E-Governance and Its Relation To The Quality of Health Services, Field Study In Laghouat Hospital Institution

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Résumé :
L'objectif de ce papier est de détecter de manière unique la relation entre la gouvernance électronique avec ses dimensions techniques et humaines et le niveau de qualité des services de santé dans l'hôpital de laghouat avec ses composants corporels et immateriels, sa fiabilité, sa réactivité, sa garantie, son empathie et ses biens corporels. Pour explorer s'il existe une influence mutuelle entre la gouvernance électronique et le niveau de qualité des services de santé, et ce niveau d'influence et comment il pourrait être renforcé dans le cas d'un positif ou amélioré si faible. L'étude a atteint le résultat d'une relation statistique significative, et elle a recommandé d'approfondir les études approfondies dans ce domaine.

Mots Clés **:** Dimension Technique, Dimension Humaine, Dimensions Materiels Et Immateriels, Gouvernance Electronique, Hopital Laghouat, Qualite Des Services De Santé.

Abstract :
The aim of this paper is to detect the relationship between e-governance with its technical and human dimensions from one hand, and the level of health services quality in laghouat's hospital with its tangible and intangible components, reliability, responsiveness, guarantee, empathy and tangibles. To explore whether there is mutual influence between e-governance and health services quality level, and this level of influence and how it could be strengthened in the case of a positive or improved if weak. The study reached the result of significant statistically relationship, and it recommended further in-depth studies in this area.

Key Words **:** e-Governance, Health Services Quality, Human Dimension, Laghouat's Hospital, Technical Dimension, Tangible And Intangible Dimensions Of Health Services Quality.
JEL Classification : H1, I1, I12,Z00, I18, I19

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Introduction :

The introduction of information technology into enterprise systems is a real revolution, especially as it is transformed into a knowledge-based economy. The latter has become the major driver of change and one of the most important reform tools at the national and international levels. On the technological dimension of information, which is the application of e-governance as one of the most prominent indicators. Services are not immune from keeping up with these developments as one of the sectors of economic activity more vital and therefore has been receiving more attention in recent years, to health, as is the concept of health quality of the basic pillars of quality competition, so the primary key for the management of the future has become an increasingly important inevitability of increasing their ability to meet the desires of its customers and their needs, especially as it seeks most of the health institutions is to provide outstanding services of high quality.

Study Problematic :

E-governance is a new and innovative way of performing government business using information, communication and information technology. It is an important tool to achieve the main objective of improving government performance. As the health sector is considered one of the most sensitive sectors facing the challenges of achieving high quality in its services, The need to deepen research on e-governance has emerged as one of the modern approaches that promote the quality of health services, and on this basis can be formulated problem paper as follows: Is electronic governance related to the quality of services in the hospital in Laghouat? To answer the problem, we have formulated the following sub-questions:

- What are the technical and human dimensions of e-governance?
- What are the most important dimensions of quality of health services?
- How does e-governance affect the quality of health services?

Study hypotheses:

In order to answer the problem we have developed a main hypothesis and two sub-hypotheses, which are as follows:

- Main hypothesis: There is no statistically significant relationship between e-governance and quality of health services.
- First Hypothesis: There is no statistically significant relationship between the technical dimension of e-governance and quality of health services.
- Second Hypothesis: There is no statistically significant relationship between the human dimension of e-governance and the quality of health services.

Importance of the study:

The study derives its importance from the importance of the subject itself. Each of the two variables (e-governance, quality of health services) is one of the most important challenges facing this sector. Therefore, our research paper aims to define and guide the hospital institution for the importance of implementing e-governance in order to improve the quality of health services.

Objectives of the study:

Through this research paper we seek to achieve a set of objectives summarized as follows:

- Understanding both the concepts and dimensions of e-governance and the quality of health services;
- Officials of this institution pointed to the importance of implementing e-governance to improve its services;
- Analysis of the relationship between the independent and dependent variables;
- An attempt by the researchers to provide practical value for this subject.

Previous studies:

In order to identify the nature of the relationship between the independent variables and the design of a default model of the study, the two researchers reviewed the literature on the subject, we present the most important studies in the following:

- "The study of Nafie Al-Dabbagh and Sindy Sultan (2010)," This study aimed at identifying the role of modern medical technology in the field of health, health, and human resources in achieving the quality of health services in its dimensions (reliability, And the results of statistical analysis reached the significance of this relationship. (Nafie Al-Dabbagh and Sindi Sultan, 2010).
- "The study of Alaa Abdul Razzaq (2011)", This study aimed to identify the relationship between medical technology of all types (diagnostic, therapeutic and analytical), and the quality of health services dimensions (reliability, speed and response) and the study reached the significance of this relationship. (Razzaq, 2011).
- "The study of Qureen and Qweider (2013)," This study aimed to identify the applications of artificial intelligence in health care and recommended the need to switch to the digital health organization using artificial intelligence tools. (Qweider, Applications of Artificial Intelligence in Health Care, 2013).

I. Theoretical framework of the study

1. E-Governance - Concept and Dimensions:

1.1. Concepts and definitions:

There are several definitions of e-governance can be summarized as follows: Is the use of information and communication technology (ICT) to increase value or benefit because of the government's actions to modernize it. (Ahmed, 2004)

David & all defined it as: the use of information technology in general and electronic commerce in particular to provide citizens and organizations with appropriate access to government information and services (Al-Khawaja, 2007), and provide public services to citizens and organizations, businesses, suppliers and

all employees in the public sector (Zaki, 2002). And ensure the confidentiality and security of information circulating anywhere and anytime (Al-Hassan, 2009).

We conclude that e-governance is a new way of doing business using ICTs, a tool rather than an end in itself. Its main objective is to improve government performance.

1.2. Dimensions of e-governance:

E-governance has several requirements: networks (Internet, intranet and extranet) (others, 2006), computers, software and human resources. However, through our knowledge of various studies, we divide these requirements into two dimensions (Palmer, 2009):

- **Technical dimension**: includes physical appliances including buildings, sanitary facilities which can be said environment of service delivery.
- **The human dimension**: It is mainly the human resource as an internal customer providing the service, and services supporting the service through contact with external customers (patients) or through the friction of staff with each other (bradier, 2004). It is important to note the need to integrate the components of these two dimensions to achieve the goal of electronic governance (Bouana, 2004).

2. Quality of health services - concept and dimensions -

A health service is only an integrated mix of tangible and intangible elements that satisfy a customer's satisfaction and satisfaction (El-Shaer, 2000). That is, it includes therapeutic services, hospital provided by a member of the medical team for individuals, as well as preventive health care such as the advice provided by the doctor to its patients, such as awareness of the disease and methods of spread (Diab, 2001). Consequently, the health service results from the combination of physical and non-physical elements, which also have tangible benefits, such as reducing the pain of patients or the intangible, such as increasing production as a result of the health services received by individuals (Maazouz Nashida, 2011).

1.1. Concepts and definitions:

Due to its lack of concrete, the definition of the concept is subject to the views of the doctor, professional and hospital management, where Lee & all it: Provide all necessary health services in accordance with modern science and medical technologies to meet the needs of individuals (A.Jacquery, 1999).

Sulek & all defined it as: the degree that the patient sees in the health service provided to him and what can be overstated in relation to what is expected (Al-Bakri, 2010). The Joint Organization for accreditation of health organizations defined it as: the degree of compliance with the contemporary standards of the expected results of the service and the diagnosis of any medical problem (Al-Saeed, 1994).

It is defined by the American Medical Institute as: the level of care provided by hospital institutions in order to increase the expected results of the individual and to match them with the possibilities and modern knowledge (lecelet, 2006).

1.2. Quality of health service dimensions:

There are five dimensions to which customers depend on their assessment of the quality of health services (P.Kotler, 2000):

- **Reliability**: The ability of the service provider to deliver the service accurately, and depends on the reliability of four elements (Aziz, 2000) (Maboli, 2002): performance, conditions of use, duration of time, reliability.
- **Response**: reflects the desire or satisfaction with the help of the customer and the provision of rapid service to him (Hamid Al-Tai, 2009).
- **Guarantee**: is to confirm the management of the hospital on the quality of health and support that qualified personnel in addition to the modern physical requirements in the health field, which leads to the provision of health services of quality matched (Alaa Al-Jalili, 1999).
- **Characteristic**: refers to buildings and customer waiting sites, in short concreteness is the service delivery environment (Fatihah Idris, 2006).
- **Sympathy**: Indicates an interactive relationship between the provider and the recipient so that there is mutual trust and confidentiality (Al-Shammari, 2001).

II. Empirical framework of the study

1. Methodology of the study:

The statistical descriptive approach was used as a suitable methodology for the subject of the study. In statistical analysis, we used the statistical package program (spss) in order to arrive at proving or negating the hypotheses at a significant level 0.05 to complete the confidence level 0.95 to interpret the results using the Alpha Kronbach calculation, Linking and testing hypotheses according to the standard mean.

2. Society and Study Sample:

The sample of the study consisted of doctors and nurses at the hospital in Laghouat (104) individuals. We adopted the simple random sample method, where 120 copies were distributed, 6 were retrieved due to non-compliance, and 10 forms were not retrieved. The remaining forms were subject to statistical analysis due to their validity.

3. Valid study tool:

We presented the study tool in its initial form consisting of (35) questions on a group of arbitrators, who numbered (9), where they were asked to express their views and issue judgments on the tool in terms of the consistency of the paragraphs with the axes that were classified within them, the clarity of language and meaning, After that, the tool stabilized on (28) paragraphs distributed on the dimensions mentioned above.

4. Test stability of the study instrument:

The researchers used the Alpha Kronbach test to measure the stability of the study instrument. The tool enjoyed good stability at the level of sub-axes and the total instrument with a total value of 95%.

III. Analysis and discussion of the results:
1. Measuring the level of its dimensions e-governance (analysis according to the standard average):

1.1. Measuring the level of the technical dimension of e-governance:

Table 1 : « The technical dimension of e-governance »

Num	The technical dimension	Average paragraph	The ratio
1	Modern methods and technologies are available to provide services such as computers	3,42	0,68
2	Advanced technologies help you deliver services quickly	3,25	0,65
3	The hospital is connected to the internet	3,14	0,63
4	The hospital has advanced medical equipment	3,31	0,66
	Total	**3,12**	**2,62**
	The average variable	**3,28**	
	Average percentage		**0,66**

Source: Based on the results of the statistical analysis

The statistical analysis showed the average level of the technical dimension as the mean of the mean is equal to 3.28.

1.2. Measuring the human dimension of e-governance:

Table 2 : The Human Dimension of Electronic Governance

Num	The Human dimension	Average paragraph	The ratio
1	The crew has the skill to use modern technology	3,12	0,63
2	The staff is cheerful in dealing	3,01	0,6
3	Employees pay attention to customer complaints	2,92	0,58
4	There is cooperation and integration to provide efficient service	3,18	0,64
	Total	**12,28**	
	The average variable	**3,07**	
	Average percentage		**0,61**

Source: Based on the results of the statistical analysis

Statistical analysis showed an average level of human dimension, with an arithmetic average of 0.03.

1.3. Measuring the level of health service quality and its various dimensions:
1.3.1. Measurement of the level of tangible dimension of quality of health service:

Table 3 : The tangible dimension of the quality of health services

Num	The tangible dimension	Average paragraph	The ratio
1	The hospital is provided with accompanying services such as parking	3,10	0,68
2	The waiting rooms have all the necessary facilities	3,05	0,66
3	Guidance boards are available to facilitate access to various departments	2,20	0,67
4	Staff enjoy a high degree of cleanliness and good looking	3,03	0,66
	The average variable	**2,84**	
	Average percentage		**0,67**
	Average Hypothesis	**3,06**	

Source: Based on the results of the statistical analysis

The statistical analysis showed that there was an average level of significant dimension in the quality of health services, considering that the mean was equal to 0.03.

1.3.2. Measuring the level after reliability of quality of health service:

Table 4 : After the reliability of the quality of health services

Num	the reliability	Average paragraph	The ratio
1	There is an obligation to provide health services on time	3,04	0,61
2	Health services are provided without errors	2,9	0,58
3	Solve customer problems and queries at high speed	2,88	0,58
4	There is a high degree of accuracy in the services provided	2,99	0,6
	The average variable	**2,95**	
	Average percentage		**0,59**
	Average Hypothesis	**3,01**	

Source: Based on the results of the statistical analysis

Statistical analysis showed an average level of reliability in the quality of health services, with an average of 3.01.

1.3.3. Measuring the level after response to health service quality:
Table 5 : After responding to the quality of health services

Num	Responding	Average paragraph	The ratio
1	Staff meets customer needs immediately	3,17	0,63
2	The hospital simplifies procedures to facilitate service delivery	2,82	0,56
3	Timely delivery of services to customers	2,93	0,59
4	There is a constant readiness for employees to help customers	2,89	0,58
	The average variable	**2,95**	
	Average percentage		**0,59**
	Average Hypothesis	**3,01**	

Source: Based on the results of the statistical analysis

Statistical analysis showed an average level of response response in the quality of health services, with an average of 3.01.

1.3.4. Measuring the level after warranty for quality of health service:
Table 6 : After the guarantee of the quality of health services

Num	guarantee	Average paragraph	The ratio
1	Customers trust the standards of hospital sanitary tires	3,03	0,61
2	The staff is polite and well behaved with customers	2,83	0,57
3	There is a sense of security on the part of customers about dealing	3,02	0,6
4	The breadth of hospital corridors makes customers feel comfortable moving	2,88	0,58
	The average variable	**2,94**	
	Average percentage		**0,59**
	Average Hypothesis	**3**	

Source: Based on the results of the statistical analysis

The statistical analysis showed an average level of confidence interval in the quality of health services, considering that the mean is equal to 3.

1.3.5. Measuring the level of empathy for quality of health service:
Table 7 : After sympathy for the quality of health services

Num	sympathy	Average paragraph	The ratio

1	The medical staff explains health problems in a simplified way	2,87	0,57
2	There is an accompanying and individual attention to clients (patients)	2,88	0,58
3	Staff have sufficient knowledge of customer needs	3,13	0,63
4	Medical preview times fit all clients	3,02	0,6
	The average variable	**2,98**	
	Average percentage		**0,6**
	Average Hypothesis	**3,02**	

Source: Based on the results of the statistical analysis

The statistical analysis showed an average level of sympathy for the quality of health services, with an average mean of 3.02.

2. The hypothesis test:

Table 8 : Coefficient of correlation

	Electronic governance	The technical dimension	The Human dimension
Quality of health services	0,57**	0,43**	0,55**
Moral level	0,00	0,00	0,00

Source: Based on the results of the statistical analysis

2.1. First sub-hypothesis test:

There is no statistically significant relationship between the technical dimension of e-governance and quality of health services. Table (8) shows a statistically significant relationship of 55% between the technical dimension of e-governance and the quality of health services. This requires rejecting the null hypothesis that there is no statistically significant relationship between the technical dimension of e-governance and the quality of health services. And accept the alternative hypothesis.

2.2. Second Hypothesis:

There is no statistically significant relationship between the human dimension of e-governance and the quality of health services.
Table (8) shows that there is a statistically significant relationship of 43% between the e-governance dimension and the quality of health services. This requires rejecting the null hypothesis that there is no statistically significant relationship between the e-governance dimension and quality of health services. And accept the alternative hypothesis.

2.3. The main hypothesis:

There is no statistically significant relationship between electronic governance and the quality of health services.

Table (8) shows that there is a statistically significant relationship between the level of e-governance and the quality of health services. This requires rejecting the zero hypothesis that there is no statistically significant relationship between e-governance and quality of health services. And accept the alternative hypothesis.

Conclusions:

Through the above we conclude the following:

- E-governance has a significant correlation with health service quality dimensions, and the way and place of delivery must be linked to the expectations of customers;
- The human dimension of e-governance is related to the readiness of employees (internal customers) to provide service, where these relationships have a high degree of confidence and thus generate a sense of security of the client;
- Despite the availability of equipment and modern technologies, but the institution is not available on the Intranet Intranet.

Recommendations:

In the light of the results we present the following recommendations:

- To develop the services provided to suit the needs of the new customers, as well as keep abreast of the continuous technological development, especially in the field of modern medical devices;
- Provision of Intranet to facilitate the exchange of information between different departments;
- Training courses to adapt staff capabilities with the use of modern equipment;
- Our study serves as a platform that encourages researchers to undertake further studies to develop this model.

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