers with respect to higher education services ", and an arithmetic mean (4.55), which is within the degree of high importance, and a standard deviation (0.61), and perhaps this shows that the single most important objectives of senior management in the ministry is working on the study and understanding of customer preferences and to meeting them, so during the inquiry directly from customers about the level of services provided, or through complaints made by clients of the ministry that fund, and that the work to achieve the goals of the ministry to achieve the quality of the performance and quality of services provided to customers.

Test hypotheses :

To test the hypothesis on Innova test to reach the extent of the existence of the influence of the independent variable (electronic management) on the follower. (Improve the performance quality in the ministry).

Table (8)

Variable	Mean	S.D	Df	F value	Statistical significance
Elements of electronic management.	4.03	0.56	99	9.16	*0.000

- Statistically significant at the level ($\alpha \leq 0.05$)

Table shows (8) the results of the simple effect of the elements of electronic management decline in improving the quality of management performance in the Jordanian Ministry of Higher Education analysis, it was found that there were trace statistically significant to the level of having a significant effect on the elements of electronic management in improving the quality of management performance in the ministry, and confirms that the value of the value of F (9.16), which was statistically significant at the level (0.05), as well as the value of (T), and the level of significance (0.000) based on the above are rejected hypothesis Home and acceptance of alternative hypothesis, which states that "no impact statistically significant elements of Directors E in improving the quality of management performance in the Ministry of Higher Education and scientific research at the significance level (0.05) ".

Results of the study and its recommendations :

The results of the study :

Through data analysis and hypothesis testing, this study found the following:

1. All elements of modern electronic administration in the Ministry of Higher Education and Scientific Research of Jordan are available through the availability of networking and communications, software, and electronic steering.
2. The Ministry of Higher Education and Scientific Research bother dramatically topic of crisis management by improving the quality of management performance, which takes into account the interests of citizens on his personal.
3. The staff's commitment to work under the electronic management is working to increase the level of accuracy in implementing transactions and also increase the quality of management performance in the ministry.
4. There is a clear impact of the components of the electronic administration in improving the quality of management performance in the Ministry of Higher Education and Scientific Research of Jordan all its elements.

The recommendations of the study:

By the results of the study, the researcher recommends the following:

1. To work on activating elements and other technology in the ministry through increased government support for them so that the ministry can buy Speaking technological devices help improve the quality of management performance in them.
2. that the Ministry is preparing a periodic courses and awareness for employees in order to develop managerial performance in the ministry.
3. Work on hiring of information technology so that the technical and technological support remains found in the ministry , in order to ensure the proper functioning and quality .

References

- 1- Al- ootom, Eptisam,(2015), The impact of information technology to improve the level of performance of employees in the Ministry of Higher Education and Scientific Research of Jordan.
- 2- Awamleh, Khaled (2014), The Impact Of Information Systems In E-Government Services In Jordan Outputs, Phd Thesis, International Islamic Science University, Amman, Jordan.
- 3- Al- Mansi, Ibraheem, Bani Saeed Amany (2015), The Impact Of Networking And Communications Resources To Improve The Quality Of Services Provided To Customers In The Jordanian Insurance Companies, Journal Of Information Engenering And Application, Vol 5, N 1, Pp 1-7.
- 4- Battah Naser (2015), "The impact of management information systems to improve management performance" An Empirical Study on Managing Directors in the Jordanian insurance companies, Journal Of management, Vol 5, N 1, Pp 1-7.
- 5- Sekaran, Uma, (2013). "Research Methods For Business: A Skill Building Approach ', 4th Edition, John Wiley And Sons Inc. , New York, P 293.
- 6- Najjar, Faiz (2013), methods of scientific research and practical perspective , Dar Al-Hamed for Publishing and Distribution, Amman , Jordan.
- 7- Malhotra, NK (2004) ,: "Marketing Research", New Jersey, Usa, Prentice Hall, P 268.