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# The Impact of Applying the Dimensions of IT Governance in Improving e-training - Case Study of the Ministry of Telecommunications and Information Technology in Gaza Governorates

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**Abstract:** The study aimed to identify the impact of the application of information technology to improve e-learning at the Ministry of Telecommunications and Information Technology (MTIT) from the standpoint of employees. The study used the descriptive and analytical approach. The study population consists of 50 employees working in the field of technology at the Ministry of Telecommunications. The researchers used the comprehensive inventory method. Fifty questionnaires were distributed to all members of the study population. The number of questionnaires returned was 44, indicating that the response rate was (88%).

The results showed a correlation between corporate governance of information technology in all its dimensions (planning, organizing, monitoring and evaluation, support and delivery, acquisition and implementation) and to improve the level of e-learning from the perspective of workers in the Ministry of Telecommunications and Information Technology. Also it showed the presence of a statistically significant effect between IT governance (planning, organizing, monitoring and evaluation, support and delivery) and to improve the level of e-learning after (the acquisition and implementation) had no effect in improving the electronic level of training. The study recommended the need to apply the COBIT framework as a tool to measure the level of information technology at the Ministry of Telecommunications and Information Technology Governance.

**Keywords:** Governance, IT, e-training, COBIT.

## 1. INTRODUCTION

In recent years, the use of the Web has greatly affected the lives of many societies, especially in training. This has contributed greatly to the emergence of e-training, in light of the suffering of traditional training in general, many constraints and restrictions that limit its effectiveness at the international level and thus does not support the competitive positions of organizations in light of the successive changes locally and globally (Jad Al Rab, 2009). The shift to adoption of e-training methods and practices in the workplace to provide staff with skills has become an essential component of training in many institutions (Al-malika, 2015). E-training is an effective input for the development of human resources and the formation of cadres capable of achieving objectives in organizations. Experience has shown that the human trainee is an essential component of production and the most flexible in achieving high rates. It also contributes to raising the efficiency and skill of workers to meet the different variables facing organization in the future and gain the skill to deal with it (Al-Turki, 2010). However, e-training has its disadvantages:

- Lack of participation of the trainee positively in the exchange of ideas and ideas with the coach on the one hand and with the group on the other hand.
- Difficulty faced by coaches in communicating their ideas in the course of the course, in addition to the coach will not be able to follow the active trainee or sleeping or stray or shows boredom.
- The weakening of the role of the human trainer as an important educational and educational influence.
- Difficulty evaluating trainees.
- The frequent use of technology may lead to trainee fatigue and lack of seriousness in dealing with these media.
- Some trainees may feel alienated from their peers and coach.

- Difficulty applying some of the skills and practices desired in some training programs.

Government units are the most affected by ICTs. The use of ICTs in the provision of their services and the design of their accounting systems resulted in the emergence of the e-Government system. This system provided many advantages, but it is not without some disadvantages, the most important of which is vulnerability to penetration and manipulation. Methods that reduce the difficulties and risks of e-government implementation Use IT governance mechanisms that include the criteria by which to achieve an appropriate level of security.

## **2. THE GENERAL FRAMEWORK OF THE STUDY**

### **2.1 Problem Statement**

Although the ICT sector is highly regarded by most countries as the most important sectors affecting the development of society and the economic structure of countries in addition to being an important factor in supporting investment and promoting development, the utilization of technological developments and changes is almost limited in Gaza Strip, This is due to several reasons including: fear of the dangers of e-training, poor transparency and control, in addition to the many problems and complexities exercised by the Israeli occupation because of its dominance on the Palestinian frequency spectrum Governed by the techniques and equipment used in Palestine. Importantly, the process needs to be prepared, planned and properly controlled to contribute to the development and to maximize the potential of this sector in light of the complex situation. To successfully manage this process, IT governance should be adopted with principles and standards as the framework that will achieve alignment and balance between the Ministry's strategic objectives and objectives that help to achieve the acceptable level of IT risks. Based on the above, the problem of research is determined by the following question:

**What is the impact of IT governance on improving e-training from the perspective of the ministry of ICT employees?**

**A number of sub-questions arise from this question:**

1. Availability of information technology governance areas (planning, organization, acquisition, implementation, support, delivery, monitoring and evaluation) in the Ministry of Telecommunications and Information Technology?
2. What is the level of availability of e-training requirements for the trainer (training, training environment, and training programs) from the perspective of employees in the Ministry of Telecommunications and Information Technology?
3. Is there a relationship between IT governance and improved e-training?
4. Is there an impact on the application of IT governance dimensions in improving the level of e-training?
5. Do respondents differ on the extent to which IT governance contributes to improving e-training (by qualification, years of service, gender, and number of training courses)?

## **3. RESEARCH OBJECTIVES**

The aim of the study is to demonstrate the impact of IT governance on improving e-training from the perspective of Ministry ICT employees by achieving the following sub-objectives:

1. Identify the availability of IT governance dimensions (planning, organization, acquisition, implementation, support, delivery, monitoring and evaluation) in the Ministry of Telecommunications and Information Technology.
2. The level of availability of e-training requirements (trainer, training environment, training programs) from the point of view of employees of the Ministry of Telecommunications and Information Technology.
3. A description of the relationship between applying the dimensions of IT governance and improving the level of e-training.
4. Disclosure of the impact of IT governance on improving the level of e-training.
5. To determine the extent to which respondents differed on the contribution of IT governance to the improvement of electronic training according to (qualification, years of service, gender, and number of training courses).

## **4. RESEARCH IMPORTANCE**

The study derives its importance from its scientific subject as well as the field of its practical application. Therefore, the importance of research can be determined by the following aspects:

1. The scientific enrichment it adds to the field of IT governance and its role in improving the level of e-training.

2. Assisting the Ministry of Telecommunications and Information Technology in adapting and reacting to rapid environmental changes and shifts through their knowledge of the level of their ownership of IT governance and e-training requirements.
3. The attention of decision makers in the ministries that support e-work has led to the need to know the impact of IT governance in enhancing e-training, in the light of the results of the study and its utilization in the field of application.

## 5. RESEARCH HYPOTHESIS

In order to provide an appropriate answer to the study questions presented, the study seeks to test the validity of the following hypotheses:

**Ho1:** There is no statistically significant relationship between IT governance (planning, organization, acquisition and implementation, support and delivery, monitoring and evaluation) and improving e-training from the perspective of MTIT employees.

**Ho2:** There is no statistically significant impact between IT governance (planning and organization, acquisition and implementation, support and delivery, monitoring and evaluation) and improving e-training from the perspective of MTIT employees.

**Ho3:** There are no statistically significant differences between respondents' views on the contribution of IT governance to improving e-training according to (qualification, years of service, gender, and number of training courses).

## Research Limits and Scope

1. **Subject Limit (Academic):** Researchers have relied on the dimensions of IT governance dimensions in line with the COBIT framework of the ITIG Institute.
2. **Human Limit:** The human limits are all ICT employees in the Ministry of Communications and Information Technology and those who have e-training courses.
3. **Institutional limit:** The study was applied to the Ministry of Communications and Information Technology in Gaza Governorate.
4. **The spatial limit:** The study was conducted in the State of Palestine, and was limited to the Ministry of Communications and Information Technology.
5. **Time Limits:** The study was conducted in 2017.

## 6. LITERATURE REVIEW

- Study of (Al-Zafairi, 2016), which aims to identify the training requirements of the trainer from the point of view of the trainees and the requirements of the training environment from the point of view of the trainers and the obstacles of using electronic training from the point of view of the administrators. The researcher used the questionnaire as a tool and a random sample was obtained by 50% of the employees and reached (100) trainees and a class sample of the 20 expert trainers. 50% of the directors of the departments and institutes of the General Authority for Applied Education and Training The number was (40) director. The results showed that there is complete agreement on the terms of the trainer's electronic training requirements with an average mean of 4.26, and that there is complete agreement on the requirements related to the training environment with an average mean of (3.9).
- Study of (Nassour, 2015) aimed at assessing the level of implementation of IT governance through its four main areas: planning, organization, acquisition, implementation, support, delivery, monitoring and evaluation in the Syrian banking sector for its customers. The researcher used a questionnaire designed for this purpose and distributed to the workers. The study sample consisted of (198) questionnaire. The most important results were that the level of application of information technology governance in Syrian banks was medium, and that the impact of IT governance on the quality of financial reports was significant.
- A study of (Zwaid et al., 2014) aimed to determine the level of information technology governance available at the Commercial Bank of Syria in Lattakia using the COBIT model in its four dimensions: planning and organization, acquisition and implementation, support and delivery, monitoring and evaluation. The study was based on the survey methodology through the survey of the managers' opinions at the bank, and 43 questionnaires were distributed to the bank's senior managers and 40 responses were retrieved. The research found that the level of application of information technology governance in the Commercial Bank of Syria is an average level.

- A study of (Mohammed, 2014) aimed to identify the views of faculty members on the extent of achieving the requirements of electronic training at the University of Banha and the relationship between electronic training and intellectual capital. The researcher used the questionnaire as a tool and a simple random sample was chosen from the faculty members, which reached (139) members. The most important results were the availability of qualified manpower for planning for electronic training and many of the requirements of electronic training, and that many of the study sample received more than (11) traditional training courses.
- A study of (Awad, 2014) aimed to examine the extent to which information technology governance can be used to control the risks of electronic banking activities as one of the modern trends in risk management and control in Saudi banks. The questionnaire was used as a tool and a random sample was selected, including the financial managers of Saudi banks, those with experience in information technology and information technology experts in Saudi banks, where 110 questionnaires were distributed and 85 were retrieved. The study concluded that there are advanced contributions to the concept of information technology governance in controlling the risks of e-banking activities and the need for banks to activate the requirements of IT governance to overcome the problems and risks of electronic banking activities. The research also found positive relationship between the multiple dimensions of IT governance and the risks of using information technology in banking activities.
- A study of (Al-Otaibi, 2014), aimed at assessing the level of IT governance at Taif University using the Quaitb Scale. The study was conducted in the questionnaire designed for this purpose. The study community consists of all Taif University employees who use information technology in the performance of their work; their number has reached (1252). Random samples of 104 employees were selected. One of the most important results is that information technology at Taif University has the governance dimensions of this technology according to the Qubit scale: strategic direction planning, acquisition of information infrastructure, better services to customers, specific level of control over various processes and the establishment of a sustainable assessment process.
- Study of (Mohammed, 2012) which aimed to identify the role of corporate governance and IT governance in working to improve and enhance the quality of electronic financial reports and the impact of the quality of electronic financial reports on the efficiency of the Saudi stock market. The researcher used the questionnaire as a tool. Three forms were designed and distributed to members of the Board of Directors, the Executive Director and the Internal Audit Manager, where 144 questionnaires were distributed and 91% were returned back. One of the most important results was that the impact of IT governance on the movement of securities trading.
- A study of (Al-Mutairi, 2012) aimed at the requirements of electronic training from the perspective of trainers. The most important results were that there is agreement among the sample of the study on the training requirements of the trainer's computer, namely: proficiency in the operation of the computer and its accessories as well as proficiency in the use of the Internet in the search for information and proficiency in dealing with Microsoft Office programs, as well as proficiency in handling e-mail and the ability to download Books and programs from the Internet and proficiency in dealing with computer operating systems, etc., and that there is strong agreement among the sample of the study on the requirements of electronic training for the training environment, namely (availability of computers with appropriate technical specifications, Bounteous halls equipped with the necessary for the application of e-training in addition to the availability of fast internet connection, as well as the presence of the work of the technical support team and the availability of necessary hardware business software devices).
- A study of (Al-Ghadian, 2011), which aims to identify the extent to which employees are aware of the basic requirements that must be met by trainees. As well as to identify the most important characteristics that must be met in the content of the courses of the effective e-training program. Identify the electronic characteristics of the effective e-training environment. One of the most important results was a strong orientation by institutions and universities to benefit from e-training programs.
- A study of (Al-Ramhi, 2010), which aims to contribute to the application of a new measurement mechanism for the level of IT governance in the industrial companies listed on the ASE by presenting the framework called COBIT in its four dimensions and determining the impact of IT governance on the performance achieved Jordanian industrial companies. The questionnaire was used as a tool. The study found that there is an impact on the level of governance of information technology in its four dimensions combined at the margin of net profit in the listed companies in the Amman Stock Exchange. Each dimension has an impact on the net profit margin except after planning and organization, which has had no effect. And that there is an impact of the dimensions of IT governance on return on assets.
- A study of (Prasad A. & et al., 2008), aimed at identifying the applicability and activation of the IT governance strategy as a complementary system for corporate governance through an electronic survey of a group of

companies worldwide. The study concluded that cooperation through the organizational structures of both corporate governance and information technology governance adds value to the establishment and that there is a positive relationship between the efforts of these structures and the activation of the concept of IT governance.

#### Comment on previous studies

IT governance is critical to maintaining information security and good management and use of information technology.

**In terms of the objective of the study:** The research trends of previous studies aimed at identifying the theoretical foundations and reality of IT governance. The majority of studies focused on the banking sector. In addition, most studies focused on the role of IT governance in the private sector, and no one has studied their impact on the government sector. The current study will deal with the criteria of IT governance and its impact on improving e-training in one of the most important ministries based on information technology from the point of view of IT employees.

**In terms of the variables of the study:** Most studies dealt with the dimensions of IT governance in general without addressing their criteria. The current research will be based on the criteria of the Coppet, ie, (planning, organization, acquisition, implementation, support, delivery, monitoring and evaluation). The current study differed from previous Arab and foreign studies in terms of field of application, methods of analysis, period of time, and nature of the sample that were dealt with.

## 7. THE THEORETICAL FRAMEWORK OF THE STUDY

### First- IT Governance:

IT governance is the responsibility of the board of directors and executive management, which consists of leadership, organizational structures and processes that ensure that information technology achieves the objectives and strategies of the ministry (IT Governance Institute, 2003). Information technology governance plays an important role in mitigating the risks associated with the use of information technology by providing an effective management and control system.

#### 1. Definition of IT Governance:

The definitions of IT governance vary widely, and Clifford (2006) points out that there is no single definition of IT governance. It is seen as a series of assertions that structures focus on processes, and that the effectiveness of IT governance ensures that investment in information technology adds value to business and reduces the risks associated with the operation and implementation of information technology (Bowen et al., 2007). Some definitions of IT governance are presented below.

**Table 1:** shows the most prominent definitions of IT governance

| Researcher                      | The Definition                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australian Institute            | The system through which current and future uses of information technology are channeled and controlled, and the evaluation and guidance of plans for the use of information technology in strengthening the company (Mtml: file: g./JPS Accounting Forums)                                                                                                                                      |
| (Jordan& Musson, 2005)          | (IT systems, performance management, risk management). It also focuses on helping them to work in line with global IT management standards. These include (infrastructure management, programming project management, information security management, technology plans and strategies) Information). The objective is to help companies use their resources to achieve the objectives required. |
| (ITGL, 2003)                    | How the people responsible for the company's leadership take information technology into account in the process of supervision, control and management of the company, how the application of information technology in the company has a decisive impact on whether the company will achieve its vision and mission and strategic objectives.                                                   |
| (IT Governance Institute, 2003) | Is the responsibility of the Board of Directors and Executive Management and is an integral part of corporate governance and consists of leadership, organizational structures and processes that ensure that the organization's information technology supports and highlights the objectives and strategies of the enterprise.                                                                 |



|                      |                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Lan & Bill, 2005)   | An integrated set of actions, policies, responsibilities and organizational structures associated with information technology to support effective decision-making.                                                                                                                                                                                                 |
| (Abdul Rahman, 2013) | Is an effective tool or tool in the enterprise by creating flexibility in information technology and in information systems structures and operations as it is seen as the regulatory capacity to control the installation and implementation of an IT strategy and is a guide for the appropriate direction to achieve a competitive advantage for the enterprise. |
| (patel, 2002)        | Is an effective tool in the enterprise to create flexibility in information technology and in information systems structures and processes. It is seen as the regulatory capacity to control the installation and implementation of an IT strategy and is a guide for the right direction to achieve a competitive advantage for the enterprise                     |

The researchers define IT governance as a set of principles and standards that contribute to increasing the effectiveness of information technology by defining policies and procedures and how to control them to achieve the objectives of the ministry.

#### **IT governance standards:**

The most important standards of IT governance that contribute to the requirements of information security and reduce the risks that may be faced in:

##### **1. Standard Coppit**

##### **COBIT The Control Objectives for Information related Technology**

This standard was issued by the Information Technology Governance Institute (ITIG) in 1995, a framework to control the links of information technology to business requirements and the organization of IT activities in the accepted process model, identification of key IT resources and management oversight objectives to be considered (<http://faculty.mu.edu.sa>). The COBIT concept is based on the following pillars:

This Framework identify 34 aims at a high-level for monitoring IT operations, provides auditors with a range of metrics, and acceptable indicators for good governance to help them express their views on the organization. The first publication of COBIT was in 1996 followed by the second newsletter in 1998, the third in 2000 and the fourth in 2005 (Gherman & Eduardo, 2006). COBIT is an IT risk management framework that helps managers, auditors, and users understand their IT systems, helps develop a governance model, and guides the choice of safety and necessary control to protect corporate assets efficiently and effectively (Pauwels, 2006). This framework is divided into four dimensions: planning, organization, ownership, implementation, delivery and support, monitoring and evaluation.

- **Planning and organization:** This concept includes the optimal use of technology in companies, helping companies to implement their general and specific objectives. In addition, this concept highlights the form of infrastructure, organization of IT in companies, to achieve satisfactory results, during the use of information technology. It addresses the strategy and tactics related to the contribution of IT in companies and emphasizes that business objectives must converge with what is planned. Information activities should be planned, connected and managed efficiently. The lack of planning and organization leads to the company's failure to identify and respond to threats from internal and external sources (Lainhart, 2000).
- **Acquisition and implementation:** Identifying and acquiring technology requirements and then implementing them through ongoing operations within the company, through the development of the plan for the preservation of information, and the assets of the company, which help prolong the life of the company's information technology and its components, Designing processes within the field of acquisition and implementation to identify, develop and acquire technical information solutions, and to implement and integrate them in the business process of the organization. The maintenance and changes in existing systems are included in this field to ensure the continuity of the systems life cycle (Arab Society of Certified Public Accountants, 2001).
- **Support and Connectivity:** The integration of IT into enterprise systems, the implementation of their applications and the support of processes to be able and effective in the implementation of IT systems. This dimension also takes into account the services required to be connected, which extends from traditional operations to training. To deliver services, support must be done effectively (Salle, 2004). Failure to achieve control objectives in this dimension can lead to improperly recorded transactions, which in turn lead to erroneous decisions, because they are based on incorrect information, and can result in equipment destruction or

loss that could disrupt the business or causing additional costs. Furthermore, unauthorized use can lead to fraud, embezzlement and loss of loss (Zayoud et al., 2014).

- **Monitoring and Evaluation:** This concept is aimed at ensuring the compatibility of existing IT systems with what they are designed and planned to achieve the company's objectives. It also aims at achieving independent and unbiased evaluation of the effectiveness and efficiency of IT systems and their ability to achieve business objectives and control processes To companies through internal and external auditors. This means that all IT processes and resources need to be systematically measured on a regular basis in order to obtain quality, adhere to the control requirements, and achieve administrative supervision of kinship operations in the company and provide them with bit Independent Kidat through internal and external auditor (Faraj, 2011).

## 2. ISO Standards:

An international organization established in 1947 with the aim of developing and preparing standards for the security and protection of information technology. The most important standards issued by this organization are:

- **ISO 27001 standard (<http://faculty.mu.edu.sa>)**

This standard was issued in 2005 to establish and establish the important rules and regulations related to the information security management and protection system. These principles are concerned with the design, implementation, control, maintenance and continuous development of this department's performance, as well as the assessment of electronic risks (Youssef, 2013) A model called "PDCA" is applied to all government units. This model is a four-step shortcut:

- Plan: Establish an information security management system.
- Do: Start implementing and running plans.
- Check: Review the system after it is executed.
- Work Act: Maintenance and improvement of system.
- **ISO 27002 standard:**

This standard was also issued in 2005. This standard is concerned with the actual application of the rules and rules that were prepared by the previous standard. This criterion is the one that must be followed after the implementation phase, in order to protect and provide security for technological assets as well as to avoid the risk of operating Through the following policies: Organizational Management, Resource Management, Information and Asset Security Management, Operations Management and Operations Control, Information Systems Development Department, Continuous Business Management and Development, Complaints Management (Youssef, 2013).

- **ISO 38500 standard:**

This standard is based on the following (Youssef, 2013):

- Identify tasks and responsibilities clearly and accurately for IT management.
- Planning strategy in line with the company's objectives and requirements.
- Acquisition of information technology for logical and acceptable reasons predetermined.
- Confidence that technological performance is going well.
- IT compatibility with other laws and regulations.
- Taking into account human resources.

## 1. The importance of information technology governance:

Information technology governance is part of corporate governance and outreach, and demonstrates the importance of IT governance through its role in achieving the following (Abdul Rahman, 2013):

- Develop an IT strategy and initiate operational and strategic testing.
- Development and management of IT systems.
- Ensure that business projects have been completed.
- Identify methods, methods and processes associated with information technology.
- Identify best practices in technological development.
- Management and development of information technology applications.
- Ensuring the effectiveness of IT services to deliver strategy to business divisions that lead to efficient and efficient interoperability.
- Development of key performance indicators.
- Increasing the capacity of information technology to attract inventions, innovations and deliver the desired benefits.

Mohammed (2012) adds that IT governance achieves the following benefits:

- Substantially rely on information technology as a necessary condition imposed by the supervisory and supervisory bodies and good applications of corporate governance and increase the competitiveness of enterprises.



- Effective management of the wishes and needs of customers within the overall strategy of the company as an increase in the quality of financial information published to customers via the Internet.
- Improve and develop the technology constantly used to meet changing environmental requirements.
- To deepen the role of the control of information technology and its outputs.
- The emergence of many legislations regulating the use of modern technology such as electronic signature, electronic publishing, communications and information circulation.
- The importance of information technology governance is to define an e-business framework that includes planning, implementation and monitoring of operations, thereby reducing the risk of e-business and increasing its efficiency.

**2. Obstacles to the application of IT governance in government units:**

There are several constraints facing the application of information technology governance in various establishments and units, especially in government units (Ayeshosh and Wadih, 2012):

- Weak internal policies and internal and external support in government units.
- Resistance to change and acceptance of new policies, standards and responsibilities by employees of government units and customers.
- Weak support to human resources management in government units.
- Lack of clarity on the principles and policies of adopting IT governance in these units.
- Lack of support for management of government IT units.
- Inadequate organizational culture in those units.
- Insufficient financial resources for IT operations and activities in government units.
- Lack of communication and coordination between different administrative levels.
- Lack of support for IT governance processes.
- Priorities of information technology are not defined or clear.

**3. Elements of applying IT governance in government units:**

IT governance needs several components that are integrated with each other for successful implementation in any private or governmental unit (Abdul Rahman, 2013):

- Management of the information technology infrastructure in the government unit, which is related to the decisions related to the types of hardware and software, the construction of the network, the data used within the unit and the specific criteria for the acquisition and development of its IT assets.
- Manage the use of information technology in a government unit that relies on planning decisions and the priority or precedence of information technology and routine IT service provision in the unit.
- Project management or IT process in a government unit that requires both infrastructure and systems skills that can be used in the development and implementation of new IT systems in the unit.

**Second- Electronic Training:**

E-training is a new term that shows the extent of the development in the field of training when using the modern means of communication and modern technology. This method includes all types of training that do not require a trained trainer or buildings to train in. But this type of training is limited to the presence of a coach who guides and directs, and training courses that manage and supervise the training programs, in places away from the trainee (Al-Ghadian, 2009).

**1. The concept of e-training:**

Through the review of many previous studies on training, many management researchers and writers have introduced the concept of training from different angles, but all agreed to its role in raising the efficiency of employees and the organization as a whole. Training is "An activity or activity of human resources management activities that assesses the need of individuals working at different organizational levels for development and rehabilitation, in light of the weaknesses and strength of their performance and behavior during work" (Al-Hitti, 2004).

It is also known as a structured process in a mobile interactive environment saturated with digital applications based on the use of the Internet, multimedia and mobile devices for the presentation of electronic software, bags and training courses to design, implement and evaluate the training programs in a consistent and interactive manner. Skills based on the speed of trainees in learning, their intellectual levels, working conditions, lives and geographical locations (Al-Mousavi, 2010).

It is defined as "The process in which an interactive environment is rich in applications based on computer technology, networks and multimedia, which enables the trainee to achieve the objectives of the training process through its interaction with its sources, in the shortest time possible, with the lowest effort and the highest quality and without limits to space and time" (Hassan, 2009).

## 2. Characteristics of e-training:

E-training provides an equal opportunity in the educational opportunities among the trainees and raises the levels of enrollment in the levels of training, thus opening up new horizons through which the trainee can satisfy his desires according to his abilities and potentials, which makes the factors provided by this type of training push the staff to join him compared to other opportunities available, E-training does the concept of continuous professional development, which helps in the development of human resources.

Electronic training, unlike traditional training focused on inputs, focuses on processes and products. The trainee is a product of knowledge, not just a consumer, and the characteristics of training (Al-Mousavi, 2010):

1. Positive participation of trainees.
2. Activate all forms of assistance during training.
3. Ability of the trainee to control the training process.
4. Receive training by time and trainee location.
5. Helps give immediate feedback to the trainee about his / her scientific progress.
6. The trainee can evaluate himself, his skills and monitor his performance.
7. Online e-training is beyond time and space, as there is no need for the presence of the trainer and trainees in the same place and time, because of the availability of the Internet in this area.
8. Online e-training enables the parties to the training process to overcome various obstacles such as physical obstacles, travel, illness, disability, leaving work, etc.
9. Online e-training enables greater and more effective use of trainees.
10. Online e-training offers tremendous opportunities to invest technological advances in training significantly, while saving considerable time, effort and expense.
11. Online e-training provides the ability to update training content with any development or change.
12. Online e-training offers great training opportunities that far outweigh the training opportunities offered by traditional training and therefore allows for a significant increase in the number of trainees.
13. Online e-training allows trainees to repeat training activities as they wish without any embarrassment and commensurate with their abilities to master the required training skills.
14. Online e-training offers opportunities for training to compete in training and excellence. This age has no place for excellence and innovation.

In the light of the above, researchers believe that e-training is characterized by many features such as: improving the level of training, saving time and effort, facilitating training for trainees, facilitation of training for trainers, increasing the number of trainees, competition in training, allow the trainee to repeat training activities, not to lose training opportunities for any trainee due to illness, to overcome the difficulties of travel and residence, leaving work and income-loss because of the total abandonment of the training, in addition to the possibility of investing various websites training and updating of information, and developing the skills of trainees through electronic training and generate positive attitudes towards these modern technological training techniques.

## 3. Objectives of Electronic Training (Tawfiq, 2007):

The training objectives can be summarized in the following table:

**Table 2: Training Objectives**

| Concept                     | Heads                                                                                                                                                                                                                                             | Subordinates                                                                                                                                                                                                                                                                                         | Trainers                                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Increase information</b> | 1. Developing the concepts of the individual through modern scientific methods.<br>2. Inform the employee of the new in his specialization and in other sciences.<br>3. Updating and refining the information to increase employee effectiveness. | 1. To refine and renew the employee's information so that he can carry out the tasks entrusted to him in his current and future competence.<br>2. Education in a specialized field intended to increase the knowledge of the individual.<br>3. Correcting incorrect concepts and clarifying the new. | Give the trainee the theoretical background on the topic in question and leave the field for him to build his concepts and transfer them to the application. |
| <b>Skills development</b>   | 1. Developing and refining the trainee's abilities.<br>2. Give more successful                                                                                                                                                                    | 1. Improve the employee's functional behavior.<br>2. Learn good behavior with                                                                                                                                                                                                                        | Provide the trainee with the necessary modern skills to accomplish a specific job.                                                                           |

|                          |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                        |  |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                          | <p>experiences to take advantage of the work.</p> <p>3. Provide the trainee with the basic skills to perform his work and develop existing ones.</p>                                                                                                                         | <p>others.</p> <p>3. Increase the efficiency of the individual to reach the goal.</p> <p>4. Employee training on ways of success.</p> <p>5. Development of production capacity.</p>                                                    |  |
| <b>Change directions</b> | <p>1. Accept new opinions or working conditions.</p> <p>2. Change what trainees think or appreciate their priorities or preferences for working methods.</p> <p>3. Amendments in the attitudes and opinions of the trainees.</p> <p>4. Change in behavior behavior next.</p> | <p>1. Training trainees to accept new opinions or new working conditions.</p> <p>2. The desire to change what the trainees think or their appreciation of the priorities of the work or their preferences for the methods of work.</p> |  |

## 8. FIELD STUDY

### First- Methodology of the study:

Based on the nature of the study and the objectives that it seeks to achieve, the analytical descriptive approach was used, which is based on the study of the phenomenon as it is in fact and is concerned as a precise description and expressed in qualitative and quantitative terms. This approach does not suffice to gather information about the phenomenon in order to investigate its manifestations and its different relations, But rather to analysis, linkage and interpretation.

### Second- Society and Study Sample:

The study population consists of all the employees of the Ministry of Communications and Information Technology in the Gaza Strip, which are (50) workers. The sample of the study is distributed according to the following table:

**Table 3:** Distribution of the members of the study community

| No.          | Administration                                      | Director general | Director of the Department | Head of the Department | Ordinary employee | Total Staff |
|--------------|-----------------------------------------------------|------------------|----------------------------|------------------------|-------------------|-------------|
| 1.           | General administration of the computer              | 1                | 2                          | 2                      | 5                 | 10          |
| 2.           | General Directorate of Informatics                  | 1                | 3                          | 5                      | 8                 | 17          |
| 3.           | General Directorate of eGovernment                  | 1                | 1                          | 1                      | 0                 | 3           |
| 4.           | General Directorate of Licenses                     | 1                | 1                          | 1                      | 7                 | 10          |
| 5.           | General Directorate of frequencies and transmission | 1                | 0                          | 1                      | 5                 | 7           |
| 6.           | General Directorate for Development                 | 1                | 2                          | 0                      | 0                 | 3           |
| <b>Total</b> |                                                     | <b>6</b>         | <b>9</b>                   | <b>10</b>              | <b>25</b>         | <b>50</b>   |

The questionnaire was distributed to all members of the study population (50), and 44 (88%) of the study population were retrieved. Study according to the following table:

**Table 4:** Distribution of the sample of the study

| Personal data          | Category            | the number | percentage % |
|------------------------|---------------------|------------|--------------|
| Gender                 | <b>Male</b>         | 36         | 81.8         |
|                        | <b>female</b>       | 8          | 18.2         |
| Academic qualification | <b>Postgraduate</b> | 7          | 15.9         |
|                        | <b>BA</b>           | 34         | 77.3         |
|                        | <b>Diploma</b>      | 3          | 6.8          |

|                            |                             |    |      |
|----------------------------|-----------------------------|----|------|
| Years of service           | Less than 5 years           | 6  | 13.6 |
|                            | From 5 - less than 10 years | 25 | 56.8 |
|                            | From 10 - under 15 years    | 7  | 15.9 |
|                            | 15 years and over           | 6  | 13.6 |
| Number of training courses | 1-Less than 3 courses       | 2  | 4.5  |
|                            | 3-Less than 6 courses       | 6  | 13.6 |
|                            | 6 courses and more          | 36 | 81.8 |
| Total                      |                             | 44 | %100 |

The following table shows the following:

1. With regard to gender, 81.8% of the Ministry's employees are male, due to the fact that most of the ICT specialists in addition to the professionals in this field are male.
2. The qualifications were the highest proportion of the holders of bachelor's and postgraduate degrees (93.2%). This indicates the Ministry's focus on the higher qualification holders as they are the most capable of creativity and meet the requirements of the work that needs qualified and trained manpower.
3. The number of training courses was (81.8%) with more than 6 courses. This indicates the Ministry's interest in training and developing employees to meet the rapid changes and developments in this field.

### Third: The Study Tool:

The tool of the research means that the tool measures what has been set for measurement, and has verified the validity of the questionnaire through the following methods:

#### 1. Honesty From the point of view of the arbitrators:

The questionnaire was presented to a number of (5) specialized arbitrators in order to ensure the accuracy of the language of the questionnaire, the clarity of the instructions of the questionnaire, the affiliation of the Paragraphs to the dimensions of the questionnaire and the validity of this tool to measure the objectives associated with this research. The arbitrators looked.

#### 2. Internal consistency:

The reliability of internal consistency was calculated by finding correlation coefficients for the identification Fields, as shown in the following table:

Table 5: Validate the internal consistency of the questionnaires

| Fields             | Coefficient of correlation | "Sig." Value | Significance     |
|--------------------|----------------------------|--------------|------------------|
| IT governance hubs | 0.941                      | 0.000        | Function at 0.01 |
| E-training courses | 0.812                      | 0.000        | Function at 0.01 |

The above table shows that the Fields of the questionnaire have statistically significant correlation coefficients. This indicates that the Fields of the questionnaire have high reliability coefficients.

### Fourthly- Stability of the study instrument:

The tool means that the tool yields the same results if applied again to the same group of individuals, ie, the results do not change. The questionnaire is confirmed by the following methods:

#### 1. Stability using the formula Alpha Cronbach:

The stability of the search tool was determined by calculating the coefficients of the correlation coefficients using the alpha-Cronbach formula, as shown in the following table:

Table 6: Correlation coefficients using the Alpha-Cronbach equation for the resolution Fields

| No. | Fields             | Coefficient of correlation |
|-----|--------------------|----------------------------|
| 1.  | IT governance hubs | 0.895                      |
| 2.  | E-training courses | 0.856                      |

The above table shows that correlation coefficients for the identification Fields are high stability coefficients, and are met for research purposes.

#### 2. Stability in split half-way:

The stability of the search tool was determined by calculating the correlation coefficients in the half-way of the identification Fields, as shown in the following table:

**Table 7:** The split half-way correlation coefficients of the resolution Fields

| No. | Fields             | Coefficient of correlation |                    |
|-----|--------------------|----------------------------|--------------------|
|     |                    | Before the amendment       | After modification |
| 1.  | IT governance hubs | 0.867                      | 0.929              |
| 2.  | E-training courses | 0.837                      | 0.904              |

The above table shows that the half-term correlation coefficients of the resolution Fields are high stability coefficients and meet the study objectives.

## 9. ANALYSIS OF THE STUDY FIELDS

### Results of the first question:

The question is: What is the availability of information technology governance areas (planning, organization, acquisition, implementation, support, delivery, monitoring and evaluation) in the Ministry of Communications and Information Technology?

This question was answered using the "T" test for one sample, as shown in the following tables:

### First- After planning and organizing:

**Table 8:** Analysis of the Paragraphs of the field of planning and organization

| No. | Item                                                                                                                                                       | SMA   | Deviation Standard | "T" value | "Sig". Value | Relative weight | Rank |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|-----------|--------------|-----------------|------|
| 1.  | A long-term strategic plan for information systems is developed in an accurate and clear manner.                                                           | 3.886 | 0.655              | 8.980     | 0.000        | 77.727          | 5    |
| 2.  | Determines the quality of the information required and the databases and the level of its security in accordance with the strategic plan.                  | 4.023 | 0.628              | 10.797    | 0.000        | 80.455          | 1    |
| 3.  | Technology infrastructure is planned to monitor future actions and trends.                                                                                 | 3.932 | 0.818              | 7.553     | 0.000        | 78.636          | 2    |
| 4.  | Plans are being made for the acquisition of technological equipment and software and the identification of technological standards to be applied.          | 3.909 | 0.772              | 7.810     | 0.000        | 78.182          | 3    |
| 5.  | The annual budget for the operation of the information systems is determined and the costs and benefits proposed in the operations are specified.          | 3.682 | 0.829              | 5.456     | 0.000        | 73.636          | 8    |
| 6.  | The required scientific qualifications for human resources, responsibilities, roles, and how to change or cancel jobs are determined.                      | 3.818 | 0.843              | 6.439     | 0.000        | 76.364          | 6    |
| 7.  | A specialized department is appointed to deal with the needs of external parties and the procedures to be implemented to achieve this.                     | 3.909 | 0.772              | 7.810     | 0.000        | 78.182          | 3    |
| 8.  | A qualified unit is assigned to assess and assess the risks involved in the information systems used and how they are documented, identified and measured. | 3.682 | 0.829              | 5.456     | 0.000        | 73.636          | 8    |
| 9.  | The system quality assurance plan and project risk management are developed in addition to the examination, training and post-implementation plans.        | 3.750 | 0.943              | 5.275     | 0.000        | 75.000          | 7    |

|  |                                    |       |       |       |       |        |  |
|--|------------------------------------|-------|-------|-------|-------|--------|--|
|  | <b>All paragraphs of the field</b> | 3.843 | 0.582 | 9.609 | 0.000 | 76.869 |  |
|--|------------------------------------|-------|-------|-------|-------|--------|--|

The following table shows:

- That the availability of planning and organization in the Ministry of Communications and Information Technology came at a relative weight (76.869), a degree (large). This is due to the Ministry's focus in its plan to achieve regional excellence in the provision of government services electronically and in a comprehensive quality and using the most appropriate communication and information technology technologies. In addition to applying the concept of governance in support of e-government. This finding is in line with the findings of Zayoud et al. (2014), which showed that the level of IT governance in the planning and organization currently applied in the Commercial Bank of Syria is at an average level of 65,377. The study also agreed with the results of the Al-Otaibi (2014) study, which showed that strategic planning and human resource planning was high and with an arithmetic mean (3.18).
- The Paragraph (specifying the quality of the required information and databases and the level of its security according to the strategic plan) was obtained with a relative weight of (80.455), which is (large). This is due to the Ministry's emphasis in its values on the protection of privacy and not the desire to improve performance and facilitate at the expense of the privacy of citizens.
- (The annual budget for the operation of information systems and the description of costs and benefits proposed in operational operations) and Paragraph (a qualified unit for assessment and assessment of the risks of information systems used and how to document, determine and measure them) is ranked last and with a relative weight of (73.636) . This is due to the ministry's interest in allocating an appropriate budget for information systems and all that serves the e-government project. It focuses on developing a highly efficient administrative and financial environment, in addition to providing a legal environment that supports the electronic transactions of the ministry and contributes to the development of the society and enhancing its security.

## Second- After planning and organizing:

**Table 9:** Analysis of the Paragraphs of the acquisition and implementation field

| No. | Item                                                                                                                                                                                                    | SMA   | Deviation Standard | "T" value | "Sig." Value | Relative weight | Rank |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|-----------|--------------|-----------------|------|
| 1.  | The required information requirements and workflows required for automated solutions and information acquisition strategies are identified.                                                             | 3.818 | 0.756              | 7.183     | 0.000        | 76.364          | 4    |
| 2.  | The software required is determined in terms of flexible design, current and future needs and how to collect data.                                                                                      | 3.909 | 0.676              | 8.924     | 0.000        | 78.182          | 2    |
| 3.  | The required outputs are identified, documented, and appropriate treatment mechanisms identified and controlled.                                                                                        | 3.818 | 0.756              | 7.183     | 0.000        | 76.364          | 4    |
| 4.  | Electronic equipment and new software are strengthened and the necessary preventive maintenance equipment is provided.                                                                                  | 3.955 | 0.834              | 7.592     | 0.000        | 79.091          | 1    |
| 5.  | Operational requirements and service levels are provided.                                                                                                                                               | 3.773 | 0.937              | 5.472     | 0.000        | 75.455          | 6    |
| 6.  | The operational manual is developed and resources are prepared for training.                                                                                                                            | 3.614 | 1.083              | 3.759     | 0.001        | 72.273          | 9    |
| 7.  | The elements related to the installation and operation of the system are identified such as: training, implementation plans, system and data conversion and examination of change plans and strategies. | 3.773 | 0.859              | 5.967     | 0.000        | 75.455          | 6    |
| 8.  | The experimental elements of the system are prepared such as: test and performance criteria, final acceptance test, safety and documentation examination, etc.                                          | 3.659 | 0.914              | 4.786     | 0.000        | 73.182          | 8    |



|                                    |                                                                                                      |              |              |              |              |               |   |
|------------------------------------|------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|---------------|---|
| 9.                                 | Installation and adoption of special software to cope with changes and processes during the process. | 3.886        | 0.754        | 7.800        | 0.000        | 77.727        | 3 |
| <b>All paragraphs of the field</b> |                                                                                                      | <b>3.801</b> | <b>0.655</b> | <b>8.110</b> | <b>0.000</b> | <b>76.010</b> |   |

The above table shows that:

- Availability and implementation of (MTIT) was relatively high (76.010). This is due to the Ministry's interest in identifying technology requirements and developing policies to maintain information security, including eight areas: administrative responsibilities, physical security, access control security, information security, application security, network security and security risk assessment Management responsibilities include the identification of public administrations and departments responsible for setting and periodically reviewing standards and instructions, external service providers and how to manage crises related to important information systems. The physical security includes the development of a standard plan that takes into account security standards when choosing the location of the computer center in addition to interest in equipment security. This finding is in line with the findings of (Zayoud et al., 2014), which showed that the level of IT governance in acquisition and implementation currently applied in the Commercial Bank of Syria is at an average level of 63.86. The study also agreed with the results of the Al-Otaibi study (2014), which showed that the acquisition of information infrastructure and the implementation of administrative decisions was high and with an arithmetic mean (3.33).
- The following Paragraph (electronic equipment, new software and equipment for preventive maintenance of equipment) was obtained at the highest order, with a relative weight of (79,091), which is (large). Where the Ministry focuses its policies on putting all information systems in a safe environment and observing security standards to maintain this equipment.
- The next Paragraph (the operational operations manual and the preparation of resources for training) is presented, with a relative weight of (72.273) in the last rank, which is (large). The Ministry of Communications is one of the most concerned ministries to train and develop employees to enable them to carry out their responsibilities and perform their duties, especially with regard to information technology security, in order to contribute to improving their outputs.

**Thirdly- After support and connection:**

**Table 10:** Analysis of Paragraphs after support and delivery

| No. | Item                                                                                                                                   | SMA   | Deviation Standard | "T" value | "Sig." Value | Relative weight | Rank |
|-----|----------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|-----------|--------------|-----------------|------|
| 1.  | The level of services is determined by the information systems to be provided to customers.                                            | 3.886 | 0.754              | 7.800     | 0.000        | 77.727          | 2    |
| 2.  | The administrative units required for effective management of customer service levels are identified.                                  | 3.682 | 0.883              | 5.120     | 0.000        | 73.636          | 9    |
| 3.  | Points are identified with the customers and the nature of the relationship with them and the degree of security of this relationship. | 3.727 | 0.845              | 5.707     | 0.000        | 74.545          | 8    |
| 4.  | Supply contracts are organized to ensure sustainability of resources from the external environment.                                    | 3.818 | 0.815              | 6.661     | 0.000        | 76.364          | 6    |
| 5.  | There is a detailed contingency plan for addressing risks and implementing alternative support measures.                               | 3.795 | 0.795              | 6.639     | 0.000        | 75.909          | 7    |
| 6.  | The Ministry implements a practical plan to determine the users' needs for data available from the information system.                 | 3.886 | 0.754              | 7.800     | 0.000        | 77.727          | 2    |
| 7.  | The plan includes a system of informed training and information security principles.                                                   | 3.932 | 0.818              | 7.553     | 0.000        | 78.636          | 1    |

|                                    |                                                                                                                                 |       |       |       |       |        |   |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|--------|---|
| 8.                                 | An effective and efficient system is available to address the problems facing the Ministry's work.                              | 3.886 | 0.813 | 7.231 | 0.000 | 77.727 | 2 |
| 9.                                 | The system includes data accuracy, completeness, integrity, handling, degree of importance, and storage management.             | 3.841 | 0.805 | 6.926 | 0.000 | 76.818 | 5 |
| 10.                                | Physical protection is provided to facilities and visitors from environmental hazards and to ensure health and personal safety. | 3.682 | 0.934 | 4.840 | 0.000 | 73.636 | 9 |
| <b>All paragraphs of the field</b> |                                                                                                                                 | 3.814 | 0.632 | 8.545 | 0.000 | 76.273 |   |

The above table shows that:

- The availability of support and communication at (MTIT) was relatively high (76.273). This is due to the Ministry's strict procedures to protect the security of communication and networks, especially the protection of the network and review of communication settings and systems periodically. The ministry also focuses on preventing the transfer of private computer resources owned by employees to the internal network of the government. In addition, In order to avoid fraud and embezzlement and change of archived data that could lead to wrong decisions. This finding is in line with the findings of Zayoud et al. (2014), which showed that the level of IT governance in the area of support and connectivity currently applied in the Commercial Bank of Syria is at an average level of 65,915.
- The following Paragraph (the plan includes the system of informed training and the principles of information security) was placed on the highest ranking and with a relative weight of (78.636), which is at (large). The Ministry of Communications focuses on developing a training plan for the employees. This is the most sophisticated and changing field. This is evidenced by the fact that 95.4% of the participants received many training courses. This is a large percentage indicating the importance of training employees to enable them to review their responsibilities in terms of security and information technology. Since the start of his appointment on a regular basis. In addition, employees who deal with or deal with information systems must pass the standards of honesty and integrity as a condition of appointment.
- The following Paragraph (the administrative units required for effective management of customer service levels) and Paragraph (physical protection of facilities and visitors from environmental hazards and ensuring personal health and safety) are ranked last, with a relative weight of (73.636), which is (large). The Ministry adopts an information security management policy that defines policies to separate tasks and duties and grants the necessary powers to ensure the functioning of the work, in addition to informing them of their responsibilities. The Ministry is also concerned with the maintenance of data centers and computer rooms from disasters and security threats. Therefore, the Ministry is setting a standard plan that takes into account the security standards when choosing the location of the computer center.

#### Fourthly- After monitoring and evaluation:

**Table 11:** Analysis of Paragraphs after monitoring and evaluation

| No. | Item                                                                                                               | SMA   | Deviation Standard | "T" value | "Sig". Value | Relative weight | Rank |
|-----|--------------------------------------------------------------------------------------------------------------------|-------|--------------------|-----------|--------------|-----------------|------|
| 1.  | Data are collected to monitor and determine the process of administrative reporting.                               | 3.955 | 0.776              | 8.157     | 0.000        | 79.091          | 1    |
| 2.  | The PAD is developed and evaluated for customer satisfaction.                                                      | 3.568 | 0.818              | 4.606     | 0.000        | 71.364          | 7    |
| 3.  | A mechanism is established to control internal processes and to determine the level of reporting on such controls. | 3.682 | 0.771              | 5.868     | 0.000        | 73.636          | 6    |
| 4.  | The operating time is determined by the internal control and the level of safety and safety required.              | 3.568 | 0.846              | 4.454     | 0.000        | 71.364          | 7    |
| 5.  | Information systems services are certified and certified, ensuring their                                           | 3.864 | 0.795              | 7.205     | 0.000        | 77.273          | 2    |

|    |                                                                                                                               |       |       |       |       |        |   |
|----|-------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|--------|---|
|    | security and independently evaluating their effectiveness internally and externally.                                          |       |       |       |       |        |   |
| 6. | Independent confirmation is obtained in terms of compliance with laws, regulatory requirements and compliance with contracts. | 3.773 | 0.774 | 6.627 | 0.000 | 75.455 | 4 |
| 7. | Regular processes are undertaken to measure the level of information systems available at the Ministry.                       | 3.795 | 0.823 | 6.408 | 0.000 | 75.909 | 3 |
| 8. | Appropriate information is provided on the level of IT governance in the Ministry.                                            | 3.727 | 0.872 | 5.530 | 0.000 | 74.545 | 5 |
|    | <b>All paragraphs of the field</b>                                                                                            | 3.741 | 0.633 | 7.770 | 0.000 | 74.830 |   |

**The above table shows that:**

- The availability of monitoring and evaluation in (MTIT) has a relative weight of (74.830), which is at (large). The Ministry focuses on assessing the compatibility of existing IT systems with what is stated in their plans, based on the criteria of measuring and indicators of results and outputs compared to previous years, such as: Indicators of growth of Internet subscriptions, Internet infrastructure indicators, percentage of schools with computers, ICT sector in the national economy, etc.), in addition to the participation of the Ministry of Planning in the discussion, evaluation and amendment meetings. This finding is in line with the findings of Zayoud et al. (2014), which showed that the level of IT governance in the field of monitoring and evaluation currently applied in the Commercial Bank of Syria is at an average level of (65.1). The study also agreed with the results of Al-Otaibi (2014), which showed that a specific level of control and the establishment of a sustainable assessment process was high and with an arithmetic mean (3.28).
- The following Paragraph (the data needed for monitoring and determining the process of administrative reporting) was ranked first, with a relative weight of (79.091), which is (large). This is evidenced by the Ministry's focus on governance and its adoption of the principle of transparency and the dissemination of all the reports related to its work and periodically and discussed through the media.
- The following Paragraph (PAM) is established and the Paragraph (the operating time for internal control and the level of safety and safety required) is ranked last, with a relative weight of (71.364), which is (large). This is due to the follow-up and control of service level agreements and the upgrading of their terms according to international standards.

#### **Results of the second question:**

The question is as follows: What is the level of availability of e-training requirements for the trainer (training, training environment, training programs) in the Ministry of Communications and Information Technology?

This question was answered using the "T" test for one sample, as shown in the following tables:

#### **First- Trainer:**

**Table 12:** Analysis of the field of the trainer

| No. | Item                                                              | SMA   | Deviation Standard | "T" value | "Sig". Value | Relative weight | Rank |
|-----|-------------------------------------------------------------------|-------|--------------------|-----------|--------------|-----------------|------|
| 1.  | He is proficient in dealing with computer operating systems.      | 4.455 | 0.663              | 14.550    | 0.000        | 89.091          | 1    |
| 2.  | He mastered the use of the internet in searching for information. | 4.386 | 0.754              | 12.200    | 0.000        | 87.727          | 2    |
| 3.  | Proficient in designing web pages.                                | 4.227 | 0.803              | 10.138    | 0.000        | 84.545          | 4    |
| 4.  | Proficiency in the use of e-training activities in training.      | 4.136 | 0.734              | 10.266    | 0.000        | 82.727          | 8    |
| 5.  | He mastered the use of multimedia in electronic training.         | 4.182 | 0.691              | 11.341    | 0.000        | 83.636          | 6    |
| 6.  | He is proficient in dealing with libraries and encyclopedias.     | 4.114 | 0.841              | 8.781     | 0.000        | 82.273          | 9    |

|                                    |                                                                |       |       |        |       |        |   |
|------------------------------------|----------------------------------------------------------------|-------|-------|--------|-------|--------|---|
| 7.                                 | Communicate effectively with trainees electronically.          | 4.205 | 0.765 | 10.446 | 0.000 | 84.091 | 5 |
| 8.                                 | Proficient in managing electronic files.                       | 4.182 | 0.815 | 9.621  | 0.000 | 83.636 | 6 |
| 9.                                 | Proficient use of computer accessories in training activities. | 4.364 | 0.613 | 14.745 | 0.000 | 87.273 | 3 |
| <b>All paragraphs of the field</b> |                                                                | 4.250 | 0.606 | 13.676 | 0.000 | 85.000 |   |

The above table shows that:

- The level of availability of the e-training requirements of (MTIT) has a relative weight of (85.000), which is (very large). This is due to the need for the coach to have multiple skills and managed efficiently. The coach must have a successful professional relationship with all the participants and convince each of them of the importance of his participation and his role regardless of his background and personality. The results of this study were agreed with the study (Al-Ghadian, 2009), which showed the need for the coach skills in the use of computers and applications, in addition to the skills of using the Internet and tools. (53%) of lecturers have experience in using electronic training resources, and that lecturers receive their resources from the internet at a high rate (87%), and that (86.7%) of Lecturers have the motivation to use electronic training as a source of information, and the electronic information sources of e-training also clearly affect their work. The results of the study were also agreed with Al-Mutairi (2012), which showed that there is agreement among the study sample members on the training requirements of the trainer, namely: proficiency in the operation of the computer and its accessories as well as proficiency in the use of the Internet in the search for information and proficiency in dealing with Microsoft Office programs, As well as proficiency in dealing with e-mail in addition to the ability to download books and programs from the Internet and proficiency in dealing with computer operating systems ... etc.) and agreed with the study (Al-Zafairi, 2016), which showed that there is complete agreement on the terms of the requirements field Electronic training for Palm Lord and an arithmetic mean of (4.26).
- The following Paragraph (proficient in dealing with computer operating systems) ranked first, with a relative weight (89.091), which is (very large). This is due to the adoption of the training process on the computer so the trainer must have advanced skills and capabilities in dealing with the computer as it increases the effectiveness of training.
- The following Paragraph (proficient in dealing with libraries and electronic encyclopedias) came in last place, with a relative weight (82.273), which is a (large) degree. This is due to the fact that the training process is done online, so trainers are chosen only according to strict criteria, including the enjoyment of all the skills necessary for the training process.

#### Second- Training environment:

**Table 13:** Analysis of the elements of the training environment

| No.                                | Item                                                                             | SMA   | Deviation Standard | "T" value | "Sig". Value | Relative weight | Rank |
|------------------------------------|----------------------------------------------------------------------------------|-------|--------------------|-----------|--------------|-----------------|------|
| 1.                                 | Computers are available with appropriate technical specifications.               | 4.114 | 0.655              | 11.283    | 0.000        | 82.273          | 4    |
| 2.                                 | There are specialized technicians for technical support.                         | 4.114 | 0.754              | 9.800     | 0.000        | 82.273          | 4    |
| 3.                                 | There are strong internal networks.                                              | 4.227 | 0.803              | 10.138    | 0.000        | 84.545          | 1    |
| 4.                                 | There is training software that fits the capabilities of the available hardware. | 4.159 | 0.745              | 10.316    | 0.000        | 83.182          | 2    |
| 5.                                 | There are rooms equipped for electronic training.                                | 4.114 | 0.813              | 9.085     | 0.000        | 82.273          | 4    |
| 6.                                 | Internet connection is available.                                                | 4.159 | 0.861              | 8.928     | 0.000        | 83.182          | 2    |
| 7.                                 | There is an excellent electronic library.                                        | 3.659 | 1.098              | 3.980     | 0.000        | 73.182          | 8    |
| 8.                                 | There are highly qualified e-designers.                                          | 3.886 | 0.970              | 6.063     | 0.000        | 77.727          | 7    |
| <b>All paragraphs of the field</b> |                                                                                  | 4.054 | 0.630              | 11.095    | 0.000        | 81.080          |      |

The above table shows that:

- The level of availability of the e-training requirements of (MTIT) was relatively high (81.080). This is due to the importance of providing an appropriate training environment, which contributes to the success or failure of the entire training process, which is one of the obstacles of training, and electronic training needs to prepare in a more complex way to increase the number of effects to include electricity and modern equipment in addition to the speed of the Internet and the availability of technical support. The results of this study were agreed with Al-Mutairi (2012), which showed that there is strong agreement among the sample of the study on the electronic training requirements for the training environment, namely: availability of computers with appropriate technical specifications, The availability of a high-speed Internet connection as well as the presence of a technical support team and the availability of software necessary for the operation of the equipment, and also agreed with Al-Zafairi (2016).
- The following Paragraph (strong internal networks) was ranked first, with a relative weight of (84.545), which is (very large). This is due to the continuous development of the Ministry in order to maintain the quality of Internet services.
- The next Paragraph (there is a distinct electronic library) came in last place, with a relative weight (73.182), which is a (large) degree. This is due to the Ministry's interest in providing all the advanced electronic training requirements that trainees need to encourage them to develop their potentials and abilities.

### Thirdly- Training Programs:

**Table 14:** Analysis of the Paragraphs of the field of the training programs

| No. | Item                                                                                    | SMA   | Deviation Standard | "T" value | "Sig". Value | Relative weight | Rank | Class |
|-----|-----------------------------------------------------------------------------------------|-------|--------------------|-----------|--------------|-----------------|------|-------|
| 1.  | The Ministry is interested in developing training programs.                             | 3.955 | 0.939              | 6.744     | 0.000        | 79.091          | 5    | large |
| 2.  | Seeks to open new sections constantly to follow the electronic development.             | 3.659 | 0.987              | 4.430     | 0.000        | 73.182          | 9    | large |
| 3.  | Programs are improved according to quality standards in the ministry.                   | 3.727 | 0.949              | 5.083     | 0.000        | 74.545          | 8    | large |
| 4.  | Is concerned with meeting the needs of the developed society.                           | 3.795 | 0.930              | 5.676     | 0.000        | 75.909          | 6    | large |
| 5.  | Electronic training programs are designed according to clear and documented objectives. | 3.795 | 0.954              | 5.529     | 0.000        | 75.909          | 6    | large |
| 6.  | The development of training programs aims at solving existing problems.                 | 4.068 | 0.846              | 8.373     | 0.000        | 81.364          | 2    | large |
| 7.  | Training programs are updated continuously.                                             | 4.045 | 0.963              | 7.198     | 0.000        | 80.909          | 3    | large |
| 8.  | Electronic training provides sufficient content for training activities.                | 4.091 | 0.884              | 8.182     | 0.000        | 81.818          | 1    | large |
| 9.  | Access to training programs is easy regardless of work pressure and time.               | 4.000 | 0.747              | 8.879     | 0.000        | 80.000          | 4    | large |
|     | <b>All paragraphs of the field</b>                                                      | 3.904 | 0.763              | 7.857     | 0.000        | 78.081          |      | large |

### The above table shows that:

- The level of availability of e-training requirements for (training programs) in the Ministry of Communications and Information Technology was relatively high (78.081). This is attributed to the importance of the employee to be familiar with the latest developments in modern technology and the latest findings of modern science, which makes it permanent contact with what is happening around the world, and contributes training in increasing the income of the individual, as shown by research and studies that training increases the salaries of employees by up to (4-10%), and that the companies made profits more than the percentage of staff increase by more than double. The results of this study agree with the study (Al-Turki, 2010) which showed that the

requirements for training faculty members were very important. These results were also agreed with Mohammed (2014), which showed the availability of qualified manpower for planning for e-training and many of the requirements of e-training, and that many of the study sample obtained more than (11) training courses are all traditional.

- The following Paragraph (electronic training provides sufficient content for training activities) ranked first, with a relative weight of (81.818), which is a (large) degree. This is due to the Ministry of Communications and Information Technology's interest in the overall quality in all fields and e-training, where the ministry sets up a document on the quality standards of e-government and training services.
- The following Paragraph (seeking to open new sections continuously to follow up the electronic development) came in last place, with a relative weight (73.182), a degree (large). This is attributed to the ministry's encouragement to continuously develop and improve services in the ministry, which requires developing the capabilities of individuals by providing them with the latest technology.

#### Results of the third question:

The question is: Is there a relationship between IT governance and e-training in the Ministry of Communications and Information Technology?

To answer this question, the following hypothesis was formulated: There is a statistically significant relationship at the level of ( $\alpha \leq 0.05$ ) between IT governance and e-training in the Ministry of Communications and Information Technology.

This hypothesis was validated by finding Pearson correlation coefficients as shown in the following table:

**Table 15:** Pearson correlation coefficients between IT governance and e-training

| No.                        | Fields               | Coefficient Of Correlation |                                |                          |                           |               |
|----------------------------|----------------------|----------------------------|--------------------------------|--------------------------|---------------------------|---------------|
|                            |                      | Planning And Organization  | Acquisition And Implementation | Support And Connectivity | Monitoring And Evaluation | IT Governance |
| 1.                         | The Coach            | 0.609                      | 0.494                          | 0.549                    | 0.499                     | 0.591         |
| 2.                         | Training Environment | 0.723                      | 0.667                          | 0.749                    | 0.709                     | 0.783         |
| 3.                         | Training Programs    | 0.713                      | 0.697                          | 0.702                    | 0.766                     | 0.789         |
| <b>Electronic Training</b> |                      | 0.758                      | 0.693                          | 0.740                    | 0.738                     | 0.804         |

The above table shows that Pearson correlation coefficients between IT governance and e-training Fields are statistically significant, indicating a statistically significant relationship at the level of ( $\alpha \leq 0.05$ ) between IT governance and e-training in the Ministry of Communications and Information Technology. This is because IT governance is a framework that defines and regulates any business where it ensures the management and use of IT assets as agreed in policies and procedures, ensures that these assets are properly controlled and maintained, and ensures that the Organization has significant value Support the organization's work strategies and goals, make decisions away from emotional influences, improve talent utilization, and build confidence in the organization by all stakeholders. This finding is consistent with Prasad A. et al (2008), which showed that collaboration through the organizational structures of both corporate governance and information technology governance adds value to the enterprise and that there is a direct relationship between the efforts of those structures and the activation of the concept of IT governance. It also agreed with Awad (2014), which showed that there is a positive relationship between the multiple dimensions of IT governance and the risks of using IT in banking activities.

#### Results of the fourth question:

The question is: Is there an impact of IT governance on e-training in the Ministry of Communications and Information Technology?

To answer this question, the following hypothesis was formulated: There is a statistically significant impact at the level of ( $\alpha \leq 0.05$ ) of IT governance on e-training in the Ministry of Communications and Information Technology.

This hypothesis was validated using Linear Regression Analysis, as shown in the following table:

**Table 16:** Linear regression analysis

| No. | Independent variables | Regression coefficient | "T" value | "Sig". Value | Significance |
|-----|-----------------------|------------------------|-----------|--------------|--------------|
| 1.  | Fixed variable        | 0.572                  | 4.510     | 0.000        | Sig          |



|                                                                                              |                                |        |        |       |         |
|----------------------------------------------------------------------------------------------|--------------------------------|--------|--------|-------|---------|
| 2.                                                                                           | Planning and organization      | 0.519  | 2.746  | 0.009 | Sig     |
| 3.                                                                                           | Acquisition and implementation | 0.031- | 0.181- | 0.857 | Not Sig |
| 4.                                                                                           | Support and Connectivity       | 0.012  | 5.058  | 0.000 | Sig     |
| 5.                                                                                           | Monitoring and evaluation      | 0.421  | 3.277  | 0.002 | Sig     |
| The coefficient of selection = (0.693) - The limiting coefficient of determination = (0.661) |                                |        |        |       |         |

\* The value of "T" tabular at the degree of freedom (43) and at the level of significance (0.05) = (2.021)

**The above table shows that:**

- Coefficient of selection = (0.663). The adjusted coefficient of change = 0.661, ie, 66.10% of the change in e-training is due to the change in the independent variables mentioned in the table. The remaining 33.90% is due to change in other factors.
- The variables of statistical significance are: (fixed variable, planning and organization, support and delivery, monitoring and evaluation), that is, they affect electronic training. This finding is consistent with Nassour (2015), which showed that the level of application of information technology governance in Syrian banks was moderate and that the impact of IT governance on the quality of financial reporting was significant. This result was also agreed with Al-Ramhi (2010), which showed an impact on the level of IT governance in its four dimensions combined at the margin of net profit in the listed companies in the Amman Stock Exchange. And that there is an impact of the dimensions of IT governance on return on assets. This finding was also agreed with Mohammed (2012), which showed that IT governance has an impact on the movement of securities.
- Variables are not statistically significant: (acquisition and implementation), ie they do not affect e-training. This is due to the lack of clarity of the impact of this dimension because the company suffers from an imposed blockade affecting its development capacity in terms of technological equipment. Regarding education and scientific research we find that there is a good presence in the subject of communication and information technology, but there is a lack of expertise and specialized training and this affects the ability to implement, in the field of safe and effective use, we find that their effort to keep pace with global technological advances rapidly, but targeted its security and the unity of its social fabric. This finding differed with (Al-Ramhi, 2010), which showed that there was no trace of the planning and organization dimension of return on assets.
- **The regression equation** is:  $e\text{-training} = 0.572 + 0.519 * (\text{planning and organization}) - 0.031 * (\text{acquisition and implementation}) + 0.012 * (\text{support and delivery}) + 0.421 * (\text{follow-up and evaluation})$ .
- **Regression equation is:**  $e\text{-training} = 0.572 + 0.519 * (\text{planning and organization}) - 0.031 * (\text{acquisition and implementation}) + 0.012 * (\text{support and delivery}) + 0.421 * (\text{follow-up and evaluation})$ .

**Results of the fifth question:**

**The question states:**

**Are there differences in the responses of the study sample members on IT governance and on e-training in the Ministry of Telecommunications and Information Technology due to the variables (gender, qualification, years of service, number of training courses)?**

**To answer this question, the following hypothesis was formulated:**

There were no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the members of the study sample on IT governance and about e-training in the Ministry of Telecommunications and Information Technology due to the variables (gender, qualification, years of service, number of training courses).

**The following sub-assumptions are subdivided:**

1. **There were no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the study sample members on IT governance and about the e-training in the Ministry of Communications and Information Technology due to gender variable.**

This hypothesis has been validated by the T-Test, as shown in the following table:

**Table 17: Differences in gender variable**

| Scale               | Gender | The Number | SMA   | Deviation Standard | "T" Value | "Sig". Value | Significance |
|---------------------|--------|------------|-------|--------------------|-----------|--------------|--------------|
| IT Governance       | Male   | 36         | 3.750 | 0.592              | 1.290-    | 0.204        | Not Sig      |
|                     | female | 8          | 4.035 | 0.401              |           |              |              |
| Electronic Training | Male   | 36         | 4.048 | 0.627              | 0.506-    | 0.615        | Not Sig      |
|                     | female | 8          | 4.168 | 0.498              |           |              |              |

\* The value of the "T" tabular at the degree of freedom (42) and at the level of significance (0.05) = (2.021)

**The above table shows that:**

The value of "T" calculated less than the value of "T" in the scale of IT governance and e-training, indicating that there are no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) on IT governance and e-training in the Ministry of Communications and Information Technology Sex.

**2. There were no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the members of the study sample on IT governance and about the e-training in the Ministry of Communications and Information Technology due to the variable of scientific qualification.**

This hypothesis has been validated by the One-Way ANOVA test, as shown in the following table:

**Table 18:** Differences for the variable of scientific qualification

| Scale               | Academic Qualification | The Number | SMA   | Deviation Standard | "F" Value | "Sig". Value | Level Of Significance |
|---------------------|------------------------|------------|-------|--------------------|-----------|--------------|-----------------------|
| IT Governance       | Postgraduate           | 7          | 3.659 | 0.561              | 0.257     | 0.775        | Not Sig               |
|                     | BA                     | 34         | 3.831 | 0.569              |           |              |                       |
|                     | diploma                | 3          | 3.806 | 0.767              |           |              |                       |
| Electronic Training | Postgraduate           | 7          | 4.132 | 0.672              | 0.238     | 0.789        | Not Sig               |
|                     | BA                     | 34         | 4.077 | 0.586              |           |              |                       |
|                     | diploma                | 3          | 3.846 | 0.828              |           |              |                       |

\* The value of the "F" table at the degree of freedom (2, 41) and at the level of significance (0.05) = (3.230)

**The above table shows that:**

The value of "F" calculated less than the value of "F" in the scale of IT governance and e-training, indicating that there are no significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the sample members of the study on the governance of information technology and electronic training in the Ministry ICT is attributable to the variable of scientific qualification.

**3. There were no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the study sample members on IT governance and about e-training in the Ministry of Communications and Information Technology due to variable years of service.**

This hypothesis has been validated by the One-Way ANOVA test, as shown in the following table:

**Table 19:** Variance for the variable years of service

| Scale               | Years Of Service            | The Number | SMA   | Deviation Standard | "F" Value | "Sig". Value | Level Of Significance |
|---------------------|-----------------------------|------------|-------|--------------------|-----------|--------------|-----------------------|
| IT Governance       | Less than 5 years           | 6          | 3.472 | 0.247              | 0.804     | 0.499        | Not Sig               |
|                     | From 5 - less than 10 years | 25         | 3.832 | 0.655              |           |              |                       |
|                     | From 10 - under 15 years    | 7          | 3.881 | 0.474              |           |              |                       |
|                     | 15 years and over           | 6          | 3.912 | 0.483              |           |              |                       |
| Electronic Training | Less than 5 years           | 6          | 3.801 | 0.587              | 0.653     | 0.586        | Not Sig               |
|                     | From 5 - less than 10 years | 25         | 4.088 | 0.636              |           |              |                       |
|                     | From 10 - under 15 years    | 7          | 4.269 | 0.449              |           |              |                       |
|                     | 15 years and over           | 6          | 4.032 | 0.668              |           |              |                       |

\* The value of the "F" table at the degree of freedom (3, 40) and at the level of significance (0.05) = (2.840)

**The above table shows that:**

The value of "F" calculated less than the value of "F" in the scale of IT governance and e-training, indicating that there were no significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the sample members of the study on the governance of information technology and electronic training in the Ministry ICT is attributable to variable years of service.

**4. There were no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the members of the study sample on IT governance and about the e-training in the Ministry of Communications and Information Technology due to the variable number of training courses.**

This hypothesis has been validated by the One-Way ANOVA test, as shown in the following table:

**Table 20:** Variance in relation to the variable number of training courses

| Scale                      | Number Of Training Courses | The Number | SMA   | Deviation Standard | "F" Value | "Sig". Value | Level Of Significance |
|----------------------------|----------------------------|------------|-------|--------------------|-----------|--------------|-----------------------|
| <b>IT Governance</b>       | Less than 3 courses        | 2          | 4.111 | 0.786              | 1.443     | 0.248        | <b>Not Sig</b>        |
|                            | 3-Less than 6 courses      | 6          | 3.468 | 0.389              |           |              |                       |
|                            | 6 courses and more         | 36         | 3.840 | 0.576              |           |              |                       |
| <b>Electronic Training</b> | 1-Less than 3 courses      | 2          | 4.250 | 0.626              | 0.613     | 0.547        | <b>Not Sig</b>        |
|                            | 3-Less than 6 courses      | 6          | 3.827 | 0.650              |           |              |                       |
|                            | 6 courses and more         | 36         | 4.100 | 0.601              |           |              |                       |

\* The value of the "F" table at the degree of freedom (2, 41) and at the level of significance (0.05) = (3.230)

**The above table shows that:**

The value of "F" calculated less than the value of "F" in the scale of IT governance and e-training, indicating that there were no significant differences at the level of ( $\alpha \leq 0.05$ ) in the responses of the sample members of the study on the governance of information technology and electronic training in the Ministry ICT is attributable to the variable number of training courses.

## 10. STUDY CONCLUSIONS AND RECOMMENDATIONS

### 10.1 Conclusions

1. The results indicated that the level of availability of IT governance dimensions in the Ministry of Communications and Information Technology was high. The relative weight was 76.035%. The order of dimensions is as follows: (planning and organization, monitoring and evaluation, support and delivery, and finally acquisition and implementation).
2. The results showed that the level of e-training in the Ministry of Communications and Information Technology was high. The relative weight was 81.399%. The order of dimensions was as follows: (trainer, training environment, training programs).
3. The results showed that there is a statistically significant relationship at the level of ( $\alpha 0.05$ ) between the IT governance in all its dimensions and improving the level of e-training from the perspective of employees in the Ministry of Communications and Information Technology.
4. The results showed that there is a statistically significant impact between IT governance (planning and organization, monitoring and evaluation, support and delivery) and improving the level of e-training.
5. The results showed that there is no statistically significant impact between IT governance (acquisition and implementation) and improving the level of e-training.
6. The results of the study showed that there were no statistically significant differences at the level of ( $\alpha 0.05$ ) between the average scores of the employees on IT governance for the following variables (gender, academic qualification, years of service and number of training courses).
7. The results of the study showed that there were no statistically significant differences at the level of ( $\alpha 0.05$ ) between the average of the employees' estimations about the e-training for the following variables: (gender, academic qualification, years of service and number of training courses).

### 10.2 Recommendations

The study concludes with a set of recommendations that reflect the benefits of this study in an attempt to remedy the deficiencies in the application of the IT governance dimensions in the Ministry of Communications and Information Technology. This will contribute to the development of electronic training for its employees by preparing a plan to implement the proposed recommendations According to the following:

1. Implement the COBIT framework as a tool to measure the level of IT governance in the Ministry of Communications and Information Technology.
2. Clarify the roles and responsibilities of entities involved in the deployment, management and application of IT standards and designs.
3. Providing a supportive environment for the application of international standards in the field of information technology at the ministry and government level.
4. Continuing training to upgrade the efficiency of dealing with information technology from the members of the Board of Directors to all levels of management.
5. To exercise a more effective supervisory role over the Ministry to ensure its commitment to applying IT governance at an advanced level.
6. The need to provide training centers specialists in the design and production of training programs according to the latest developments and the lowest expenses.
7. Ensure that the e-training program is designed according to internationally approved standards.
8. Provide infrastructure including electronic devices and communication networks.
9. Employing good scientific competencies to undertake e-training in the field of ICT.

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