



**IMPACT OF E-TRAINING ON IMPROVING THE  
PERFORMANCE OF EMPLOYEES AN APPLIED  
STUDY IN THE MINISTRY OF PLANNING THE  
NATIONAL CENTER FOR MANAGEMENT  
DEVELOPMENT FOR THE YEAR 2022**

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## THESIS APPROVAL PAGE

I certify that, in my opinion, the thesis submitted by Ali Hadi Jabbar ALMANSOORI titled "IMPACT OF E-TRAINING ON IMPROVING THE PERFORMANCE OF EMPLOYEES AN APPLIED STUDY IN THE MINISTRY OF PLANNING THE NATIONAL CENTER FOR MANAGEMENT DEVELOPMENT FOR THE YEAR 2022" is fully adequate in scope and quality as a thesis for the degree of Master of Arts.

Assist. Prof. Dr. Akram ALHAMAD .....

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This thesis is accepted by the examining committee with a unanimous vote in the Department of Business Administration as a Master of Arts thesis. 30/12/2023

Examining Committee Members (Institutions)

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The Administrative Board of the Institute of Graduate Programs, Karabuk University, approves the degree of Master of Arts by the thesis submitted.

Assoc. Prof. Dr. Müslüm KUZU .....

Director of the Institute of Graduate Programs

## **DECLARATION**

I hereby declare that this thesis is the result of my own work and all information included has been obtained and expounded in accordance with the academic rules and ethical policy specified by the institute. Besides, I declare that all the statements, results, materials, not original to this thesis have been cited and referenced literally.

Without being bound by a particular time, I accept all moral and legal consequences of any detection contrary to the aforementioned statement.

**Name Surname** : Ali Hadi Jabbar ALMANSOORI

**Signature** :



## **FOREWORD**

In this section, it is expected that the student gives information about the process of emergence of the thesis and thanked the people who helped for writing of the thesis.

## **ABSTRACT**

This study aims to identify the obstacles facing institutions adopting electronic training to raise performance efficiency through training courses and identify the challenges facing electronic training during Covid19. To achieve the study's objectives, a questionnaire was used to collect data and distributed to a sample of (172). The number of valid questionnaires for analysis was (124), while (48) answers were not completed, or the researcher could not obtain them. Several methods were used in the statistical analysis of the data, including the means and standard deviation. The study achieved several results. There is a positive relationship between the dimensions of electronic training and employee performance. This study also recommended paying attention to electronic training to form trained cadres that would be an advantage for institutions. It also recommended evaluating employee performance after completing the electronic training program to detect and strengthen strengths and address weaknesses in the institution.

**Keywords:** Training Infrastructure, E-Training Methods, Employees' Performance

## ÖZET

Bu çalışma, kurumların eğitim kursları aracılığıyla performans verimliliğini artırmak için elektronik eğitimi benimsemede karşılaştıkları engelleri ve ayrıca Covid19 sırasında elektronik eğitimin karşılaştığı zorlukları belirlemeyi amaçlamaktadır. Çalışmanın amaçlarına ulaşmak amacıyla, veri toplamak ve (172) örneğe dağıtmak için bir anket kullanılmış ve analiz için geçerli anket sayısı (124) iken, (48) cevap tamamlanmamış veya araştırmacı tarafından elde edilememiştir. Verilerin istatistiksel analizinde, ortalama ve standart sapma dahil olmak üzere çeşitli yöntemler kullanılmıştır. Çalışma birkaç sonuca ulaştı. Elektronik eğitim boyutları ile çalışan performansı arasında pozitif bir ilişki vardır. Bu çalışmada ayrıca kurumlara fayda sağlayacak yetişmiş kadrolar oluşturma aracı olarak e-egitime önem verilmesi önerilmiştir. Ayrıca, organizasyondaki güçlü yönlerin tespit edilip güçlendirilmesi ve zayıf yönlerin giderilmesi için çalışanın elektronik eğitim programını tamamladıktan sonra performansının değerlendirilmesi gerekliliğini tavsiye etmiştir.

**Anahtar Kelimeler:** Eğitim Altyapısı, E-Eğitim Yöntemleri, Çalışan Performansı

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<b>Anahtar Kelimeler</b>	Eğitim Altyapısı, E-Eğitim Yöntemleri, Çalışan Performansı

## **ABBREVIATIONS**

<b><math>\sigma</math></b>	: Standard Deviation
<b><math>\rho</math></b>	: Correlation Coefficient
<b>ICT</b>	: Information and Communication Technology
<b>NCDMIT</b>	: National Center for Management Development and Information Technology
<b>E-Training</b>	: Online Training
<b>IT</b>	: Information Technology
<b>HR</b>	: Human Resources
<b>DV</b>	: Dependent Variable
<b>IV</b>	: Independent Variable
<b>SPSS</b>	: Statistical Package for the Social Sciences

## **SUBJECT OF THE RESEARCH**

Impact of E-Training on Improving the Performance of Employees in an Applied Study in the Ministry of Planning the National Center for Management Development for the Year 2022.

## **PURPOSE AND IMPORTANCE OF THE RESEARCH**

The purpose of this study is to determine how electronic training affects employee performance because of the electronic training dimensions. The impact of the training infrastructure on the training process and how that affects how well people perform is one of the most crucial aspects of this dimension. Was it a good or bad thing? This study aims to determine whether higher education institutions might implement the idea of electronic training. The training provider (institution) and the trainee (employees) for internal training are both covered by e-training in this study environment.

## **METHOD OF THE RESEARCH**

The previous chapter, which contains a literature review, describes studies devoted to the effect of electronic training variables on employee performance. More specifically, the variables examined in this research include E-training infrastructure, e-training method, and employee performance. This chapter presents the study methodology, theoretical framework, and hypothesis development based on a literature review to clarify the relationships between variables (independent and dependent variables). The questionnaire was used as a data collection tool to achieve the research objective. This chapter will also provide an overview of the research design, data sampling, data tool, and testing research objectives.

## **HYPOTHESIS OF THE RESEARCH / RESEARCH PROBLEM**

Based on hypothesis testing, the H1 results were supported. This indicates that the infrastructure of the training process has a positive and clear effect on the performance of employees, as supported by the results of H2, which emphasize the impact of the methods and methods used in electronic training on the performance of employees, and research sources also supported the results.

As a result, the abovementioned research has been addressed in this study, which empirically investigates how e-training in the National Center for Administrative Development is affected by infrastructure, methods, and training methods. To the researcher's knowledge, this is an experimental study on educational institutions in Iraq.

### **POPULATION AND SAMPLE (IF AVAILABLE)**

The current study uses a widely used sample size adjustment method to determine sample size (Bartlett, 2001). The sample size was (184) employees of the National Center for Administrative Development and Information Technology affiliated with the Iraqi Ministry of Planning. One hundred and twenty-three employees were selected from the appropriate sample size to take employees' opinions from this inquiry to submit to the National Center for Administrative Development and Information Technology.

### **SCOPE AND LIMITATIONS / DIFFICULTIES**

The research project is only as strong as its capability to recognize its limitations. Since research contributes to the HR department, these contributions are influential only when their limitations are indicated. Like other studies, the results of this thesis have weaknesses, and they need to be recognized when and when to interpret the results ,Highlighting possibilities for future research. The limitations will be discussed in the following paragraphs.



# 1. INTRODUCTION

## 1.1. Background of Study

Increased demand for internet use for various purposes is Since it is the quickest way to send and receive information at any time and from any location, information and communication technology (ICT) has had one of the most significant consequences (AedoIgnacio, 2011). The primary recipients of this network's e-marketing, e-commerce, and other services may have been business groups. Additionally, firms that want to train their employees to improve their human capital are searching for efficient training techniques (Al-Yaseen, 2015). Electronic training does not have these restrictions because the learner can access it anytime and get training via video and audio from any location. The definition of electronic training is a methodical method performed in a mobile, interactive environment where digital technology applications are prevalent (Al-Yaseen, 2015). The use of the internet, multimedia, and mobile devices for the presentation of the software and electronic training courses is the foundation for the design, execution, and evaluation of continuous and non-synchronized training programs through self-training and interactive training, which can be utilized to accomplish learning goals and master skills depending on the learner's learning rate, intellectual level, working circumstances, and location (Sangraet al.,2012).

Additionally, it was defined as including various applications, including simulations, web-based training, and distant learning (AedoIgnacio, 2011). Business agencies that might be eager to continue to exist in an aggressive international marketplace search for their human sources as an asset because the human detail is within the enterprise. The enterprise is the entity that controls operations and sources toward accomplishing the enterprise's goals (Boselie,2014). To maintain tempo with fast traits inside the enterprise world, corporations have come to be eager to make sure that personnel gather extra understanding and increase new capabilities for utility withinside the workplace organizations have come to be satisfied that training is the manner to obtain those gains (Santos Filip & Karen Mumford, 2004). This training needs to be non-stop. Most of the literature agrees on the definition of instruction as structural work intended to provide learners with new knowledge and skills to improve overall performance on the job (Al-Jaghoubet al., 2009). Given the range of training equipment

and methods, companies must select the maximum suitable manner to attain the training dreams with minimal cost, mainly because each training technique has its blessings and disadvantages.

According to Catteuwe (2010), there is no doubt that the high-quality technical advancements we have witnessed in the most recent years have resulted in the birth of modern mechanisms connected to ways of gaining knowledge and skills. Utilizing technical devices such as computer systems and other advanced technology is of secondary importance regarding the processes through which information is transmitted and the methods by which it is created. This resulted in the development of the phrase "technology training," which became a name for one of the methods of simulated training (Anas et al., 2014).

E-training is described as a system of wealthy interactive surroundings that create the use of computer-primarily based totally applications, networks, and more than one media that allow the trainee to gain The goal of education is to interact with educational resources as quickly, easily, and cheaply, and with the highest level of quality possible, all while avoiding space and time restrictions (Al-Yaseen et al., 2013). E-training is a "form of training that takes place on the Internet in a holistic manner, involving plenty of multimedia elements, such as graphics, audio, video, and internet links, all of which are accessible from the web browser, and those elements are used instead of the traditional magnificence elements. In addition to displaying academic materials and information, online instruction allows students to interact with instructors live, voice their thoughts, and participate in discussions and quick quizzes. The instructor and students interact through various methods, including conversations, blogs, e-mails, and other online contact forms (Andre, 2018). E-training is a type of training that "takes place online in a comprehensive way, considering many multimedia variables, such as Employee performance can be defined as the tasks and duties associated with their jobs (Abu Sharba & Nazzal 2018). Most workers spend a significant portion of their lives looking for job satisfaction because it positively affects their personal and professional lives. (Siahaan et al., 2016). Therefore, organizations seek continuous improvement in material and human resources by training employees with modern technological means compatible with work circumstances or the institution in general (Andre, 2018).

According to Siswanto (2005), performance is the outcome of a person's achievement in performing the tasks and duties delegated to him, quantitatively and qualitatively. According to Rivai (2005), performance is a genuine behavior that each person exhibits as a work product created by the employees following their function in the firm. Implementing the responsibilities and roles allocated to him will demonstrate the quality and quantity of the employee's job or activity in the organization. One may say that an employee's output of work for the company and their performance are strongly correlated. Work outcomes might include quantity, quality, and timing, but how well employees perform determines how an organization will flourish after all workshops held remotely or a combination of workplace and electronic training (Al-Yaseen et al., 2013).

## **1.2. Problem Statement**

E-training is one of the most essential means of sending and receiving information at any time and location. The internet has become increasingly popular due to the tremendous growth in information and communications technology (ICT) (Navimipour & Zareie, 2015; Rosenberg, 2005; Bayani et al., 2017; Susanto et al., 2018). The supply of services from this network in the areas such as E-marketing, E-commerce, and many others may have benefited business organizations the most. Also, businesses that invest in training to grow their workforce always look for new and improved approaches to education (Koziolet al., 2019; Akgünet al., 2021; Tien, 2017; Macarenhas, 2019; Hansén & Fredriksson, 2018). Training is a very needed mechanism for the excellent development of individual growth that benefits the organization because it is used as the benchmark used by the organizations to determine the task or job done by the related employees (Woloret al., 2020). Employee performance should be prioritized to promote the enhancement of the business' performance's sustainability. Employee performance needs to be improved, and the business needs to start doing this if it wants to get good work from its employees. To succeed in a company in the modern era, it is necessary to have a competitive advantage and talent suited for the industry to which the firm is connected (Ismail et al., 2022). A company's capacity to compete on a global and regional scale will suffer if its workforce is not well-equipped to handle the variety of external pressures. Companies are always on the lookout for innovative ways

to educate their employees. E-training is effective when supplementary learning tools are supplied and the software has specific mixed properties (Robertson & Hardman, 2012). Thus, many businesses are turning to it as a method to reach large populations in different areas or nations, cut costs, and communicate relevant information—the impact of globalization on society. For many, the convenience, portability, and accessibility of online learning have made it their preferred method of acquiring knowledge (Kuznia & Ellis, 2014).

E-training, or electronic learning, is a cutting-edge approach to teaching and learning for career professionals using information technology resources, according to Ellis and Kuznia (2014) and Ramayah et al. (2012). Additionally, found that it has the potential to be internationally accessible and that it can reach more people while requiring less time for training to be successful, mobile training and mobile training. As observed, video conferencing, web-based training, and other e-service training platforms were the most common and efficient modes (Kuznia & Ellis, 2014).

Employees utilizing e-training must be able to adjust rapidly to access the new training environment, have working knowledge of the necessary software, have ongoing access to the Internet, and have a high level of mental power and enthusiasm. Employees who lack a solid foundational knowledge of using computers and other electronic devices may struggle with online learning platforms and lose interest in e-learning altogether. Employees' productivity has suffered without a pleasant working environment, necessary organizational infrastructure, and appropriate training (Hanapi & Nordin, 2014). One of the National Center's goals is to promote employee productivity through training. Thus, once the Covid19 outbreak hit, it moved fast to digitize several aspects of the training process to equip its staff better. Spending money on training is a wise investment in a firm's and its employees' success. Even though we know Covid19 will not halt or disturb the training and learning process, the Iraqi Ministry of Planning still needs to study how effective e-training may be in raising workers' levels of expertise and productivity (Iraqi Ministry of Planning, 2020). As a result of the epidemic, many service facilities, including the Ministry of Planning, were isolated, and workers were allowed to work from home. People increasingly rely on remote internetwork to maintain productivity and efficiency despite the pandemic. The Iraqi National Government and the Information Technology Development Center of the Iraqi Ministry of Planning are dedicated to upgrading public sector employees nationwide (Iraqi

Ministry of Planning, 2020). One of its goals is to establish an effective government apparatus capable of running the country (Putra et al., 2018). Therefore, necessary to continue the training process, and one of the main methods used in the development is E-training, which is an effective strategy for forming human resources capable of achieving goals (Al-Hila et al., 2017; Siswanto et al., 2021).

Conducting or attending training courses has become crucial for developing the abilities necessary to satisfy the needs of businesses and individual personal growth (Al-Hila et al., 2017; Siswanto et al., 2021). This contributed to the growth of the knowledge-based or workers' society (Al-Hila et al., 2017; Siswanto et al., 2021). Most firms continue to train their human resources using conventional coaching (e.g., employees must be in a specific place, for a particular duration, and with a specific trainer). However, today's conventional training methods are pricy, less adaptable, and harder to customize to the demands and expectations of individuals and businesses. This study aims to determine whether higher education institutions might implement electronic training. The training provider (institution) and the trainee (employees) for internal training are covered by e-training in this study environment in the National Center for Administrative Development, determine the requirements and capabilities, and adopt the concept of e-training. Furthermore, try to adopt e-training that can help the organization to advance to an additional degree of imparting knowledge and involving it to develop competent workers (Hanapi & Nordin, 2014; Al-Hila et al., 2017; Siswanto et al., 2021; Putra et al., 2018). As a result, the gaps mentioned above in the literature are filled in this study as it experimentally investigates the impact of e-training (E-training infrastructure and E-training methods) on employee performance at the Ministry of Planning and National Center for Management Development in Iraq (Al-Hila et al., 2017; Siswanto et al., 2021; Putra et al., 2018).

### **1.3. Research Questions**

The following study questions have been developed based on the abovementioned problem regarding the elements that could improve employees' performance.

1. What is the impact of E-training Infrastructure on the performance of employees in the Ministry of Planning and National Center for Management Development in Iraq?
2. What is the impact of E-training methods on the performance of employees in the Ministry of Planning and National Center for Management Development in Iraq?

#### **1.4. Research Objectives**

The following problem statements on the elements that could improve employees' performance serve as the foundation for the research objectives:

1. To investigate E-training Infrastructure and E-training methods on the performance of employees in the Ministry of Planning and National Center for Management Development in Iraq.
2. To investigate E-training methods on the performance of employees in the Ministry of Planning and National Center for Management Development in Iraq.

#### **1.5. Study Signification**

Relevance to theory and relevance to practice are two different but complementary viewpoints on this topic.

##### **1.5.1. Significance of Theory**

The study's subject is the foundation for the interaction between E-training Infrastructure and E-training methods and their impacts on employee performance. The National Center for Administrative Development and Information Technology research is made better by the contribution of this study and the National Center for Administrative Development and Information Technology's study on the impact of e-training infrastructure on employees' performance.

### **1.5.2. Significance of Practice**

The study determined the expected variations in employee performance due to the influence of the E-training infrastructure and E-training methods on the outcomes of the combined analytical survey and test experiments. The resulting framework provides practitioners with a helpful tool to aid in developing Employees' performance strategies for the National Center for Administrative Development and Information Technology, the relevance of practical, theoretical contributions. (Iraqi Ministry of Planning, 2020). E-training methods are the primary approach for evaluating the quality of services surrounding E-training infrastructure. The National Center for Administrative Development and Information Technology will be the subject of this investigation. These practical training requirements will boost the service offered to participants and help the center overcome potential roadblocks that may otherwise slow it down. To understand the requirements of this process and to provide a clear image of the electronic training idea, this study was undertaken. The National Center for Administrative Development and Information Technology, however, will be the main subject of this investigation. Likewise, the connection between worker productivity and e-training infrastructure. Because of this, this study recognizes the expanding need for additional research in this field and groups the significance into theoretical and practical contributions (Iraqi Ministry of Planning, 2020).

### **1.6. Research Scope**

Employees' performance is a gauge of how well someone performs their duties. Human resource management includes studying job performance, an industrial and organizational psychology component. The National Center for Administrative Development and Information Technology oversees enhancing the administrative, financial, and information technology skills of employees in state agencies, the private sector, and civil society organizations, which helps to achieve organizational development and boost performance. The objectives of e-government will be attained by training, as well as by spreading ideas of modern management information systems and information culture in state departments, the corporate sector, and civil society groups, and by creating institutional frameworks. Modern management trends will be incorporated into the training and qualification of administrative leaders in the various

state departments. Training and educational programs in planning, development, administrative development, and information technology can also achieve better outcomes. (Iraqi Ministry of Planning, 2020). One service industry that significantly affects the country's economy is the National Center for Administrative Development and Information Technology. On the other side, the IT industry is seeing a boom in terms of construction. From the practitioner's perspective, management development organizations and academic development programs impact the e-learning platform and e-learning strategy to improve and boost employee performance. The National Center for Management Development and Information Technology was selected as the setting for this thesis because prior research has shown that managers use e-training infrastructure and methods at these development centers, which impacts employee performance. (Kim & Cha, 2002). According to the literature that is currently accessible (Hoehlee et al., 2012), a minimal amount of recent academic study focused on varied and specialized aspects of developmental centers has been carried out. Some studies have specifically examined how employees' performance is affected by e-training infrastructure and e-training methodology in the context of the development center business (Kim & Cha, 2002). These studies solely used segmented factors within a particular geographic area to measure the employee performance process of staff members of the National Center for Administrative Development and Information Technology (Kim, W.G& Cha; Y., 2002). In response, this thesis broadens knowledge of staff performance theory, e-training infrastructure theory, and e-training method theory and practice to improve academic comprehension. As a result, the suggested model advances the theories of employee performance and e-training: infrastructure of the theory and application of e-training methods. This study applied to the National Center for Management Development and Information Technology through experimental research into the relationship between its derived components, the quality of the relationship (electronic training method of e-training infrastructure), and employee performance. As a result, the proposed model contributes to the theories of employee performance, the theory of e-training infrastructure, and the theory of e-training method. This study varies from all earlier contributions regarding integrated variables and scope coverage nationwide.



According to the literature that is currently accessible (Hoehlee et al., 2012), a minimal amount of recent academic study focused on varied and specialized aspects of developmental centers has been carried out.

### **1.7. Key Terms Definitions**

1. **Employee Performance:** What an employee does and does not do. Employee performance involves quality and quantity of output, presence at work, accommodative and helpful nature, and timeliness (Sopiah et al., 2020).
2. **E-training Infrastructure:** E-training is like e-learning in many ways, particularly in the technology and delivery mechanism. However, acquiring a single learning objective or skill typically involves a much shorter learning period (Ramayah et al., 2012). E-training is a kind of distance learning that uses the Internet or an intranet to provide individuals with the knowledge they need about various subjects of their choice (Amara & Atia, 2016).
3. **E-Training Method:** The nature of e-training is off-the-job training that is usually conducted by an expert in his or her field. The trainer can use the available methods and methods. Each training program begins with lectures, conferences, and an oral presentation (Rahja, 2019).

### **1.8. Thesis Organization**

**Chapter 1:** This chapter contains a study background, a research problem, research objectives, research questions, and a thorough examination of the influences that affect customers' purchase decisions. **Chapter 2:** This chapter is dedicated to a discussion of the aspects of the study done by other academics and researchers, as well as their findings, and it begins with an overview of the study. It includes the definitions, explanations, and arguments they presented and the results they arrived at after performing many studies. In addition, the researcher offers some theories on specific aspects of the topic that were investigated to understand it better. The conceptual model and the hypothesis that guides the creation of the model are both depicted in the conceptual framework that served as a framework for the study. In addition, the conceptual framework served as a framework for the research. **Chapter 3** describes how

the whole data-gathering procedure was conceptualized and planned. The research strategy and methods that served as the parameters for the study's course are described in detail in this section. The researcher also described the sampling procedure used to pick the responders and the sample that comprised the study's participants. Additionally, the researcher stated how they planned to gather the data and the equipment that would be utilized to do this task. **Chapter 4:** Thus, the researcher analyzed the data using the SPSS program, and the program version that was used was 26.0, to achieve the primary objective of the study, which comprised descriptive demographic statistics, a regression model, a correlation test, a normality test, and the measurement of pertinent and significant responses from customers; additionally, based on the result, the excite. **Chapter 5:** This chapter will find all the discussions on conclusions and findings of research analyses and any recommendations and suggestions the researcher has presented.

## **2. LITERATURE REVIEW**

### **2.1. Introduction**

Finding the elements that affect employees' performance at the Iraqi National Center for Administrative Development and Information Technology is the goal of this study. This chapter focuses on relevant research, including articles on the impact of e-training infrastructure and e-learning strategies. It comprises one component containing the E-training Infrastructure, the E-training Method, and the Independent and Dependent Variables (employees' performance). This chapter evaluates employee performance at the National Center for Administrative Development and Information Technology and correlates it. The performance of the employees in an e-training infrastructure and e-training approach is generally covered in this chapter.

### **2.2. Overview Of the Iraqi Ministry of Planning**

The Iraqi Ministry of Planning is one of the Iraqi Council of Ministers formations, founded in 1952. The Iraqi Ministry of Planning is interested in conducting research and studies and developing plans and perceptions that achieve the goal of economic and human development in Iraq in cooperation with official and private agencies. It has other tasks, such as:

1. Preparing, implementing, and following up on the annual and five-year strategy for comprehensive development plans.
2. Providing indicators, statistical data, and the necessary information state agencies need and establishing a comprehensive national information base.
3. Supervising and following up on the international cooperation file concerning grants and technical assistance.
4. Its sponsors support the Iraqi private sector, studying the reality of this sector and overcoming the difficulties and obstacles it faces. It develops a detailed framework and proposes strategic projects that require huge capital and a more extended period for implementation in cooperation with the rest of the state agencies.

5. It Evaluates and follows up on government contracting activity in investment and development.
6. It Adjusts measurement and upgrades the quality of imported local goods and enhances intellectual creativity in a way that enhances the national economy. Studying human development needs to contribute to providing job opportunities, employment, and social services for the population.
7. It Prepares and implements an unemployment and poverty alleviation strategy.
8. It Prepares and proposes action plans and programs that contribute to building institutional capacities and developing the human element, as it is considered a tool and pivot for achieving development.

### **2.3. The National Center for Management Development Information Technology (NCMDIT)**

When it was founded in 1970, the National Center for Management Development and Information Technology was called (The National Center for Consultation and Management Development). where it was entrusted with the task of building and strengthening the capabilities of workers in the governmental administrative apparatus and other sectors (private and mixed) in a way that contributes to achieving administrative development. In 1988 it merged with the National Planning Institute, and after the Ministry of Planning was abolished in 1994 and its organizational level was reduced to a body, the Center was merged with the Financial and Accounting Training Center and became affiliated with the Ministry of Finance. In 1996 the center was re-created and linked to the Ministry of Planning. And after the issuance of a law, The new Ministry of Planning No. (19) of 2009. In 2011, the center merged with the Jerusalem School of Computers and became known as (the National Center for Management Development and IT). The National Center for Management Development and Information Technology, 2022, states that the center has branches in the governorates of (Mosul, Basra, and Diwaniyah) and that it carries out the following duties:

1. Building and strengthening the capacities of workers in state agencies, sectors (public, private, and mixed), and civil society organizations.
2. Enhance the concepts of management information systems and informatics culture.

3. Implementation of quality management systems in accordance with international standards.
4. Preparing and qualifying administrative leaders.
5. Expand the center's activities at the level of regions and governorates that are not organized in a region.
6. Developing scientific research methodology in the fields of administrative development and information technology.
7. Strengthening the bonds of cooperation with the concerned local, regional, and international bodies.
8. Providing technical advice in the administrative and information technology fields to raise the efficiency of institutional performance.

#### **2.4. Strategic Directions of The Center**

The Center is constantly keen to update its strategic directions to upgrade the Iraqi administration to keep pace with global administrative development and information technology developments. Therefore, the National Center organizes courses, training, and study programs in planning, development, administrative development, and information technologies, granting certificates to those who pass them successfully and conducting studies and research in administrative development and development and information technologies. Moreover, it provides advisory services to the public, private, and mixed sectors and civil society organizations in planning, development, and information technologies.

The center also works on documenting, transferring, and disseminating knowledge at the internal and external levels and cooperation with experts, specialists, departments, and advisory and training bodies inside and outside Iraq.

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**Vision: High-quality public administration for sustainable management development.** Message: The National Center for Management Development and Information Technology works to improve institutions' performance and the management apparatus' effectiveness. In finding a flexible management apparatus capable of managing state institutions to achieve management reform by providing advisory services to state ministries that live up to their expectations to achieve their goals and ambitions. Also, as rely mainly on the implementation of training programs by the latest models and international standards to enrich knowledge and refine management skills within a training environment that adheres to the quality standard.

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<p><b>Corporate Values:</b></p> <ul style="list-style-type: none"> <li>- Creativity,</li> <li>- Innovation,</li> <li>- Honesty,</li> <li>- Integrity,</li> <li>- Teamwork,</li> <li>- The significance of active human capital investment</li> </ul>	<p><b>Strategic Goals:</b></p> <ul style="list-style-type: none"> <li>- Providing highly specialized and effective management and technical training.</li> <li>- Providing professional services through the application of quality standards.</li> <li>- Achieving the objectives of government institutions through training and development.</li> <li>- Raising the efficiency of the management system and human resources.</li> <li>- Keeping pace with global changes and achieving leadership, success, and excellence in business.</li> <li>- Focusing on all workers in the development process and creating an environment of mutual trust to exchange ideas, discuss performance obstacles and find solutions.</li> <li>- Focusing on work ethics and developing job loyalty among all employees.</li> </ul>
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**Soures:** National Center for Management Development and Information Technology, (2022).

## **2.5. Benefits and Objectives of e-Training**

E-training is a "kind of education that occurs online comprehensively, related to many multimedia elements, such as graphics, audio, video, and internet links. All of that is accessible via the web browser, and those elements are used instead of the traditional beauty elements. The students can interact in real time, express their ideas, and participate through questions and quick quizzes in online education, in addition to seeing educational materials and content. The interaction between the instructor and the students is also carried out through various methods, including debates, blogs, e-mail, and various online contact forms. (Al-Yaseen et al., 2004; Itmazi, Jamil., 2013) noted that training through technology devices has evolved into the best method for resolving many difficult circumstances that Ministries, authorities, establishments, and public and

personal companies face. Moreover, from the researcher's viewpoint, the availability of the latest information and abilities through e-education stays within the trainee's reminiscence for longer than while the use of conventional education strategies, including lectures (Alhamad, A. M., Junoh, & Eneizan, 2019; Faraj, & Alhamad, 2022). Concrete proof of this was offered by (Alruwaili Naif, 2013; Alhamad, Osman, Manaf, Abdullah, & AlShatnawi, 2015), who concluded that online video film education, or "simulation education," was the most effective form of education, whereas classroom lectures were the least effective. According to several authors, e-schooling provides educational departments in businesses with an ecosystem that promotes achieving multiple goals. (Aedo, Ignacio, et al., 2011, Akram, et al., 2022), Emphasized that the following goals can be accomplished by using e-training techniques.

1. Identifying and documenting the employees' training requirements to help the organization design its training strategy. Examining the available e-training resources, determining whether the training materials are appropriate and required, and developing the quantity and kind of workers who require such materials.

2. Giving students current instruction, which encourages employees to acquire training materials.

## **2.6. Employee Performance**

Researchers in management sciences focused on the performance of employees, especially after organizations' increasing pursuit of competitive advantages by emphasizing activities and outputs related to employee performance, in addition to being one of the most critical indicators through which employees' efficiency and effectiveness in achieving set goals considering the available capabilities. Performance is the result of the work performed in terms of quantity and quality that the employee obtains in performing his duties through the company's policies and procedures as performance (Alhamad, et al., 2019). The quantity that the employee can carry out his activity according to the obligations assigned to him (Riyanto et al., 2017) has a different interpretation of performance, stating that performance as an outcome achieved by a person under the scale is related to the work in question. According to the above definitions, performance is a measure that characterizes and measures how well the organization performs its duties and obligations to achieve its goals, objectives, vision,

and mission (Abd Alia &ALhamad, 2022). Because of this, it is challenging to achieve high levels of long-term productivity without job satisfaction. On the other hand, many types of research show an essential relationship between employee motivation and job satisfaction. According to Siswanto (2005), Performance is the outcome of a person's quantitative and qualitative effort in carrying out the tasks and activities delegated to him. According to Rivai (2018), each person views performance as the accomplishment of work that employees generate after their function in the organization. Doing the responsibilities and roles allocated to him will show the organization the results of the employee's labor or activities in terms of quality and quantity. One may say that the display of the employee is closely related to the work output of the person in the organization. Work outcomes can involve quantity, quality, and timeliness, but the growth of an organization depends on employee performance evaluation (Prabowo et al.,2018). In other words, the staff performance appraisal paradigm is represented by performance appraisal (Kuswati, 2020). The employee performance appraisal model is generally represented by performance appraisal (Kuswati, 2020). The management's ability to motivate, promote, and lead the workforce in carrying out their duties significantly impacts the employee's performance in any firm. Motivation is one of the main goals of management. The success of the motivation mentioned above depends on management's capacity to put the concepts of motivation into practice.

Performance can be defined as the quality and quantity of work done by an individual or group to achieve specific objectives. Individual performance is influenced by effort, ability, and environmental factors (Rianto, 2016). The performance of organizational determination is also strongly influenced by performance. Almost every company, including those in the IT sector, requires high-performing people to create a competitive advantage, so it will need high-performing employees (Sriviboon, 2020) because workers who achieve high jobs can help the company achieve and develop its strategic goals. Gain and maintain a long-term strategic competitive advantage. The following are some of the factors that affect employee performance:

1. Leadership and confidence factors include each employee's knowledge, skills, confidence, motivation, and commitment.
2. Managerial leadership factors, such as the ability of managers and team leaders to provide employees with encouragement, passion, direction, and business support.



3. Aspects of the team, such as cohesion and closeness among team members, as well as the quality of support and excitement provided by colleagues on one team.

4. System factors include the organization's working systems and work facilities or infrastructure.

The employee's general perception of his or her behavior and contributions to the company's success is reflected in perceived job performance. Three elements that enable certain employees to perform better than others might be considered when evaluating an employee's performance; these aspects include "declarative knowledge," "procedural knowledge," and "motivation" (McCloy et al., 1994). People's performance is positively impacted by HR practices, according to Huselid (1995), who also asserts that there is a clear correlation between HR management and positive employee behavior. (Carlson et al., 2006).

Performance is one of the metrics used to assess how successfully a job has been done. For the sake of organizational sustainability, performance is a crucial method for management to communicate the objectives and performance standards and to inspire future individual performance (Shafini et al., 2016). Performance is the extent to which a person achieves organizational goals at work (Cascio, 2006). Although different studies have varied perspectives on performance, most academics link it to measuring transactional efficacy and effectiveness in relation to corporate goals (Stannack, 1996; Barne, 1991). The level of accomplishment of a particular goal or purpose that establishes performance parameters determines how much of a job a worker has (Cascio, 2006). Researchers have noted various viewpoints attitudes, and as it aids in measuring input and output efficiency parameters that result in the transactional relationship. (Stannack, 1996). An organization's ability to create a perfect relationship with resources demonstrates successful and efficient resource management (Daft, 2000). Strategies have been developed based on organizational performance to accomplish the organization's goals and objectives (Richardo, 2001). Managing organizational resources effectively thanks to the equity based on high returns boosts performance. (Ricardo, 2001).

The performance measurement system assists organizations in being more effective at achieving their goals and objectives (Ittner & Larcker, 1998). Establishing goals and objectives as part of strategic planning helps the firm concentrate on non-

financial or intangible assets. Customer-related quality, performance, and services have a financial component (Kaplan & Norton, 2001). The measurement and evaluation of performance measuring systems enable the financial and non-financial reward management systems. Functionality performance is the outcome of efforts associated with an organization's success or failure (Sopiah et al., 2020). Mangkunegara (2015) identifies four indices of staff performance: quality, quantity, reliability in carrying out tasks, and attitude.

## **2.7. Training of Employee**

Training is a methodical process to help people learn new abilities or concepts. In other words, training aims to alter trainees' behavior. This means that trainees will pick up new business, technical, and manipulative abilities that will assist the firm in accomplishing its objectives (Archieve, 2008). According to Taylor (2002), e-learning and e-training are the same, especially regarding technology and delivery. However, accomplishing a specific learning objective or skill in a shorter amount of time is what is meant by the term "e-learning.". Researchers studying the training literature have found that e-primary training aims to increase trainees' job satisfaction and performance while fostering a productive workforce. Business leaders frequently participate in online training to obtain a competitive edge and prepare for globalization (Kuznia & Ellis, 2014).

E-training at Toyota AUTO 2000 SM and PT. Astra International Tbk. The training variable is recognized to have a higher positive impact on worker performance in the training field. This is consistent with Bangun's viewpoint (2012), who asserted that training enhances employees' capacities to aid an organization in achieving its aims. The development of human resources to handle the difficulties of the globalization period is another benefit of training. It is adapting and being flexible with the organization's overall environmental changes. Hence, it is essential not to disregard training activities, particularly when improving employee health, safety, and professional skill development. As a result, training ought to be a crucial component of an organization's or business's development. Many modern e-learning systems merely automate the process and management of teaching and course delivery, with the added benefit of removing time and location barriers as businesses seek to respond to changes

in the training field. Getting superior training results is still a research subject, even though academics have identified obstacles and offered new answers to some issues connected to them (Hassanzadeh et al., 2012). Contrarily, some researchers emphasized the significance of employee satisfaction with the training process and whether employees who actively engage in e-training will be satisfied, which will translate into more substantial training benefits when supervisors consistently focus on the significance of continuous learning and associate specific rewards with their initiative. (Bataineh, 2017). Experts think that successful businesses make an effort to satisfy the objectives of both the organization and the workers at the same time. One reason the e-learning program may not be successful is that the e-programs have poor human interaction, and trainees may be unhappy with their experience. However, the trainee is the one who needs to take responsibility. According to Tanquist (2001), various factors contribute to a reduction in liability. To begin with, students should organize their education and take control of it. Also, they must become accustomed to the interface and learn to utilize the required gear and software. The student must take the initiative to address any technical issues with the electronic form. Finally, using technology in education presents a hurdle to those who are uneasy about using it. The study examined the causal relationship between the variables that might indicate the efficacy of e-training. Employees of multinational corporations (MNCs) with prior e-training experience were surveyed to gather data. Subjective efficacy, convenience of use, and training content were not shown to be significant predictors of user satisfaction. However, learning motivation, management support, and organizational support were E-training is like e-learning, particularly concerning the technology and delivery mechanism. However, it typically refers to a much shorter learning period intended to acquire a single learning objective or skill (Ramayah et al., 2012). E-training is a kind of distance learning that uses the Internet or an intranet to provide individuals with the knowledge they need about various subjects of their choice (Amara & Atia, 2016). The systematic acquisition of knowledge that is helped by Technology and structured in a way that increases the productivity of the individual learner and organization is known as e-training. Instead of being thought of as transmitting and receiving knowledge, knowledge transfer should be seen as a process of knowledge reconstruction (Szulanski, 2000). Thus, the crucial question is whether e-training helps enhance employees' skills by transferring the knowledge acquired to job performance (Amrouet et al., 2015).

### **2.7.1. E-Training Infrastructure**

Anderson (2002) explained that an institution with an orientation towards electronic training should be able to answer questions related to five critical success factors, including measuring, or evaluating the organization's culture. E-training readiness, specific content and software, internal capabilities, or infrastructure electronic, cost, and target personnel. Bagnasco (2003) also proposed a training framework. The electronic content and its main issues represented in the standard of content and flexibility to meet the needs of trainees and that user training framework is:

1. Interns (internal staff, staff from other organizations, technicians, and clients).
2. Teachers (from inside and outside the institution), specialists, and advisors (from inside and outside training institutions). Administrators of large-scale systems from the learning environment. All these user types should be able to use the platform from their places of employment.

The training framework provides the following learning objectives:

1. Instruction for newcomers, ongoing training to improve integration and proficiency, help customers, support strategies, and learning methodologies: self-learning, virtual classrooms, and group work.
2. The institution can consider how to define whom it wants and decide whom it will develop, what materials, where, and how the training will be (in the workplace, at home).
3. New e-training platforms are needed, supported by knowledge management and online communications, to enable the trainees to access and from remote sites using multimedia (Bagnasco et al., 2003).
4. The platform is a platform for remote administration based on web technology, and it is the arena through which business and all things related to electronic training and the activities it contains are achieved through which the learning process is achieved.
5. Using a set of communication and communication tools, the trainee was able to obtain what he needed from the training content materials (recording the lectures he needed, storing them in the form of video files, and uploading them to the Lecture

Management System - in a manner that facilitates the assimilation of the content of the lecture.

6. PowerPoint - with the ability to annotate, comment and add notes, and play all educational audio and video files very quickly. Allowing all devices to be controlled.

This study onclude from the preceding description of the e-training environment as follows (Al-Zanbaqi, 2012).

#### **A- Human Resources**

1. The trainer must possess the following qualities: the capacity to instruct and make effective use of contemporary educational technologies, the Internet, and email.
2. Self-learning aptitude. Understanding of how to use a computer, including email and the Internet.
3. Computer and internet component specialization. Knowledge of training methods and basic computer programming pertinent to the system.
- 4- Central technical staff. Studies by Aydin (2005), Egan and Akdere (2005), Salmon (2004), and Williams (2003). Emphasized the importance of the technical role and that the coach must possess knowledge of appropriate use of necessary technology, creation and integration of training programmers, and the ability to solve simple technical problems and present a level of technical support for trainees.
4. The central management body. Studies, like (Guaschet al. 2010) and Baranet (2011), confirmed that the managerial role requires significant attention as it involves setting work rules and regulations, implementing planned training procedures, monitoring the training process, and ensuring the improvement of the institutional process in the Internet context.

#### **B- For preparation**

1. Server.
2. The location and equipment of the trainer.
3. Place and equipment of the trainee.
4. Internet access service.

At the appropriate speed and at any time and without restrictions on the number of trainees and the presence of a password to enter the sites of online training or virtual training rooms (Bagnasco, A., Chirico, M., Parodi, G., & Scapolla, A. M., 2003).

### **2.7.2. E-Training Method**

The nature of e-training is off-the-job training usually conducted by an expert in his or her field. The trainer can use the available methods and methods. Each training program begins with lectures, conferences, and an oral presentation. However, for a big audience, the lectures should be exciting and generate interest and conversation among the students utilizing simulated exercises: a manufactured setting that exactly mimics a real-world scenario. Four fundamental simulation techniques are employed in training: Role-playing, management simulations, case studies, and basketball training (Rahja, 2019). Modern workplace training is driven by technology. A 2003 American Association for Training and Development (ASTD) survey revealed that 95% of participants used some e-learning in their workplaces (Ellis, 2003). The American Society for Technology in Education (ASTD) defines e-learning (also known as electronic learning) as "a broad range of applications and procedures, including Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It covers the distribution of content over the Internet, LAN/WAN, CD-ROM, audio- and videotape, satellite transmission, and interactive TV (Kaplan-Leiserson, 2002). E-learning is a potent instrument for delivering various instructional technologies and approaches as a training medium. With live-stream audio and video technologies, for instance, e-learning can deliver online lectures, text-based materials in electronic PowerPoint slides, and conversations through message boards and chat rooms. It has only been a few years since the term "e-learning" was coined (Henry, 2001), but it has already been called the next "killer application" for the Internet (Chambers, as cited in Henry, 2001). Organizations may deliver training uniformly to all employees using e-learning, update training materials as needed, cut travel expenses to external training facilities, and give employees access to training whenever needed (Burgess & Russell, 2003). E-learning was predicted to account for roughly \$11.4 billion of U.S. corporate training investments in 2003 due to its affordability and just-in-time availability (Moe & Blodget, 2000).

According to Welsh et al. (2003), who refer to it as the "e-learning revolution," the usage of e-learning in businesses outpaces academic study on the subject. Hence, organizational strategies must be frequently reviewed to keep up with state of the art in e-learning because this field of practice is developing quickly. The most often used e-training techniques are video conferencing and online training. This definition agrees with Mohsen and Suleiman's (2013) definition of e-training, which is the use of technology by the trainer to impart specialized knowledge to the employee through a medium like the Internet while properly utilizing simulation techniques, role-playing, live lectures, and recorded lectures. According to Collette and Collette (1989), trainees are more motivated and eager to learn using technology due to the training process' rapid increase in reliance on computers and the Internet and allowing for audio, video, graphs, animations, and text download. All these frameworks and information transmission techniques simulate the setting and process of conventional training.

## **2.8. Theory Training**

Working theory: As defined by Michael Fries (2007), action theory tries to explain how to do this. How people adjust their behavior to meet dynamically is how learning is organized targets in ordinary and extraordinary circumstances. Methods and situations for practical learning necessitate the trainees' creativity and expose them to different scenarios. Unlike many other cognitive and information-processing theories, action theory concerns action's unique circumstances and results. It also manages the operations of the company. It participates in the relationship between how cognition impacts behavior and performance and how environmental stimuli influence behavior on the one hand (Paul, 2010). According to Salisbury (2008), business theory is a rigorous tool for learning to recognize and understand cognitive processes in a performance environment. Focus, sequence, and action structure are used to organize the content (Frese, 2007) and theoretical foundations that interact dynamically. The structure of the business terms of conceptual processes is the most significant component. By being sensitive, teachers can regulate the learner's expectations regarding the complexity of the learning process and reduce the amount of information they receive. When the trainees are more at ease with their surroundings, they frequently try to adapt the approach to other workplace issues (Paul, 2010).

According to Rupley et al. (2009), the training approaches now being utilized are an upgraded version of tactics that have been used successfully. The technique of holding a discussion or conference and the instructional procedure are critical training approaches used in the past. Most organizations rely on these two procedures. It is stated that they ought to have been accepted and adopted into the training mainstream and produced proof of their usefulness if training practitioners had paid attention to the government and other enticing proponents of new ways (Sadler et al., 2000). This study will thus aim to analyze the relative efficacy of various training delivery methods and the frequency with which they are utilized based on the comments expressed by the workers. In addition, there is an increasing worry over the applicability of training strategies or methods to enterprises of a smaller or medium size (Kraiger et al., 1993).

## **2.9. Hypothesis Formulation**

According to the information available, there is a consensus that e-training improves functionality performance. Consequently, training positively impacts employee performance by enhancing skills, knowledge, capacities, competencies, and behavior for the benefit of both the individual employee and the business in which they work. (Boaduet et al., 2018). Online training is crucial for developing organizations, enhancing performance and efficiency, and ultimately placing businesses in the best possible position to compete and remain successful (Divya & Gomathi, 2015). This indicates a significant difference between businesses that train their staff and those that do not. Only 16% of US employees said that they had gotten any training from their employers, according to New et al. in their book *Human Resource Management: Achieving a Competitive Advantage*, published in 2000 (Appiah, B., 2010). According to the study, there is a chance that the United States could experience a surge in unemployment during the next five or more years due to the rapid growth of technology, which will replace unskilled labor. Thus, the United States must create plans and policies to guarantee that its human resources are adequately trained to meet the rising technology standards. General Electric, Texas Instruments, and Federal Express have already taken the lead and are currently devoting between 3% and 5% of their pay to training to accomplish this (Appiah, b., 2010).



Businesses dedicated to investing in their human resources make long-term, sustainable earnings. According to Black and Lynch (1996), who cited Bartel (1989) in their study on the effects of human capital investments like employer-provided training and development, "Returns on training and development investments boost productivity by 16%." This increases the value of staff training. As a result of the attributes created, the staff members put them into practice in their work, enabling the business to advance and make money (Backhauset al., 2004).

Okumo et al. (2018) found a direct link between staff training and work effectiveness. In a Kenyan court, conclude the relationship between staff training and employee performance. The study identified knowledge transfer as the first and most significant independent variable related to job performance. Educational media was the second most significant factor in employee performance (Wiradendiet al., 2020). Regarding the effects of e-training, every company is dedicated to generating profits for its owners (shareholders) and giving its clients and beneficiaries a high level of service by investing in their training (Evans & Lindsey, 1999). Robert Simpson, the managing director of Legna Construction Ltd, a construction firm in Ghana's central region, substantially contributes to the nation's growth by building roads and hiring workers. The company's human resources training helped it achieve a significant increase in revenue from 2005 to 2009 (a 40% increase from 2001 to 2004). Nevertheless, this was attributed to the abilities and information that the staff members acquired through training, which enabled them to be more productive and, as a result, lower the cost of the job and increase income (Evans & Lindsay, 1999) added that Motorola and Texas Instruments offer each employee at least 40 hours of training every three months and that this has had a significant impact on worker performance. Training helps employees become more skilled in their occupations and provides better outcomes. Employee success is exemplified by improved quality, ease of use of new technology, and highly motivated employees. Hassan and Hassan Wayne (2020) state that employee performance involves duties and deeds that promote company goals. The vision and mission of the organization they worked for, and their personal goals are achieved by creating and implementing them. Employee performance refers to a worker's abilities, motivation, and capacity to carry out a task successfully and securely to enhance their capacity to do a better job by drawing on prior work experience. Information and technical expertise are necessary for e-training, and participants receive significant

support for their achievements. Past studies have shown a high correlation between successful training and workers' capacity to handle various tasks (Jha, 2016; Anitha & Kumar, 2016). It was discovered through earlier studies that electronic training impacts job performance. Checking if infrastructure preparedness affects functioning is advised, mainly if mobile devices are used as the primary source of reference material both before and after training. (Christian et al., 2007).

### **2.9.1. The relationship Between E-Training Infrastructure and Employee Performance**

The E-Training infrastructure preparedness substantially influenced work performance, mainly once individuals were skilled in using mobile devices as essential references for materials during and after training (Christian et al., 2007). E-learning in the workplace attempts to improve workers' productivity and the company's overall competitiveness by making them better at their jobs (Jha, 2016; Anitha & Kumar, 2016). E-learning is typically an investment that top-level corporate leaders make for various reasons, including the requirement of globalization and the aspiration to obtain a competitive advantage (Backhaus et al., 2004). E-learning is becoming increasingly popular with executives at other companies to satisfy the need for education and work around cost constraints (Kumar, 2016). A competitive advantage enables an enterprise's leaders to satisfy employees' needs while advancing the organization's strategic objectives (Divya & Gomathi, 2015). Corporate executives require increasingly sophisticated communication technology, such as the Internet and other e-learning tools, to communicate with stakeholders anywhere in the globe (Divya & Gomathi, 2015). The effectiveness of online and remote learning was evaluated based on the research that was relevant to the topic. As can be seen, more than 92 percent of all studies conducted on online education and remote learning concluded that these methods are at least as successful as conventional education methods (Nguyen, 2015). found a positive relationship between e-learning infrastructure and staff performance.

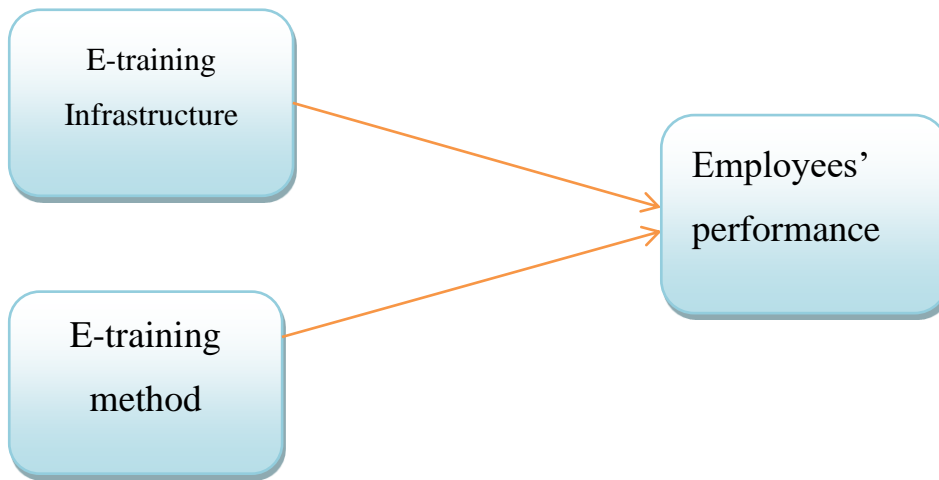
**H1:** There is a positive impact between the E-training Infrastructure and employee performance.

### **2.9.2. The Relationship Between E-Training Method Employee Performance**

Some literature has addressed the significance of e-education via way of means of offering authentic evidence. For example, (Al-Yaseen et al., 201; Khalil, 2015) indicated that e-education has turned out to be the destiny dream of commercial enterprise corporations and employees since the effectiveness of e-training has increased to 80% at the time this article was written and may even reach 100%, per worldwide research (Al-Yaseen et al., 201; Khalil, 2015). According to some relevant literature, the importance of e-schooling rests in its focus on developing human resources, which are among the most critical assets of any organization. It has also become a source of concern for businesses. In this context (Al-Yaseen et al., 2013) suggested that training through technology devices has emerged as an appropriate solution for solving many challenging issues facing ministries, government institutions, and public and private businesses. Moreover, from the researcher's point of view, presenting new expertise and abilities through digital education stays within the trainee's reminiscence for an extended duration than conventional education strategies, including lectures. Practical proof for this was furnished by (Alruwaili & Naif, 2013), in which it was observed that education through online videos - "simulation training" - ranked first most of the education strategies, at the same time as education blanketed study room lectures placing last. According to several authors, e-training provides education departments in corporations with a robust environment that fosters the achievement of many goals. The researcher observed a fantastic courting between digital education strategies and worker performance (Aedo Ignacio et al., 2011).

**H2:** There is a positive impact between the E-training method and employee performance.

## 2.10. The Framework



**Figure 1.** Research conceptual model

## 2.11. Summary

This research described the study sector, which confirms the strategic direction of the National Center in the Iraqi Ministry of Planning and its most important strategic objectives, which depend mainly on training. In reviewing previous studies of articles and books on the topic of the research, this study notes that there is great importance in contributing to raising the efficiency of employees' performance by relying on e-training (infrastructure; training methods and methods) as well as determining its value, impact to functionality performance, as studies confirmed the existence of a link between employee performance and training. This study also refers to the most critical employee training theories that emphasize the importance of investing in the intellectual capital of organizations.

### **3. RESEARCH METHODOLOGY**

#### **3.1. Introduction**

In order to complete the theoretical study, this study developed a questionnaire based on the theoretical framework and prior research, specifically prepared to measure the trends of the surveyors according to the principal axes of the study to test the problem of the study and its hypotheses about the existence or absence of a relationship between e-training, technological infrastructure, and employees' performance.

#### **3.2. Research Design**

In order to characterize the phenomena that were the focus of the study's component, the researcher utilized the descriptive analytical technique. There is an accurate description of it that is stated in the form of quantitative exhaustion, as well as the analysis of its data, the explanation of the link between its components, and the viewpoints that have been advanced around it, as well as the processes and effects that it includes that can be generalized to other situations (Finnerty et al., 2013).

According to Finerty et al. (2013), the quantitative technique describes the problem in its current state. The research used a descriptive research methodology to "provide an accurate profile of occurrences or situations" (Robson, 2002), as stated in the introduction to the study. Quantitative research helps find answers because it enables the collection of numerical data, forecasting, and variable measurement. This type of research is meticulously organized using a logical approach. Most research of this sort places a significant amount of emphasis on hypotheses. (Creswell, 2017) Employing evaluation, observation, and theory analysis as research methods. The researcher utilized procedures such as scanning and descriptive measurement during this investigation. This method of describing has been used to investigate the impact that e-training has had on the work performance of employees at the National Centre for Management Development and Information Technology (NCMDIT) to identify characteristics that speak to whom, when, where, and what sorts of problems each feature is relevant too.

Moreover, research is being done using the survey approach to create questionnaires for employee responses (Ziemond et al., 1994). A survey is a measurement tool for gathering information from a representative sample of the research community. As a result, the National Center for Management Development and Information Technology staff will be given a questionnaire to complete to gather the data (Boogie & Scaran, 2019; Osborne & Costello, 2004; Uhl & Schoner, 1969).

### **3.3. Population and Sample Size**

The researcher will estimate the size of the target population in this section using the sample size and the procedure that he applied to choose the sample for the research. The term population refers to the complete vocabulary the researcher plans to examine to generate study results and distribute study findings to the entire vocabulary. The researcher also aims to study the population to produce study results. According to (McMillan & Schumacher, 2014), the sample size must be enough to generate reliable data for analysis and accurate population estimates. "Population" refers to the total number of people, events, or other significant occurrences that will serve as the foundation for the investigation that will be carried out (Boogie & Scaran, 2019; Osborne & Costello, 2004; Uhl & Schoner, 1969). This term can also be used to refer to the people who are the focus of the investigation.

#### **3.3.1. Sample Size Determination**

In order to correctly carry out the phases of the study, it is necessary to choose a sample of the community that is representative of the community following the techniques outlined in the sample selection table. The total number of employees that made up the sample was 184. One hundred twenty-three workers were chosen to represent the usual sample size required for this inquiry to be forwarded to the National Centre for Administrative Development and Information Technology. Determine the sample size, and the current research uses a method that has widespread use and is based on (Bartlett, 2001).

**Table 1. Sample Size Calculation**

N	S	N	S	N	S
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

A skill-building Methods for research methods in business, by (Bougie & Sekaran, 2019)

In order to avoid not receiving answers from some respondents, Salkind suggested increasing the sample size by 40 to 50 percent, using the total sample size of 123, in addition to an additional 40 percent of the sample as recommended by Salkind and implemented in Bartlett, 2001, which means that the total number of participants in the sample for this research is 172.

Where x is an unknown percentage more than the first 40%, and 123 Is the actual size of the sample.

$$Y=40/(100)*123$$

$$Y=40/100*123$$

$$Y=0.4*123$$

$$Y=49.2\approx 49$$

The value of 49 in the equation corresponds to 40 percent of the total sample size of 123. As a result, 172 people were chosen as the sample size for this study (172 = 123 + 40). To conduct a research study sample on the staff of the National Center for Management Development and Information Technology, 172 randomly chosen questionnaires were chosen.

### **3.3.2. Sample Techniques**

This study will use a simple random sample design in an almost comprehensive inventory method from the National Center for Management Development and IT staff. Forms containing their questions at the end of their official terms have been filled out so that the researcher can get the answers accurately.

### **3.4. Elements of Analysis**

Analysis elements refer to the researched entities in a particular case study. The study's analysis parts are divided into three categories: the organization, the community, and the individual. (Kumar et al., 2013). The main objective of this research is to study the effect of e-training in improving the performance of employees at the National Center for Management Development and Information Technology.

### **3.5. Data Collation Method**

A survey can be used to gather information in various ways, but the primary data for this study's statistical analysis came from a questionnaire given to a group of National Center personnel. It reviews a set of inquiries structured in the form of paragraphs. It gathered a significant number of data at one point because of the data-collecting strategy used in this inquiry. The researcher also used quantitative measurement to help in the process of analyzing the investigation's findings as well as to confirm the study's findings. The researcher decided to employ manual delivery to gather the completed questionnaires since it is quicker and more effective in terms of time management, can be explained to the respondents, and may persuade the respondents to engage in the survey and to give their honest opinions (Sekaran & Bougie, 2016).



### 3.6. Measurement of Instruments

Previous relevant references and studies were used to build the questionnaire and formulate its paragraphs and consult the supervising doctor to determine the questionnaire's dimensions and paragraphs. The main themes covered by the questionnaire and the paragraphs within each axis were identified, and the questionnaire was designed in its initial form and then presented to the supervising doctor to provide advice and amendments that he deemed necessary for the validity of the questionnaire, and in the light of what the supervisor referred to, some paragraphs of the questionnaire were amended from deletion and addition until the questionnaire came out in its final form and was adopted. The questionnaire chosen for this investigation is a closed-organization questionnaire created by earlier studies (Sources: Adapted from Khloudet al, 2016). One of the five questions must be responded to by the respondent. Use the 5-point Likert scale by creating some unique questions and limiting answer alternatives. The measurement method adopted and adjusted in the current study activity was based on recent studies pertinent to this context (Churchill, 1999). Table 2 of the 5-point Likert scale to be used in the research shows.

**Table 2.** Question Alternative Scores

<b>Item</b>	<b>Scale</b>
<b>Strongly disagree</b>	1
<b>Disagree</b>	2
<b>Neutral</b>	3
<b>Agree</b>	4
<b>Strongly agree</b>	5

#### 3.6.1. E-Training

The systematic process of acquiring new information or skills for a specific aim is known as training (Jones & George, 2005).

### 3.6.1.1. First Dimension: E-Training Infrastructure

It includes the items of the e-training infrastructure. Eight questions, as in Table 3.

**Table 3.** E-Training Infrastructure

No	Items
1	The National Center for Management Development provides basic, high-quality communications services, such as the Internet
2	At the National Center for Management Development, IT assistance and other communication infrastructure maintenance services are accessible
3	The National Center for Management Development features virtual training rooms to simulate live or recorded lectures for the audience on E-Training Portal.
4	By determining the specific training needs of the participants, the training course content is developed for them
5	A team devoted to creating the course's electronic material creates the training course activities to ensure that the requisite interactivity is achieved
6	The National Center for Management Development's website, which provides interactive online courses, is accessible to all employees.
7	The training programs offered by the National Center for Management Development are set up and carried out in conformity with worldwide standards.
8	There are high criteria for support and assistance with creating training materials

Sources: Adapted from Khloudet al, (2016)

### 3.6.1.2. Second Dimension: E-Training Methods

The electronic training method includes nine questions, as shown in Table 4.

**Table 4.** E-Training Methods

No.	Items
1	Trainers at the National Center for Management Development work with learners on an interactive platform
2	Trainers employ visual electronic programs.
3	Trainers make use of computerized simulations.
4	Trainers play digital games
5	Trainers make use of virtual programs.
6	Trainers communicate online.
7	Trainers employ digital brainstorming
8	Trainers employ a coordinated electronic strategy
9	Trainers employ a small electronic method

Sources: Adapted from Khloudetal,(2016)

### 3.6.2. Employee Performance

Employee performance includes 12 questions, as in Table 5.

**Table 5.** The Employee Performance Dimension

No.	Items
1	Rarely do I need to move my tasks to another time period.
2	I want to make the most of my working hours.
3	I believe I go above and beyond the requirements of my supervisors in how I carry out my duties.
4	In addition to my primary responsibilities, I hope to be given new assignments.
5	I think I make a few mistakes when carrying out my responsibilities.
6	I complete my tasks correctly without needing more time.
7	I am reliable.
8	I offer fresh suggestions for improving performance.
9	I make original recommendations for raising performance.
10	I am unable to do the tasks given to me since they are not in conformity with my work.
11	I have no trouble adjusting to new changes in my responsibilities when they occur.
12	Even though it is outside the scope of my job, I have the ability to address unusual problems.

Sources: Adapted from (Alhooti & Anto, 2020)

### 3.7. Data Analysis Technique

Data analysis is used to investigate, clean, analyze, convert, and model the data to draw conclusions, support decision-making, and uncover crucial information. To analyze the data for this study project, the researcher will employ the SPSS program, version 26.0. The reliability test, correlation analysis, and other SPSS26.0 features help text the response in this study.

#### 3.7.1. Reliability Analysis

Refers to the ability of the questionnaire to obtain the same results under similar search conditions using the same tool (resolution) or on the same sample, as well as the

accuracy of the scale and the stability of its results indicate the extent to which it is error-free, ensuring the consistency of its results when measuring the various elements in (Sekaran, 2006), and for that the use of the method alpha Cronbach; the researcher used the method alpha Cronbach to determine the reliability of the scale. The first findings of the fundamental study suggest that a credibility range of 0.50-0.60 is adequate and that enhanced credibility of more than 0.80 relies on the research goal. The internal consistency of the variables is essential, and the research objective should be considered while determining the value of alpha-Cronbach and the needed Kobach. A value of at least 0.80 is considered acceptable, and Hair et al. (1998) suggested that the Alpha Cronbach value should be more than 0.70. According to the findings of a study that was conducted by Bougie and Sekaran (2019), a reliability analysis that is 0.60 or below is seen as undesirable, while an analysis that is 0.80 or above is regarded as good. The dependability coefficients of the acquired items are summarized in Table.6.

**Table 6.** Summary Reliability Factor

<b>Reliability coefficient</b>	<b>Remarks</b>
<b>Less than 0.60</b>	Poor
<b>0.70</b>	Acceptable
<b>0.80</b>	Good
<b>0.90 and more</b>	Excellence

**Sources :** (Bougie & Sekaran, 2019)

### **3.7.2. Descriptive Statistics**

The frequency, mean, percentages and standard deviation of statistical analysis with a descriptive focus illustrate respondents' overall perception of each questionnaire category (Cavana et al., 2001). The study found that descriptive statistics are favored since they accurately reflect characteristics such as a person's behavior, group, organization, or scenario and their perspectives, capabilities, beliefs, and knowledge.

**Table 7.** Summary of Descriptive Analysis

<b>Mean score</b>	<b>Interpretation</b>
<b>1.00 – 1.99</b>	Low
<b>2.00 – 3.49</b>	Moderate
<b>3.50 – 5.00</b>	High

**Source:** (Lopes; 2012)

According to an earlier study, the connection is created by contrasting the fluctuation in one set of variables to another (Sekaran et al., 2001). Therefore, it is essential to use statistical analysis to determine whether there is any correlation between two variables (Bewick et al., 2003). Scores of 1.0 (plus 1) were discovered by Coakes et al. (2010) and Sekaran (2003) to signify an entirely favorable connection. Otherwise, there will be a total negative correlation of -1. (Minus 1). The strength of the relationship is indicated by its value, while its orientations are indicated by the positive and negative signs (Coakes et al., 2010).

### **3.8. Summary**

This chapter serves as a guide for conducting this research. This chapter begins with a discussion of the creation of the questionnaire and data collection, followed by discussions of the various stages of the research design and processes. This chapter also provides a summary of the updated analysis tools that were used in this study. When the researcher has finished collecting all the data from the questionnaire-based questionnaire, she will use the SPSS version 26.0 software for analysis and interpretation. The structure and procedures for the study design, measurement, data collection, and data analysis methodologies are covered in this chapter.

## 4. RESULTS AND FINIDGS

### 4.1. Introduction

This chapter is divided into three sections: The first section contains a summary of the respondents' demographic characteristics, information on the Cronbach Alpha reliability test, and the psychometric characteristics of the scales used in the study. In the third and last section, a discussion on the analysis of study subjects is presented.

### 4.2. Response Rate and Demographic Profile

#### 4.2.1. Response Rate

The current study looked at staff answers. After delivering 172 questionnaires as part of the information-gathering process, the number of completed answers was 124, while 48 answers were not completed or the researcher was unable to obtain them, as in the following Table 8.

**Table 8.** Response Rate

<b>Reason</b>	<b>Total</b>	<b>Present (%)</b>
<b>Distributed questionnaires</b>	172	100
<b>Usable questionnaires</b>	124	72.093
<b>Unreturned/incomplete questionnaires</b>	48	27.907

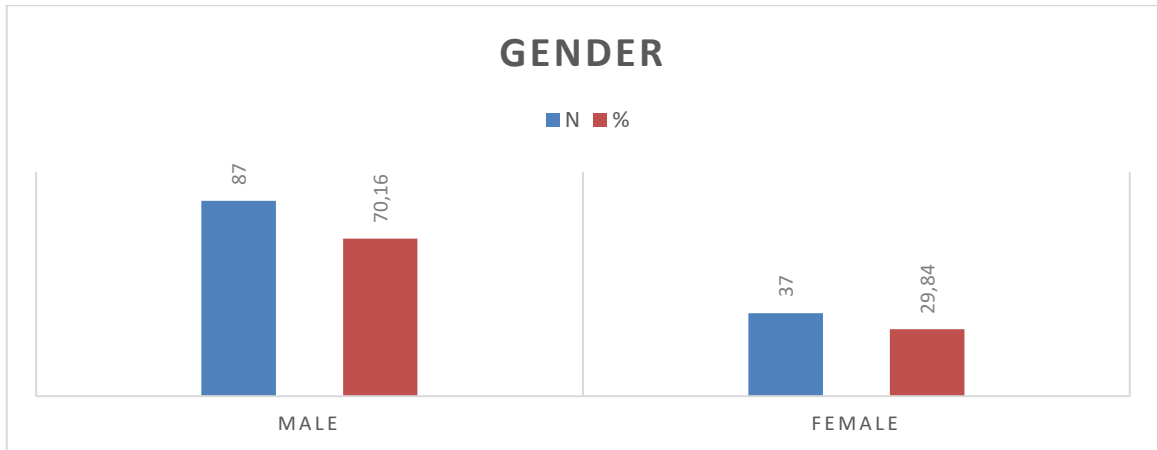
#### 4.2.2. The demographics of the respondents

Table 9 lists the respondents' demographic characteristics, including gender, age, education, marital status, income, and employment.

**Table 9.** Percentage And Frequency of Demographic Information.

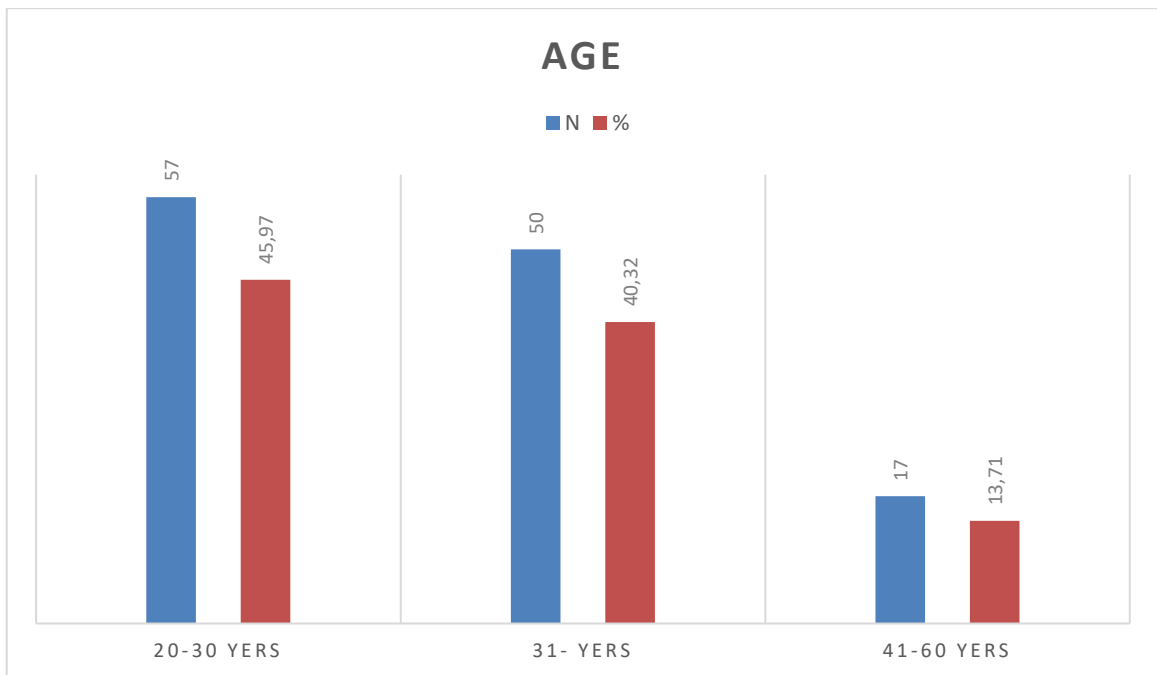
		<b>N</b>	<b>%</b>
<b>Gender</b>	Male	87	70.16
	Female	37	29.84
	<b>Total</b>	124	100
<b>Age</b>	20-30	57	45.97
	31-40	50	40.32
	41-60	17	13.71
	<b>Total</b>	124	100
<b>Qualifications</b>	Diploma and less	24	19.35
	Bachelors	80	64.52
	Master	11	8.87
	PhD	9	7.26
	<b>Total</b>	124	100
<b>Years of Experience</b>	2-5 years	33	26.61
	6-10years	57	45.97
	11-20years	23	18.55
	21-more years	11	8.87
	<b>Total</b>	124	100
<b>Monthly Income (IRAQI DINAR (IQD))</b>	Less than 500000	2	1.61
	500001 – 599999	13	10.48
	600000 – 699999	22	17.74
	700000 – 799999	34	27.42
	800000 – 899999	13	10.48
	900000 – 999999	21	16.94
	More than 1000000	19	15.32
	<b>Total</b>	124	100
<b>Married status</b>	Single	34	27.42
	Married	80	64.52
	Divorced	7	5.65
	Engaged	3	2.42
	<b>Total</b>	124	100

Beginning with gender, it is clear from the table variable is male (87) by (70.16%) and the number of female respondents (37) by (29.84%), according to Figure 2.



**Figure 2.** A Comparison of the Genders of the Responders.

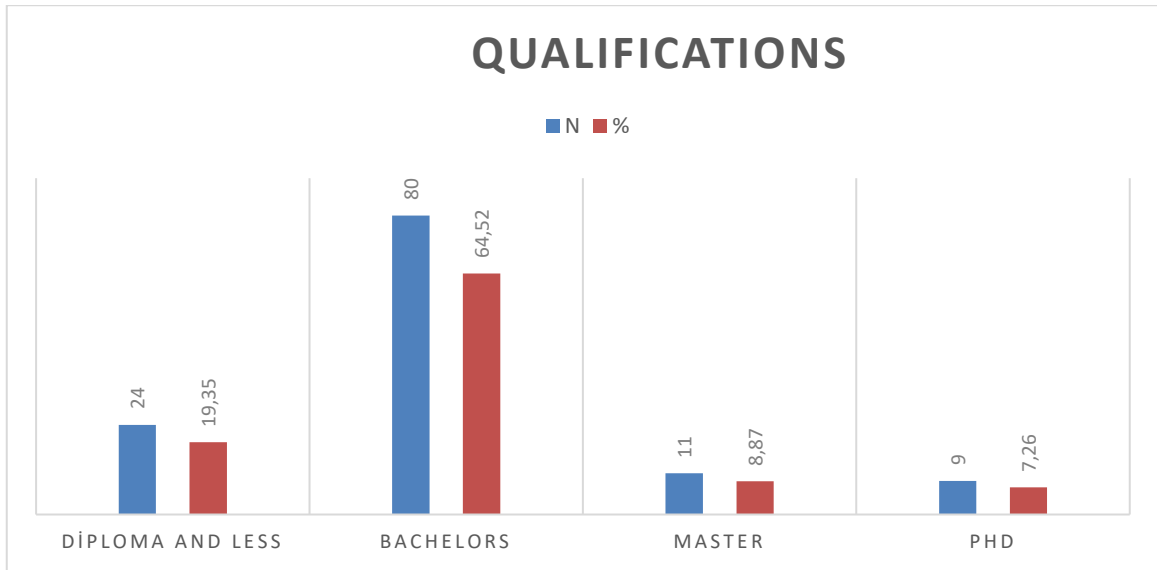
Regarding age, the respondents were between 20 and 30 years (57) and (45.97%). The number of those aged 31-40 years was (50) and (40.32%), and those aged 41-60 numbered (17) respondents and (5%). according to Figure 3.



**Figure 3.** A Comparison of the Respondents Ages.

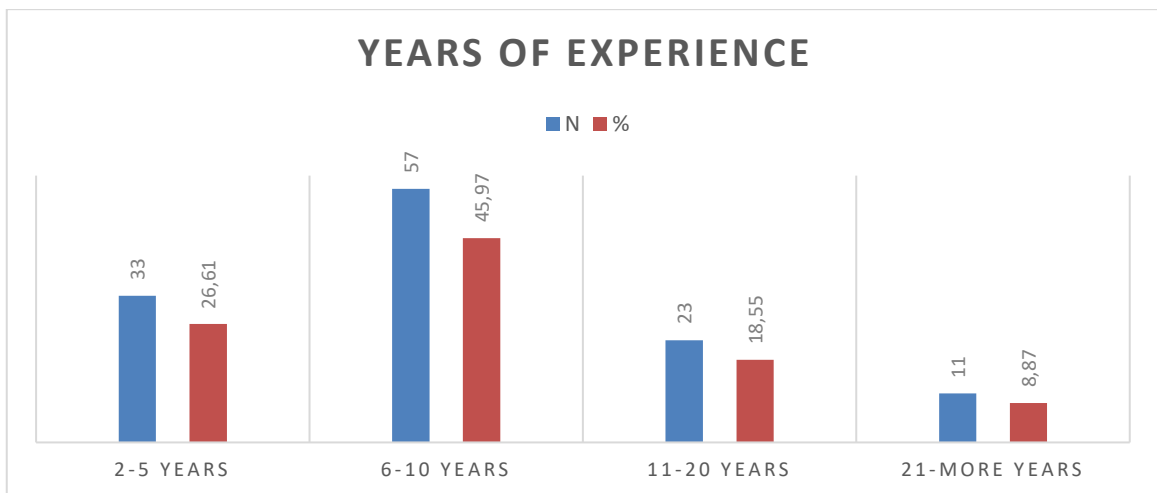
As for qualifications, the number of respondents with a Diploma or less was (24), and (19.35%), with a Bachelor's (80) and (64.52%), Master (11) and (8.87%), and with Ph.D. (9) and (7.26%), according to Figure 4.





**Figure 4.** A Comparison of the Respondents Qualifications.

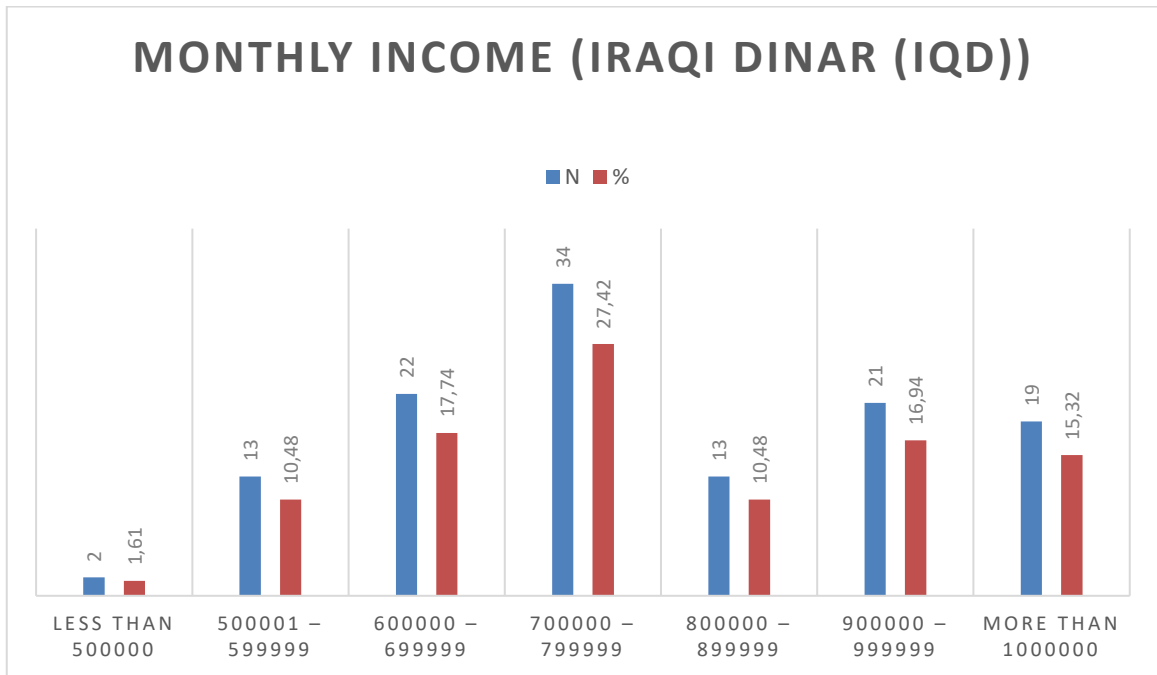
The findings showed that the research sample consisted of several respondents with work experience between (2-5) years (33) and (26.61%). While the number of those with work experience ranging from (6-10 years) was (57) and (45.97%). The number of those whose years of service ranged from (11 to 20) years was (23) and (18.55%). In contrast, the number of those whose years of service ranged from (more than 21 years) was (11) and (8.87%), according to Figure 5.



**Figure 5.** A Comparison of the Respondents Experience.

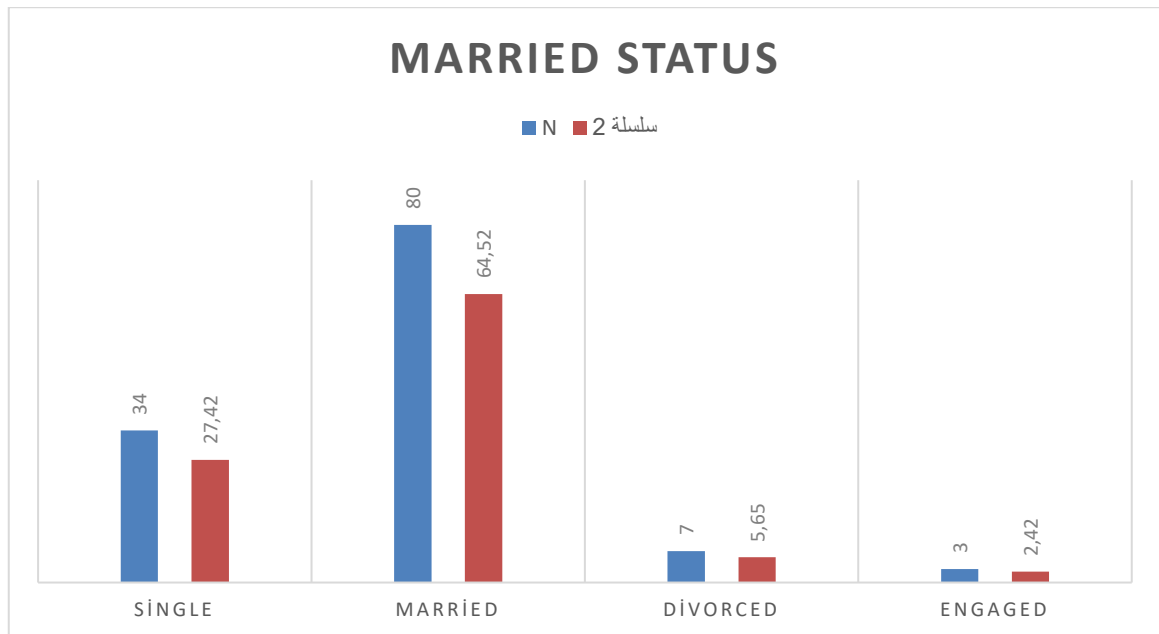
The findings showed the following: the search sample consisted of the number of respondents by monthly income (IRAQI DINAR (IQD)), those whose monthly income ranged from (Less than 500,000) were (2) and (1.61%), the number of those whose monthly income ranged from (500001-599999) was (13) and (10.48%), the number of people with monthly income ranged from (600,000 - 699999) was (22) and

(17.74%), the number of people with monthly income ranged from (700,000-799999) was (34) and (27.42%), those whose monthly income ranged from (800,000 to 899999) were (13) and (10.48%), the number of people with monthly income ranged from (900,000 - 999999) was (21) and (16.94%), and the number of those whose monthly income ranged from (More than 1000,000) was (19) ) and (15.32%), according to Figure 6.



**Figure 6.** A Comparison of the Respondents Monthly Income.

The findings concerning marital status showed that the number of Single respondents was (34) and (27.42%). Married were (80) and (64.52%). Divorced were (7) and (5.65%). Engaged were (3) and (2.42%), according to Figure 7.



**Figure 7.** A Comparison of the Respondents Married Status.

### 4.3. Reliability

Cronbach's Alpha is the primary tool used in the reliability test, which is used to evaluate the consistency and stability of the variable, according to Bougie and Sekaran (2019). A Cronbach's Alpha rating close to 1.00 denotes more reliable data. A value greater than 0.80 is considered exceptional, whereas one less than 0.70 is considered subpar. (Bougie & Sekaran, 2019). The Cronbach Alpha tests for each of the several characteristics of the independent and dependent study variables are shown in Table 10.

**Table 10.** Reliability Values for The Variables

Variable	Item	Reliability Coefficients	Remarks
E-Training Infrastructure	8	0.763	<b>Acceptable</b>
E-Training Methods	9	0.802	<b>Good</b>
employee performance	12	0.829	<b>Good</b>
Total	29	0.852	<b>Good</b>

The table 10 data show that the tool's overall reliability value was (0.852), which is adequate, while the reliability estimates for the questioners' element of these investigations ranged from (0.763 to 0.829).

#### 4.4. Factor Analysis

The information for the (KMO) test in the following table shows that the "Olkn" scale has a value of (0.712), which is higher than the "Bartlett" scale (0.5). This demonstrates the increasing dependability of the factors that we find through factor analysis to assess the suitability of the sample size. This study discovered that the "Bartlett" test's probability value (P-value) is (0.00) and less than (0.05). The correlation matrix does not equal the matrix unit as a result. The matrix's related variables enable it to analyze the data. Also, this shows that the sample in the following Table 11 is "Kaizarr Mir UConn" measures to judge the appropriateness of the sample, and "Bartlett" test the results.

**Table 11.** KMO And Bartlett's Test.

<b>KMO and Bartlett's Test</b>		
<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		0.712
<b>Bartlett's Test of Sphericity</b>	Approx. Chi-Square	125.993
	Sig.	0.000

#### 4.5. Descriptive Finding

##### 4.5.1. E-Training Infrastructure

The results for the axis (E-Training Infrastructure)'s mean and standard deviations were as follows:

**Table 12.** Results for E-Training Infrastructure

<b>NO.</b>	<b>Statements</b>	<b>Mean</b>	<b>Standard deviation</b>
<b>1</b>	The National Center for Management Development provides basic, high-quality communications services, such as the Internet.	3.8710	0.77531
<b>2</b>	At the National Center for Management Development, IT assistance and other communication infrastructure maintenance services are accessible.	4.4032	0.74265
<b>3</b>	The National Center for Management Development features virtual training rooms to simulate live or recorded lectures for the audience on E-Training Portal.	4.2581	0.90051
<b>4</b>	By determining the specific training needs of the participants, the training course content is developed for them	4.0484	0.90934

5	A team devoted to creating the course's electronic material creates the training course activities to ensure that the requisite interactivity is achieved.	4.4113	0.79646
6	All employees have access to the National Center for Management Development's website, which offers interactive online courses.	4.4355	0.75699
7	In the National Center for Management Development's training, courses are organized and delivered in accordance with international standards.	4.2016	0.78585
8	There are high criteria for support and assistance with creating training materials	4.2258	0.67280
<b>General Average</b>		4.2319	0.41310

The previous Table 12 shows that the first axis's overall arithmetic mean is 4.2319 and that the range of standard deviations was generally 0.41310.

#### 4.5.2. E-Training Method

The results for the arithmetic mean, and standard deviations for the axis E-Training Methods were as follows:

**Table 13.** Results for E-Training Method

NO.	Statements	Mean	Standard deviation
1	Trainers at the National Center for Management Development work with learners on an interactive platform	3.6613	0.94471
2	Trainers employ visual electronic programs.	3.9355	0.82385
3	Trainers make use of computerized simulations.	3.8306	0.90815
4	Trainers play digital games	3.8548	0.93438
5	Trainers make use of virtual programs.	3.7903	0.77851
6	Trainers communicate online.	3.7581	0.91395
7	Trainers employ digital brainstorming	4.0887	0.88356
8	Trainers employ a coordinated electronic strategy	4.2258	0.70813
9	Trainers employ a small electronic method	4.0887	0.79646
<b>General Average</b>		3.9149	0.46001

The above Table 13 demonstrates that the arithmetic mean for the first axis is 4.2319 and that the standard deviation range was typically between 0.41310.

### 4.5.3. Employee Performance

The outcomes for the axis (employee performance arithmetic)'s mean and standard deviations were as follows:

**Table 14.** Results for Employee Performance

<b>NO.</b>	<b>Statements</b>	<b>Mean</b>	<b>Standard deviation</b>
1	Rarely do I need to move my tasks to another time period.	4.3065	.600510
2	I want to make the most of my working hours.	4.0000	.954240
3	I believe I go above and beyond the requirements of my supervisors in how I carry out my duties.	4.0806	.888930
4	In addition to my primary responsibilities, I hope to be given new assignments.	3.8548	.993420
5	I think I make a few mistakes when carrying out my responsibilities.	3.9839	.883300
6	I complete my tasks correctly without needing more time.	3.6371	1.01481
7	I am reliable.	3.7177	.975810
8	I offer fresh suggestions for improving performance.	3.9355	.960540
9	I make original recommendations for raising performance.	4.0806	.851560
10	I am unable to do the tasks given to me since they are not in conformity with my work.	4.0806	.898030
11	I have no trouble adjusting to new changes in my responsibilities when they occur.	4.1855	.768980
12	Even though it is outside the scope of my job, I have the ability to address unusual problems.	4.2016	.674500
<b>General Average</b>		4.0054	.569450

The overall arithmetic mean of the first axis is 4.0054, and the general average of standard deviations was 0.56945, as seen in the preceding table.

**Table 15.** Summary of Descriptive Findings

<b>Variables</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
<b>E-Training Infrastructure</b>	4.2319	0.41310	High
<b>E-Training Methods</b>	3.9149	0.46001	High
<b>employee performance</b>	4.0054	0.569450	High

#### 4.6. Pearson Correlation Analysis

The significance of the linear bivariate relationship between the independent factors and the dependent variable in the current inquiry was assessed using Pearson correlation analysis. The primary goal of the correlation analysis was to determine the level of correlation between each independent variable and the dependent variable. For the likely correlations that were considered, which ranged from +1 to -1, R values of 0-0.2 are weak, 0.3 to 0.6 are moderate, and 0.7 to 1 are strong (Brace, 2000), as stated in Table 16.

**Table 16.** Pearson’s Correlation Analysis of Variables

	<b>E-Training Infrastructure</b>	<b>E-Training Methods</b>	<b>employee performance</b>
<b>E-Training Infrastructure</b>	1		
<b>E-Training Methods</b>	0.637**	1	
<b>employee performance</b>	0.589**	0.560**	1

**\*\*.** Correlation is significant at the 0.01 level (2-tailed).

The correlation values of the existing search variables are proven to be good and statistically moral at the indication level by Table 4.9 outcomes.

#### 4.7. Hypothesis Testing

The assumptions in the planned model were evaluated using the significance of the correlation coefficients (R), the Coefficient of Determination (R<sup>2</sup>), and lastly, the Multiple Regression (Beta). Using multivariate regression analysis, it is feasible to evaluate ideas and models regarding how certain conditions affect behavior. The correlation coefficient, or R<sup>2</sup>, is frequently used to assess the effect between two variables, whereas multiple regression examines the relationship between a group of variables and a single variable. On the other hand, examining the coefficient makes it possible to determine the linearity between the variables (R<sup>2</sup>). The results of the significant hypothesis testing are presented in Table (17) together with the results of the hypothesis testing. In line with the hypothesis:

Hypothesis 1: There is a positive impact between the E-training Infrastructure and employee performance.

Hypothesis 2: There is a positive impact between the E-training method and employee performance.

**Table 17.** The Results of The Regression

Variable	B	T	Sig.	R	R Square	F	Sig
<b>-training, technological infrastructure</b>	0.539	4.298	0.000	0.636	0.405	41.170	0.000
<b>e-training method</b>	0.385	3.421	0.001				

a. Dependent Variable: employee performance

Table 17 shows a clear and statistically significant connection between (E-training, E-training method, and employee performance). The degree of findings revealed that the test value was (F), the correlation coefficient (R) value was (0.636), and the coefficient of determination (R<sup>2</sup>) value was (0.405) (41.170). By doing so, we can show that the hypothesis is correct.

#### 4.8. Summary of Findings

Based on the conclusions of the multiple regression analysis, the study's findings are compiled in the following Table 18.

**Table 18.** Summary of Hypotheses

The Hypotheses	Result
<b>H1</b> There is a positive impact between the E-training Infrastructure and employee performance.	Supported
<b>H2</b> There is a positive impact between the E-training method and employee performance.	Supported

#### 4.9. Conclusion

The concepts that were presented in the preceding chapter were examined in this chapter. The required analyses for the study, which comprised a frequency table, a descriptive analysis, and reliability and validity tests, were performed using SPSS Version 26. The results confirmed the effect of (E-training Infrastructure and E-training method) on employee performance and supported all proposed hypotheses.



## **5. DISCUSSION AND CONCLUSION**

### **5.1. Introduction**

Every hypothesis test recommended in chapter two had its results discussed in the previous chapter. According to the two research questions in the first chapter, the current chapter analyses the results to achieve the thesis' objectives. Considering the information gathered and past findings that have been published in the literature, the researcher examines the findings with the underlying theories. This chapter also lists its limitations, successes, and suggestions for further research.

### **5.2. Recapitulation of the Study**

This study used a simple random sample design from the 124 National Center for Management Development and Information Technology staff members in an almost comprehensive inventory method. Forms containing their questions at the end of their official terms have been filled out so that the researcher can get the answers accurately. Validity and dependability have been confirmed for the final virtual model. The results of H1 and H2 were supported by hypothesis testing. E-training is one of the most essential modern methods of developing the capabilities and skills of the employees in the organization. Using the developed methods is essential in the environment of electronic training. The first hypothesis claimed that there was a relationship between (E-training Infrastructure) and (employee performance). The outcome is a significant degree of ( $=0.539$ ). The researcher's findings in the current study validate the second hypothesis's claim that there is a positive relationship between the (E-training method) and (employee performance), with the degree of that relationship reaching ( $=0.385$ ).

### **5.3. Theoretical Contributions**

One of the critical components of management is training, which is also one of the fundamental duties of human resources that enable high levels of performance effectiveness. The development of human capabilities, which aids in accomplishing the organization's goals, is actively aided by training. By giving workers diverse

information, skills, and attitudes to help the business reach its targeted goals at the lowest possible cost, it helps improve the quality of job performance of employees. With the least effort and in a specified period, E-training adopts several criteria that give it excellence from other types of training, such as the variety of sources contained in the training program in each activity to serve the patterns of the trainees and enrich their experiences. The theoretical addition to the current research lies in spreading the culture of electronic training among employees, working to employ modern training techniques to raise the level of work performance, benefiting from training in achieving convergence between presidents and subordinates, which positively affects the level of performance, overcoming the constraints of time and space. Performance reflects the level the working individual achieves when doing their work. The importance of training as a new concept in human resources development appropriate electronic training contributes to improving the performance of employees through the information acquired by the Training is one of the essential elements of management and one of the primary responsibilities of human resources that enable high levels of performance effectiveness. Training actively supports the development of human capabilities that contribute to achieving the organization's goals. It helps to improve the quality of job performance of employees by providing them with various information, skills, and attitudes to help the organization achieve its specified goals at the lowest possible cost. The traditional training system requires changing and developing traditional training systems and changing ways of thinking and transforming them into new systems, innovative formulas, and modern methods that fit the needs of the process of developing competencies and help change the training process significantly since technology and job requirements change permanently and continuously. Therefore, institutions must consider the needs of their workers and the requirements of their jobs on the one hand and shifts in scientific and technical advancement on the other. The success of employees involves factors like higher quality, the simplicity with which new technologies may be employed, and highly engaged staff (Hassan et al., 2020).

The institution's interest in the success of its employees helps the organization attain its objectives. Thus, all institutions seek to complete their work efficiently and effectively to achieve the ruler's goals at the lowest possible cost. The Department of Human Resources evaluates the performance of its employees to pinpoint their strengths

and weaknesses. This evaluation ensures that all employees are delighted and motivated to advance the organization's objectives.

The results, consistent with earlier theoretical studies that underpin this research, lend credence to the body of literature by demonstrating the positive impact of IV on DV. The study's findings demonstrated that emphasizing e-training, technological infrastructure, and e-training techniques may result in increased (staff performance). This research adds various information regarding the interrelated advantages of business theory. The results of this study show that the focus on the work environment in terms of infrastructure, training methods, and trainers, which may lead to an increase in the productive efficiency of workers in the government sector, focuses on the importance of training for state employees, as this study is considered one of the first studies that dealt with electronic training in Iraq, especially after the Covid pandemic 19 that forced institutions to work and electronic communication. The study's findings generally showed that electronic training methods, technological infrastructure, and e-training are essential for raising employee performance at the National Center for Management Development and Information Technology (NCMDIT).

#### **5.4. Managerial Implications**

By presenting the theoretical framework of e-training and all its concepts and results, the researcher recommends working to spread the culture of e-training and the use of modern technology in state institutions and to take care of the development of the electronic world by organizing courses and lectures to educate employees on the importance of modern technology. This study recommends a comprehensive and complete assessment of the objectives of e-training and work on developing long-term plans for transformation following the foundations and modern technological standards and in line with the reality of state institutions. Holding conferences, lectures, and workshops periodically is also recommended to motivate the employee in Various sectors of the country and inform them of the advantages of using e-training in the field of employment, planning the electronic training system, which falls primarily on the institutions benefiting from this training, needs, regulations, and regulations that must include the legalization of the electronic training process per the directions and plans of development and the development of general and unique objectives. This study highly

recommends implementing training through the translation of policies, strategies, and procedures to achieve the objectives of e-training and evaluation of electronic training according to the foundations and standards, including indicators of modification and development of the process. Finally, this study suggests training accurate identification, comprehensiveness, continuity of the evaluation process, interconnection of the training system, integration, and quality of efforts.

### **5.5. Limitations**

The effectiveness of a research endeavor will not be determined until it has recognized its constraints. The introductory chapter of this thesis has contributed to the body of knowledge; nevertheless, for these additions to the literature to be helpful, it is necessary to discuss the boundaries of those contributions. When evaluating the findings and looking for prospective topics for additional study, it is essential to consider these limitations, which are present in the results of this thesis, just as they are in other studies. The restrictions are going to be covered in the following paragraphs. For this thesis, a tiny sample stored for two months was utilized.

Consequently, the person may continue using the outcome during this time. Second, the factors accounted for in the study model constitute a significant factor limiting the breadth of this analysis. The factors included in the research model, such as the institution's infrastructure for providing logistical support for the electronic training process, the training techniques used, and the technical approaches used, further limit the scope of the study. The National Center for Administrative Development and Information Technology is the only source of the respondents' opinions.

### **5.6. Recommendations For Further Research**

Focusing on the interest in e-training to create trained cadres that are the advantages of institutions and focusing on evaluating training after it finishes to assess its success in achieving the required objectives. Conducting electronic training courses periodically and continuously and, where necessary, in various ways and methods, the presence of a department or department specialized in electronic training within each institution. It was reducing the control over staff who have received electronic training,

working to spread the adoption of electronic learning and competency development through technology. Developing competencies is one of the institution's priorities, as it motivates employees to train electronically and obliges them to participate in electronic training to develop their competencies. It was updating and renewing the means of work in the human and technical aspects, such as the application of new technologies, the use of computers, the improvement of electronic training techniques, and the communication of institution-wide information to the individual. The need to emphasize the exchange of experiences with other institutions, as well as to benefit from the experiences of successful institutions in applying e-training. The need to evaluate the employees' performance after completing the electronic training program to detect and strengthen strengths and address the institution's weaknesses. The use of experienced and competent specialists to provide electronic training courses and benefit from their expertise, design and update the training content in line with the needs of the employees. The need to provide qualified, competent, and specialized human cadres that plan, implement, and evaluate the electronic training program. The need to provide the necessary infrastructure for the training process, such as hardware and programs, to give importance to follow-up and monitoring the employees' functional performance after receiving the training courses. Continuous contact, consultation, and collaboration between the trainer and the learners are required to accurately evaluate the degree to which the training courses are used and how this utilization reflects the trainees' performance. Organizations should consider the opportunities available to them when designing the strategic direction of e-training programs. The foundation's management ought to offer access to more advanced levels of electronic training courses and make the existing ones more comprehensive. According to the findings of this study, a more extraordinary investigation into how e-training influences the overall performance of educational institution departments is warranted.

## **5.7. Conclusion**

According to the findings of this study, two of the procedures that were planned to be investigated were those involving training and electronic jobs. The results of this study make it abundantly clear that there is a connection between them, and many other administrative procedures and that the inefficiency of electronic training significantly

impacts workers' performance. Because it helps employees improve their performance on the job, electronic training is an essential and natural component of any organization. This is especially true when one considers that the performance of the functional behavior of an organization's employees needs to be differentiated. This differentiation depends on the electronic training process, which is essential in any organization. Therefore, one of the most significant issues that the organization will face is the need for distance learning, which is believed to be the most crucial aspect in the success of training and Continuity in training curricula, absence of laziness, and sincerity in work. In addition, the quality of the Internet connection utilized during the preparations for the e-training and the presentation of the material to the participants is one of the most significant challenges it faces. The Internet is an essential component in educational settings. Considering this, the study aimed to assess how the participants' performance in e-functionality was influenced by the e-training they received. Our investigation into e-training and how it influences how well employees do their jobs has concentrated on two areas: the first aspect was the theoretical aspect that dealt with electronic training and job, and the second aspect was embodied in the practical aspect of the study through the impact electronic training plays a role in improving jobs employing the questionnaire as the primary research technique. From both points of view, this study arrived at a set of conclusions from which suggestions were developed.

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## APPENDIX 1

*Dear Respondents,*

You are invited to participate in this survey about the **impact of e-training on improving the performance of employees**. This research is an achievement to complete my MBA degree from Karabuk University and I would be grateful if you could take the time and consider completing the survey. I hope that you will cooperate in completing the questionnaire as best as possible. This questionnaire consists of three parts/sections. The first part consists of questions about your demographic profile; Continue to the second part about the dimensions of electronic training (infrastructure, training methods,), and the last part about the performance of employees for employees. All information in this survey will in no way reflect the identity of the participants. It will be kept strictly confidential and will be used for academic purposes only.

*THANK YOU*

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## Part 1. Personal Information

Gender

Male	Female

AGE

20-30	31-40	41-60

Qualification

Diploma and less	Bachelor's degree	Master	PhD

Years of experience

2-5	6-10	11-20	21- more

MONTHLY INCOME (IRAQI DINAR (IQD))

Less than 500000	500001 – 599999	600000 – 699999	700000 – 799999	800000 – 899999	900000 – 999999	More than 1000000

Married status

Single	Married	Divorced	Engaged

## Part 2. E-Training

A: First Dimension: E-Training Infrastructure

No.	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	The National Center for Management Development provides basic, high-quality communications services, such as the Internet					
2	At the National Center for Management Development, IT assistance and other communication infrastructure maintenance services are accessible					
3	The National Center for Management Development features virtual training rooms to simulate live or recorded lectures for the audience on E-Training Portal					

No.	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
4	By determining the specific training needs of the participants, the training course content is developed for them					
5	A team devoted to creating the course's electronic material creates the training course activities to ensure that the requisite interactivity is achieved					
6	All employees have access to the National Center for Management Development's website, which offers interactive online courses.					
7	In the National Center for Management Development's training, courses are organized and delivered in accordance with international standards.					
8	There are high criteria for support and assistance with creating training materials					

#### B : Second Dimension: E-Training Methods

No.	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	Trainers at the National Center for Management Development work with learners on an interactive platform					
2	Trainers employ visual electronic programs.					
3	Trainers make use of computerized simulations.					
4	Trainers play digital games					
5	Trainers make use of virtual programs.					
6	Trainers communicate online.					
7	Trainers employ digital brainstorming					
8	Trainers employ a coordinated electronic strategy					
9	Trainers employ a small electronic method					

### Part 3. Employee Performance Dimension

No.	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	Rarely do I need to move my tasks to another time period.					
2	I want to make the most of my working hours.					
3	I believe I go above and beyond the requirements of my supervisors in how I carry out my duties.					
4	In addition to my primary responsibilities, I hope to be given new assignments.					
5	I think I make few mistakes when carrying out my responsibilities.					
6	I complete my tasks correctly without needing more time.					
7	I am reliable.					
8	I offer fresh suggestions for improving performance.					
9	I make original recommendations for raising performance.					
10	I am unable to do the tasks given to me since they are not in conformity with my work.					
11	I have no trouble adjusting to new changes in my responsibilities when they occur.					
12	Even though it is outside the scope of my job, I have the ability to address unusual problems.					

## APPENDIX 2

### Output statistics SPSS v26

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.712
Bartlett's Test of Sphericity	Approx. Chi-Square	125.993
	Sig.	.000

#### Case Processing Summary

		N	%
Cases	Valid	124	100.0
	Excluded <sup>a</sup>	0	.0
	Total	124	100.0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	N of Items
0.852	3

#### Correlations

		E-Training Infrastructure	E-Training Methods	employee performance
E-Training Infrastructure	Pearson Correlation	1	0.637**	0.589**
	Sig. (2-tailed)		.001	.001
	N	124	124	124
E-Training Methods	Pearson Correlation	0.637**	1	0.560**
	Sig. (2-tailed)	.001		.000
	N	124	124	124
employee performance	Pearson Correlation	0.589**	0.560**	1
	Sig. (2-tailed)	.001	.000	
	N	124	124	124

\*\* . Correlation is significant at the 0.01 level (2-tailed).

#### Descriptive Statistics

	N	Mean	Std. Deviation
Infrastructure1	124	3.8710	.77531
Infrastructure2	124	4.4032	.74265
Infrastructure3	124	4.2581	.90051
Infrastructure4	124	4.0484	.90934
Infrastructure5	124	4.4113	.79646
Infrastructure6	124	4.4355	.75699
Infrastructure7	124	4.2016	.78585
Infrastructure8	124	4.2258	.67280
Methods1	124	3.6613	.94471
Methods2	124	3.9355	.82385
Methods3	124	3.8306	.90815
Methods4	124	3.8548	.93438
Methods5	124	3.7903	.77851
Methods6	124	3.7581	.91395
Methods7	124	4.0887	.88356

Methods8	124	4.2258	.70813
Methods9	124	4.0887	.79646
Employee1	124	4.3065	.60051
Employee2	124	4.0000	.95424
Employee3	124	4.0806	.88893
Employee4	124	3.8548	.99342
Employee5	124	3.9839	.88330
Employee6	124	3.6371	1.01481
Employee7	124	3.7177	.97581
Employee8	124	3.9355	.96054
Employee9	124	4.0806	.85156
Employee10	124	4.0806	.89803
Employee11	124	4.1855	.76898
Employee12	124	4.2016	.67450
Valid N (listwise)	123		

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636 <sup>a</sup>	.405	.395	.44289

a. Predictors: (Constant), T, E

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.151	2	8.076	41.170	.000 <sup>b</sup>
	Residual	23.734	121	.196		
	Total	39.885	123			

a. Dependent Variable: employee performance

b. Predictors: (Constant), T, E

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.366	.109		3.009	.012
	E	.539	.125	.391	4.298	.000
	T	.385	.113	.311	3.421	.001

a. Dependent Variable: employee performance

## **CURRICULUM VITAE**

The researcher graduated from the University of Al-Qadisiyah, College of Administration and Economics. Department of Business Administration. Year 2014 in Iraq.

He started his master's studies in 2020 at Karabuk University, Department of Business Administration. He is currently working in the field of development and training.