

# The Role of Electronic Management in Improving Administrative Performance

<sup>1</sup>Dr. Gajanan P. Mudholkar  
<sup>1</sup>Mr. Mohammed Murshed Ali Al-Khasi  
<sup>1</sup> School of Commerce & Management Sciences  
, S.R.T.M. University, Nanded,  
Maharashtra, India

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## Abstract

Electronic management is one of the modern trends in leadership, due to its use of advanced electronic technologies that have a significant impact on people's lives, and it represents one of the concepts of the digital revolution that allows all knowledge and administrative services in the least possible time and at the lowest possible cost. Also The study aimed to investigate the role of electronic management in improving administrative performance by applying to the Ministry of Education. To achieve the aims of the study, a descriptive approach was used that relies on studies of the phenomenon as it is in reality. The researcher used a questionnaire as a tool to collect data and used the statistical packages program (S.P.S.S). The study concluded with a set of results, the most important of which is that electronic management has contributed to improving administrative performance. However The study made many recommendations, perhaps the most important of which is that the Ministry of Education should train workers on electronic management systems, and provide the financial support required to operate and implement electronic management systems in all departments of the Ministry and that the ministry work should activate the external communication process between the Ministry's office and the various offices in the governorates through the networking of electronic systems.

**Keywords:** Electronic management, improving administrative performance

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## I. Introduction

Most countries seek to activate electronic management as a new trend in contemporary management. The world has become an active movement to invest all modern technologies of information and communication systems developed in developing the work of organizations, whether they are business organizations or governmental organizations, and transforming them into electronic organizations that use the Internet to accomplish all their work. And its administrative transactions of planning, organizing, directing and controlling, as well as fulfilling all its functions of marketing, production, financing, investment, office work and other works, with a global mentality and very quickly.

Many experts agree that activating "electronic management" will solve many problems, starting with the completion of "bureaucratic" procedures and preparing society for an advanced stage of electronic transactions, which is characterized by quality and speed of completion without consuming time and paper. It seems that the time is to apply that. Especially since many introductions preceded this activation, as they were applied in many departments such as "passports" and "the Ministry of Labor", in addition to many other bodies in which electronic transactions were used, they achieved many successes in many factors, including time, efficiency and reduction in routine procedures, which many entities and departments have suffered from.

The need seems to be urgent to implement this new system, especially since the majority of citizens are fully prepared to receive electronic Administration, through several important points, the first of which is that the majority use computers, which means that there are no difficulties in the arrival of these new transactions, as well as the success of previous experiences. In several government agencies, however, there are many obstacles that must be overcome according to experts and specialists, who stressed the need to increase investment in infrastructure, in addition to concerted efforts with service providers in Yemen, to reach good services that achieve complete satisfaction with them, stressing the need for Collaborating efforts with service providers to reach services that meet expectations.

## **II. The study Problem**

The use of electronic management systems techniques in the performance and completion of work in public institutions of the Republic of Yemen came in line with technical progress, which has become an urgent necessity and among the clear indicators that indicate the success of the organization in carrying out its mission to the fullest in order to facilitate and accomplish administrative work, and as the Ministry of Education is considered one of the vital and service ministries that are directly related to the citizen and provide various administrative services through a huge amount of administrative transactions that pass through the various offices of the Ministry all over the republic. With the level of performance, facilitating services, improving the performance of departments, and ensuring communication with all citizens and administrators in an easy way and at lower costs, to reduce the burden on administrators and facilitate transactions and communicate with citizens and administrators, the Ministry of Education sought to use electronic management to take advantage of these advantages.

From all the foregoing, the study problem can be formulated in the following question:

To what extent did the electronic Administration contribute to improving administrative performance?

In order to answer the main question of this study, the researcher asked the following sub-questions:

- 1- Did the electronic Administration contribute to improving administrative performance?
- 2- Is there a relationship between electronic management and improving administrative performance?

## **III. Study hypotheses:**

- ❖ **The first hypothesis:** Did the electronic Administration contribute to improve the administrative performance of the Ministry of Education?
- ❖ **The second hypothesis:** Is there a relationship between electronic management and improving administrative performance?
- ❖ **The third hypothesis:** There are no statistically significant differences in the response of the sample members about the role of electronic management in improving the performance of the Ministry of Education due to the following variables (gender, age, qualification, years of service, ability to use the computer).

## **IV. The importance of studying**

The importance of the study is determined by its scientific and practical importance as follows:

### **4.1. Scientific (theoretical) importance**

- a) Opening the door for administrators to move towards adopting the idea of developing administrative work and spreading awareness about the importance of electronic management systems.
- b) The aspiration for this study to be a new scientific addition to the field of scientific knowledge and to be a key for researchers in the field of electronic work.
- c) Provide libraries with a scientific study on electronic management and its systems.

### **4.2 Practical (application) importance**

- a) Presenting recommendations and proposals to the higher management of the Ministry of Education about the importance that the electronic Administration has reached and the role it plays in providing and facilitating services at all administrative levels in the Ministry of Education.
- b) Contribute to identifying the role that the electronic Administration plays in improving and developing performance in public administrations.

## **V. Objectives of the study**

This study aims to:

- a) To find out the role of electronic management in improving administrative performance.
- b) Surveying the views of employees of the Ministry of Education to find out about the role of electronic Administration in improving performance in the Ministry and its units.

## **VI. Definition of electronic management**

(Najm, 2004: 125) defined it as (information resources that depend on the Internet and business networks, and it tends ever to abstract things and what is related to them to the extent that the intellectual cognitive information capital is the most effective factor in achieving its goals and the most efficient use of its resources) .(Al-Awad, 2009: 6) defined it as (an administrative strategy for the information age, working to achieve better services for citizens, institutions and their customers with optimal utilization of available information sources by employing the material, human and moral resources available in a modern electronic framework in order to optimize the use of time, money and effort, and to achieve the demands. Targeted and with the required quality). The article (Al-Serafy, 2011: 13) that defined it as (that means that is used to raise

the level of performance and efficiency, and it is a paperless administration, because it uses electronic archives, manuals, electronic notes and voice messages, and it is an administration that meets rigid requirements and relies mainly on knowledge workers). And he defined it (Jocbs.2003: p11) (a group of partners and entities that deal efficiently and effectively through the use of systems and mechanisms of information technology and superior and advanced communications to perform business in an organized and accurate manner). Bird (Bird.2002.p20) believes that it is a group of pivotal organisms for business management in the organization that work through a set of technical procedures, programmed systems and high technologies from the cohesion of knowledge bases and digital communication systems within integrated circles of planning, organizing, coordination and control.

(Lam, 2004: p5) defines it as (a group of electronic communication networks in which data and documents are transferred from virtual organizations to educational organizations). The author (D.State and Federal, 2001: p22) defines it as the use of information technology, especially Internet applications built on the web To support and enhance citizens' access to the services provided by the local government, in addition to providing services to the business sector and various government departments with high transparency and efficiency, to achieve justice and equality.

The researcher defines it as (it is the use of modern information and communication technology means to manage the activities of the institution and provide its services electronically to reach the achievement of the objectives of the institution with the least effort, cost and the fastest time).

### **6.1. Objectives of electronic management and their importance**

There are many goals that the electronic Administration seeks to achieve and increase the ability of departments to benefit from information and communication technology for the purpose of development, and there are many goals for electronic management as mentioned (Amer, 2007: 33-34), including the following:

- ❖ Development of management in general by using modern digital technologies in terms of solutions and systems.
- ❖ Fighting bureaucracy and eliminating the complexities of daily work.
- ❖ Providing information and data to decision-makers in an appropriate and timely manner, and raising the level of the control process
- ❖ Improving economic recovery and attracting investment through advanced mechanisms available in institutions.
- ❖ Reducing operating costs by reducing the number of files and safes for safekeeping, the amount of paper used and the rapid completion of the transaction.
- ❖ Better communication and a greater connection between the departments of the same institution.
- ❖ Managing and following up the various headquarters of the institution as if it were a central unit.

(Radwan, 2004, p. 3) stated that the aim of applying electronic management is to benefit from the advantages it provides, including the following:

- ❖ Managing and following up the various institutions as if they were a central unit.
- ❖ Collect data from its sources in a right way.
- ❖ Reducing decision-making obstacles by providing data and linking it to decision-making centres.
- ❖ Reducing spending in monitoring the operations of senior management.
- ❖ Providing data and information to the beneficiaries immediately.

He added (Al-Hiyt, 2015: 26-27) a set of objectives for electronic management that many researchers believe are focused on the efficiency and effectiveness of the organization and can be presented as follows:

- ❖ Development of management in general by using modern digital technologies in terms of solutions and systems, which would develop administrative work and thus raise the efficiency and productivity of the employee and create a new generation of cadres capable of dealing with technologies.
- ❖ Fighting bureaucracy and eliminating the complexities of daily work.
- ❖ Providing information and data to decision-makers in the appropriate speed and time, and raising the level of the control process
- ❖ Improve the economic recovery and attract investment through the advanced mechanisms available in the relevant institutions.
- ❖ Reducing operating costs by reducing the amounts of files and safes for safekeeping, the quantities of paper used and the speedy completion of the transaction.

## **6.2. The importance of electronic management**

Through the services introduced by electronic management to organizations, electronic management has become of great importance not limited to the level of the organization, but has become of great importance to society as mentioned (Ghoneim, 2003-2004: 43), where he mentioned the importance of electronic management from two aspects:

### **6.2.1.1. The first aspect: the importance of electronic management at the level of the organization through the following (Ghoneim, 2003: 45)**

- ❖ Lower production costs.
- ❖ The expansion of the market.
- ❖ Directing production according to the needs and desires of customers and consumers.
- ❖ Improving product quality.
- ❖ Avoid the risks of paper handling.

### **6.2.1.2. The importance of electronic management at the national level (Ghoneim, 2003: 50)**

- ❖ Improving the performance of governmental organizations.
- ❖ Take advantage of the opportunities available in the advanced technology markets.
- ❖ Increasing exports and boosting the national economy.
- ❖ Supporting imports in the country.
- ❖ Increasing the capacity of small and medium-sized enterprises to participate in the global trade movement.
- ❖ Finding new opportunities for self-employment.

He adds (Amer, 2007: 35) and (Al-Salmi, 2008: 37) that:

- ❖ Improving the effectiveness of performance and decision-making by making information and data available to whoever wants it, and facilitating access to it through its presence on the network and the possibility of obtaining it with minimal effort through automatic search means
- ❖ Facilitating communication procedures between the various departments of the institution as well as with other institutions inside and outside the institution.
- ❖ Ease of completing transactions for the auditors through a single entity that performs this task.
- ❖ Shortening the execution time of the transaction.

(Al-Zughaibi, 2015: 32) adds that:

- ❖ Contribute to building a flexible electronic archiving system.
- ❖ Provides services to the largest number of beneficiaries at one time.

## **6.3. Electronic management functions and components**

### **6.3.1. Functions of electronic management**

The tremendous development in the current era, the era of technical wealth, has led to clear changes in the traditional functions of management that have turned into electronic functions, in order to optimize the use of time, money, effort, and energies. Traditional administrative and modern management has become dependent on information systems in planning, in designing organizational structures, managing teamwork, and achieving coordination and remote control.

### **6.3.2. A- Electronic Planning**

(Ghoneim, 2004: 57-59) believes that electronic planning depends mainly on the use of strategic planning and the pursuit of achieving strategic goals, as the decisions that use electronic systems in planning their work are comprehensive to serve the various departments and departments of the organization, and electronic planning is also adopted in Electronic wealth has remained on the use of new knowledge systems such as decision support systems, expert systems, and artificial neural network systems. It also depends on simplifying work systems and procedures. Of course, electronic planning differs completely from traditional planning, as he indicated (Najm, 2004: 236-237) He noted that there are fundamental differences between electronic planning and traditional planning, which are as follows:

- Electronic planning: a dynamic process in the direction of broad, flexible, timely, short-term goals and subject to continuous development, unlike traditional planning that defines goals for implementation in the coming year. Usually, the impact of goals negatively affects the efficiency of planning.
- The continuous flow of digital information gives continuity to everything in the organization, including planning, which transforms it from interrupting planning to constant planning.

- Electronic planning is horizontal planning in its general framework that forms between management and workers, while traditional planning was, in essence, vertical planning.

**6.4. 3. Electronic regulation**

(Najm, 2004, pp. 250-251) believes that the electronic organization is the loose framework for a wide distribution of power, tasks and horizontal network relationships that achieve simultaneous coordination and everywhere in order to achieve the common goal of the parties to the organization.

(Ghoneim, 2004, p. 61) states that the electronic organization of contemporary organizations depends on making changes in the levels and shape of organizational structures, which are transformed from the long-form to the flat shape, and it also requires changes in the organizational structures themselves, to confront all the problems of traditional administrative organizations and eliminate them. This is done through grouping jobs, redistributing specializations, or excluding some administrative units from the organization, and creating some new organizational units. The administrative organization of contemporary organizations also requires that it include many new administrative divisions, the most important of which are mainly the following units:

- ❖ Managing electronic databases, information and knowledge.
- ❖ Department of technical support to the beneficiary.
- ❖ Managing customer relationships online.

The electronic organizational structure is one of the most important requirements for the transition from traditional management to electronic management. The electronic structure may carry, in its theoretical content, the traditional structural characteristics, from primary, supporting and third technical functions, as well as the distribution of roles, responsibilities, powers, and the like, but the dominant feature in the electronic structure. It is the extensive and appropriate use of information technology with its main pillars. In order to convert the traditional structure into an electronic one, it is necessary to study the work relationships and the nature of the traditional structure in the organization.

**Table No. (1)** Shows the differences between electronic and traditional organization

<b>Traditional regulation</b>	<b>Electronic regulation</b>
Systematic	Unsystematic
Solid environment	Flexible environment
Assertive management	Empowerment leadership
Control and tuning	Own and share
Direct	Reinforcement
Staff costs	Personnel from assets
Information belong management	Information for everyone
Avoid taking risks	Risk management
Individual contributions	Difference contribution

**6.3.4. Electronic routing:**

(Ghoneim, 2004: 71-73) indicates that the electronic approach in contemporary organizations depends on the presence of electronic leaders that seek to activate the role of dynamic goals and work to achieve them. It also depends on the presence of leaders capable of effectively interacting electronically with other individuals and the ability to motivate and cooperate to achieve Required actions. The efficient application of electronic routing also depends on the use of advanced electronic communication networks such as the Internet, so that all routing operations are accomplished and executed through it.

(Najm, 2004: 267) confirms that self-leadership is the most prominent in electronic management. The electronic leader is required to make quick and immediate decisions, which makes him need to develop special directions and rules for different cases that help him to respond quickly. Therefore, self-leaders are characterized by several features, including:

- Ability to motivate themselves and keep the focus on completing tasks. Understand the organization and its contributions to problem-solving.
- ❖ Desire and ability to solve problems.
- ❖ Dexterity, skill and flexibility to adapt to a changing environment.
- ❖ Responsibility for their career paths, activities and development.

(Ghoneim, 2004: 73) mentioned some basic skills that must be available in e-driving:

- **Electronic knowledge skills:** such as information technology in computers and electronic communication networks and their software and good handling of them.
- **Effective communication skills with others:** This requires the need to establish new business relationships through the use of all types of communication, whether written or verbal.
- **Administrative skills:** It includes the skills of motivating other individuals in the organization towards teamwork and cooperation in addition to the skills of planning, organizing, following up and controlling. Moreover, leaders and managers in this era make sure to follow all new developments in the field of electronic technologies and to have a culture of creativity, openness and flexibility, which are essential. This era, for them to be able to properly and well plan to enter the era of the digital revolution and take advantage of its potential to develop the performance of organizations and raise their production efficiency.

### 6.3.5. Electronic Control

It is the use of modern technological means within the organization to monitor activities and transactions, as it is considered one of the modern means to solve the problems produced by modern technological developments in detecting job abuse and data leakage. It also has a role in continuously following up the implementation of work and plans and trying to discover deviations from the plans and objectives set while identifying the causes of the deviation and taking measures. Corrective action in a timely manner to correct warp and deviations after detecting errors, misconduct, default, deviation and corruption and follow-up performance.

(Najm .2004: 247-277) indicates that electronic control is more close to trust-based oversight than the traditional control based on official relations and accountability, and this explains the increasing trend towards emphasizing electronic trust and electronic loyalty between employees and management, and this is what transforms control As a balance to control as a process and a continuous flow, there are many advantages to electronic control, including:

- ❖ It achieves continuous monitoring instead of periodic monitoring.
- ❖ Achieving real-time and real-time censorship instead of past-based censorship, as it achieves censorship by clicks instead of monitoring reports.
- ❖ Minimum internal surprises in control. Nothing is aggravated within the organization without first knowing it, and this reduces to a minimum the internal surprises.
- ❖ Electronic control requires and stimulates trust-based relationships, which reduces the administrative effort required in monitoring.
- ❖ The electronic control has diminished with time the importance of monitoring based on inputs, processes or activities in favor of increasing emphasis on results, so it is closer to monitoring with results.
- ❖ The electronic control helps everyone to know what is in the organization to a large extent in order to achieve the requirements of control and reduce surprises and crises in the organization.

(Al-Taie 2005: 20) mentioned a set of advantages of electronic monitoring, the most important of which are:

- ❖ Shifting from monitoring based on inputs, processes, and activities to monitoring results.
- ❖ The speed with which the results of censorship spread. Everyone knows what is happening.

(Bakhsh. 1427 AH: 60) mentioned a number of advantages of electronic control, the most important of which are:

- ❖ Easy access to information.
- ❖ The possibility of publishing the regulations and procedures for administrative services and the standards for their provision and making them available online.
- ❖ The ability to determine responsibility by getting to know the decision-makers and being accountable when mistakes are made.

The features of electronic control can be summarized as follows:

- ❖ Shifting from self-censorship to practical censorship
- ❖ Availability of transaction tools and procedures.
- ❖ Moving closer to trust-based oversight instead of authority-based oversight.
- ❖ Approaching censorship in the present instead of censoring the past.
- ❖ Lack of internal surprises with immediate supervision and correction.
- ❖ Expanding oversight over procurement, suppliers, and internal and external networks
- ❖ 7 - Shifting from monitoring based on inputs, processes and activities to monitoring results.
- ❖ The speed of the spread of the results of the censorship, as everyone knows what happens?

### **6.3.6. Disadvantages of electronic censorship**

(Al-Taie 2005: 50) mentioned a number of defects, including:

- ❖ Lacks human interaction.
- ❖ The employees' sense that the management is monitoring them from a distance
- ❖ Ease of penetration.
- ❖ The researcher adds to these defects, the researcher's lack of self-censorship and manipulation of electronic systems by some specialists.

### **6.4. Elements of electronic management**

(Al-Salmi, Al-Sulaiti, 2008: 41) indicates that the application of electronic management requires several elements, as follows:

- ❖ Devices and equipment.
- ❖ Software of all kinds.
- ❖ Communications.
- ❖ Information systems.
- ❖ Human cadres.

(Yasin, 2005: 23) believes that electronic management consists of four elements, namely:

#### **1- Computer Hardware ((Hard ware:**

It is an electronic machine with very high speed and extreme accuracy that can accept, store and process data to reach the required results (Clinics 2004: 19).

Computer hardware refers to computers and their accessories.

It consists of computer hardware, systems, networks, and their accessories.

#### **2- Software (soft ware):**

It is a group of programs used to operate the automatic computer and take advantage of its various capabilities (Al-Masoud 2008: 41).

It means the mental part of systems and computer networks such as:

E-mail programs, databases, accounting software, network management systems, translator programming language and programming audit tools

#### **3- Communications network:**

As a result of the development of computers, communication networks appeared, which led to its use by more than one beneficiary at the same time through different input units in time and space, and this is called network communication (Abu Maghyid 2004: 157).

They are the connections spanning a communication fabric to the Internet, the extranet and the Internet, which represent the value network of the organization and its various management.

#### **4- Knowledge Makers (knowledge workers):**

It is at the heart of these components, and is made up of the digital leaders, managers, analysts, knowledge resources, and intellectual capital in the organization.

### **6.4.1. Pros and cons of electronic management**

#### **6.4.1.1. The advantages of electronic management**

As for traditional management, there are disadvantages, and electronic management has a set of positives. (Al-Ashhab, 2010: 24-25) (Al-Shamrani, 2001: 182) listed a set of positives, the most important of which are:

- ❖ Speed up services for workers.
- ❖ Transferring documents electronically in a more effective manner.
- ❖ Reduce the cost.
- ❖ Knowing those who are negligent at work in an advanced manner.
- ❖ Less prone to errors.
- ❖ Clarify the documents required of citizens in an easy and simple way.
- ❖ Reducing the need for additional buildings.
- ❖ Reducing road congestion due to the less need to go to government institutions.

Al-Qahtani (2006) believes that there are a number of positives achieved by electronic management, namely:

- ❖ Fast return to data.
- ❖ Provide a lot of time for employees.
- ❖ Obtaining data and information related to work at anytime and anywhere.
- ❖ Increase the efficiency of administrative work.
- ❖ Increasing the link between the sub-departments and the main department.

Al-Tai (2008) believes that, through the results obtained, there are five advantages of electronic management, namely:

- ❖ Encouraging workers to devise modern methods in their communication with the public.
- ❖ Immediate response to inquiries of beneficiaries from the public.
- ❖ The low cost of the service provided to the public.
- ❖ Simplifying the procedures used in evaluating services.
- ❖ Providing a security system to protect employee data and information.

#### **6.4.1.2. The negatives of electronic management**

Also, electronic management has advantages and pros, it also has its disadvantages and disadvantages, and among the most important of these negatives as mentioned (Al-Ashhab, 2010: 27), which include the following:

**1- Electronic espionage:** It is accessing secure information on another computer over the network, and unauthorized persons are not allowed to view it. Often this information is extremely confidential and important to its owner, and these actions are done with the intent to harm others (Divis, 1998: 46).

**2- Hacking:** It is someone who tries to access computer and information systems illegally, by searching for weaknesses in security protection systems (Ladon, 2006: 346).

**3- Unemployment:** as it is the application of electronic management that leads to an increase in the unemployment rate as a result of dispensing with services and hiring new workers.

**4- Social communication:** where the application of electronic management leads to a lack of contact with members of society, as places of review are among the most important places of communication.

**5- Loss of privacy:** where the electronic interaction of people can learn the privacy of others.

**6- Loss of security:** as electronic transactions result in many transactions, the most important of which are electronic transfers and financial transactions via credit card (Nubi, 2003: 13)

**7- Management paralysis:** increasing dependency on foreign organizations and companies through the applications and programs provided by these companies.

**8- The speed of technological development:** which leads to the manufacture of modern programs and devices that make old programs and devices work slowly.

(Najm, 2004: 58) mentioned a set of negatives to electronic management, the most important of which are:

- ❖ The culture of the organization does not match the culture of the Internet, as the Internet requires openness, transparency and sharing of information with others, while protecting the company's business and its secrets requires limiting all of this.
- ❖ Threatening the company's security systems through the crimes of hackers and hackers to the organization's information bases has become a serious threat not only by tampering with the company's resources, but also in the core capabilities of the organization.
- ❖ Various pressures on e-business, including: (Official pressure - Cost pressure - Technology pressure - Customer pressure).

#### **6.5. The role of electronic management in improving performance**

The electronic and informatics management plays an important role in improving the performance of the organization, and the importance of these systems has increased in recent times due to the increasing size of government organizations and the complexity of their work and their geographic complexity, which requires an increase in the need for more effective means of monitoring and communication and their systems. Therefore, information technology has become a catalyst for organizations looking for excellence. In its production and on the efficiency and effectiveness in its performance, so organizations accelerate to use modern information technology (electronic management) to create new and innovative opportunities in several areas such as raising the level of job performance, improving administrative decisions, simplifying administrative procedures, optimal utilization of available resources, and making changes in the administrative structure and processes And updating the financial systems, training employees on how to use this technology, to ensure that it works properly and in a way that meets the high performance standards that organizations seek to achieve.

Therefore, there is a role that the electronic Administration and technology play in improving performance in general. This role is represented in the following (Central Research Administration, 2013: 41)

- ❖ Improving job performance by completing work quickly, efficiently, and accurately, with less cost and increasing the rate of employee performance.
- ❖ Reducing the routine job burdens placed on the shoulders of managers, allowing them to use time in strategic planning and formulating the general policies of the organization, which contributes to raising the efficiency and effectiveness of senior management.
- ❖ Increase the sense of belonging and loyalty on the part of workers towards the organization through the opportunities it provides for easy access to information, which contributes to enhancing their participation in the decision-making process.



❖ It pushes the organization towards achieving the goal of competitive advantage, which highlights the increased interest in research, development and training that contribute to strengthening, building and developing individual capabilities.

5. (Al-Shawabkeh, 2011: 285) stated that information technology has an impact and a role in the process of improving institutional performance, the most important of which are the following:

❖ Increasing the opportunities available to the Ministry and the process of applying new ideas to develop services.

❖ Increase the Ministry's effectiveness in achieving its long-term goals in providing services through the use of local and international business networks.

❖ Improving the coordination process between all administrative levels within the Ministry to achieve its goals.

❖ Increase the Ministry's efficiency in utilizing its various resources to generate the required outputs at the lowest possible cost, by automating its operations and activities based on computer applications, which contributed to improving the quality of services and reducing variation and disparity in the level of performance.

❖ We will review the role that the electronic Administration plays in improving performance at all levels.

#### **6.6. The role of electronic management in improving administrative performance (Al-Subaie, 2005: 19)**

1. Increase your productivity.
2. Accuracy and speed in completing work.
3. Providing electronic information (Radwan, 2004: 3).
4. Providing the necessary and comprehensive information in a timely manner (Bin Muhammad et al. 2009: 29).
5. Organizing the daily workload.
6. Overcoming obstacles that reduce the level of performance.
7. Accurate completion of work (Al-Manea, 2006: 173).

### **VII. The study sample**

It is a part of the original community withdrawn in a certain way to obtain information about the community (Ibrahim et al., 2008: 175). A stratified random sample was taken to quantitatively measure the opinions of the study sample on the role of electronic management in improving the administrative performance of the Ministry. The stratified random sample is defined as the process of selecting a number of Units from a community divided into strata and a random sample is chosen from each stratum so that the drawing from the different classes is independent and the group of samples selected from the strata forms the stratified random sample in order to access the characteristics of the community from the data of this sample, as we make each stratum a small community from which a random sample is drawn. Of a specific size, we estimate the community parameters from each stratum separately, and then these estimates are used in the estimation of the whole community.

And referring to Morgan and Gregisi's tables in determining the sample size from any given community, the study sample was chosen and the Ministry of Education's General Office represents (1098). A sample of 20% was chosen from which a stratified random sample was drawn from all the classes of the Ministry's general office.

### **VIII. Study population**

The study population consists of employees of the departments of the Ministry of Education's office, the employees of the Department of Education in Amanat Al-Asimah and the educational districts in which there are electronic systems, whose number is (1098) employees according to the 2016/2017 statistics, and some secondary schools in Amanat Al-Asemah that have school electronic systems according to the statistics of the Education Office for the year 2016 A.D., totaling (34) schools.

### **IX. Analysis Of The Results**

#### **9.1. Descriptive analysis of the opinions of the study sample**

To get acquainted with the views of the study eye on the role of electronic management in improving administrative performance, in order to provide a comprehensive description of the degree of agreement of the sample members with the axes and paragraphs of the questionnaire, the arithmetic averages, standard deviations and the relative importance were used to analyze the responses of individuals on the axes of the questionnaire.

**First:** The sample's views towards the paragraphs of the axis: Improving administrative performance:

The paragraphs of the axis dealt with the role of electronic management systems in improving administrative performance. The following table shows descriptive statistics of the views of the study sample on the role of electronic management systems in improving administrative performance.

**Table No. (2) Arithmetic averages, standard deviations, arrangement and relative weight of the expressions of the role of electronic management in improving administrative performance**

No	The paragraphs	Rank	Mean	standard deviation	R.I.I.	Level relative to the mean
1.	The electronic Administration helps to easily retrieve information to achieve the Ministry's objectives	11	3.77	0.94	75%	Good average
2.	The electronic Administration helps in strengthening the supervisory role of the Ministry	14	3.67	0.96	73%	Good average
3.	The electronic Administration contributes to the transfer of information and communication between all departments and offices of the Ministry	13	3.68	1.02	74%	Good average
4.	Electronic Administration helps in making administrative decisions	15	3.50	1.06	70%	Good average
5.	Electronic management contributes to reducing red tape in accomplishing daily work	4	3.80	1.03	76%	Good average
6.	The electronic Administration helps in reducing the number of auditors who frequent the Ministry's office and offices	8	3.77	1.05	75%	Good average
7.	Electronic management contributes to discovering administrative obstacles in a timely manner	9	3.76	1.00	75%	Good average
8.	The electronic Administration contributes to the transfer of information and communication between all departments and offices of the Ministry	10	3.75	0.99	75%	Good average
9.	E-management saves the trouble of moving between different departments to complete the work	3	3.78	1.05	76%	Good average
10.	The electronic Administration helps in managing all administrative units and raising the Ministry's efficiency	5	3.81	1.02	76%	Good average
11.	Electronic management helps in achieving the principle of comprehensive quality and continuous improvement	6	3.80	0.97	76%	Good average
12.	Electronic management helps in qualifying and training workers and increasing their creativity	7	3.81	0.93	76%	Good average
13.	The electronic Administration facilitates the rapid preparation of the activities programs in the Ministry	2	3.87	0.90	77%	Good average
14.	Electronic management helps in evaluating administrative performance	12	3.76	0.92	75%	Good average
15.	Electronic management helps to reduce the use of papers and replace them with electronic archives	1	3.96	0.92	79%	Good average
	<b>Total</b>		<b>3.77</b>	<b>0.82</b>	<b>75%</b>	

**Source:** Prepared by the researcher based on the outputs of the statistical program package

The results appear in Table No. (2) the contribution of electronic management in improving administrative performance in a high manner, with an arithmetic average of (3.77), a standard deviation of (0.82) and an approval rate of (75%), and this indicates and confirms the contribution of electronic management systems to improving administrative performance.

The arithmetic averages were limited to between (3.96) and (3.76), with a level of significance between (70%) and (79%), as the results appear in Table No. (31) Standard deviations, where the largest standard deviation was reached in Paragraph No. (4), followed by the paragraph. No. (6) and (7) by the amount (1.5) and (1.6), and this indicates the variation in the respondents' answers in the answer to those paragraphs,

and on the contrary, the slightest deviation was reached in Paragraphs No. (15) and (14) by (0.92) , And this indicates the respondents 'agreement on these paragraphs, and accordingly the standard deviations of most of the paragraphs show that there is agreement in the views of the surveyed sample, as all these deviations are less than half of the hypothetical arithmetic mean of the study of (1.5). This indicates that there is agreement among the sample members. To study the contribution of electronic management to improving administrative performance.

**9.2. Hypothesis analysis:**

**9.2.1. Analyze the results of the first hypothesis:**

The first hypothesis: the electronic Administration contributes to improving the administrative performance of the Ministry of Education.

**Table (3)** the results of the hypothesis

	The number	mean	standard deviation	T	Degree of freedom	Indication level
Improving administrative performance	207	3.77	0.82	13.44	206	*0.00

\* D at the significance level of 0.05

Through the above table in general, it is noticed that the arithmetic mean of all the paragraphs of the axis has reached (3.77) with a standard deviation of (0.82), the value of (T) (13.44), and the value of the level of significance is equal to (0.00), so this axis is considered a statistical significant at the level of Significance (0.05), which indicates that the average degree of response in this field differs substantially from the degree of neutrality, which is (3), and this is evidence of the approval of the sample members that electronic management contributes to improving administrative performance by (75%) and therefore we accept the hypothesis that states:

Electronic Administration contributes to improving the administrative performance of the Ministry of Education.

**9.1.2. The second hypothesis: finding the relationship between electronic management and administrative performance:**

A- Finding the relationship to the second hypothesis:

This is to create a correlation coefficient between electronic management systems and improving administrative performance in the Ministry of Education.

There is a statistically significant relationship between electronic management and improving administrative performance.

**Table (4)** shows the correlation coefficient between electronic management and improving administrative performance

		Electronic management
Improving administrative performance	Pearson correlation coefficient	.397**
	P.value	.000
	Sample size	207

\*\* D at the significance level 0.01

To verify this, Spearman's correlation coefficient was used as shown in Table No. (4) that the correlation coefficient in general between electronic management and improving administrative performance in the Ministry of Education is (0.397), and the probability value is equal to (0.00), which is less than the level of significance (0.05) And this is evidence of accepting the null hypothesis, which is the existence of a relationship between electronic management and administrative performance, and this indicates the existence of a positive relationship, because the more electronic management is used, the greater the improvement in performance, and this may be due to the importance of electronic management in improving administrative performance through data preservation The information and its preservation are intact, far from damage and loss, and can be retrieved at any time, as the greater the improvement in administrative processes, the greater the application of electronic management, and therefore we accept the hypothesis that states:

**There is a statistically significant relationship between electronic management and improving administrative performance.**

**9.1.3. Finding the Differences:**

Analysis of the third hypothesis: There are no statistically significant differences in the response of the sample members about the role of electronic Administration in improving the performance of the Ministry of Education due to the following variables (gender, age, qualification, years of service, ability to use the computer).

**1. Gender:**

There are no statistically significant differences in the response of the respondents to the role of electronic Administration in improving the performance of the Ministry of Education due to the gender variable.

The researcher used the (t) test to determine the differences attributed to the gender variable.

Table No. (5): shows the results of the (t) test to determine the differences attributed to the gender variable

	Type	NO	Mean	standard deviation	T	Degree of freedom	P.value
The role of electronic management in improving administrative performance,	Male	143	3.70	0.84	-1.88	205	0.06
	Female	65	3.93	0.77			
	Female	65	4.02	0.70			
	Female	65	3.85	0.59			

Table No. (5) shows the effect of the gender variable of the study sample on the fields of study, which are: The role of electronic management in improving administrative performance. For the gender variable, as the value of (t) (the college) reached (-1.88) and the probability value (0.06), which is not statistically significant at the level ( $\leq 0.05$ ).

Improving administrative performance, as electronic management plays a vital role in raising institutional performance, and we conclude from the previous table that the Ministry applies electronic management in order to increase performance, and based on the aforementioned result, we accept the hypothesis attributed to their gender, which states that:

There are no statistically significant differences in the response of the sample individuals about the role of electronic Administration in improving the administrative performance of the Ministry of Education, due to the gender variable.

**2. Age:**

To answer the question, the researcher used the one-way analysis of variance (ANOVA).

There are no statistically significant differences in the response of the respondents to the role of electronic Administration in improving the performance of the Ministry of Education due to the variable of age.

**Table No. (6): shows the results of the analysis of variance (ANOVA) attributable to the variable of age**

		Sum of squares	Degree of freedom	Meansquared	F	P.value	Semantics
The role of electronic management in improving administrative performance	Between groups	.242	3	.242	.117	.950	Not d
	Within groups	139.872	203	139.872			
		140.114	206				

Table No. (6) Shows the effect of the age variable on the fields of study, where it is noticed that there are no statistically significant differences between the arithmetic averages in the attitudes of the study sample towards the role of electronic management in improving administrative performance due to the age variable as the value of (f) is the total. (.117) and the probability value reached (.950), which is thus not statistically significant at the level of significance ( $\alpha \leq 0.05$ ). Thus, we accept the hypothesis related to administrative performance and the age variable, which states that:

There are no statistically significant differences in the response of the sample individuals about the role of electronic Administration in improving administrative performance, the Ministry of Education, which is attributed to the age variable.

**3. Academic qualification**

There are no statistically significant differences in the response of the sample individuals about the role of electronic Administration in improving administrative performance in the Ministry of Education due to the qualification variable.

**Table No. (7):** shows the results of the analysis of variance (ANOVA) attributable to the qualification variable

		Sum of squares	Degree of freedom	Mean squared	F	P.value	Semantics
The role of electronic management in improving administrative performance	Between groups	8.055	3	2.685	1.128	.72	Not d
	Within groups	132.059	203	.651			
		140.114	206				

Table No. (7) shows that there are no statistically significant differences in the attitudes of the study sample towards the role of electronic management in improving administrative performance, due to the scientific qualification variable, as the total value of (F) reached (1.128) and a probability value (0.72), which is Not a function at the level ( $\alpha \leq 0.05$ ), and there was a consensus by the study sample on the importance and effectiveness of the role of electronic management in improving administrative performance, and this result came according to what the researcher expected that there were no statistical differences between the role of electronic management in improving performance Administrative, attributable to the variable of scientific qualification, and that is due to the fact that individuals with high academic degrees are on a high level of responsibility and objectivity in their judgment of these fields if they are good and correct in the course or if they are defective or defective in order to affect performance and productivity, and also because of their conviction that The role of electronic management systems in improving administrative performance, with high effectiveness and efficiency in providing better performance, employees also have the ability to evaluate the role of electronic management used in their field of work in terms of its ability and efficiency in improving performance A hypothesis related to the three fields of study and the scientific qualification variable, which states that:

There are no statistically significant differences in the response of the sample individuals about the role of electronic management in the role of electronic management in improving administrative performance, and the Ministry of Education attributes the scientific qualification variable.

**4. Years of Experience:**

There are no statistically significant differences in the response of the sample individuals about the role of electronic Administration in improving the performance of the Ministry of Education due to the years of experience variable.

**Table No. (8):** shows the results of the analysis of variance (ANOVA) attributable to the experience variable

		Sum of squares	Degree of freedom	Mean squared	F	P.value	Semantics
The role of electronic management in improving administrative performance	Between groups	1.090	3	.363	.530	.662	Not d
	Within groups	139.024	203	.685			
		140.114	206				

It is noticed from Table No. (8) that there are no statistically significant differences at the level of (0.05) due to the variable of years of service, where the value of (F) total is (.530) and probability value is (.662), which is thus not statistically significant at the level of ( $\alpha \leq 0.05$ ), and thus we accept the hypothesis related to the role of electronic management in improving administrative performance, attributing years of experience variable, which states that:

There are no statistically significant differences in the response of the sample individuals about the role of electronic Administration in improving the performance of the Ministry of Education, attributable to the years of experience variable.

**1. Computer proficiency level:**

There are no statistically significant differences in the response of respondents to the role of electronic Administration in improving the performance of the Ministry of Education due to the variable of computer proficiency.

**Table No. (9):** shows the results of the analysis of variance (ANOVA) attributable to the variable of the computer proficiency level

		Sum of squares	Degree of freedom	Mean squared	F	P.value	Semantics
The role of electronic management in improving administrative performance	Between groups	.597	3	.199	.290	.833	Not d
	Within groups	139.517	203	.687			
		140.114	206				

Table No. (9) shows that there are no statistically significant differences due to the variable of computer proficiency level, as the total value of (P) reached (.290) and the probability value (.833), which is not statistically significant at the level ( $\alpha \leq 0.05$ ), perhaps because Almost every employee knows how to use the computer, which means that he is able to deal with any tool used to raise performance or, ignoring the role of the complexities that characterize some computer programs that are used by the Ministry to improve performance. Based on the above, the researcher concludes with accepting the hypothesis that there are no statistical differences due to the variable computer proficiency.

### 6. Job degree

There are no statistically significant differences in the response of the sample individuals about the role of electronic management in improving the performance of the Ministry of Education due to the job grade variable.

**Table No. (10):** shows the results of the analysis of variance (ANOVA) attributable to the variable of job grade

		Sum of squares	Degree of freedom	Mean squared	F	P.value	Semantics
The role of electronic management in improving administrative performance	Between groups	2.660	3	.887	1.309	.272	Not d
	Within groups	137.454	203	.677			
		140.114	206				

Table No. (10) shows the attitudes of the study sample towards the three areas, the role of electronic management in improving the administrative performance) due to the job level variable, where the table shows that there are no statistical differences at the level ( $\alpha \leq 0.05$ ) in the trends of the study sample individuals due to the job grade variable. As the total value of (f) reached (1.309) and the probability value (0.272), which is not statistically significant. Therefore, the hypothesis can be accepted that states: There are no statistically significant differences in the response of the sample members about improving the role of electronic management in improving administrative performance; The Ministry of Education attributed the job level variable.

**7. Specialization:** There are no statistically significant differences in the response of the respondents to the role of electronic Administration in improving the performance of the Ministry of Education due to the variable of specialization.

**Table No. (11):** shows the results of the analysis of variance (ANOVA) attributable to the specialization variable

		Sum of squares	Degree of freedom	Mean squared	F	P.value	Semantics
The role of electronic management in improving administrative performance	Between groups	3.257	3	1.086	1.610	.188	Not d
	Within groups	136.857	203	.674			
		140.114	206				

Table No. (11) shows the trends of the study sample toward the role of electronic management in improving administrative performance, attributable to the variable of specialization, as the table shows that there are no statistical differences at the level ( $\alpha \leq 0.05$ ) in the attitudes of the study sample towards the three fields due to the job grade variable. The total value of (f) was (1.610) and the probability value was (.188) It is not statistically significant and it is not statistically significant and therefore the hypothesis that? "Can be accepted. In improving administrative performance, the Ministry of Education is due to variable specialization.

### X. Conclusions

This topic seeks to present a summary of the results of the opinions of the study sample, test the hypotheses of the study, and then present the most important **conclusions of the study**.

#### First: Summary of the results of the analysis of the opinions of the study sample:

The following table shows a summary of the analysis of the opinions of the study sample regarding the role of electronic management in improving the performance of institutions.

**Table No. (12): Arithmetic averages, standard deviations, arrangement and relative weight on the role of electronic management systems in improving administrative performance**

	mean	standard deviation	R.I.I.	Level relative to the mean
<b>The role of electronic management in improving administrative performance,</b>	3.77	0.82	75%	Good average

The source was prepared by the researcher based on the outputs of the statistical software package (S.P.S.S.)

Through analyzing the opinions of the study sample towards the role of electronic management in improving administrative performance, we extract the following results:

Table No. (2) Shows the role of electronic management in improving administrative performance is high, as the arithmetic average reached (3.77), a standard deviation (0.82), and an approval rate of (75%). The Ministry should expand the use of electronic Administration in managing all activities in the Ministry in order to increase the process of improving performance in general. Axis No. (5) came in first place with an average of (4.04), a standard deviation of (0.66), and an approval rate of (81%). This is evidence that electronic management has a tangible role in the process of improving the quality of educational services.

While Axis No. (3) came in second place with an average of (3.88), a standard deviation of (0.69) and an approval rate of (77%), and this is evidence that electronic management has a tangible role in the process of improving job performance. Axis No. (2) ranked third with an average of (3.77), a standard deviation of (0.82), and an approval rate of (75%). This is evidence that electronic management has a tangible role in the process of improving administrative performance. Axis No. (4) ranked fourth with an average of (3.62), a standard deviation of (1.08) and an approval rate of (72%). This is evidence that electronic management systems have a tangible role in the process of improving administrative performance. Axis No. 1 ranked fifth with an average of (3.53), a standard deviation of (0.62), and an approval rate of (70%). This is evidence that electronic management has a tangible role in the process of improving administrative performance.

#### 9.2. Summary of the results of testing the study hypotheses:

The results of the study hypotheses can be summarized in the following table:

**Table No. (13) Illustrates the results of hypothesis testing**

Hypothesis	The result
There is a relationship between electronic management and improving administrative performance	Acceptance of the alternative hypothesis
Electronic management contributes to improving administrative performance	Acceptance of the alternative hypothesis
There are no statistically significant differences in the response of the sample members about the role of electronic management in improving the administrator at the Ministry of Education due to the following variables (gender, age, qualification, years of service, ability to use the computer, specialization) (Diwan)(	Completely accepting the null hypothesis regarding (gender, age, qualification, years of service, ability to use computer, specialization)

## 10. The conclusions of the study:

The most important conclusions are as follows:

- 1) Electronic management contributes to improving administrative performance, so it was the lowest level in Paragraph No. (4). Electronic management systems help in making administrative decisions with an approval rate of 70%. The highest level in Paragraph No. 15 was that electronic management systems help reduce the use of papers and replace them with electronic archiving, with an approval rate (79%).
- 2) It reached the axis with approval (75%).
- 3) The existence of a positive correlation between electronic management systems and improving administrative performance, where the Brison correlation coefficient reached (0.397).
- 4) There are no statistically significant differences at the level of (0.05) or less in the attitudes of the individuals of the study community about the role of electronic management in improving administrative performance, attributing to personal variables (age - specialization - gender - computer proficiency).

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