



**Birzeit University**

**Faculty of Graduate Studies**

**MBA program**

**“The Impact of E-Learning on Employees’ Performance in the Palestinian  
Banking Sector”**

**“أثر التعلم الإلكتروني على أداء الموظفين في القطاع المصرفي الفلسطيني”**

**A Thesis prepared by**

**Hiba Nasri Salah Alden**

**Supervised by**

**Dr. Samir Baidoun**

**2023**



Faculty of Graduate Studies

**“The Impact of E-learning on Employees’ Performance in the Palestinian  
Banking Sector”**

“أثر التعلم الإلكتروني على أداء الموظفين في القطاع المصرفي الفلسطيني”

Thesis Discussion Date:

14. June.2023

A Thesis Prepared by:

Hiba Salah Alden 1195466

Supervised by:


Dr. Samir Baidoun

In Partial Fulfillment of the Requirements for the Degree of Master’s in Business Administration at the Faculty of Graduate Studies of Birzeit University, Palestine.

Approved by:

Dr. Samir Baidoun (Supervisor):  \_\_\_\_\_

Dr. Saro Nakashian (Examiner):  \_\_\_\_\_

Dr. Tareq Ashour (Examiner):  \_\_\_\_\_

## **Abstract**

The purpose of this study was to investigate the Impact of E-Learning on Employees' Performance in the Palestinian Banking Sector using the Technology Acceptance Model (TAM). The objectives of this study were to investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Efficiency in the Palestinian Banking Sector. To investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Effectiveness in the Palestinian Banking Sector. To investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Productivity in the Palestinian Banking Sector. To investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Employee Satisfaction in the Palestinian Banking Sector. To Identify the Challenges Facing Using E-Learning in the Palestinian Banking Sector. To identify the Benefits of Using E-Learning in the Palestinian Banking Sector. This study relied on a descriptive-analytical approach to achieve its objectives. The quantitative approach and survey research design methods were adopted. As survey instruments, well-structured questionnaires were used. The study population consists of all employees of commercial banks in Palestine, amounting to 4328 employees. The random sample method was used. Questionnaires were designed using Google Forms and distributed electronically via the human resources department E-mails of banks, and the number of questionnaires retrieved was 466. The statistical methods used in the study were provided by the statistical program software SPSS version 26.

The researcher used a set of statistical tests, including Cronbach's alpha to measure reliability, frequency, and percentages to measure and describe the variables of the study sample, in addition to the descriptive measures (arithmetic mean, standard deviation, rank, and level), Pearson correlation, and the multiple linear regression test to test hypotheses, which concluded there is no

significant statistical impact of the independent variables (Flexibility, Ease of Use) on Efficiency. In addition, there is a significant statistical impact of the independent variables (Quality, Perceived Usefulness, Technical Support, and Organizational Support) on Efficiency. There is no significant statistical impact of the independent variable (Ease of Use) on Effectiveness. Besides, there is a significant statistical impact of the independent variables (Quality, Flexibility, Perceived Usefulness, Technical Support, and Organizational Support) on Effectiveness. There is no significant statistical impact of the independent variables (Ease of Use and Organizational Support) on Productivity. Moreover, there is a significant statistical impact of the independent variables (Quality, Flexibility, Perceived Usefulness, and Technical Support) on Productivity. There is no significant statistical impact of the independent variables (Flexibility, Technical Support, and Organizational Support) on Employees' Satisfaction. In addition, there is a significant statistical impact of the independent variables (Quality, Perceived Usefulness, and Ease of Use) on Employees' Satisfaction. In addition, this study's conclusions provided essential recommendations for decision-makers, human resource managers, trainers, and trainees.

Keywords: E-Learning, Employees' Performance, Technology Acceptance Model (TAM),  
Palestinian Banking Sector

## ملخص تنفيذي

كان الغرض من هذه الدراسة هو التحقيق في تأثير التعلم الإلكتروني على أداء الموظفين في القطاع المصرفي الفلسطيني باستخدام نموذج قبول التكنولوجيا ، وهدفت هذه الدراسة إلى التحقق من أثر التعلم الإلكتروني بأبعاده (الجودة ، المرونة ، الفائدة المتصورة ، سهولة الاستخدام ، الدعم الفني ، والدعم التنظيمي) على أداء الموظفين من خلال بُعد الكفاءة في القطاع المصرفي الفلسطيني . والتحقيق في تأثير التعلم الإلكتروني بأبعاده (الجودة ، المرونة ، الفائدة المتصورة ، سهولة الاستخدام ، الدعم الفني ، والدعم التنظيمي) على أداء الموظفين من خلال بُعد الفعالية في القطاع المصرفي الفلسطيني. والتحقيق في تأثير التعلم الإلكتروني بأبعاده (الجودة ، المرونة ، الفائدة المتصورة ، سهولة الاستخدام ، الدعم الفني ، والدعم التنظيمي) على أداء الموظفين من خلال بُعد الإنتاجية في القطاع المصرفي الفلسطيني. والتحقيق في تأثير التعلم الإلكتروني بأبعاده (الجودة ، المرونة ، الفائدة المتصورة ، سهولة الاستخدام ، الدعم الفني ، والدعم التنظيمي) على أداء الموظفين من خلال بُعد رضا الموظفين في القطاع المصرفي الفلسطيني، بالإضافة إلى التعرف على التحديات التي تواجه استخدام التعلم الإلكتروني في القطاع المصرفي الفلسطيني ، و أيضاً التعرف على فوائد استخدام التعلم الإلكتروني في القطاع المصرفي الفلسطيني . اعتمدت هذه الدراسة على المنهج الوصفي التحليلي لتحقيق أهدافها . بالإضافة إلى ذلك تم اعتماد أسلوب تصميم البحث المسحي والنهج الكمي ، بالإضافة إلى استخدام الاستبيانات المنظمة كأدوات مسح ، ويتكون مجتمع الدراسة من جميع الموظفين في البنوك التجارية في فلسطين والبالغ عددهم (4328) موظفًا، حيث تم استخدام طريقة العينة العشوائية، وقد تم تصميم الاستبانة وتوزيعها إلكترونيًا عبر البريد الإلكتروني لإدارة الموارد البشرية بالبنوك، وبلغ عدد الاستبيانات المسترجعة (466) استبانة، حيث تم التحليل بواسطة البرنامج الإحصائي "الحزمة الإحصائية للعلوم الاجتماعية" نسخة (26) .

استخدمت الباحثة مجموعة من الاختبارات الإحصائية، بما في ذلك كرونباخ ألفا لقياس الموثوقية، والتكرار والنسب المئوية لقياس ووصف متغيرات عينة الدراسة، بالإضافة إلى المقاييس الوصفية (المتوسط الحسابي، الانحراف المعياري، الرتبة، والمستوى)، وارتباط بيرسون، إلى جانب اختبار الانحدار الخطي المتعدد لاختبار الفرضيات. وأظهرت النتائج عدم وجود أثر إحصائي كبير للمتغيرات المستقلة (المرونة، سهولة الاستخدام) على الكفاءة. بالإضافة إلى ذلك، هناك تأثير إحصائي كبير للمتغيرات المستقلة (الجودة، الفائدة المتصورة، الدعم الفني، والدعم التنظيمي) على الكفاءة. لا يوجد تأثير إحصائي كبير

للمتغير المستقل (سهولة الاستخدام) على الفاعلية. إلى جانب ذلك، هناك تأثير إحصائي كبير للمتغيرات المستقلة (الجودة، المرونة، الفائدة المتصورة، الدعم الفني، الدعم التنظيمي) على الفعالية. لا يوجد تأثير إحصائي كبير للمتغيرات المستقلة (سهولة الاستخدام والدعم التنظيمي) على الإنتاجية. علاوة على ذلك، هناك تأثير إحصائي كبير للمتغيرات المستقلة (الجودة والمرونة والفائدة المتصورة والدعم الفني) على الإنتاجية. لا يوجد تأثير إحصائي كبير للمتغيرات المستقلة (المرونة والدعم الفني والدعم التنظيمي) على رضا الموظفين. بالإضافة إلى ذلك، هناك تأثير إحصائي كبير للمتغيرات المستقلة (الجودة، والفائدة المتصورة، وسهولة الاستخدام) على رضا الموظفين. بالإضافة إلى ذلك، قدمت استنتاجات هذه الدراسة توصيات أساسية لصناع القرار ومديري الموارد البشرية والمدربين والمتدربين.

الكلمات المفتاحية: التعلم الإلكتروني، أداء الموظفين، نموذج قبول التكنولوجيا، القطاع المصرفي الفلسطيني

## **Acknowledgments**

I thank Almighty God for the knowledge, wisdom, courage, and determination he has given me to complete this thesis.

I extend my sincere appreciation to all those who stood with me from the beginning of this thesis through to the end.

I extend my sincere gratitude and appreciation to the supervisor, Dr. Samir Baidoun, and the esteemed members of the committee, Dr. Saro Nakashian, and Dr. Tareq Ashour, for their efforts and enrichment of this thesis.

My sincere gratitude and thanks to my fabulous and supportive family.

To my father, the symbol of sacrifice and persistence, to the one who made me adore science and knowledge and with whom I grew prouder.

To my mother, the symbol of love, sincerity, generosity, and perseverance.

To my brothers and sisters, who are the closest to my soul

To my dear husband, the beloved of my heart, the companion of my path, and the light of my life.

To my children, the most precious and dearest thing I have.

## **Declaration**

This thesis is submitted to Birzeit University in partial fulfillment of the requirements for the degree of Master in Business Administration. This thesis represents my original work toward this research degree and contains no material that has been previously submitted for a degree at this University or any other institution.

Signature: **Hiba Nasri Salah Alden**



## Table of Contents

Abstract.....	i
ملخص تنفيذي.....	iii
Acknowledgments.....	v
Declaration.....	vi
Table of Contents.....	vii
List of Tables.....	x
List of Figures.....	xii
Chapter One.....	1
Introduction.....	1
1.1 Introduction.....	2
1.2 Research Problem.....	4
1.3 Research Questions.....	5
1.4 Research Objectives.....	5
1.5 Significance of the Study.....	6
1.6 Structure of the Study.....	7
2.1 Introduction.....	9
2.1.1 Training (E-Learning) Delivery Method.....	9
2.1.2 Definition of Terms.....	9
2.1.3 The Evolution of E-Learning.....	10
2.1.4 The Importance of Training.....	11
2.1.5 Benefits of E-Learning.....	12
2.1.6 E-Learning Delivery Methods.....	13
2.1.7 E-Learning Challenges.....	14
2.1.8 E-Learning Dimensions.....	14
2.2 Employees' Performance.....	16
2.2.1 Introduction.....	16
2.2.2 The Concept of Employees' Performance.....	16
2.2.3 Employees' Performance Dimensions.....	17
2.3 The Impact of E-Learning on Employees' Performance.....	18

2.4 Commentary on the Previous Study.....	26
Chapter Three.....	33
Research Methodology .....	33
3.1 Introduction .....	34
3.2 Research Design.....	34
3.3 Data Collection.....	34
3.4 Research Population and Sample .....	35
3.5 Study Tool.....	35
3.6 Research Hypothesis .....	41
3.7 Validity and Reliability Analysis .....	41
First: The Apparent Validity.....	41
Second: Reliability .....	42
3.8 Ethical Considerations.....	43
3.9 The Statistical Methods Used in the Research .....	43
Chapter Four .....	44
Results and Discussion .....	44
4.1 Descriptive Statistics.....	45
4.1.2 Descriptive Analysis of the Study Variables.....	48
4.1.2.1 Descriptive Analysis of Independent Variable.....	49
4.1.2.2 Descriptive Analysis of Dependent Variable .....	55
4.2 Testing the Study Hypotheses .....	58
4.3 Descriptive Analysis of the Benefits Obtained from Using E-Learning in the Palestinian Banking Sector. ....	67
4.4 Descriptive Analysis of the Challenges Facing the Use of E-Learning in the Palestinian Banking Sector. ....	68
4.5 Descriptive Analysis of the most Developments in Learning Technologies that will have the Greatest Impact on Training Activities in the Next Five Years. ....	70
Chapter Five.....	72
Conclusions and Recommendations .....	72
5.1 Introduction .....	73
5.2 Conclusions .....	73
5.3 Managerial Implications.....	78
5.4 Recommendations .....	79

5.5 Limitations .....	81
5.6 Future Studies.....	81
References.....	82
Appendix.....	97

## List of Tables

Table (1).....	36
References of Dimensions .....	36
Table (2).....	40
Mean values and their interpretation.....	40
Table (3).....	42
Cronbach's alpha internal consistency coefficient for variables and their dimensions.....	42
Table (4).....	46
The sample demographic characteristics .....	46
Table (5).....	48
Descriptive Statistics of the Study Variables.....	48
Table (6).....	49
E-Learning: Quality .....	49
Table (7).....	50
E-Learning: Flexibility.....	50
Table (8).....	51
E-Learning: Perceived Usefulness.....	51
Table (9).....	52
E-Learning: Ease of Use .....	52
Table (10).....	53
E-Learning: Technical Support.....	53
Table (11).....	54
E-Learning: Organizational Support.....	54
Table (12).....	55
Employees' Performance: Efficiency .....	55
Table (13).....	56
Second Dimension: Effectiveness.....	56
Table (14).....	56
Third Dimension: Productivity .....	56
Table (15).....	57
Fourth Dimension: Employees Satisfaction.....	57

Table (16).....	58
Multicollinearity and Normality Test .....	58
Table (17).....	59
Model Summary of E-Learning- Efficiency .....	59
Table (18).....	60
The E-Learning- Efficiency Model Coefficients .....	60
Table (19).....	61
Model Summary of E-Learning- Effectiveness .....	61
Table (20).....	62
The E-Learning- Effectiveness Model Coefficients .....	62
Table (21).....	63
Model Summary of E-Learning- Productivity .....	63
Table (22).....	64
The E-Learning- Productivity Model Coefficients .....	64
Table (23).....	65
Model Summary of E-Learning-Employee Satisfaction.....	65
Table (24).....	66
The E-Learning- Employee Satisfaction Model Coefficients.....	66
Table (25).....	67
The Benefits Obtained from Using E-Learning in the Palestinian Banking Sector .....	67
Table (26).....	69
The Challenges Facing the Use of E-Learning in the Palestinian Banking Sector.....	69
Table (27).....	71
The most Developments in Learning Technologies will have the Greatest Impact on Training Activities in the next Five Years.....	71

## List of Figures

Figure (1) .....	<b>Error! Bookmark not defined.</b>
Conceptual Framework .....	28
Figure (2) .....	68
The Benefits Obtained from Using E-Learning in the Palestinian Banking Sector .....	68
Figure (3) .....	70
The Challenges Facing the Use of E-Learning in the Palestinian Banking Sector.....	70
Figure (4) .....	71
The most Developments in Learning Technologies will have the Greatest Impact on Training Activities in the Next Five Years.....	71

# **Chapter One**

## **Introduction**

## 1.1 Introduction

The global E-Learning market size in 2021 was valued at 214.26 billion dollars, and the projected revenue for 2030 is expected to be \$1,124.79 billion. It is expected to grow at a compound annual growth rate (CAGR) of 20.5% from 2022 to 2030 (Polaris, 2023).

It is worth noting that one of the Sustainable Development Goals (SDGs) was approved by the United Nations in 2015. The fourth goal of the Sustainable Development Goals was to address the global standard for education, as this goal encourages every learner to acquire the knowledge and skills necessary for sustainable development in the world to improve the world's population, the environment, and future generations. Thus, the impact of COVID-19 is considered positive as it accelerates the shift from face-to-face to E-Learning due to its significant benefits to society as a whole (Shahzad, 2023; Wang, 2022).

The World Health Organization (WHO) declared the new coronavirus, called COVID-19, a global pandemic on March 11, 2020. The first recorded case dates back to December 2019 in Wuhan, China, and subsequently spread worldwide. It is caused by the SARS-CoV-2 virus, which is an infectious disease. Infect the respiratory system; however, anyone of any age is at risk of getting sick and dying from COVID-19. The best way to prevent the transmission of COVID-19 infection is through the measures and restrictions taken by all organizations to limit the spread of this global pandemic by closing organizations, institutions, banks, schools, and universities, and then moving to E-Learning (Chrysafiadi, 2023; HRW, 2023; World Health Organization, 2023). Therefore, global capital markets were severely affected, in addition to foreign currencies and financial assets, as well as commodity markets such as oil, as financial institutions such as banks suffered, which affected their banking activities (Elnahass, 2021). In addition, many organizations have replaced the traditional methods of training employees with E-Learning and, thus, require organizations to quickly adapt to all changes to maintain their competitiveness in the market (Čevra, 2022). E-Learning in organizations has become the prevailing new training model for training employees in various sectors and sizes, so organizations have realized that E-Learning is crucial in improving employees' performance, which contributes to achieving the organization's goals and thus maintaining and developing its



competitive position in the market (Kramer, 2007; Rathnasekara, 2023). Therefore, competition, rapid technological progress, and employee training together have become a challenge that E-Learning successfully addresses because E-Learning is a training method used by organizations to help employees improve their job skills and knowledge, which leads to improved employee performance and satisfaction that contributes to achieving the goals and competitive advantage of the organization (Akpoviroro, 2022), and because of the ability of competitiveness resulting from liberalization and globalization, organizations work to create their competitive advantage, so training through E-Learning is the key to competitiveness in the global market as it provides organizations with prosperity, stability, and employee growth. Moreover, E-Learning provides more accessible training opportunities, as well as lower costs, time savings, adaptability, and flexibility, in addition to providing standardized, customized, and continuous training for employees (Makonjio, 2019).

Therefore, the importance and necessity of E-Learning stem from all periods, especially periods of crisis such as pandemics. As the COVID-19 pandemic caused damage to the global economy, E-Learning comes as a savior for the world (Thapa, 2021) because it helps in acquiring knowledge and developing digital skills for employees to deal with the changes resulting from the use of information and communication technology (Agrawal, 2020). To help them continue their work efficiently while working remotely (Nurhayati, 2021). The novel coronavirus (COVID-19) has accelerated the adoption of fully digital methods, which makes it a significant challenge for managers and human resource management practitioners (Alqabbani, 2021; Hamouche, 2021). Because it is linked to building digital training programs with appropriate content to adapt to the new reality of organizations and employees, as well as the urgent need to bypass traditional training delivery methods and choose modern training delivery methods to achieve the goals and survival of the company (Kamoliddinova, 2021; Soni, 2020). In addition, E-Learning works on having efficient employees and constantly improving their job performance and productivity by realizing, knowing, and understanding job-related skills, contributing to achieving the organization's goals (Bagram, 2009; Rijal, 2022; Sharma, 2021).

## 1.2 Research Problem

At the end of 2019, companies, universities, schools, and the banking sector around the world couldn't anticipate the crisis that would affect them a few months later in 2020, as the global pandemic COVID-19 reduced the volume of business and the complete transition to work at home, 2020 became the year the most challenging for all organizations (Neway, 2019; Qiao, 2021), so they had to find solutions to overcome this pandemic, and one of the solutions that came to save the banking sector is the use of electronic learning to train employees in the banking sector because training is a requirement in various organizations in general, and the banking sector in particular (Naeem, 2022), as that the Palestinian Banking Sector is considered one of the vital sectors and has a fundamental role in development, prosperity and economic growth in Palestine. Since banking service is characterized by a continuous change in the needs and desires of customers, and with the severity of local and international competition, and the increase in the number of services provided by banks for their customers (Mamatha, 2019; Mustapha, 2019) , the skill, knowledge, and experience necessary to perform the employees' performance must be provided these services, therefore, it has become crucial to provide E-Learning because it is one of the essential factors for achieving economic development, in addition to this is a sustainable and long -term solution to meet the increasing requirements in the banking sector to ensure that employees keep pace with developments in bank activities and services and the continuous development of their information, knowledge, skills and capabilities to enable them to perform services effectively to customers, the use of E-Learning in banks in Palestine, whether foreign or national, allows each bank to design its training programs and the ability to participate in training programs with other banks, which saves time, effort and costs, so it was necessary to provide electronic learning in banks to improve employees' performance because this includes increasing their productivity and improving their efficiency and effectiveness, in addition to increasing their employees satisfaction, which contributes to achieving the goals and objectives of organizations. Therefore, in this study, the researcher investigates the Impact of E-Learning on Employees' Performance in the Palestinian Banking Sector.

### **1.3 Research Questions**

The research problem could be stated in the following research questions:

RQ1. How do E-Learning dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) impact Employees' Performance by the Efficiency dimension in the Palestinian Banking Sector?

RQ2. How do E-Learning dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) impact Employees' Performance by the Effectiveness dimension in the Palestinian Banking Sector?

RQ3. How do E-Learning dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) impact Employees' Performance by the Productivity dimension in the Palestinian Banking Sector?

RQ4. How do E-Learning dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) impact Employees' Performance by the Employee Satisfaction dimension in the Palestinian Banking Sector?

RQ5. What are the Benefits Obtained from Using E-Learning in the Palestinian Banking Sector?

RQ6. What are the Challenges Facing the Use of E-Learning in the Palestinian Banking Sector?

### **1.4 Research Objectives**

1. To investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Efficiency in the Palestinian Banking Sector.

2. To investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Effectiveness in the Palestinian Banking Sector.

3. To investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Productivity in the Palestinian Banking Sector.
4. To investigate the Impact of E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by the dimension of Employee Satisfaction in the Palestinian Banking Sector.
5. To Identify the Challenges Facing the Use of E-Learning in the Palestinian Banking Sector.
6. To Identify the Benefits of Using E-Learning in the Palestinian Banking Sector.

## **1.5 Significance of the Study**

The significance of this study stems from investigating the Impact of E-Learning on Employees' Performance in the Palestinian Banking Sector; furthermore, it contributes to grasping the great benefit that the Palestinian Banking Sector can reap from using E-Learning, in addition to knowing the biggest challenge facing E-Learning in the Palestinian Banking Sector and how it can be overcome. To the researcher's knowledge, this research is considered the first study to investigate the Impact of E-Learning on Employees' Performance in the Banking Sector in Palestine. It is hoped that the findings of this study will provide significant insight into the decision-makers regarding the use of E-Learning in the Palestinian Banking Sector.

## **1.6 Structure of the Study**

This study is organized into five chapters. The first chapter consists of an introduction to the study, the problem statement, research questions, research objectives, and the significance of the study. The structure of the study is described at the end of the chapter.

The second chapter consists of a literature review.

The second chapter will be based on a review of the existing literature on E-Learning. This chapter will introduce different definitions of E-Learning, in addition to presenting the evolution of E-Learning. E-Learning delivery methods will also be mentioned, as well as the benefits and challenges of E-Learning. Then, this chapter will present different definitions of employees' performance; in addition, Employees' Performance dimensions will be mentioned; and this chapter will define the impact of E-Learning on employees' performance; furthermore, this chapter will introduce a commentary on the previous study; then, a brief overview of the Palestinian Banking Sector will be presented, which pertains to commercial banks operating in Palestine; thereafter, this chapter will present the conceptual framework.

The third chapter consists of the methodology of the study. The researcher presents the methodological procedures that followed, represented in determining the type of study method, determining the study population, the study sample, and the exploratory (experimental) sample to ensure the validity and reliability criteria of the study tool represented by the questionnaire, then presenting the justifications for choosing the parameter tests in the study. Finally, the statistical methods used in the study were provided by the statistical program SPSS v26.

The fourth chapter is about empirical results and discussion. This chapter presents the results of the study that were reached by analyzing the data collected through the study tool and using the (SPSS) software to test its hypotheses; moreover, each hypothesis is discussed separately, given the results of relevant previous studies.

The fifth chapter is the final chapter of the study and consists of conclusions, managerial implications, limitations, recommendations, and future studies.

**Chapter Two**  
**Literature Review**

# Literature Review

## 2.1 Introduction

Many previous studies reviewed the impact of E-Learning on employees' performance from different angles. The researcher will review a set of studies that have been used in the current study, whether it is to benefit in terms of variables or goals, in terms of formulating hypotheses or choosing the sample, or in terms of the methodology that the researcher used in the current study.

### 2.1.1 Training (E-Learning) Delivery Method

#### 2.1.2 Definition of Terms

Training is part of the learning process and an integrated system that includes a set of procedures that are applied to employees to acquire knowledge, improve skills, increase efficiency, and develop their capabilities at a specific time, which aims to increase effectiveness and productivity in achieving the goals of the organization (Rosita, 2021). Alsharhan (2021) showed that employee knowledge acquisition is a strategically essential asset for many companies and banks to stay competitive. Training is defined as a planned process of acquiring knowledge and skill, modifying behavior, and developing employees' capabilities through learning to improve employees' performance, increase their productivity, develop their competencies, and improve their ability to make the right decision at the right time to complete the tasks assigned to them quickly, efficiently, and accurately (Aisah, 2021; Armstrong, 2020; Armstrong, 2006; Nguyen, 2021; Setyabudi, 2021).

Based on the above description, training is a pre-planned process of assisting employees in the learning process aimed at acquiring the necessary knowledge and skills and developing the capabilities of employees to carry out their assigned tasks at a specific time to improve their performance and achieve the goals of the organization.

E-Learning is known as web-based learning, interactive learning, computer-aided learning, digital learning, and Internet-based learning (Maatuk, 2021; Tang, 2021). According to Ghosh (2021), E-Learning is the use of the Internet and other technologies to deliver educational and training materials to organize courses in an organization. Because E-Learning allows learners to view different activities and listen to lessons as needed (Zhang, 2006), moreover, it improves the performance of employees by providing them with the required knowledge and skills (Kumar, 2018).

Information and Communication Technology (ICT) infrastructure is the generation, collection, processing, and sharing of useful information with all stakeholders, as it consists of devices that can sense various operational data using sensors and send the data file to the Internet server (Asif, 2018).

### **2.1.3 The Evolution of E-Learning**

In late 1997, the term E-Learning was introduced by Elliott Masie (Cross, 2004) and was used for the first time in November 1999 at the TechLearn Symposium at Disneyworld (Masie, 2008). Then words like virtual learning and online learning appeared. It should be noted that throughout history, early forms and basic principles of E-Learning have been documented as follows:

In the 1840s, Isaac Bateman taught his students shorthand by correspondence to improve their writing speed (Bozkurt, 2019). In 1924, the first “Automatic Teacher” was invented by Sidney Pressey at Ohio State University. The “Automatic Teacher” helped students test themselves through an automatic machine to replace standardized testing (Okeke, 2021). In 1954, B.F. Skinner invented the “Teaching Machine”, which allowed schools to manage programmed learning for students (Bezovski, 2016; Epignosis, 2014).

And then, in the 1960s, the world's first computer-based training (CBT) program was introduced (Bedwell, 2010). It was called PLATO (Programmed Logic for Automatic Teaching Operations) at the University of Illinois by Donald L. Bitzer (Bitzer, 1966; Bitzer, 1973). In the seventies, E-Learning seemed to gain the attention of universities, including the Open University in Britain. It was one of the leading universities in that, as it was interested in focusing on E-Learning,



study materials, and correspondence with teachers were done quickly via E-mail. In the 1980s, MAC computers made it possible to have computers at home. And in the decade that followed, virtual learning environments flourished as people had access to a wealth of material via the Internet (Niaz, 2021).

In the 2000s, E-Learning began to flourish, develop, and spread quickly, as companies, institutions, and banks began to use it to train their employees, which contributed to providing the opportunity for new and experienced workers to improve their skills and knowledge, increase their information, and improve their performance. In addition to enabling them to access programs and training courses that they were able to access through it, it is possible to obtain certificates online, which saves money, time, and effort from the trouble of traveling (Mamatha, 2019; Nicholson, 2007).

As it can be concluded that E-Learning has gone through three stages throughout history, where the first stage relied on printing the content and the second stage relied on sending the content without any interaction, that is, using CDs, audio or video recordings, etc., the third stage was distinguished in another way as it relied on sending the content and interacting with it due to the development, prosperity, and spread of electronic and communication technologies and the development of computer multimedia and its networks (Gu, 2022).

#### **2.1.4 The Importance of Training**

Training is the main tool for human resource management (HRM) practices to improve the performance of employees in an organization (Burhan Ismael, 2021). Training acquires knowledge, develops skills, changes the behavior of employees to become more productive, creative, and innovative, and improves their performance so that they contribute to the achievement of the organization's goals (Ochoa, 2018). In addition, training can be considered a flow in which employees receive awareness, skills, attitudes, knowledge, and ability to make appropriate decisions, perform their jobs effectively and efficiently, increase their productivity, and adapt to the changing environment that leads to improved employee performance and achievement of the organization's goals (Bhatia, 2021; Van Assen, 2021). Furthermore, training is useful for dealing with changes fostered by technological innovation, market competition, and globalization because it plays an important role in improving the performance of employees

(Abdel-Gadir, 2020). Ibrahim (2020) stated that the importance of training stems from the importance of the training content, which is a set of educational materials related to the goals and objectives of training programs that help trainees acquire individual characteristics such as self-efficacy and awareness, and increase trainees' motivation to learn new knowledge and skills and the ability to apply them in their current job. And improves security as it reduces errors (McIlwraith, 2021).

### **2.1.5 Benefits of E-Learning**

One of the most important training delivery methods in the era of globalization and digitization is E-Learning because of its many benefits for the company and employees, as it improves the employees' performance through the acquisition of knowledge and skills required, which is reflected in the achievement of the company's objectives and its survival.

E-Learning is the delivery of learning through technology and the Internet. E-Learning enhances employees' knowledge, professionalism, and skills, reduces costs (including travel, printed learning materials, trainers' salaries, etc.), and increases employee satisfaction and motivation (Fleming, 2017; Shahzad, 2021; Zhao, 2021).

Cheng (2015) stated that E-Learning is very important for employees because it provides flexibility in the time and location of training, and also saves travel costs. In addition, E-Learning is essential for all institutions, regardless of their type and size. And the importance of E-Learning lies in the ease of access of employees to the training program, its increased flexibility in terms of time and place, the ease of use of E-Learning, and its ability to expand to include a large number of employees in the training program. Moreover, it has high reliability, gives employees quick feedback, and improves employees' performance (Gavril 2017; Khan, 2021; Nasrabadi, 2021; Natarajan, 2015; Tyurina, 2021). Shinde (2021) explained that E-Learning enables employees to easily adapt and control training, which contributes to improving their productivity and increasing their satisfaction, as well as the ease of management's ability to follow employee training programs to achieve the best results from E-Learning.

### **2.1.6 E-Learning Delivery Methods**

E-Learning is a set of applications transferred over the Internet, with many names, including web-based training, computer-based training, virtual classes, and technology-based training, which aims to provide content for distance training programs (Sofiadin, 2020). Some methods of providing E-Learning can be summarized as follows :

**Web-Based Training (WBT):** It is a set of training programs and an innovative approach that allows information to be passed over the Internet, the advantages of which are that it is flexible in delivering content and enhancing learning (Afolabi, 2021).

**Synchronous E-Learning (Synchronous Virtual Classrooms):** It is E-Learning, where learning takes place at the same time and place. Even if the content of the program can be logged in remotely, its advantages include giving employees direct feedback (Lee, 2021).

**Asynchronous E-Learning:** It is E-Learning that does not happen in real time, and its content can be accessed anywhere and at any time because asynchronous learning is flexible (Manou, 2021).

**Blended (Hybrid):** It is a combination of traditional face-to-face training and E-Learning, where traditional training allows for participation and feedback between employees and coaches, while E-Learning is flexible and convenient, and one form of blended learning is the flipped classroom (Li 2021).

**Flipped Classroom (Reverse Classroom):** It is the transfer of training materials outside the time of the training course, for example, PowerPoint or pre-recorded lectures, etc., to enable employees to understand the content of the course program before attending the training program and to take advantage of the real-time nature of the course for guidance, assistance, and feedback to enhance the skills and capabilities of staff to think and solve problems (Wang, 2019).

Asynchronous and synchronous training are the two most popular models of machine learning.

One of the advantages of asynchronous training is that it supports critical thinking among employees and is convenient for employees, as it enables employees to watch training programs anytime and anywhere, as training programs rely on asynchronous text communication over the Internet. Its disadvantages are that it does not provide employees with feedback and does not

provide communication and visual communication skills between staff and coach (Lowenthal, 2017).

The advantages of blended learning include ease of continuous learning, cost-effectiveness, increased flexibility in terms of time and place where employees can pursue training programs at any time and place, and improved critical thinking so that they can make the appropriate decision effectively (Lu, 2021; Moradimokhles, 2020; Yang, 2021).

### **2.1.7 E-Learning Challenges**

Despite the benefits of E-Learning, according to previous studies, some challenges must be taken into account to ensure the success of E-Learning, and these challenges can be summarized as follows:

**Personal Challenges:** Alkharang (2014) stated that the most important personal challenges when using E-Learning are the language, the attitude toward using E-Learning, in addition to the challenges of personal preferences or learning styles, and time management.

**Organizational Challenges:** Carey (2003) explained that one of the most prominent organizational challenges in the use of E-Learning is the neglect of employees' participation with senior management in strategic planning and setting organizational goals, as well as the lack of administrative support for the use of E-Learning, insufficient knowledge, awareness, and realization of its benefits, in addition to the deficiency of motivation and credibility for it (Rathnasekara, 2023).

**Technological Challenges:** Rahiem (2020) identified the challenges of technology, which are the lack of knowledge, experience, and skills in the use of technology during E-Learning, the poor quality of Internet service, access to Internet networks, and its high cost.

### **2.1.8 E-Learning Dimensions**

This study relied on the Technology Acceptance Model (TAM), developed by Davis in 1989, which is considered one of the most important models for technology acceptance. Davis identified two important factors, namely, the perceived usefulness and the perceived ease of use, that influence the individual's intention to use the new technology, as well as the TAM model

can be expanded to include the variables of quality, flexibility, technical support, and organizational support (Hong, 2006; Hu, 1999).

As the TAM model has received great attention from researchers and has become a widely used model, it is also a valid, effective, simple, and powerful model, in addition to having a high reputation among 88 research journals (Achmad, 2020; Al-Mamary, 2015; Mingyue, 2020; Mohammadyari, 2015; Purnomo, 2013; Rughoobur, 2021; Thanji Meenakshi, 2018; Utami, 2021). Therefore, the researcher relied on the TAM model for this study.

Flexibility is defined as providing the employees with many options suitable for them in terms of how, where, and when to learn, in addition to the flexibility to choose and access the content of the training course easily, at any time and place, and to reuse and store the contents of the training course and share them, which leads to an increase in the effectiveness, efficiency, and satisfaction of employees, which contributes to improving their performance (Elneel, 2023; Joan, 2013; Meenakshi Thanji, 2018).

Quality is defined as a set of characteristics in terms of input quality, process quality, and output quality, in addition to the quality of security and speed, training materials, and information reliability, in addition to the quality and availability of service, which increases employee satisfaction and leads to improved employees' performance (Cação, 2010; Fülöp, 2023; Rajasekaran, 2022; Thanji Meenakshi, 2018; Veeramanickam, 2022; Zheng, 2023).

Perceived Usefulness is defined as the employees' belief that using the system will achieve many benefits and enhance the understanding and effectiveness of E-Learning, in addition to increasing their desire to use E-Learning, which leads to improving employees' performance by increasing their productivity (Davis, 1989; Elsayed, 2023; Fülöp, 2023; Zheng, 2023).

Perceived Ease of Use refers to the employees' belief that any system used does not require any effort and can be used easily. In addition, it is considered a convenience factor for employees because E-Learning provides ease of access to training materials (Davis, 1989; Elsayed, 2023; Fülöp, 2023; Zheng, 2023).

Technical Support refers to technicians maintaining and repairing websites, implementing computer networks, adapting existing software to meet user requirements, responding to

inquiries about software and hardware problems, and ongoing diagnosis and resolution of technical problems (Hamad, 2023; Jaoua, 2022).

**Organizational Support:** It is a mutual relationship between the organization and the employees. When the organization cares and appreciates the efforts of the employees in performing the tasks entrusted to them constantly and working to achieve their material and moral needs, this leads to an increase in employee satisfaction, which leads to improving their performance to achieve the goals of the organization (Chen, 2020; Hamad, 2023).

## **2.2 Employees' Performance**

### **2.2.1 Introduction**

The organization strives to improve its performance, and its performance can be progressed by improving its employees' performance because their performance is closely linked to achieving the strategy, goals, and survival of the organization, so employees' performance is considered critical to it (Dewi 2021).

### **2.2.2 The Concept of Employees' Performance**

Employees' performance is one of the most important factors in achieving company goals, success, and growth (Saluy, 2021). Because it plays an important role in improving the creativity and innovation of employees. Also, the distinguished performance of employees will help them to be promoted in their jobs (Sinaga, 2021). Furthermore, the performance of the employees affects the performance of the company, which contributes to the achievement of the company's goals and its continuity (Mustapha, 2019; Susilowati, 2021).

Riyanto's (2021) study defines employees' performance as the ability of employees to understand and know what is required of them to achieve in a manner consistent with the goals of the organization. Based on Niaty's (2021) definition of employee performance, which is the skills, knowledge, and experience that employees have to accomplish the tasks assigned to them.

According to Al-Halibeh's (2013) definition of employee performance, it is how employees perform the duties and tasks assigned to them efficiently and effectively.

Neway's (2019) study states that employees' performance is to achieve the expectations and the required quality based on the specified standards. Moreover, employees' performance is the results, success, and suitability of employees to accomplish their assigned tasks, through criteria including quality, quantity, timeliness, ability to cooperate, job knowledge, profitability, efficiency, effectiveness, attendance, speed, accuracy, and productivity (Fadeel, 2014; Hasibuan, 2021; Marwa, 2021; Nassazi, 2013; Prayuda, 2021; Rodriguez, 2017; Setyabudi, 2021; Simanjuntak, 2021; Taye, 2021).

### **2.2.3 Employees' Performance Dimensions**

Reviewing previous studies, several dimensions determine the employees' performance, as these dimensions differ from one organization to another depending on the nature of the work, activity, and service that the organization exercises. Among the most significant dimensions that the researcher will address in this research (Alemu, 2020; Hankir, 2020; Kuruppu, 2021; Li, 2021; Pribadi, 2020; Setyowati, 2020; Sutisna, 2021):

**Effectiveness:** The ability of the employee to perform the tasks and duties correctly and in the proper manner to achieve the desired goals and results is considered one of the significant indicators to measure the extent to which the employee achieves the objectives of the organization through adaptation, growth, continuity, development, and achieving a competitive advantage (Arafah, 2022; Kemal, 2020).

**Efficiency:** The ability of the employee to accomplish job tasks correctly with the least possible amount of inputs and resources, whether money, time, or effort, to obtain the greatest potential benefit (Bhattarai, 2019).

**Productivity:** The ability of employees to perform their job duties on time based on specific criteria set by the organization to achieve its goals can be measured through the ratio of outputs to inputs. In addition, employee productivity is essential for the organization, as it leads to better employee performance, which achieves a competitive advantage for the organization (Dharmila, 2021; Hanaysha, 2016; Mamy, 2020).

Employees' Satisfaction: It is the expectations, attitudes, and perceptions of employees toward E-Learning, and it refers to the employees' positive feelings of happiness and pleasure in their job and carrying out their tasks with desire (Dharmila, 2021; Ibrahim, 2020). Because it is a psychological state formed after the emotional and rational comparison between the expectations of E-Learning of employees and the impact of the perceived usefulness, ease of use, quality, and flexibility in improving employee performance through employee satisfaction; therefore, employee satisfaction is critical to the effectiveness of the E-Learning delivery method. When employees receive training according to their functional needs, this leads to increased employee satisfaction, which improves employee performance and contributes to achieving a competitive advantage for the organization (Qiangfu, 2022; Seoane, 2021; Vate, 2020).

### **2.3 The Impact of E-Learning on Employees' Performance**

Makonjio's (2019) study to determine the impact of E-Learning on employees' performance in commercial banks. One of the objectives of this study is to determine the impact of E-Learning on the performance of employees in commercial banks. This study found a positive relationship between E-Learning programs and the performance of commercial bank employees, as E-Learning played an effective role in improving employees' performance. Knowledge of teamwork, modern banking technology, communication skills, customer service skills, and knowledge of risk management are important factors that will affect E-Learning programs and employee performance.

The results of Azizy's (2021) study showed that virtual training has a positive relationship with improving the performance and competencies of employees and achieving the company's goals during the coronavirus pandemic (COVID-19). In addition, virtual training is one of the best solutions during crises, especially during the coronavirus (COVID-19) pandemic.

The results of Stollar's (2021) study showed the impact of E-Learning compared to traditional education on students' thinking and how they apply the acquired knowledge to their performance; there was no difference in their performance. And in terms of the percentage of satisfaction among students, it is the same whether it is the traditional method or E-Learning.



Students learn a lot through E-Learning; in addition, the learning objectives are explained in a better way than traditional learning, according to their perceptions.

The results of Bock's (2021) study showed that blended learning is better in terms of results in acquiring knowledge, improving practical skill development, and improving student performance than traditional education and E-Learning. In addition to increasing student satisfaction with blended learning.

The results of Kuzina's (2014) study showed that E-Learning in employee training needs administrative support to achieve the desired objectives of E-Learning. The relationship between E-Learning and the following variables (employee performance, organizational commitment, employee satisfaction, and employee productivity) is related to varying degrees among the variables.

Subramaniam's (2019) study proved that E-Learning in organizations significantly improves employee performance when it is optimally applied. Among the most important E-Learning variables that were taken into consideration ( service quality, employee satisfaction, system quality, net benefits, system use, and information quality ), they were noted to have a significant positive impact on improving employee performance by enhancing efficiency and effectiveness and increasing employee productivity, which contributes to achieving organizational objectives.

Alfarsy's (2019) study reviewed some of the positive and negative aspects of using E-Learning, in terms of the positive side is that E-Learning is flexible and saves time, and training materials are easily accessible. In addition to that, they can be memorized, etc. The negative side of using E-Learning is that it reduces the motivation of the trainee to learn while also interrupting the Internet, which is its weakness.

Van Thinh's (2016) study suggested that E-Learning can significantly replace traditional education and improve the performance and effectiveness of trainees if E-Learning is supported and encouraged by the surrounding environment, whether managers, supervisors, observers, or technicians, in addition to promoting a culture of E-Learning in the community. And motivate the trainees and encourage them to participate in E-Learning to allow the trainees to acquire knowledge, refine a skill, have flexibility in time, and have ease of access to training materials, regardless of the distance, based on the trainees' point of view.

Evangelin's (2020) study presented the challenges of E-Learning and the differences between students in urban and rural areas in terms of Internet availability and accessibility of educational and training materials, in addition to teachers' lack of experience, knowledge, and skill in distance education and training during the Corona pandemic, which constitutes an obstacle to the progress of E-Learning.

Arkorful's (2014) study summarizes the benefits and drawbacks of using E-Learning and its role in imparting knowledge, experience, and skill to learners when applied appropriately. In addition, it provides a highly ethical environment characterized by tolerance, regardless of race, color, gender, or location, because information, experiences, knowledge, and skills are communicated to all without discrimination.

Ghosh's (2021) study showed a strong positive relationship between E-Learning and employee outcomes, as E-Learning facilitates the acquisition of knowledge, refining skills, and modifying employee attitudes and behaviors, in addition to developing creative thinking for employees, helping to solve problems, and increasing flexibility in smoothly accessing information. Moreover, the importance of E-Learning in improving critical analysis is reflected in improving their performance and achieving the best results.

The results of Abdalmenem's (2019) study showed that there is a strong relationship between E-Learning strategies and increasing the efficiency of educational performance, as having a well-studied budget commensurate with the E-Learning needs in the organization will improve the performance of its employees, which will reflect positively on the performance of the institution, and motivating employees and urging them for commitment to the performance criteria has a strong positive impact on achieving the desired results from E-Learning that are efficiently linked to the objectives of the organization.

One of the most important findings of Lin's (2019) study is the existence of a relationship between E-Learning and employee satisfaction, as the presence of adoption and support for an E-Learning policy in the organization would motivate employees to use it. In addition, there is a strong relationship between the expected performance variable and the social impact variable in increasing employee satisfaction, as the study considered. Organizational learning culture as a mediator between E-Learning and employee satisfaction. Remarkably, there is no strong relationship between the following variables, namely, facilitating conditions and the expected

effort in increasing employee satisfaction, given that employees are knowledgeable about the use of information and communication technology.

Nagy's (2005) study emphasized the importance of E-Learning and its many benefits, whether for individuals, organizations, or society, as E-Learning contributes to identifying the training needs of employees in proportion to their needs and helps them in self-learning, which contributes to improving their knowledge and refining their skills. In addition to improving the performance of employees and their ability to complete the tasks assigned to them efficiently and effectively, which benefits the organization.

Islam's (2011) study found that demographic factors (age, gender, study program, and level of education) and there is a strong relationship between E-Learning effectiveness and gender and age, in addition to a strong relationship between study program and education level on E-Learning effectiveness, and on the contrary, it there is not a relationship between marital status and race.

The results of Xhelili's(2021) study showed that educational background has a strong impact on the acceptance of online learning, especially for students with a technology background, which increases their enjoyment, enthusiasm, and satisfaction, and improves their performance in using online training and educational programs compared to other educational backgrounds, and it should be noted here the importance of the availability of electronic devices and Internet networks because it is considered one of the most challenges that students face, which affects their performance, satisfaction, and productivity, furthermore, they prefer blended learning, whether in emergencies such as pandemics the coronavirus pandemic, or others.

Bagram's (2009) study revealed the impact of the effectiveness of E-Learning on the performance of employees in the organization and the existence of a strong positive relationship, which leads to effective E-Learning to acquire the knowledge required for the job and improve skills and creative abilities. In addition to the positive attitude of the employee's behavior, it is reflected positively in his performance, which in turn will lead to the achievement of the organization's goals.

Vadakalur's (2020) study examined the factors that affect the quality of E-Learning, and these factors were as follows (teacher characteristics, technology support, learner characteristics, course content, administrative support, social support, and course design). It was found that there is a strong relationship between E-Learning quality and the mentioned variables above during the coronavirus pandemic.

Purnomo's (2013) study examined the possibility of the technology acceptance model (TAM) extension in commercial banks by adding other variables organization support, computer self-efficacy, computer anxiety, compatibility, prior experience, perceived ease of use, and perceived usefulness of E-Learning. In addition, the main objectives of the study were to identify the most impact factors in the use of E-Learning. The study used structural equation modeling (SEM) to examine the factors. The results of this study show that organizational support, compatibility, computer anxiety, and prior experience, have predictive strength toward behavioral intention to use E-Learning. In addition, perceived ease of use has an indirect effect, but organizational support, ease of use, and perceived usefulness are significant and impactful in E-Learning.

Chatti's (2021) study contributed to revealing the most prominent factors that affect the user's intention to adopt E-Learning through the use of the adoption model (UTAUT) during the COVID-19 pandemic, and these factors include perceived ease of use, perceived usefulness, facilitating conditions (top management, technical assistance), and social influences (classmate influence, teacher influence). These factors had a significant positive impact on the user's intention to adopt E-Learning.

The results of Dash's (2022) study, which adopted the Davis technology acceptance model for the adoption of E-Learning in light of the coronavirus pandemic among teachers and students, came by taking the independent variables, which are the perceived usefulness and perceived ease of use, and the dependent variable, which is the behavioral intention to use, the mediator is satisfaction, and the moderator is the choice and, that there is a positive effect on the intent of behavior, that there is a relationship the mediator, which is satisfaction, is effective for teachers and not for students, and the mediator, which is a good choice was the relationship between perceived usability and behavioral intent.

Malureanu's (2021) study contributed to revealing the relationship and impact of the following variables: self-confidence, self-efficacy, ease of use, grit, and usefulness of E-Learning platforms during the coronavirus pandemic (COVID-19) in corporate training, where the results showed a direct effect between self-efficacy, grit (consistency of interest), and ease of use of E-Learning platforms, as they were directly affected by the self-confidence variable, in addition to the effect of the perceived usefulness directly with ease of use; on the contrary, the perceived usefulness is indirectly affected by self-confidence. The mediating variable, the ease of use of E-Learning platforms, was the variable in the relationship between self-confidence and perceived usefulness. It should be noted here that grit (consistency of interest) was not related to employee self-efficacy, which is evidence that the effectiveness of E-Learning in training corporate employees is not related to consistency of interest.

Čevra's (2022) study clarified the factors that affect individual work performance through the intention to use E-Learning, as it found that the intention to use E-Learning has a significant impact on individual work performance, followed by knowledge sharing. Personal innovativeness and knowledge sharing were also significant factors in perceived usefulness. The organizational support factor had a positive, but not significant, effect on the intention to use E-Learning. The researcher justified this for possible reasons because the concept of E-Learning is new and does not specify the desired benefits from it when using it. In addition to that, there is a lack of incentives and technical support. The companies that have been researched are from developing countries, where the people who run them are more oriented towards traditional training, and some respondents work in government companies, as they are less interested in the progress and development of employees from the private sector.

Riandi's (2021) study recommended the use of a conceptual model to measure the success of the learning information system and its impact on the individual performance of students through the E-Learning system. It relied on two independent variables service quality and its dimensions are (interactivity, responsiveness, and functionality), and system quality and its dimensions are (timeliness, ease of use, and flexibility), and the dependent variable, which is the student's performance and its dimensions are (knowledge improvement, time-saving, performance

improvement, effectiveness improvement), in addition to that, the study relied on the mediating variable, which is user satisfaction and its dimensions are (interest to continue using the system, satisfaction with E-Learning, expectation fulfillment).

Isaac's (2017) study revealed that when investigating the variables that affect the use of the Internet and its impact on the performance of employees through the application of the technology acceptance model (TAM), the independent variable is Internet usage and its dimensions of Internet self-efficacy, and the dependent variable is the performance impact and its dimensions of communication quality, decision quality, and knowledge acquisition. Where the Internet self-efficacy had a positive effect on perceived usefulness and ease of use, in addition to the positive effect of perceived ease of use on actual usage of the Internet and perceived usefulness, as well as the positive impact of the perceived usefulness on the actual usage of the Internet, as the actual usage has a positive impact on the performance of employees.

Thanji's (2018) study revealed the factors that affect perceived satisfaction and its effect on behavioral intention to use and also on online learning effectiveness, where the mediator was the behavior's intention to use between perceived satisfaction and online learning effectiveness, among these factors (course aspects, design features, technology, learner characteristics, and environmental characteristics), as well as identifying the challenges that institutions face when applying E-Learning and identifying the potential benefits when using it. The results of this study indicate the existence of a positive relationship between course aspects (quality and flexibility) on learners' satisfaction and also that learners' satisfaction is affected by their self-efficacy, orientation towards the essential goal of the learner, ease of use, and usefulness of learning components. The most crucial factor in influencing learner satisfaction with E-Learning is design features (perceived usefulness, ease of use), moreover, technology (ICT skills, ICT support, and ICT infrastructure) significantly affects learner satisfaction, in addition to learner characteristics (self-efficacy, intrinsic goal orientation) significantly affects learner satisfaction, and environmental characteristics (perceived interaction, diversity in assessment) positively affect learner satisfaction. Thus, perceived satisfaction with online learning is the most critical factor of behavioral intention to use.

El-Ashry's (2022 ) study, conducted in Egypt, revealed the most important factors affecting E-Learning. It used several factors to determine the success of E-Learning as measured by net benefits, which are as follows: user satisfaction, user attitude, E-Learning quality, intention to use, and technological factors. Two questionnaires were distributed, one for the learners and the other for the trainees, via Google Forms. After the analysis, the two models were confirmed statistically, using the technique of partial modeling of the structural equation of least squares, and the results showed that information quality, ease of use, and perceived usefulness are indicators that must be improved, developed, and taken care of to indirectly enhance and support the success of E-Learning. They also showed that the most important pillars for achieving success in E-Learning are the quality of E-Learning and user satisfaction.

Baskaran's (2020) study examined the relationship between drivers of technology adoption and employee performance in an organization. The employees' performance was analyzed through its dimensions, which are as follows: workload, job stress, and motivation. Furthermore, the study evaluated the mediating impact of perceived job insecurity on the relationship between technology adoption and employee performance. 370 questionnaires were analyzed via Google Forms through the use of SPSS software. The study's results showed that employee satisfaction was statistically significant, and motivation was also statistically significant. In addition, there was no statistical evidence of the mediating impact of job insecurity, and the workload failed to be retained.

Navimipour 's (2015) study showed that the impact of E-Learning on employee satisfaction contributes to improving outcomes and benefits in organizations. A model and framework for evaluating E-Learning satisfaction were presented. The four variables were as follows: motivation, educational content, attitude, and technology. 240 questionnaires were distributed randomly to the employees, and 128 were analyzed. The results showed that the four variables of motivation, educational content, attitude, and technology analyzed by SPSS 22 and the SMART-PLS3 2.0 software package had a significant impact on employee satisfaction with E-Learning in the organization.

Utami's (2021) study revealed the influence of perceived ease of use, perceived usefulness, training, and support of users on the behavioral intention to adopt technology use through TAM. Where the main objective of the study was to use TAM to detect the behavior of faculty

members in using Google Applications for learning through E-Learning. The questionnaire was distributed through Google Forms and social media platforms to faculty members at both public and private universities. The analysis was done by SPSS Process Model 4 and Model 15 for 108 questionnaires. This study used both the moderated mediation effect and the mediation effect. The results revealed that perceived ease of use and perceived usefulness have a direct impact on faculty members' behavioral intention to use Google Apps. Perceived usefulness mediates the perceived ease of use and behavioral intention to use technology; conversely, the perceived ease of use can have an indirect effect. In addition, the effect of moderated mediation on user training and support is not supported. It should be noted here that age affects behavioral intention to use Google Apps.

## **2.4 Commentary on the Previous Study**

Previous studies (Azizy, 2021; Bagram, 2009; Baskaran, 2020; Bock, 2021; Islam, 2011; Makonjio, 2019; Navimipour, 2015; Purnomo, 2013; Riandi, 2021; Stollar, 2021; Vanthinh, 2016) agreed that E-Learning has a strong relationship with employees' performance by increasing productivity and employee satisfaction, increasing their effectiveness, and raising their efficiency in the job they do, which leads to improving the employees' performance in particular and the performance of the organization in general, which facilitates the achievement of the company's goals when it is optimally applied in organizations.

Among the previous studies that used the theory of TAM and the unified theory of acceptance and use of technology (UTAUT) (Chatti, 2021; Isaac, 2017; Vadakalur, 2020), the most important factors that contribute to the adoption of E-Learning and its impact on employees' performance that affected the adoption of E-Learning and found a positive effect on the performance of employees in organizations. In contrast, the study (Čevra, 2022) revealed that the organizational support factor has a positive, but not significant, effect on the adoption of the use of E-Learning. This was supported by the (Utami, 2021) study; in addition, the perceived ease of use has an indirect impact on the adoption of E-Learning technology. In addition, previous studies (Abdalmenem, 2019; Dash, 2022; El-Ashry, 2022; Ghosh, 2021; Lin, 2019; Subramaniam, 2019; Thanji Meenakshi, 2018; Xhelili, 2021) agreed that the more the organization provides support for the use of E-Learning, the greater the availability of technical

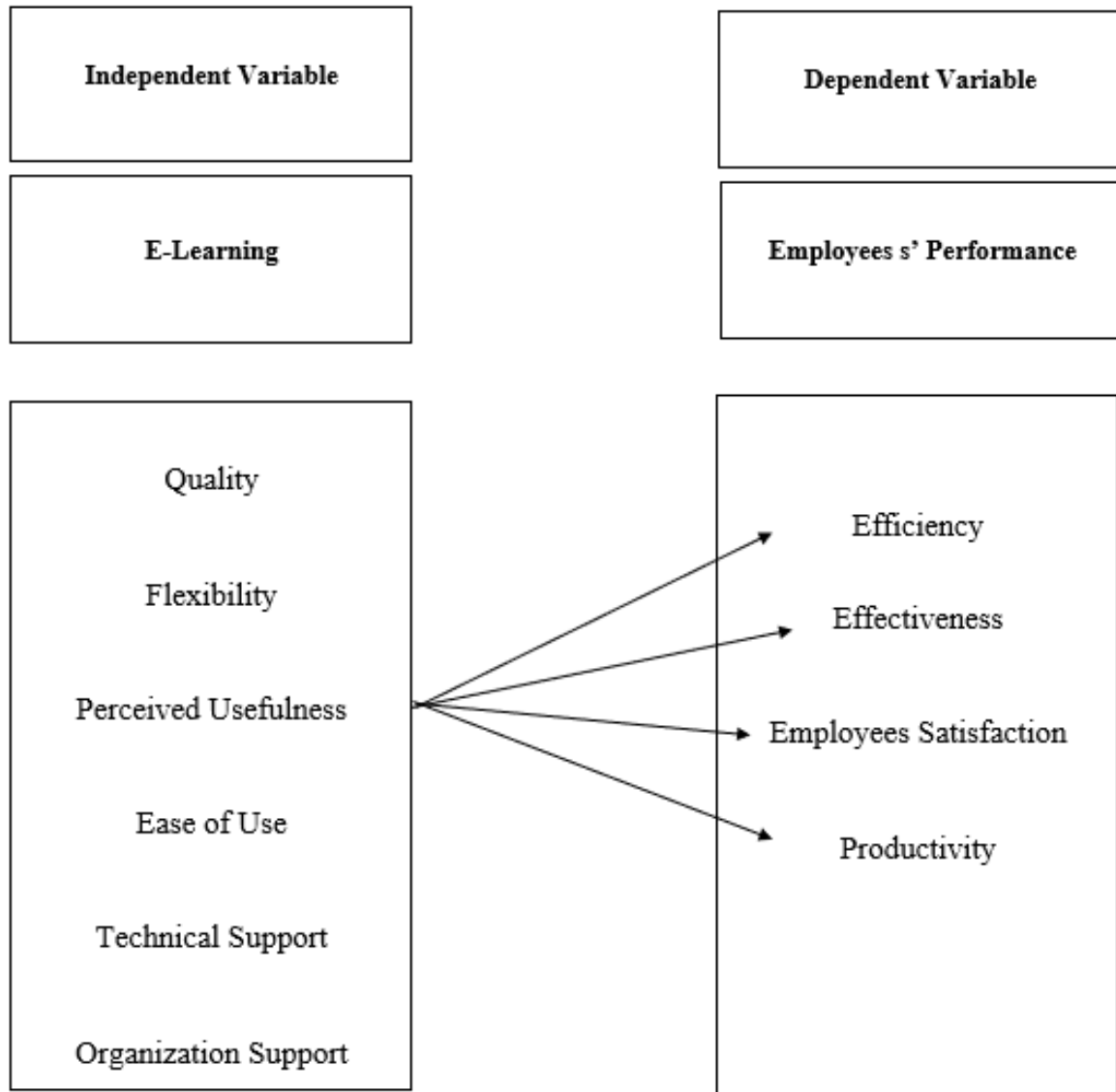


support, ease of use, sufficient flexibility, and increased quality; moreover, the desired benefit from using E-Learning helps greatly improve employee satisfaction and productivity, in addition to increasing their efficiency and effectiveness, which leads to the employees' performance.

Among the previous studies is a study (Alfarsi, 2019; Malureanu, 2021) where this study mentioned the benefits of E-Learning for the employee in terms of saving cost, time, and effort, ease of access, and improvement of the employee's capabilities, knowledge, and refinement of skills, which contributes to the employee obtaining promotions and new positions in the job, and emphasized these benefits in a study (Nagy, 2005) as these benefits contribute by improving employees' performance and developing their capabilities and abilities to accomplish the tasks entrusted to them efficiently and effectively, as well as improving their productivity, which leads to their employees' satisfaction. In contrast, the study of (Arkorful, 2014; Bashiruddin, 2010; Evangelin, 2020; Xhelili, 2021) mentioned the challenges faced by E-Learning in terms of employee resistance to E-Learning and the lack of technical support, in addition to the trainer's lack of experience, knowledge, and skill and privacy concerns.

## 2.5 Conceptual Framework

Figure 1: The Impact of E-Learning on Employees' Performance



Source: Prepared by the researcher, based on Davis (Davis, 1989)

## **2.6 Commercial Banking Sector in Palestine**

### **2.6.1 Introduction**

The Banking Sector has significant economic effects on the Palestinian economy, both in terms of encouraging investment in the stock exchange by granting credit and providing the necessary liquidity to investors in it, in addition to facilitating and attracting foreign investment, moreover, that it has the investment role of the banks themselves in the stock exchange and the shares of companies inside Palestine, in addition, the Palestinian Banking Sector is of particular importance in economic activity as the main component of the Palestinian financial system, furthermore, the Banking Sector is the main financing artery for the Palestinian economy and the main guarantor for providing all financial services needed by various economic activities and various social segments.

The researcher will briefly present an overview of the local and foreign banks operating in the Palestinian Banking Sector, where the local banks consist of four banks, which are (the Bank of Palestine, the National Bank (TNB), the Palestine Investment Bank (PIB), Quds Bank), in addition to the foreign banks that consist of six banks (Arab Bank, Egyptian Arab Land Bank, Ahli Jordanian Bank, The Housing Bank, Bank of Jordan, and Cairo Amman Bank).

### **2.6.2 Local Banks**

**The Bank of Palestine** was established in 1960, and its founder, Haj Hashim Atta Shawa, is considered the first national bank. In addition to being the largest and most widespread bank in terms of the number of branches, offices, and ATMs, in addition to its qualified staff, which works to serve more than 850,000 accounts between individuals and firms, this bank aims to develop the level of banking services in Palestine through various financing programs that are suitable for the needs of the social and economic sectors (BoP, 2023).

**The National Bank (TNB)** is the second largest Palestinian bank in terms of capital and one of the best providers of integrated, comprehensive, and innovative national banking services to the corporate and individual sectors, in addition to providing investment, treasury, and micro, small, and medium enterprise financing. The bank was classified by the Palestinian Monetary Authority as a bank of systemic importance at the level of banks in Palestine. The bank's paid-up capital is about \$105.53 million, and its authorized capital was raised to \$110 million in 2021. The National Bank provides banking services to more than 140,000 clients through its network of branches spread across the various governorates of the West Bank and Jerusalem and its network of ATMs located in the most vital places. The bank also provides its services through modern electronic channels. In addition, National Bank carried out many successful acquisitions and mergers, the latest of which was the acquisition of the assets and liabilities of the Jordan commercial bank in Palestine. This was preceded by leading a consortium of shareholders to acquire a controlling stake in the Palestine Islamic Bank (PIB) in a deal considered the largest in the history of the Palestine Stock Exchange. In 2015, the National Bank acquired the assets and liabilities of the Union Bank of Jordan in Palestine, and this was the first acquisition by a Palestinian bank of a Jordanian bank (TNB, 2023).

**Palestine Investment Bank (PIB)** is considered the first Palestinian bank to obtain the necessary licenses to conduct its business from the Palestinian National Authority. It was registered on 10/8/1994, with a paid-up capital of 20 million US dollars. Where the Palestine Investment Bank (PIB) was established as a Palestinian public shareholding company with the participation of a group of bankers and businessmen from Palestine and the brotherly Arab countries. The first branch of the bank opened on March 26, 1995, and the bank's management continued to expand and spread in the main Palestinian cities and population centers, successively and according to drawn, clear, and specific plans until the bank had a network of branches covering most of the Palestinian regions without exception (PIB, 2023).

**Quds Bank** was established in 1995 and is one of Palestine's most prominent banking institutions. It offers the Palestinian market an integrated package of banking and investment services and trade solutions designed to meet the requirements of both corporate and individual customers and to participate in supporting the national economy. Quds Bank was established as a limited shareholding company with a capital equivalent of 20 million US dollars, which was

increased during the years of the bank's operation to reach today's 93.71 million US dollars. Quds Bank is present as the first Palestinian bank in the Jordanian banking market through its representative office in the capital, Amman, as it is considered a platform to facilitate the bank's clients' transactions between the Jordanian and Palestinian markets (QB, 2023).

### **2.6.3 Foreign Banks**

**Arab Bank** was registered on May 21, 1930, with a capital of 15,000 Palestinian pounds and seven investors. The first chairman of the board of directors of the Arab Bank was Abdel Hamid Shoman, as he was the founder. In addition, the Arab Bank started its work in Jerusalem. The bank's legacy since its inception has been to play an active and important role as a partner in the social and economic development of the region. Today, the Arab Bank Group is considered one of the largest Arab networks. Global, which includes more than 600 branches spread across five continents, the Bank also has a prominent presence in the major financial markets and centers in the world, such as London, Dubai, Singapore, Shanghai, Geneva, Paris, Frankfurt, Sydney, and Bahrain (AB, 2023).

**Cairo Amman Bank** was established on June 11, 1960, as a public shareholding company and offers a variety of innovative banking services to its clients. It was one of the first banks to use Iris Recognition printing to verify the identity of customers (CAB, 2023).

**Bank of Jordan** is a Jordanian financial banking institution with a long legacy. It was one of the first banks established in Jordan in 1960 and bore its name. Since its inception, it has contributed to supporting the investment movement and economic development in Jordan and the countries in which it is located by providing comprehensive banking products and services that meet the requirements and needs of customers and dealers of various groups and segments, from individuals to companies and institutions. Today, the Bank of Jordan has become one of the largest banks operating in the Jordanian market, with a capital of 200 million dinars (BoJ, 2023).

**Housing Bank** for Trade and Finance was established as a Jordanian public shareholding company in 1973. During the past years, the bank's capital has increased more than once, the last of which was in 2017, to reach 315 million Jordanian dinars (equivalent to 444 million dollars). The successive managements of the bank were keen to strengthen its capital base by

strengthening its various reserves until the total equity amount reached 1.2 billion dinars. Opening its first branch in Ramallah at the end of 1995 (HB, 2023).

**Ahli Jordanian Bank** opened its first branch in Palestine in 1957 in Nablus City. The bank continued to expand in the West Bank, increasing the number of its branches from 4 to 9 (JAB, 2023).

**Egyptian Arab Land Bank** since its inception, the Egyptian Land Bank has aimed to advance the Egyptian economy. At that time, the bank launched its first major goal to contribute to the development of the Egyptian agricultural sector by providing loans to agricultural landowners to improve the productivity of their lands, advance the Egyptian economy, and achieve concepts of communication with all segments of the local society to activate their productive resources. Economic development, the construction movement, and national development. Since its inception, the bank has achieved great growth to become today one of the largest specialized banks in the region and has become a brilliant name in the banking sector, serving Arabs in all countries of the region, and the Egyptian Arab Land Bank opened its branch in Palestine (TEALB, 2023).

**Chapter Three**  
**Research Methodology**

# **Research Methodology**

## **3.1 Introduction**

The researcher presents the methodological procedures that were followed, represented in determining the type of study method, determining the study population, the study sample, and the exploratory (experimental) sample to ensure the validity and reliability criteria of the study tool represented by the questionnaire, then presenting the justifications for choosing the parameter tests in the study without resorting to the test of the normal distribution. Finally, the statistical methods used in the study were provided by the statistical software SPSS version 26.

## **3.2 Research Design**

This study relied on the descriptive analytical approach to achieve its objectives, as this approach allows the researcher to describe the study variables based on the respondents' responses to the questions contained in the tool. Moreover, it enables the test of causation and correlation between variables to reach the results of the test on the Impact of E-Learning on Employees' Performance in the Palestinian Banking Sector.

## **3.3 Data Collection**

Referring to several studies that were described in the literature review, the researcher examined how to investigate the Impact of E-Learning on Employees' Performance in the Palestinian Banking Sector using secondary data resources such as previous literature, books, journal articles, theses, and websites, and then primary data were collected for the purposes of statistical analysis. The study used the survey research design method because it relied on a quantitative approach, and well-structured questionnaires were used as survey tools for this purpose to collect primary data that was applied to Palestinian bank employees.



### 3.4 Research Population and Sample

According to the annual report issued by the Association of Banks in Palestine, the current study population consists of all employees in commercial banks in Palestine, amounting to (4328) employees. The study sample was also determined according to the statistical tables used to calculate the size of the random samples included in the study (Sekaran, 2016), which indicated that the minimum sample size according to the study population was equal to (354), where the random sample method has been used. In addition, questionnaires were designed using Google Forms and distributed electronically via the human resources department E-mails of banks; the number of questionnaires retrieved was (466).

### 3.5 Study Tool

The study tool is the main tool that is used to collect the necessary data about the variables of the study, and in the current study, a well-structured questionnaire was used as the main tool for the study, which was designed based on previous studies (Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2015; Cheng, 2022; Duggal, 2022; Fleming, 2017; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018; Utami, 2021; Zulfiqar, 2018).

The number of questionnaire items reached (37) items. The current questionnaire consisted of three main sections, as follows:

- **Section One:** This section is devoted to collecting demographic data for respondents, which includes categorical variables for the question about gender, age, qualification, work experience, computer proficiency, and the number of training courses employees obtained during COVID-19.
- **Section Two:** This section included (29) paragraphs devoted to the question about the independent variable represented by E-Learning. This variable is divided into six dimensions: Quality, which is measured in five paragraphs; Flexibility, which is measured in four paragraphs; Perceived Usefulness, which is measured in eight paragraphs; Ease of Use, which is measured in four paragraphs; Technical Support, which is measured in four paragraphs; and Organizational Support, which is measured in four paragraphs.

- **Section Three:** This section consists of (8) paragraphs devoted to the question about the dependent variable represented by the Employees' Performance. This variable is divided into four dimensions: Efficiency, which is measured by two paragraphs; Effectiveness, which is measured by two paragraphs; Productivity, which is measured by two paragraphs; and Employee Satisfaction, which is measured by two paragraphs.

**Table (1)**  
**References of Dimensions**

No.	Dimensions	Questionnaire Items	References
<b>E-Learning</b>			
1	Quality	1. I can gain access to the learning site at any time, very accurate, current, and related to the course content. 2. I feel the communication quality of the Internet is good. 3. I am satisfied with the quality/quantity of the course materials. 4. Information is available in the appropriate format.	(Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2015; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018)
2	Flexibility	1. Supports group meetings, chats, and instant communications without any physical restrictions. 2. Taking training via the Internet saved me a lot of time. 3. Taking training via the Internet allowed me to arrange my work schedule more effectively.	(Bhardwaj, 2019; Cheng, 2015; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018)

		4. Taking training via the Internet allowed me to take the training I would otherwise have missed.	
3	Perceived Usefulness	<p>1. Enables me to accomplish the tasks assigned to me more quickly.</p> <p>2. Improves my ability to accomplish the tasks assigned to me.</p> <p>3. Increases my productivity in accomplishing tasks assigned to me.</p> <p>4. Enhances my effectiveness in accomplishing the tasks assigned to me.</p> <p>5. E-Learning would be useful for me to construct knowledge in my work context.</p> <p>6. Using E-Learning would allow me to organize my learning more efficiently.</p> <p>7. Using E-Learning would increase the efficiency of my job-related learning.</p> <p>8. Using E-Learning at my job would allow me to acquire job-related.</p>	(Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2022; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018; Utami, 2021; Zulfiqar, 2018)
4	Ease of Use	<p>1. I find it easy to perform work using E-Learning.</p> <p>2. I find that E-Learning is clear and understandable for me.</p> <p>3. I find E-Learning easy to use.</p> <p>4. Learning to operate an E-Learning system would be easy for me.</p>	(Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2015; Cheng, 2022; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018; Utami, 2021; Zulfiqar, 2018)
		1. My bank provides easy access to the Internet.	(Bhardwaj, 2019; Cheng, 2015; Cheng, 2022;

5	Technical Support	<p>2. My bank has up-to-date ICT infrastructure.</p> <p>3. I can get technical support from technicians</p> <p>4. IT support is available 24*7 (All days a week and round-the-clock support).</p>	Duggal, 2022; Fleming, 2017; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018; Utami, 2021)
6	Organization Support	<p>1. The bank I work for has a performance appraisal system that links financial rewards to the use of newly acquired knowledge and skills.</p> <p>2. The bank I work for rewards employees for using newly acquired knowledge and skills at work.</p> <p>3. I am always supported and encouraged by my boss to E-Learning to perform my job.</p> <p>4. The administration has provided most of the necessary help and resources to get us used to E-Learning quickly.</p>	(Al-Mamary, 2015; Cheng, 2015; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018)
<b>Employees' performance</b>			
7	Efficiency	<p>1. I try to acquire new ways and working methods to perform and develop the work.</p> <p>2. I strive to improve my job performance continuously.</p>	(Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2015; Cheng, 2022; Duggal, 2022; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018; Zulfiqar, 2018)
	Effectiveness	<p>1. I collaborate with my co-workers to complete the required tasks.</p>	(Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2015; Cheng,

		2. Using an E-Learning system improves my effectiveness in doing my job.	2022; Duggal, 2022; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018; Zulfiqar, 2018)
	Employees Satisfaction	1. E-Learning has increased employee satisfaction. 2. I am satisfied with the effects of using E-Learning on my job.	(Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2015; Cheng, 2022; Duggal, 2022; Fleming, 2017; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018)
	Productivity	1. Using an E-Learning system improves productivity in doing my job. 2. Overall, E-Learning is useful in doing my job.	(Al-Mamary, 2015; Bhardwaj, 2019; Cheng, 2015; Cheng, 2022; Duggal, 2022; Mohammadyari, 2015; Perera, 2022; Purnomo, 2013; Thanji Meenakshi, 2018; Zulfiqar, 2018)

The study tool used the five-point Likert scale in the questionnaire to give the study sample flexibility when choosing, as the scale values ranged between (1-5), which are: (1 = strongly disagree), (2 = disagree), (3 = neutral), (4 = agree), and (5 = strongly agree). It is possible to determine the weighted average by calculating the length of the category according to the following equation:

$$\text{Class Interval} = (\text{maximum} - \text{minimum}) / \text{number of degrees of importance}$$

$$\text{Class Interval} = (5-1) / 3 = 1.33,$$

So, the following Table (2) shows the classification has been approved to judge averages:

**Table (2)**  
**Mean values and their interpretation**

<b>Range</b>	<b>Importance index</b>
<b>1-2.33</b>	Low
<b>2.34-3.67</b>	Moderate
<b>3.68 and more</b>	High

Moreover, rank was given for each item, representing the order of the statements in terms of the highest mean, where the upper statement has the mean number one and the following one is ranked by number 2 and so on, reaching the statement with the lowest mean value.

### **3.6 Research Hypothesis**

Four hypotheses were formulated based on the research questions listed below:

H1: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Efficiency

H2: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Effectiveness.

H3: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Productivity.

H4: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Employee Satisfaction.

### **3.7 Validity and Reliability Analysis**

The validity and stability of the study tool were confirmed by applying it to a survey sample consisting of (30) employees from outside the actual study sample, and the results were as follows:

#### **First: The Apparent Validity**

The researcher presented the study tool in (Appendix) to many arbitrators from the specialized faculty members at Birzeit Palestinian University to ensure the validity of the content of the questionnaire's paragraphs and their suitability to achieve the objectives of the study. Accordingly, the questionnaire was modified according to the arbitrators' opinions, suggestions, and observations.

## Second: Reliability

The reliability of the study tool was confirmed by extracting the reliability coefficient by the method of internal consistency, or what is known as Cronbach's alpha coefficient. Table (3) shows the internal consistency coefficient according to Cronbach's alpha equation for the variables and their dimensions.

**Table (3)**

**Cronbach's alpha internal consistency coefficient for variables and their dimensions**

<b>Variables</b>	<b>No. of Paragraphs</b>	<b>Cronbach's alpha</b>
<b>Independent variable: E-Learning</b>	<b>29</b>	<b>0.950</b>
Quality	5	0.829
Flexibility	4	0.876
Perceived Usefulness	8	0.952
Ease of Use	4	0.884
Technical Support	4	0.798
Organizational Support	4	0.799
<b>Dependent Variable: Employees' Performance</b>	<b>8</b>	<b>0.911</b>
Efficiency	2	0.721
Effectiveness	2	0.738
Productivity	2	0.801
Employees Satisfaction	2	0.798

Table (3) shows that the values of Cronbach's coefficient alpha values are greater than (0.70) for all dimensions and variables, which indicates that the study tool has a high level of stability; therefore, the questionnaire can be used to achieve the objectives of the study.



### **3.8 Ethical Considerations**

The researcher obtained permission to distribute the questionnaire from Birzeit University; the first page of it included information explaining the objectives and importance of the study and giving participants complete freedom to participate in it. To confirm the confidentiality of the information received, the questionnaires were encoded, and no names or personal identification were included in the survey. All the data was kept on a laptop, where no one could access it except for the researcher and supervisor.

### **3.9 The Statistical Methods Used in the Research**

The researcher used in analyzing the data the statistical analysis program "Statistical Package for the Social Sciences" (SPSS v26), where the researcher used a set of statistical tests, including Cronbach's alpha, to measure reliability. The frequency and percentages are used to measure and describe the variables of the study sample, in addition to the descriptive measures: (arithmetic mean, standard deviation, rank, and level), besides the multiple linear regression test to test hypotheses.

**Chapter Four**  
**Results and Discussion**

## **Results and Discussion**

This chapter presents the results of the study that were reached by analyzing the data collected through the study tool, using the (SPSS) software to test its hypotheses.

### **4.1 Descriptive Statistics**

Descriptive statistics were performed on the collected data. Frequencies were used to describe the demographics of the participants. The values of arithmetic means, standard deviations, and ranks were also extracted to identify and characterize the attitudes of the study sample members toward the study variables.

#### **4.1.1 Demographic Characteristics**

This section is aimed at gathering information from the study sample about gender, age, qualification, work experience, computer proficiency, and the number of training courses employees obtained during COVID-19. Table (4) presents the results of the frequencies and percentages used in the analysis of demographic variables for the study sample members (n= 466).

**Table (4)**  
**The Sample Demographic Characteristics**

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percent%</b>
<b>Gender</b>	Male	240	51.5
	Female	226	48.5
	<b>Total</b>	<b>466</b>	<b>100%</b>
<b>Age</b>	Less than 25 years old	60	12.9
	25 – 34 years	201	43.1
	35 – 44 years	155	33.3
	45 years and above	50	10.7
	<b>Total</b>	<b>466</b>	<b>100%</b>
<b>Qualification</b>	Diploma	45	9.7
	Bachelor	290	62.2
	Master	131	28.1
	PhD	0	0
	<b>Total</b>	<b>466</b>	<b>100%</b>
<b>Work experience</b>	Less than 5 years	115	24.7
	6-10 years	126	27.0
	11-15 years	80	17.2
	16 years and above	145	31.1
	<b>Total</b>	<b>466</b>	<b>100%</b>
<b>Computer proficiency</b>	Elementary	15	3.2
	Average	166	35.6
	Expert	285	61.2
	<b>Total</b>	<b>466</b>	<b>100%</b>
<b>The number of training courses</b>	3 courses or less	296	63.5
	4-6 courses	65	13.9

	7-10 courses	55	11.8
	11 courses and more	50	10.7
	<b>Total</b>	<b>466</b>	<b>100%</b>

From the previous Table (4) the majority of the participants were male at the rate of 51.5%, while the female at the rate of 48.5%. In terms of ages, about (43.1%) of the participants' age were between 25- less than 34 years, followed by (35 –44 years), less than 25 years, and more than 45 years with rates of 33.3%, 12.9% and 10.7% respectively. On the other hand, it should be noted that most of the respondents have Bachelor's with 62.2%, followed by a Master's degree and Diploma at 29.1% and 9.7% respectively. Besides, about (31.1%) of sample experiences are 16 years and above, followed by 6-10 years, less than 5 years, and 11-15 years with rates of 27%, 24.7%, and 17.2% respectively. Moreover, about (61.2%) of participants' computer proficiency was expert, followed by average and elementary level with rates of 35.6% and 3.2% respectively. In terms of the number of training courses, about (63.5%) of participants have 3 courses or less, followed by 4-6 courses, 7-10 courses, and 11 courses and more with rates of 13.9%, 11.8%, and 10.7% respectively.

### 4.1.2 Descriptive Analysis of the Study Variables

Descriptive statistics are used to briefly introduce some trends in the data. It will contain central tendency measures of mean and standard deviation (STD) for all variables.

**Table (5)**

**Descriptive Statistics of the Study Variables**

	<b>Variables</b>	<b>Mean</b>	<b>STD</b>	<b>Degree</b>
<b>Independent Variable: E-Learning</b>	Quality	3.92	0.622	High
	Flexibility	4.08	0.695	High
	Perceived Usefulness	3.94	0.725	High
	Ease of Use	4.01	0.698	High
	Technical Support	4.05	0.639	High
	Organizational Support	3.92	0.684	High
	<b>Total</b>	<b>3.98</b>	<b>0.533</b>	<b>High</b>
<b>Dependent Variables: Employees' Performance</b>	Efficiency	3.83	0.735	High
	Effectiveness	3.95	0.703	High
	Productivity	3.90	0.755	High
	Employees Satisfaction	3.92	0.741	High
	<b>Total</b>	<b>3.90</b>	<b>0.655</b>	<b>High</b>

Table (5) investigated E-Learning at a high level of respondents' agreement with the mean (3.98). E-Learning dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) captured a high level of respondents' agreement

with means (3.92, 4.08, 3.94, 4.01, 4.05, and 3.92) respectively. Flexibility came first, followed by Technical Support and Ease of Use, while Quality was the last dimension. In addition, the Employees' Performance captured a high level of respondents' agreement with a mean of (3.90). The Employees' Performance dimensions (Efficiency, Effectiveness, Productivity, and Employees Satisfaction) captured a high level of respondents' agreement with means (3.83, 3.95, 3.90, 3.92) respectively. Effectiveness came first, followed by Employees' Satisfaction and Productivity while Efficiency was the last dimension.

#### 4.1.2.1 Descriptive Analysis of Independent Variable

Table (6) investigates the descriptive statistic and the relative degree for E-Learning items.

- **First Dimension: Quality**

**Table (6)**  
**E-Learning: Quality**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>1</b>	I can gain access to the learning site at any time.	4.29	0.727	1	<b>High</b>
<b>2</b>	Very accurate, current, and related to the course content.	3.94	0.787	3	<b>High</b>
<b>3</b>	I feel the communication quality of the Internet is good.	3.69	0.962	4	<b>High</b>
<b>4</b>	I am satisfied with the quality/quantity of the course materials.	3.75	0.812	5	<b>High</b>
<b>5</b>	Information is available in the appropriate format.	3.95	0.724	2	<b>High</b>

All of the items show a high degree. The item that states “I can gain access to the learning site at any time” comes first among items with a mean of (4.29), a standard deviation of

(0.727), and a high degree. Whereas the item which states: “I am satisfied with the quality/quantity of the course materials” ranked last among the items, with a mean of (3.75), and a standard deviation of (0.812) at a high degree.

- **Second Dimension: Flexibility**

**Table (7)**  
**E-Learning: Flexibility**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>1</b>	Supports group meetings, chats, and instant communications without any physical restrictions.	4.24	0.740	1	<b>High</b>
<b>2</b>	Taking training via the Internet saved me a lot of time.	4.07	0.802	2	<b>High</b>
<b>3</b>	Taking training via the Internet allowed me to arrange my work schedule more effectively.	3.94	0.879	4	<b>High</b>
<b>4</b>	Taking training via the Internet allowed me to take the training I would otherwise have missed.	4.07	0.828	3	<b>High</b>

All of the items show a high degree. The item that state “Supports group meetings, chats, and instant communications without any physical restrictions” comes first among items with a mean of (4.24), a standard deviation of (0.740) at a high degree. Whereas the item which states: “Taking training via the Internet allowed me to arrange my work schedule more effectively” ranked last among the items, with a mean of (3.94), a standard deviation of (0.879) at a high degree.



- **Third Dimension: Perceived Usefulness**

**Table (8)**

**E-Learning: Perceived Usefulness**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>1</b>	Enables me to accomplish the tasks assigned to me more quickly.	4.05	0.834	1	<b>High</b>
<b>2</b>	Improves my ability to accomplish the tasks assigned to me.	3.99	0.810	2	<b>High</b>
<b>3</b>	Increases my productivity in accomplishing tasks assigned to me.	3.95	0.808	4	<b>High</b>
<b>4</b>	Enhances my effectiveness in accomplishing the tasks assigned to me.	3.87	0.858	7	<b>High</b>
<b>5</b>	E-Learning would be useful for me to construct knowledge in my work context.	3.94	0.878	5	<b>High</b>
<b>6</b>	Using E-Learning would allow me to organize my learning more efficiently.	3.97	0.796	3	<b>High</b>
<b>7</b>	Using E-Learning would increase the efficiency of my job-related learning.	3.92	0.845	6	<b>High</b>
<b>8</b>	Using E-Learning at my job would allow me to acquire job-related.	3.86	0.875	8	<b>High</b>

All of the items show a high degree. The item that states “Enables me to accomplish the tasks assigned to me more quickly” comes first among items with a mean of (4.05) and a standard deviation of (0.834) at a high degree. Whereas the item which states: “Using E-Learning at my job would allow me to acquire job-related” ranked last among the items, with a mean of (3.86), a standard deviation of (0.875) at a high degree.

- **Fourth Dimension: Ease of use**

**Table (9)**  
**E-Learning: Ease of Use**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>1</b>	I find it easy to perform work using E-Learning.	4.08	0.765	1	<b>High</b>
<b>2</b>	I find that E-Learning is clear and understandable for me.	3.90	0.868	4	<b>High</b>
<b>3</b>	I find E-Learning easy to use.	4.02	0.842	3	<b>High</b>
<b>4</b>	Learning to operate an E-Learning system would be easy for me.	4.02	0.762	2	<b>High</b>

All of the items show a high degree. The item that states “I find it easy to perform work using E-Learning” comes first among items with a mean of (4.08) and a standard deviation of (0.765) at a high degree. Whereas the item which states: “I find that E-Learning is clear and understandable for me” ranked last among the items, with a mean of (3.90), and a standard deviation of (0.868) at a high degree.

- **Fifth Dimension: Technical Support**

**Table (10)**  
**E-Learning: Technical Support**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>1</b>	My bank provides easy access to the Internet.	4.05	0.795	3	<b>High</b>
<b>2</b>	My bank has up-to-date ICT infrastructure	4.12	0.788	1	<b>High</b>
<b>3</b>	I can get technical support from technicians	4.08	0.779	2	<b>High</b>
<b>4</b>	IT support is available 24*7 (All days a week and round-the-clock support)	3.97	0.873	4	<b>High</b>

All of the items show a high degree. The item that states “My bank has up-to-date ICT infrastructure” comes first among items with a mean of (4.12) and a standard deviation of (0.788) at a high degree. Whereas the item which states: “IT support is available 24\*7 (All days a week and round-the-clock support) ranked last among the items, with a mean of (3.97), a standard deviation of (0.873) at a high degree.

- **Sixth Dimension: Organizational Support**

**Table (11)**  
**E-Learning: Organizational Support**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>1</b>	The bank I work for has a performance appraisal system that links financial rewards to the use of newly acquired knowledge and skills.	3.88	0.949	3	<b>High</b>
<b>2</b>	The bank I work for rewards employees for using newly acquired knowledge and skills at work.	4.09	0.799	1	<b>High</b>
<b>3</b>	I am always supported and encouraged by my boss to E-Learning to perform my job.	4.01	0.796	2	<b>High</b>
<b>4</b>	The administration has provided most of the necessary help and resources to get us used to E-Learning quickly.	3.71	0.911	4	<b>High</b>

All of the items show a high degree. The item that states “The bank I work for rewards employees for using newly acquired knowledge and skills at work” comes first among items with a mean of (4.09), a standard deviation of (0.799) at a high degree. Whereas the item which states: “The administration has provided most of the necessary help and resources to get us used to E-Learning quickly” ranked last among the items, with a mean of (3.71), a standard deviation of (0.911) at a high degree.

#### 4.1.2.2 Descriptive Analysis of Dependent Variable

Table (12) investigates the descriptive statistic and the relative degree for all items of dependent variables.

- **First Dimension: Efficiency**

**Table (12)**  
**Employees' Performance: Efficiency**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>1</b>	I try to acquire new ways and working methods to perform and develop the work.	3.73	0.929	2	<b>High</b>
<b>2</b>	I strive to improve my job performance continuously.	3.94	0.841	1	<b>High</b>

The two items show a high degree. The item that states “I try to acquire new ways and working methods to perform and develop the work” comes first among items with a mean of (3.94) and a standard deviation of (0.841) at a high degree. Whereas the item which states: “I strive to improve my job performance continuously” ranked the last item, with a mean of (3.73), and a standard deviation of (0.929) at a high degree.

- **Second Dimension: Effectiveness**

**Table (13)**

**Second Dimension: Effectiveness**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>3</b>	I collaborate with my co-workers to complete the required tasks.	3.96	0.762	1	<b>High</b>
<b>4</b>	Using an E-Learning system improves my effectiveness in doing my job.	3.94	0.775	2	<b>High</b>

The two items show a high degree. The item that state “I collaborate with my co-workers to complete the required tasks” comes first among items with a mean of (3.96) and a standard deviation of (0.762) at a high degree. Whereas the item states: “Using an E-Learning system improves my effectiveness in doing my job” ranked last item, with a mean of (3.94), and a standard deviation of (0.775) at a high degree.

- **Third Dimension: Productivity**

**Table (14)**

**Third Dimension: Productivity**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>5</b>	Using an E-Learning system improves productivity in doing my job.	3.89	0.887	2	<b>High</b>
<b>6</b>	Overall, E-Learning is useful in doing my job.	3.91	0.806	1	<b>High</b>

The two items show a high degree. The item that states “Overall, E-Learning is useful in doing my job” comes first among items with a mean of (3.91) and a standard deviation of (0.806) at a high degree. Whereas the item states: “Using an E-Learning system improves productivity in doing my job” ranked last item, with a mean of (3.89), and a standard deviation of (0.887) at a high degree.

- **Fourth Dimension: Employees Satisfaction**

**Table (15)**

**Fourth Dimension: Employees Satisfaction**

<b>NO.</b>	<b>Items</b>	<b>Mean</b>	<b>STD</b>	<b>Rank</b>	<b>Degree</b>
<b>7</b>	I am satisfied with the effects of using E-Learning on my job.	3.89	.784	2	<b>High</b>
<b>8</b>	E-Learning has increased my job satisfaction.	3.94	.775	1	<b>High</b>

The two items show a high degree. The item that state “I am satisfied with the effects of using E-Learning on my job” comes first among items with a mean of (3.94) and a standard deviation of (0.775) at a high degree. Whereas the item which states: “I am satisfied with the effects of using E-Learning on my job” ranked last item, with a mean of (3.94), and a standard deviation of (0.784) at a high degree.

## 4.2 Testing the Study Hypotheses

Before applying the linear regression to test the study hypotheses, a test, and skewness coefficient were used as pre-regression tests, to ensure that there is a lack of multicollinearity and no outlier found in the study data. Detecting the using the questionnaire survey data on maintenance planning, this study used two techniques, the correlation coefficients, and the variance inflation factor (VIF). Table (16) investigates these results.

**Table (16)**  
**Multicollinearity and Normality Test**

<b>Independent Variable Dimensions</b>	<b>VIF</b>	<b>Tolerance</b>	<b>Skewness</b>
Quality	1.618	.618	-0.537
Flexibility	3.218	.311	-0.63
Perceived Usefulness	3.110	.322	-0.836
Ease of Use	2.956	.338	-0.613
Technical Support	2.774	.360	-0.466
Organizational Support	2.094	.478	-0.513

The results show that Skewness values fall outside the range of -1 to +1 expect strategic planning and development which is indicate a substantially skewed distribution (Hair, 2013). The results also show that VIF values are less than (10). Besides, the results also show that tolerance values are more than (0.05), which is the mean of the linear regression assumptions, so there is no collinearity between independent variable dimensions.



**4.2.1 The First Hypothesis: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Efficiency.**

To test the first hypothesis, a multiple linear regression/ enter method was adopted. Table (17) shows the corresponding results.

**Table (17)**  
**Model Summary of E-Learning- Efficiency**

<b>Model</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>Durbin-Watson</b>	<b>F</b>	<b>Sig.</b>
<b>E-Learning-Efficiency</b>	0.749	0.561	1.814	97.892	0.000

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )

It is noted from Table (17) that the two variables have a significant relationship with R equal to 0.749. E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) predicts Efficiency, where R<sup>2</sup> equals 0.561, with a significant F which equals 97.892. This model can predict 56.1% of the variance in Efficiency and the rest is attributed to other factors. As shown in Table (18) there is no significant statistical impact of the independent variables (Flexibility, Ease of use) on Efficiency, based on the insignificant value of t which are 1.305 and 0.639 where significant levels  $\alpha > 0.05$  variables, while there is a significant statistical impact of the independent variables (Quality, Perceived Usefulness, Technical Support, and Organizational Support) on Efficiency, where t equals to 2.464, 6.646, 2.051 and 9.542 when significant level  $\alpha \leq 0.05$ . These results lead us to build the interpretation equation as follows:

$$\text{Efficiency} = 0.187 + 0.115 * \text{Quality} + 0.368 * \text{Perceived Usefulness} + 0.121 * \text{Technical Support} + 0.459 * \text{Organizational Support}$$

**Table (18)**

**The E-Learning- Efficiency Model Coefficients**

	Unstandardized		Standardized		
	Coefficients		Coefficients		
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>T</b>	<b>Sig.</b>
(Constant)	.187	.181		1.033	.302
Quality	.115	.047	.097	2.464	.014
Flexibility	.077	.059	.072	1.305	.193
Perceived Usefulness	.368	.055	.362	6.646	.000
Ease of Use	.036	.056	.034	.639	.523
Technical Support	.121	.059	.106	2.051	.041
Organizational Support	.459	.048	.427	9.542	.000

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )

**4.2.2 The Second Hypothesis: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Effectiveness.**

To test the first hypothesis, a multiple linear regression/ enter method was adopted. Table (19) shows the corresponding results.

**Table (19)**  
**Model Summary of E-Learning- Effectiveness**

Model	R	R <sup>2</sup>	Durbin- Watson	F	Sig.
<b>E-Learning- Effectiveness</b>	0.754	0.568	2.256	100.599	0.000

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )

It is noted from Table (19) that the two variables have a significant relationship with R equal to 0.754. The E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) predicts the Effectiveness, where R<sup>2</sup> equals 0.568, with a significant F which equals 100.599. This model can predict 56.8% of the variance in Effectiveness and the rest is attributed to other factors. As shown in Table (20) there is no significant statistical impact of the independent variable (Ease of Use) on Effectiveness based on the insignificant value of t which are 1.388 where significant level  $\alpha > 0.05$  variables, while there is a significant statistical impact of the independent variables (Quality, Flexibility, Perceived Usefulness, Technical Support, and Organizational Support) on Effectiveness, where t equals to 6.657, 3.403, 6.947, 3.674 and 4.997 where significant level  $\alpha \leq 0.05$ . These results lead us to build the interpretation equation as follows:

$$\text{Effectiveness} = 0.233 + 0.294* \text{Quality} + 0.189* \text{Flexibility} + 0.365* \text{Perceived Usefulness} + 0.206* \text{Technical Support} + 0.228* \text{Organizational Support}$$

**Table (20)**  
**The E-Learning- Effectiveness Model Coefficients**

	Unstandardized		Standardized		
	Coefficients		Coefficients		
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>T</b>	<b>Sig.</b>
(Constant)	.233	.172		1.356	.176
Quality	.294	.044	.260	6.657	.000
Flexibility	.189	.056	.187	3.403	.001
Perceived Usefulness	.365	.052	.376	6.947	.000
Ease of Use	.074	.053	.073	1.388	.166
Technical Support	.206	.056	.188	3.674	.000
Organizational Support	.228	.046	.222	4.997	.000

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )

**4.2.3 The Third Hypothesis: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Productivity.**

To test the first hypothesis, a multiple linear regression/ enter method was adopted. Table (21) shows the corresponding results.

**Table (21)**  
**Model Summary of E-Learning- Productivity**

Model	R	R <sup>2</sup>	Durbin- Watson	F	Sig.
<b>E-Learning- Productivity</b>	0.777	0.604	2.457	116.575	0.000

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )

It is noted from Table (21) that the two variables have a significant relationship with R equal to 0.777. The E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) predicts Productivity, where R<sup>2</sup> equals 0.604, with a significant F which equals 116.575 This model can predict 60.4% of the variance in the productivity and the rest attributed to other factors. As shown in Table (22) there is no significant statistical impact of the independent variables (Ease of Use and Organizational Support) on Productivity based on the insignificant value of t which are 0.022 and 0.914 where significant levels  $\alpha > 0.05$  variables, while there is a significant statistical impact of the independent variables (Quality, Flexibility, Perceived Usefulness, and Technical Support) on Productivity, where t equals to 3.365, 3.065, 8.180 and 4.031 where significant level  $\alpha \leq 0.05$ . These results lead us to build the interpretation equation as follows:

**Productivity**= 0.275 +0.153\* Quality +0.176\* Flexibility + 0.442\*Perceived Usefulness +0.233\* Technical Support.

**Table (22)**  
**The E-Learning- Productivity Model Coefficients**

	Unstandardized		Standardized		
	Coefficients		Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	.275	.177		1.551	.122
Quality	.153	.045	.126	3.365	.001
Flexibility	.176	.057	.162	3.065	.002
Perceived Usefulness	.442	.054	.424	8.180	.000
Ease of Use	.001	.055	.001	.022	.982
Technical Support	.233	.058	.197	4.031	.000
Organizational Support	.043	.047	.039	.914	.361

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )

**4.2.4 The Fourth Hypothesis: E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) has a positive impact on Employee Satisfaction.**

To test the first hypothesis, a multiple linear regression/ enter method was adopted. Table (23) shows the corresponding results.

**Table (23)**

**Model Summary of E-Learning-Employee Satisfaction**

<b>Model</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>Durbin-Watson</b>	<b>F</b>	<b>Sig.</b>
<b>E-Learning- Employee Satisfaction</b>	0.734	0.538	2.363	89.235	0.000

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )

It is noted from Table (23) that the two variables have a significant relationship with R equal to 0.734. E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) predicts Employee Satisfaction, where R<sup>2</sup> equals 0.538, with a significant F which equals 89.235. This model can predict 53.8% of the variance in Employee Satisfaction and the rest is attributed to other factors. As shown in Table (24) there is no significant statistical impact of the independent variables (Flexibility, Technical Support, and Organizational Support) on Employee Satisfaction based on the insignificant value of t which are 1.796, 0.953, and 1.776 where significant level  $\alpha > 0.05$  variables, while there is a significant statistical impact of the independent variables (Quality, Perceived Usefulness and Ease of Use) on Employee Satisfaction, where t equals to 5.395, 6.062 and 2.323 where significant level  $\alpha \leq 0.05$ . These results lead us to build the interpretation equation as follows:

**Employee Satisfaction**= 0.033 +0.259\* Quality +0.347\*Perceived Usefulness +0.134\* Ease of Use.

**Table (24)**  
**The E-Learning- Employee Satisfaction Model Coefficients**

	Unstandardized		Standardized		
	Coefficients		Coefficients		
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>T</b>	<b>Sig.</b>
(Constant)	.033	.188		.177	.860
Quality	.259	.048	.218	5.395	.000
Flexibility	.109	.061	.102	1.796	.073
Perceived Usefulness	.347	.057	.339	6.062	.000
Ease of Use	.134	.058	.127	2.323	.021
Technical Support	.058	.061	.050	.953	.341
Organizational Support	.088	.050	.082	1.776	.076

\* Statistically significant at the level of statistical significance ( $\alpha \leq 0.05$ )



### 4.3 Descriptive Analysis of the Benefits Obtained from Using E-Learning in the Palestinian Banking Sector.

This section is aimed to gather information about the Benefits Obtained from Using E-Learning in the Palestinian Banking Sector. Table (25) presents the results of the frequencies and percentages used in the analysis of these benefits (n= 466).

**Table (25)**

**The Benefits Obtained from Using E-Learning in the Palestinian Banking Sector**

<b>NO.</b>	<b>Benefits</b>	<b>Frequency</b>	<b>Percentage %</b>
1	Developing employee skills.	326	70%
2	Saving cost.	321	68.9%
3	Saving employee time.	306	65.7%
4	Better position in working.	96	20.6%
5	Increase the quality of work.	266	57.1%
6	Ensuring quick resolution of issues.	151	32.4%
7	Takes into consideration the individual trainees' differences.	96	20.6%

It appears from Table (25) that the majority of the responses of the study member show that using E-Learning in the Palestinian Banking Sector is useful in developing employee skills with a rate of (70%). while (68.9%) of the sample members show that using E-Learning in the Palestinian Banking Sector is useful in saving costs. In addition, about (65.7%) of them said that using E-Learning in the Palestinian Banking Sector is useful in Saving employee time. On the other hand, about (20.6%) of study members show that using E-Learning in the Palestinian Banking Sector is useful in a better position in working and takes into consideration the individual trainees' differences. The next Figure shows the Benefits Obtained from Using E-Learning in the Palestinian Banking Sector.

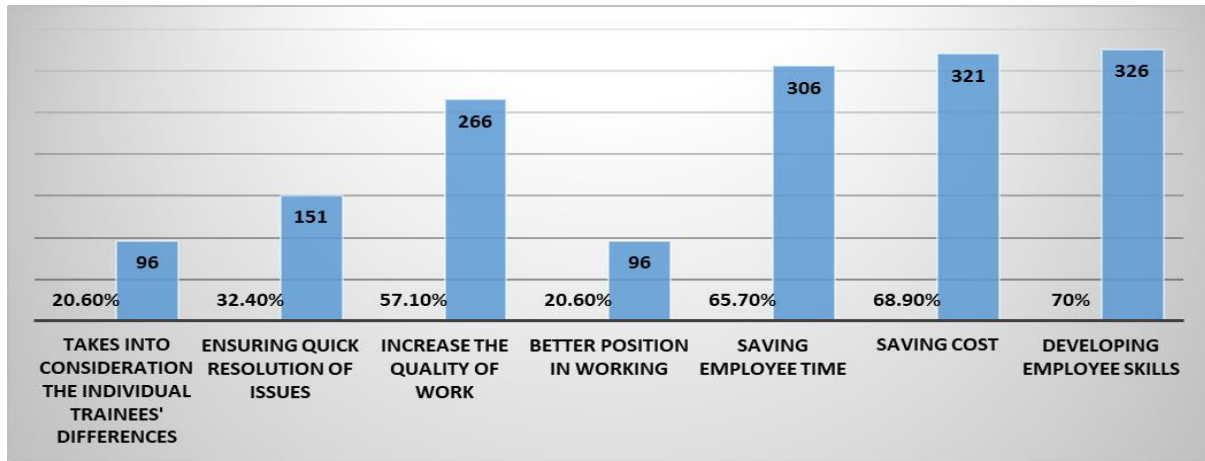


Figure (2): The Benefits Obtained from Using E-Learning in the Palestinian Banking Sector

#### 4.4 Descriptive Analysis of the Challenges Facing the Use of E-Learning in the Palestinian Banking Sector.

This section is aimed to gather information about the Challenges Facing the Use of E-Learning in the Palestinian Banking Sector. Table (26) presents the results of the frequencies and percentages used in the analysis of these benefits (n= 466).

**Table (26)**

**The Challenges Facing the Use of E-Learning in the Palestinian Banking Sector**

<b>NO.</b>	<b>Challenges</b>	<b>Frequency</b>	<b>Percentage %</b>
1	Employee Resistance to E-Learning.	251	53.9%
2	Lack of supportive culture in the bank.	125	26.8%
3	Lack of technical support.	165	35.4%
4	Insufficient computer and Internet skills.	226	48.5%
5	Trainers' knowledge and skills to teach.	131	28.1%
6	Concerns about privacy or confidentiality online.	166	35.6%
7	Lack of interaction with the trainers.	191	41%
8	Physical health barriers such as eye strain.	171	36.7%

It appears from Table (26) that the majority of the responses of the study member show that the most Challenges Facing the Use of E-Learning in the Palestinian Banking Sector are: Employee resistance to E-Learning, Insufficient computer, and Internet skills, and Lack of interaction with the trainers with the rate (53.9%, 48.5% and 41%). while (36,7%) of the sample members show that there are physical health barriers such as eye strain according to the use of E-Learning. On the other hand, about (26.8%) of study members show that there is a lack of supportive culture in the bank. The next Figure shows the Challenges Facing the Use of E-Learning in the Palestinian Banking Sector.

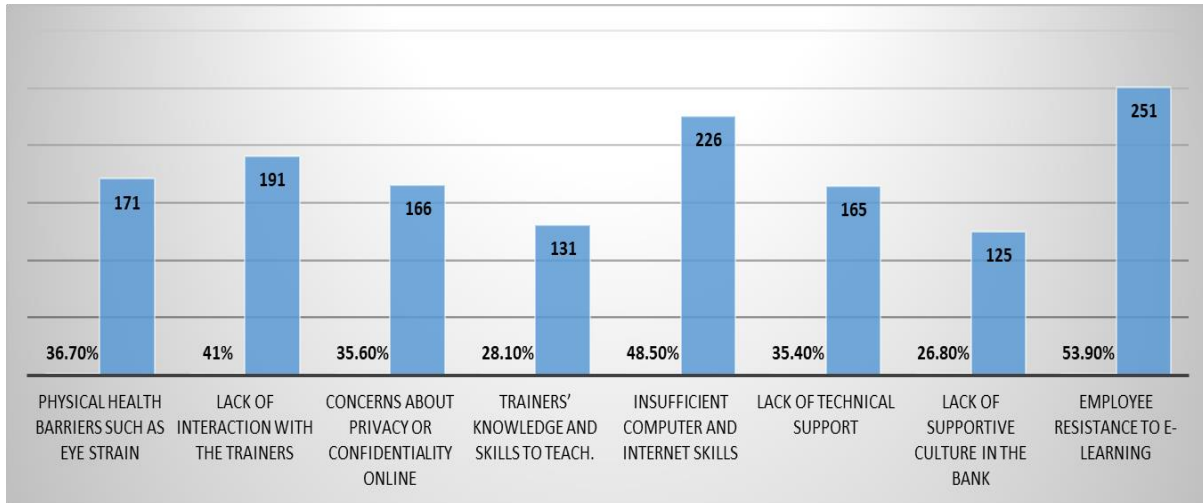


Figure (3): The Challenges Facing the Use of E-Learning in the Palestinian Banking Sector

#### **4.5 Descriptive Analysis of the most Developments in Learning Technologies that will have the Greatest Impact on Training Activities in the Next Five Years.**

This section is aimed to gather information about the Developments in Learning Technologies that will have the Greatest Impact on Training Activities in the Next Five Years. Table (27) presents the results of the frequencies and percentages used in the analysis of these benefits (n= 466).

**Table (27)**

**The most Developments in Learning Technologies will have the Greatest Impact on Training Activities in the Next Five Years**

<b>NO.</b>	<b>Options</b>	<b>Frequency</b>	<b>Percentage %</b>
1	Face-to-Face learning.	124	26.6%
2	E-Learning.	202	43.3%
3	Virtual Classrooms and Webinars.	140	30.0%

It appears from Table (27) that the Developments in Learning Technologies that will have the Greatest Impact on Training Activities in the Next Five Years are E-Learning with a rate of (43.3%), followed by Virtual Classrooms and Webinar and Face-to-Face learning with rates (30% and 26.6%). The next Figure shows that most Developments in Learning Technologies will have the Greatest Impact on Training Activities in the Next Five Years.

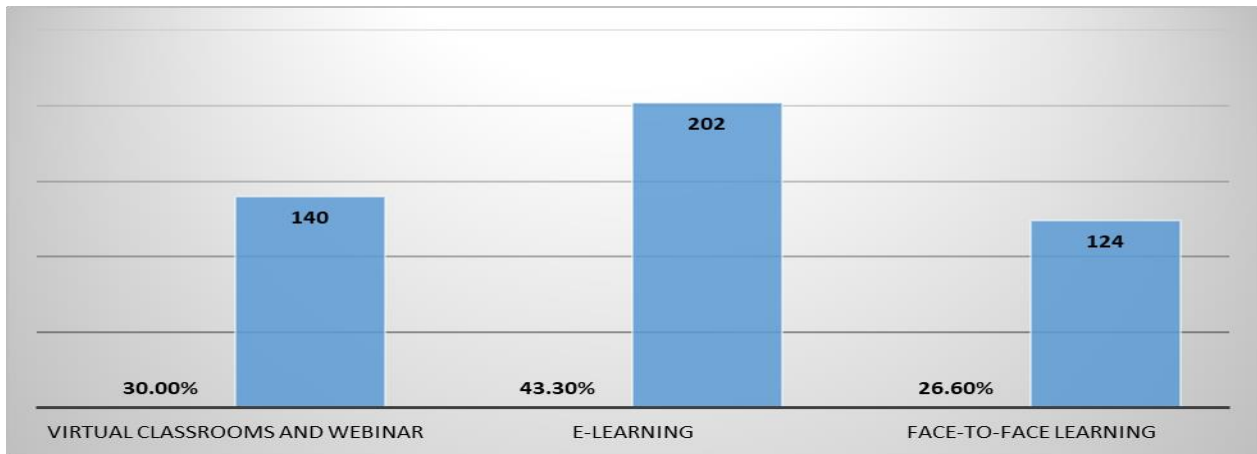


Figure (4): The most Developments in Learning Technologies will have the Greatest Impact on Training Activities in the Next Five Years

**Chapter Five**  
**Conclusions and Recommendations**

## **Chapter Five**

### **Conclusions and Recommendations**

#### **5.1 Introduction**

This study aimed to investigate the Impact of E-Learning was measured through (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance measured: (Efficiency, Effectiveness, Productivity, and Employee Satisfaction) in the Palestinian Banking Sector.

#### **5.2 Conclusions**

The results showed that the level of E-Learning scored a high level of respondents' agreement, with a mean of (3.98). This result is attributed to the awareness of the management of Palestinian banks of the importance of E-Learning through the computer network and the Internet to deliver the content of training programs to the trainees, and the E-Learning process appeared so that the trainees do not need to be present in a specific place. In addition to the belief of this administration in the importance of E-Learning and its role in improving the skills of employees in a specific area or developing a new skill faster, the electronic method helps to provide information from the employee's workplace or home. This is especially useful in times of work stress because the employee does not need to go to a particular place to learn. Moreover, the recent social and health conditions represented by the coronavirus pandemic have contributed to the necessity of adopting E-Learning patterns that are consistent with these changes. Therefore, E-Learning is considered the most appropriate tool to use.

In addition, the Employees' Performance captured a high level of respondents' agreement, with a mean of (3.90). This result is attributed to the commitment of employees in the Palestinian Banking Sector to their job duties, carrying out the work entrusted to them, bearing the responsibilities and burdens of the job, commitment to attendance, and leaving the specified dates, in addition to showing good values and morals within the Palestinian Banking Sector. In

addition to their carrying out the functional tasks, responsibilities, and duties required of them with the required efficiency and effectiveness during the specified period, taking into account their compliance with quantitative and qualitative specifications and in accordance with their qualifications, experiences, and capabilities.

Where the researcher used a set of statistical tests, including Cronbach's alpha, to measure reliability. The frequency and percentages to measure and describe the variables of the study sample, in addition to the descriptive measures :(arithmetic mean, standard deviation, rank, and level) and Pearson correlation, besides the multiple linear regression test to test hypotheses.

The analysis indicates that there is a positive relationship between E-Learning by its dimensions (Quality, Flexibility, Perceived Usefulness, Ease of Use, Technical Support, and Organizational Support) on Employees' Performance by its dimensions (Efficiency, Effectiveness, Productivity, Employees Satisfaction) in Palestinian Banking Sector. On the other hand, the results indicate there is no significant statistical impact of the independent variables (Flexibility and Ease of Use) on Efficiency. This result is attributed to the efficiency of the employee depending on their job competency, the professional environment, the organization's internal policies, management methods, and policies, professional information, the supervision process, and the laws of work. This can be explained by the fact that as employees acquire experience, knowledge, and awareness with a new system, the perceived ease of use becomes less efficient because the fears and anxiety of using modern devices gradually diminish as their awareness and knowledge of the new system increase, and these results are consistent with Purnomo's (2013) study that the perceived Ease of Use has no impact. In addition, there is a significant statistical impact of the independent variables (Quality, Perceived Usefulness, Technical Support, and Organizational Support) on Efficiency. This result is attributed to E-Learning saving a lot of time for the company, as it can be taken quickly with a controlled duration, and E-Learning courses are generally shorter than face-to-face training courses. This saves time because the employee will remain close to the company, and online learning is also scalable as it is possible to train the largest number of staff, and the more learners in the course, the faster the costs can be reduced. This result is consistent with Abdalmenems' (2019) study, which indicated that there is a strong relationship between E-Learning strategies and increasing the efficiency of its employees, justified by the fact that a well-studied budget commensurate with E-Learning needs in the



organization will work to motivate employees, which contributes to improving employee performance that will help achieve goals for the organization.

There is no significant statistical impact of the independent variable (Ease of Use) on Effectiveness. This result is attributed to the employee's effectiveness, which depends on the bank's organizational processes, material resources, data, and information, the employee's capabilities, motivation factors, knowledge of the nature of the job, the timing or period of evaluation, and the person in charge of the evaluation process. Besides, there is a significant statistical impact of the independent variables (Quality, Flexibility, Perceived Usefulness, Technical Support, and Organizational Support) on Effectiveness. This result is attributed to E-Learning being easy to access. E-Learning requires only a computer and a camera, in addition to good Internet, and the trainee only has to access the entity that provides the training to be able to register for a course and follow the dates and times of the lectures. Moreover, E-Learning saves a lot of time for the company, as it can be taken quickly with a controlled duration, and E-Learning courses are generally shorter than face-to-face training courses. This saves time because the employee will stay close to the company. This result is consistent with Azizy's (2021) study, which indicated that virtual training has a positive relationship with improving the performance and competencies of employees and achieving the company's goal. In addition to that, Bagram's (2009) study confirmed that E-Learning has a strong positive relationship with Employees' Performance, which contributes to the acquisition of knowledge and skills required for the job, improving creative capabilities, which contributes to improving the employee's effectiveness, which leads to achieving the objectives of the organization; In addition, This finding is consistent with Makonjio's (2019) study, which indicated that E-Learning has a significant impact and an effective role in improving employee performance. In addition, these results supported VanThinh's (2016) study of the existence of a positive relationship between E-Learning and Employees' Performance if E-Learning has been supported and encouraged by the surrounding environment, whether managers, supervisors, or technicians, which helps motivate employees and encourages them to participate in E-Learning, which contributes to acquiring knowledge and refining staff skills, in addition to flexibility in time and easy access to training materials anywhere and anytime.

There is no significant statistical impact of the independent variables (Ease of Use and Organizational Support) on Productivity. This result is attributed to the fact that employees' productivity depends on obtaining information that contributes to the development of their skills and abilities. This result contradicts Kuzina's (2014) study, where the effect of organizational support on productivity justifies that organizational support is of great importance in increasing employee productivity, which is reflected in improving their performance. The more employees participate in the decision-making process and choose the appropriate training programs, this leads to increased trust between employees and senior management, which reduces resistance to the use of E-Learning because the cause of resistance is fear and anxiety about using a new system, and this is a natural concern that employees face when entering a new system. Therefore, the importance of employee participation in the decision-making process emerges, explaining the importance of E-Learning and its necessity in increasing productivity, which leads to increased confidence between employees and senior management that the training courses will be appropriate according to the needs of employees and achieve the desired goals, which is reflected in the improvement of employee performance and achieve the competitive advantage of the organization. Moreover, there is a significant statistical impact of the independent variables (Quality, Flexibility, Perceived Usefulness, and Technical Support) on Productivity. This result is attributed to E-Learning saving money for the employee and the company; the learning time is faster for the employee; the employee stays close to his workplace and can be reached on time for employees more easily; and it also provides employees with continuous access to key resources. Moreover, E-Learning provides a risk-free work environment for the employee's benefit and allows global collaboration between companies and employees. E-Learning is flexible with the employee's personal life, providing employees and managers with timely feedback, and it is standardized and comprehensive for all employees. These results are consistent with Alfarsy's (2019) study, which indicated that E-Learning is flexible and saves time, and training materials are easily accessible and can be memorized. The results of the study are also consistent with the results of Subramaniam's (2019) study, which proved that quality has a positive impact on improving employees' performance by increasing employees' productivity, which contributes to the achievement of organizational goals. In addition, these results were confirmed by the results of Bhardwaj's (2019) study, which agreed that E-Learning has a

positive impact on the productivity of employees, which increases their productivity and contributes to achieving a competitive advantage.

There is no significant statistical impact of the independent variables (Flexibility, Technical Support, and Organizational Support) on Employee Satisfaction; this result is attributed to E-Learning saving time and effort and ensuring that the employee carries out his responsibilities within the bank. This does not affect employee satisfaction as much as it provides good-quality E-Learning for the employee. These results contradict Lin's (2019) study, which confirmed the existence of a relationship between E-Learning and employee satisfaction, as the presence of technical support and organizational support for E-Learning in the organization would motivate employees to use E-Learning, which contributes to increasing their employees' satisfaction. Moreover, there is a significant statistical impact of the independent variables (Quality, Perceived Usefulness, and Ease of Use) on Employees' Satisfaction. This result is attributed to E-Learning systems supporting the needs of the new workforce and stimulating employee participation, which contributes to the employees' feeling of satisfaction with themselves and their work as a result of the many positives provided by E-Learning, such as access to training materials, adding and modifying materials, meeting work needs or changing trends, and employees contributing to content themselves. All of this adds to the continuous learning and competencies of the workforce. In addition to being familiar with work systems and methods, employees already use these basic systems and methods outside of work. They understand technology and make it an integral part of their lives. As a result, they have increased expectations about the systems employers use. E-Learning also provides the possibility of contacting subject matter experts and communicating with all bank branches and the regional management of each bank, whether they are local banks or foreign banks, to benefit from their expertise, immediate cooperation, and exchange of best practices. Therefore, these results agreed with Thanji's (2018) study, which showed a positive relationship between quality and employee satisfaction, in addition to a strong effect between perceived usefulness and ease of use on employee satisfaction, which are two of the most significant factors influencing employees' satisfaction with E-Learning. The results of the study agreed with Dash's (2022) study, where there was a positive effect between perceived usefulness and ease of use on employee satisfaction.

### **5.3 Managerial Implications**

Based on the results of the study, the management of banks in Palestine must set a periodic schedule as part of its policies to invest in human capital to ensure that employees learn using E-Learning through various electronic technologies and provide opportunities for employees to participate effectively achieve knowledge gains, skills, and new ideas to meet work requirements and challenges at the Palestinian commercial banks. Managers should set E-Learning goals as a broad first step and identify the new skills they expect employees to acquire after E-Learning is completed. In addition, develop a flexible E-Learning strategy to serve as the map that you use to lead the process of developing E-Learning materials and how to deliver content to employees. After setting clear goals for E-Learning, the bank will be able to determine the extent to which employees gain the additional capabilities for which the E-Learning is designed. However, other indicators can be measured to study the effectiveness of E-Learning, such as the number of sessions recorded, E-Learning modules completed, test results, time taken to complete certain E-Learning courses or web pages, and so on. Subject matter experts and digital content partners will help measure the right indicators to identify the level of performance of the E-Learning content and the extent to which it has to be altered in the future.

## 5.4 Recommendations

1. Raise awareness and realization of the benefits of E-Learning because it improves the Employees' Performance through the acquisition of knowledge and skills required, professionalism, and flexibility; reduces costs (including travel, printed learning materials, trainers' salaries, etc.); and increases employee satisfaction, efficiency, effectiveness, and productivity, which are reflected in the achievement of the bank's sector objectives and its survival, as well as its competitive advantage.
2. Decision-makers must provide organizational support (moral or material) because of its invaluable importance, in addition to constantly encouraging employees to use E-Learning and rewarding them for that, providing them with incentives, and encouraging them to attend conferences and seminars for their career development, because this helps them to realize and be aware of the rapid technological progress and all that is modern and developed in the field of their jobs, which leads to an increase in employee productivity, improving their performance, and achieving a competitive advantage.
3. Establishing the required infrastructure for employing information and communication technologies and transitioning to high-efficiency E-Learning in the Palestinian Banking Sector.
4. Providing instruments compatible with modernity and speed, including the Internet, an electricity network capable of continuously delivering electric current, computers, digital learning platforms, operating software, evaluation applications, and electronic libraries.
5. Allocating a budget for the E-Learning process and working to rehabilitate wired and wireless communication networks to attract and urge all employees to use E-Learning continuously and increasingly to achieve better employee performance in the era of rapid digitization.
6. The existence of well-thought-out plans and programs for the application of E-Learning, as well as benefiting from the experiences of leading institutions in this field, in addition to the commitment of service providers to improve Internet speed to obtain high quality, in order to enable employees to make optimal use of the E-Learning system.

7. Providing technical cadres specialized in operating and developing electronic networks and following up on their problems to ensure quality and continuity.
8. Improving the response speed of technical support services for employees when needed while providing direct and quick lines to respond to their inquiries contributes to solving problems related to the E-Learning system, which leads to acceptance and interest and an increase in the number of employees who use E-Learning.
9. Human resource managers in the Palestinian Banking Sector should develop strategies for supervision, guidance, and promotion, as well as learning software that provides suitable applications for managing E-Learning, as well as control and follow-up systems for electronic networks, all of which contribute to employees acquiring knowledge and improving capabilities, as well as increasing employee skills, which positively affects enhancing their performance, in addition to subjecting trainers to professional training courses and keeping them constantly up-to-date with everything modern and developed to increase their professionalism, qualification, knowledge, and skills to deliver training courses that include professional and high-quality training content smoothly, efficiently, effectively, and professionally, which contributes to banking sector having a competitive advantage.
10. Employees' participation in the decision-making process and the selection of appropriate training programs for them according to their needs, in order to overcome the challenges facing E-Learning, that revolve around employee resistance to using E-Learning, as their participation in this leads to increased trust between employees and human resource managers, which contributes to reducing the resistance of use of E-Learning because the cause of resistance is fear and anxiety of using a new system, and this is a natural source of anxiety faced by employees when they enter a new system, which leads to alleviating employees' fears as well as increasing confidence among them that the training courses will be appropriate for them based on their needs to achieve the desired goals of the courses training.
11. The trainers must constantly develop the training content in accordance with the needs of the employees to ensure the quality, richness, variety, and flexibility of the content of the training

programs. Furthermore, employees should undergo pre-qualification and orientation training courses to learn how to use the E-Learning system efficiently and effectively.

12. Training programs should be interactive and include communication tools such as chat rooms, audio and video conferencing, whiteboards, and Email lists.

13. Work on creating and digitizing a high-quality content bank characterized by ease, accuracy, and attractiveness, including audio-visual training programs and simulation programs, in addition to enabling employees to access the content bank around the clock, seven days a week, anywhere, anytime, and an optional training program according to their needs.

## **5.5 Limitations**

1. This study adopted a quantitative approach due to the bank's policy difficulty in conducting a qualitative approach, so the research could have more validity if it adopted mixed methods of a qualitative approach (interviews) and a quantitative approach (questionnaires) to investigate the Impact of E-Learning on Employees' Performance in the Palestinian Banking Sector.

2. This study used only cross-sectional data collected at the same time, while if longitudinal data had been used, the study could have been generalized better.

## **5.6 Future Studies**

The researcher recommends conducting the following studies in the future:

1. Determine other variables that may impact the use of E-Learning in Palestinian commercial banks.

2. Employing E-Learning to achieve quality standards in Palestinian commercial banks.

3. E-management and its impact on E-Learning: a field study in Palestinian commercial banks

4. Determining the training needs necessary to develop the E-Learning process in Palestinian banks.

## References

- Abdalmenem, S. A., Abu-Naser, S. S., Al Shobaki, M. J., & Abu Amuna, Y. M. (2019). Relationship between E-Learning Strategies and Educational Performance Efficiency in Universities from Senior Management Point of View.
- AB. (2023). ArabBank Palestine. <https://www.arabbank.ps>
- Abdalmenem, S. A., Abu-Naser, Samy S, Al Shobaki, Mazen J, Abu Amuna, Youssef M. (2019). Relationship between E-Learning Strategies and Educational Performance Efficiency in Universities from Senior Management Point of View.
- Abdel-Gadir, S. E. M., AL-Jahwari, Nabila Salim Hamed %J International Journal of Managerial Studies Research. (2020). Impact of Training on Employees' Performance: A Case Study of Selected Private Sectors Companies in Oman.
- Achmad, Y. F., Raista, Rizky Fernando, Harahap, Parlindungan. (2020). Evaluation of Acceptance of E-Learning Information System Using TAM (Technology Acceptance Model) at Esa Unggul University.
- Afolabi, O. A., Segun, Salami Sarafadeen %J International Business Education Journal. (2021). Web-Based Training in Business Education: Tool for Effective Teaching in the Post-Covid-19 Era in Kwara State, Nigeria. *14*(1), 71-79.
- Agrawal, S., De Smet, Aaron, Lacroix, Sébastien, Reich, Angelika %J McKinsey Insights. (2020). To Emerge Stronger from The COVID-19 Crisis, Companies Should Start Reskilling Their Workforces Now.
- Aisah, S., Junianti, Anisa, Lestari, Sonya Pita, Faris, Riyan Mirdan, Juniansyah, M Andri %J Nusantara Science Technology Proceedings. (2021). The Role of Training Management in The Development of Human Resources in The Era of Industrial Revolution 4.0. 170-175.
- Akpoviro, K. S. (2022). Moderating Influence of E-Learning on Employee Training and Development (A Study Of Kwara State University Nigeria).
- Al-Mamary, Y. H., Shamsuddin, Alina, Abdul Hamid, Nor Aziati, Al-Maamari, Mohammed Hasan J Journal of Digital Information Management. (2015). Adoption of Management



- Information Systems in Context of Yemeni Organizations: A Structural Equation Modeling Approach. *13*(6).
- Alemu, T. (2020). The Effect of Training Practice on Employee Performance; Case of Commercial Bank of Ethiopia ST. Mary's University].
- Alfarsi, G., Sulaiman, Hidayahbte, Tawafak, Ragad M, Malik, S, Jabbar, Jasiya, Alsidiri, Abir. (2019). A Study of Learning Management System with E-Learning. In: Academic Press.
- Alqabbani, S., Almuwais, Afrah, Benajiba, Nada, Almoayad, Fatmah %J E-Learning, digital media. (2021). Readiness Towards Emergency Shifting to Remote Learning During COVID-19 Pandemic Among University Instructors. *18*(5), 460-479.
- Arafah, L. N., Susita, Dewi, Wolor, Christian Wiradendi J The International Journal of Social Sciences World. (2022). Effect of E-Learning training methods and instructor competencies on the effectiveness of training mediated by training motivation. *4*(1), 204-215.
- Arkorful, V. (2014). The role of E-Learning, advantages, and disadvantages of its adoption in higher education. *2*, 396.
- Armstrong, M. (2020). Human resource management practice. Kogan's page was limited.
- Armstrong, M. J. L. K. p. 1. (2006). Human resource management practice.
- Asif, F. M., Roci, Malvina, Lieder, Michael, Rashid, Amir, Štimulak, Mitja, Halvordsson, Erik, de Bruijckere, Ruud %J Procedia Cirp. (2018). A practical ICT framework for the transition to circular manufacturing systems. *72*, 598-602.
- Azizy, R., J Jurnal Akuntansi, Manajemen dan Ekonomi. (2021). A Virtual Training on Competency Improvement Bank Mandiri Employees In Covid Pandemic 19. *22*(4), 26-29.
- Bagram, A., Mohsin. (2009). Effectiveness of E-Learning and its Impact on Performance of Employees. *Interdisciplinary Journal of Contemporary Research in Business*, *1*, 136-148.
- Bashiruddin, B., Abdul, Naeem, Muhammad. (2010). Barriers to the implementation of an E-Learning system with a focus on organizational culture. In.
- Baskaran, S., Lay, Ho Sze, Ming, Beh Sze, Mahadi, Nomahaza J International Journal of Academic Research in Economics Management Science. (2020). Technology adoption and employee's job performance: an empirical investigation. *9*(1), 78-105.

- Bedwell, W. L., Salas, Eduardo J International Journal of Training Development. (2010).  
Computer-based training: capitalizing on lessons learned. *14*(3), 239-249.
- Bezovski, Z., Poorani, Subitcha. (2016). The Evolution of E-Learning and New Trends.
- Bhardwaj, A. (2019). Employee Training and Development through E-Learning.
- Bhatia, S. J. P., Education Journal. (2021). Training and Employee Performance: Empirical Study on Durgapur Steel Plant. *58*(3), 1501-1521.
- Bhattarai, S. (2019). *Training and Development and its Effect on Employee Performance in Nepal Rastra Banka Central Department of Management*].
- Bitzer, D. L., Slottow, HG. (1966). The plasma display panel: a digitally addressable display with inherent memory. Proceedings of the November 7-10, 1966, fall joint computer conference,
- Bitzer, D. L. J. T. i. P. (1973). Computer-assisted education. *12*(3), 173-178.
- Bock, A., Kniha, Kristian, Goloborodko, Evgeny, Lemos, Martin, Rittich, Anne Barbara, Möhlhenrich, Stephan Christian, Rafai, Nicole, Hölzle, Frank, Modabber, Ali %J BMC medical education. (2021). Effectiveness of face-to-face blended and E-Learning in teaching the application of local anesthesia: a randomized study. *21*(1), 1-8.
- BoJ. (2023). Bank of Jordan <https://bankofjordan.com.ps/ar/boj-rooted-in-growth>
- BoP. (2023). Bank of Palestine <https://bop.ps/en/about/our-history>
- Bozkurt, A. (2019). From distance education to open and distance learning: A holistic evaluation of history, definitions, and theories. In *Handbook of Research on Learning in the Age of Transhumanism* (pp. 252-273). IGI Global.
- Burhan Ismael, N., Jabbar Othman, Baban, Gardi, Bayar, Abdalla Hamza, Pshdar, Sorguli, Sarhang, Mahmood Aziz, Hassan, Ali Ahmed, Shahla, Sabir, Bawan Yassin, Ali, Bayad Jamal, Anwar, Govind %J Ismael, NB, Othman, BJ, Gardi, B., Hamza, PA, Sorguli, S., Aziz, HM, Ahmed, SA, Sabir, BY, Ali, BJ, Anwar, G.. The Role of Training and Development on Organizational effectiveness. International Journal of Engineering, Business Management. (2021). The Role of Training and Development on Organizational Effectiveness. *5*(3), 15-24.
- CAB. (2023). Cairo Amman Bank. <https://www.cab.ps/profile>
- Cação, M. d. R. S. C. A. (2010). *Perceptions of quality in E-Learning: a case study*

- Čevra, B., Amra, Zaimović, Tarik, Turulja, Lejla J International Journal of Emerging Technologies in Learning. (2022). E-Learning in Organizations: Factors Affecting Individual Job Performances. *17*(2), 189-208.
- Chatti, H., Hadoussa, Slim %J Engineering, Technology, Applied Science Research. (2021). Factors Affecting the Adoption of E-Learning Technology by Students during the COVID-19 Quarantine Period: The Application of the UTAUT Model. *11*(2), 6993-7000.
- Chen, T., Hao, Shuaikang, Ding, Kaifang, Feng, Xiaodong, Li, Gendao, Liang, Xiao %J Employee Relations: The International Journal. (2020). The impact of organizational support on employee performance.
- Cheng, W.-y. T., Chen, Chen-cheng J International Journal of E-Education, E-Business, E-Management, E-Learning. (2015). The impact of E-Learning on workplace on-the-job training. *5*(4), 212.
- Cheng, Y.-M. J. K. (2022). Can tasks and learning be balanced? A dual-pathway model of cloud-based E-Learning continuance intention and performance outcomes. *51*(1), 210-240.
- Chrysafiadi, K., Virvou, Maria, Tsihrintzis, George A J Electronics. (2023). A Fuzzy-Based Evaluation of E-Learning Acceptance and Effectiveness by Computer Science Students in Greece in the Period of COVID-19. *12*(2), 428.
- Cross, J. (2004). An informal history of eLearning. *on The Horizon*, *12*, 103-110.  
<https://doi.org/10.1108/10748120410555340>
- Dash, G. (2022). Pandemic Induced E-Learning and the Impact on the Stakeholders: Mediating Role of Satisfaction and Moderating Role of Choice.
- Davis, F., Davis, Fred. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*, 319.  
<https://doi.org/10.2307/249008>
- Dewi, & Anak Agung Made Dwitya, S., I Negah, Yuesti, Anik %J International Journal of Sustainability, Education, Global Creative Economic. (2021). Role of Organizational Commitment on Employee Performance. *4*(1), 17-28.
- Dharmila, S. (2021). The impact of E-Learning on employee performance in corporate companies

- Duggal, S. J. A. A. o. O. U. J. (2022). Factors impacting acceptance of E-Learning in India: learners' perspective. (ahead-of-print).
- El-Ashry, A., El-Din, Amira Nasser, Khairy, Kariman, Soliman, Peter, Beram, Reham, Nosier, Shereen J Anatolian Journal of Education. (2022). Investigating critical success factors of E-Learning: Different stakeholders' perspectives. 7(2), 61-84.
- Elnahass, M., Trinh, Vu Quang, Li, Teng J Journal of International Financial Markets, Institutions Money. (2021). Global banking stability in the shadow of the Covid-19 outbreak. 72, 101322.
- Elneel, D. A. H., Kahtan, Hasan, Fakharudin, Abdul Sahli, Abdulhak, Mansoor, Al-Ahmad, Ahmad Salah, Alzoubi, Yehia Ibrahim J Journal of King Saud University-Science. (2023). The Factors Influenced by Stakeholder Identification in E-Learning Systems: A Survey. 102566.
- Elsayed, A. A. E., Saad, Mohamed J Journal of Business. (2023). Determinants of Intention to Use Online Training Based on the TAM Model in Telecom Egypt Company. 11(1), 1-21.
- Epignosis. (2014). E-Learning Concepts, Trends, Applications. *digital ebook*.
- Evangelin, K. R. J. J. o. C. R. (2020). Impact of Students on E-Learning during COVID-19. 7(11), 1737-1739.
- Fadeel, M. (2014). *The Effect of the Psyche on Performance in Business Establishments Bank of Khartoum, Bank of Yemen Islamic Master Thesis*].
- Fleming, J., Becker, Karen, Newton, Cameron J Education+ Training. (2017). Factors for successful E-Learning: does age matter? , 59(1), 76-89.
- Fülöp, M. T., Breaz, Teodora Odett, Topor, Ioan Dan, Ionescu, Constantin Aurelian, Dragolea, Larisa-Loredana %J Frontiers in Psychology. (2023). Challenges and perceptions of E-Learning for educational sustainability in the “new normality era”. 14.
- Gavril, R. M., Kiehne, J., Hell, C. R., & Kirschner, C. (2017). Impact assessment on the performance of E-Learning in corporate training programs in the context of globalization. Proceedings of the International Conference on Business Excellence,
- Ghosh, S., Muduli, Ashutosh, Pingle, Sameer. (2021). Role of E-Learning technology and culture on learning agility: An empirical evidence. *Human Systems Management*, 40, 235-248. <https://doi.org/10.3233/HSM-201028>

- Gu, J. (2022). Development History and Theoretical Basis of Distance Education. 2022 2nd International Conference on Education, Information Management and Service Science (EIMSS 2022),
- Hair, J. F., Ringle, C. M., & Sarstedt, M. . (2013). Partial least squares structural equation modeling: Rigorous applications, better results, and higher acceptance. *Long range planning*, 46(1-2), 1-12.
- Hamad, Y. A., Azeez, Noor Dheyaa J resmilitaris. (2023). Electronic Learning and its Implications on Job Burnout: An Exploratory Study Depending on Opinions of a Sample of Faculty Members at the University of Mosul. *13(1)*, 2503-2514.
- Hamouche, S. J. J. o. M. (2021). Human Resource Management and the COVID-19 Crisis: Implications, Challenges, Opportunities, and Future Organizational Directions. 1-16.
- Hanaysha, J. J. I. J. o. L. (2016). Testing The Effects of Employee Empowerment, Teamwork, and Employee Training on Employee Productivity in the Higher Education Sector. *6(1)*, 164-178.
- Hankir, D., Haspolat, Nicosia, BERBEROGLU, Aysen %J *European Journal of Business Management*. (2020). The Effect of Compensation, Training, Knowledge Transfer, and Creativity Culture on Employee Performance within the hotel industry in Lebanon. *12(15)*, 34-42.
- Hasibuan, J. S., Lesmana, M Taufik,Sari, Ainun Permata %J *International Journal of Educational Review, Law,Social Sciences*. (2021). Employee Performance Studies: Antecedents of Work Discipline, Work Motivation, and Job Training. *1(2)*, 117-128.
- HB. (2023). Housing Bank. <https://hbtf.ps/ar/about-the-housing-bank>
- Hong, S., Thong, James YLTam, Kar Yan J *Decision support systems*. (2006). Understanding continued information technology usage behavior: A comparison of three models in the context of mobile Internet. *42(3)*, 1819-1834.
- HRW. (2023). Coronavirus Human Rights Watch <https://www.hrw.org/tag/coronavirus>
- Hu, P. J., Chau, Patrick YK, Sheng, Olivia R Liu, Tam, Kar Yan %J *Journal of management information systems*. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *16(2)*, 91-112.

- Ibrahim, D. S., Suharto, Rahcmad Budi, Zainurossalamia, Saida, Samarinda, East Kalimantan J Productivity management. (2020). The Important Role of Employee Satisfaction to Support Employee Performance Through Quitting Intention. 25, 682-697.
- Isaac, O., Abdullah, Zaini, Ramayah, T, Mutahar, Ahmed M J Science International. (2017). Internet Usage within Government Institutions in Yemen: An Extended Technology Acceptance Model (Tam) with Internet Self-Efficacy and Performance Impact. 29(4), 737-747.
- Islam, M. J. I. E. S. (2011). Effect of demographic factors on E-Learning effectiveness in a higher learning Institution in Malaysia. 4(1), 112-121.
- JAB. (2023). Jordan Ahli Bank. <https://www.ahli.com.ps>
- Jaoua, F., Almurad, Hussein M., Elshaer, Ibrahim A., Mohamed, Elsayed S. (2022). E-Learning Success Model in the Context of COVID-19 Pandemic in Higher Educational Institutions. *International journal of environmental research and public health*, 19(5), 2865. <https://doi.org/10.3390/ijerph19052865>
- Joan, D. J. J. O. S. E. T. (2013). Flexible Learning as New Learning Design in Classroom Process to Promote Quality Education. 9(1), 37-42.
- Kamoliddinova, V. F. (2021). The Importance of E-Learning Education. E-Conference Globe,
- Kemal, H. (2020). *Effectiveness of Short-Term Training on Employee Performance: The Case of Key Enterprise Customer Service Advisors at Ethio Telecom ST. Mary's University*].
- Khan, M. A., Nabi, Mohammed Kamalun, Khojah, Maysoon, Tahir, Muhammad %J Sustainability. (2021). Students' Perception Towards E-Learning During COVID-19 Pandemic in India: an Empirical Study. 13(1), 57.
- Kramer, H. (2007). *Measuring the effect of E-Learning on job performance*. Nova Southeastern University.
- Kumar, B., Sujit Wotto, Marguerite, Belanger, Paul %J E-Learning, Digital Media. (2018). E-Learning, M-learning, and D-learning: Conceptual Definition and Comparative Analysis. 15(4), 191-216.
- Kuruppu, C., Kavirathne, CS, Karunarathna, N %J Global Journal of Management, Business Research. (2021). The Impact of Training on Employee Performance in a Selected Apparel Sector Organization in Sri Lanka.

- Lee, Y. W., Dorasamy, Magiswary, Ahmad, Abdul Aziz Bin, Jambulingam, Manimekalai, Yeap, Peik Foong, Harun, Sharbani %J FResearch. (2021). Synchronous Online Learning During Movement Control Order in Higher Education Institutions: A Systematic Review. *10(1056)*, 1056.
- Li, Q., Li, Zihao, Han, Jie J Education Information Technologies. (2021). A Hybrid Learning Pedagogy for Surmounting the Challenges of the COVID-19 Pandemic in the Performing Arts Education. 1-21.
- Li, Y. Y., Jiahui, Wu, Meifen, Wang, Jiaqi, Long, Ruyin J Sustainability. (2021). A Comprehensive Model of the Relationship between Miners' Work Commitment, Cultural Emotion, and Unemployment Risk Perception. *13(5)*, 2995.
- Lin, C.-Y., Huang, Chung-Kai, Zhang, Hao J International Journal of Human-Computer Interaction. (2019). Enhancing employee job satisfaction via E-Learning: the mediating role of an organizational learning culture. *35(7)*, 584-595.
- Lowenthal, P., Dunlap, Joanna, Snelson, Chareen %J Online Learning Journal. (2017). Live Synchronous Web Meetings in Asynchronous Online Courses: Reconceptualizing Virtual Office Hours. *21(4)*.
- Lu, D. J. F. i. P. (2021). Students' Perceptions of a Blended Learning Environment to Promote Critical Thinking. *12*, 2496.
- Maatuk, A. M., Elberkawi, Ebitisam K, Aljawarneh, Shadi, Rashaideh, Hasan, Alharbi, Hadeel %J Journal of Computing in Higher Education. (2021). The COVID-19 Pandemic and E-Learning: Challenges and Opportunities from the Perspective of Students and Instructors. 1-18.
- Makonjio, F., Odera, Peter, Warentho, Tobias O J International Academic Journal of Human Resource, Business Administration. (2019). Effect of E-Learning programs on staff performance in commercial banks in Kakamega county. *3(7)*, 140-161.
- Malureanu, A., Panisoara, Georgeta, Lazar, Iulia J Sustainability. (2021). The relationship between self-confidence, self-efficacy, grit, usefulness, and ease of use of E-learning platforms in corporate training during the COVID-19 pandemic. *13(12)*, 6633.
- Mamatha, S., Honnali, Mr Panduranganagouda. (2019). Employees Attitude towards E-Learning in Banking Sector-An Empirical Study of Shivamogga District.

- Mamy, M. M. B., Shabbir, Rubaiyat, Hasan, Md Zahid %J Journal of Economics, Management Trade. (2020). The Influence of Training and Development on Employee Performance: A Study on Garments Sector, Dhaka Bangladesh. 44-58.
- Manou, E., Lazari, Evgenia-Charikleia, Thomopoulou, Georgia-Eleni, Agrogiannis, Georgios, Kavantzias, Nikolaos, Lazaris, Andreas C %J Advances in Medical Education Practice. (2021). Participation and Interactivity in Synchronous E-Learning Pathology Course During the COVID-19 Pandemic. *12*, 1081.
- Marwa, T. (2021). Islamic Human Resource Management, Organizational Commitment, and Employee Performance A Case Study on Sharia Bank in South Sumatra (Similarity).
- Masie, E., J ASTD Handbook for Workplace Learning Professionals, Association for Talent Development: Alexandria, VA, USA. (2008). What is the meaning of the e in E-Learning? 227.
- McIlwraith, A. (2021). *Information Security and Employee Behaviour: How to Reduce Risk Through Employee Education, Training and Awareness*. Routledge.
- Meenakshi Thanji, S. V., Management Studies, Vels University, Created and maintained by INFLIBNET Centre. (2018). Effectiveness of Online Learning Methods Offered by Educational Institutions A Learners Perspective. *The Shodhganga@INFLIBNET Centre provides a platform for research students to deposit their Ph.D. theses and make them available to the entire scholarly community in open access.*  
<http://hdl.handle.net/10603/274565>
- Mingyue, F., Krampah-Nkoom, Anastasia, Manu, Blessing Dwumah, Oduro, Daniel %J Journal of Arts, Humanities. (2020). Evaluating the Effects of Online Training on Employee Self-Efficacy. A Dilemma from the Banking Industry in Ghana. *9(2)*, 01-16.
- Mohammadyari, S., Singh, Harminder J Computers Education. (2015). Understanding the effect of E-Learning on individual performance: The role of digital literacy. *82*, 11-25.
- Moradimokhles, H., Hwang, Gwo-Jen %J Interactive Learning Environments. (2020). The Effect of Online Vs. Blended Learning in Developing English Language Skills by Nursing Student: An Experimental Study. 1-10.
- Mustapha, A. I. J. A. I. A. I. J. o. A. H. (2019). The Impact of Manpower Development on Organizational Efficiency in National Inland Waterways Authority of Nigeria (NIWA). *8(1)*, 102-114.



- Naeem, M., Jawaid, Syed Tehseen, Mustafa, Sadaf. (2022). Evolution of modified TAM associated with e-banking services adoption: a systematic PRISMA review from 1975 to 2021. *Journal of Modelling in Management, ahead-of-print*(ahead-of-print).  
<https://doi.org/10.1108/JM2-10-2021-0251>
- Nagy, A. (2005). The impact of E-Learning. In *E-Content* (pp. 79-96). Springer.
- Nasrabadi, K. E., Kaffashpoor, Azar %J International Journal of Procurement Management. (2021). The Impact of E-Learning Through Social Networks on Performance of Employees in Iran's Customs. *14*(5), 596-611.
- Nassazi, A. (2013). Effects of Training on Employee Performance.: Evidence from Uganda.
- Natarajan, M. J. J. o. L., Information Communication Technology. (2015). Impact of E-Learning in Virtual University Environment. *4*(1-2), 65-72.
- Navimipour, N. J., Zareie, Batool J Computers in Human Behavior. (2015). A model for assessing the impact of E-Learning systems on employees' satisfaction. *53*, 475-485.
- Neway, G. (2019). *The Effect of Training and Development on Employees Performance in the Case of Renaissance International School Share Company st. mary's University*].
- Nguyen, M. H., Ngo, Khanh Huyen %J International Journal of Education Knowledge Management. (2021). Evaluating the Effectiveness of Internal Training of Commercial Banks in Vietnam. *4*(5), 1-14.
- Niaz, S., Memon, Shumaila, Khokhar, Samina %J International Research Journal of ArtsHumanities. (2021). Development of E-Learning: A Historical Review with Global Perspective. *49*(49).
- Nicholson, P. (2007). A History of E-Learning. In B. Fernández-Manjón, J. M. Sánchez-Pérez, J. A. Gómez-Pulido, M. A. Vega-Rodríguez, & J. Bravo-Rodríguez (Eds.), *Computers and Education: E-Learning, from Theory to Practice* (pp. 1-11). Springer Netherlands.  
[https://doi.org/10.1007/978-1-4020-4914-9\\_1](https://doi.org/10.1007/978-1-4020-4914-9_1)
- Nurhayati, H., Rachmawati, R. (2021). Measuring the Effectiveness of E-Learning in Public Sector. 18th International Symposium on Management (INSYMA 2021),
- Ochoa, M. J. I. J. o. B. S. S. (2018). The Importance of Training in the Knowledge Era: a Comprehensive Vision. *9*(4).
- Okeke, F., Mbanusi, Ce, Okonkwo, Kc, Anyagafu, Ic. (2021). Revamping computer education through sustainable and secure E-Learning innovations and compliance.

- Perera, R., Abeysekera, Nalin J Asian Association of Open Universities Journal. (2022). Factors affecting learners' perception of E-Learning during the COVID-19 pandemic. (ahead-of-print).
- PIB. (2023). Palestine Investment Bank. <https://pibbank.com/about>
- Polaris. (2023). E-Learning Market Size Global Report, 2022 - 2030. <https://www.polarismarketresearch.com/industry-analysis/E-Learning-market>
- Prayuda, I., Yunita, Lidia %J Journal of Economics Business. (2021). The Effect of Selection and Training on Employee Performance of Ptpn Iii Giting Nest Gardens. *1*(2), 201-208.
- Pribadi, T., Effendi, Ihsan, Suryani, Wan J Budapest International Research, Critics Institute: Humanities, Social Sciences. (2020). The Effect of Spirit at Work and Compensation Toward Employee Performance in Pt. Arista Auto Lestari Medan. *3*(1), 247-254.
- Purnomo, S. H., Yi-Hsuan J Information Development. (2013). E-Learning adoption in the banking workplace in Indonesia: An empirical study. *29*(2), 138-153.
- QB. (2023). Quds Bank. <https://www.qudsbank.ps/page/About%20Us>
- Qiangfu, Q. (2022). Factors Influencing Online Learning Satisfaction. *Front Psychol*, *13*, 852360. <https://doi.org/10.3389/fpsyg.2022.852360>
- Qiao, P., Zhu, Xiaoman, Guo, Yangzhi, Sun, Ying, Qin, Chuan J Journal of Risk, Financial Management. (2021). The development and adoption of online learning in pre-and post-COVID-19: Combination of technological system evolution theory and unified theory of acceptance and use of technology. *14*(4), 162.
- Rajasekaran, V. A., Kumar, KR, Susi, S, Mohan, YC, Raju, Muntha, Hssain, Mohammed Waheeduddin J International Journal of Web-Based Learning ,Teaching Technologies. (2022). An evaluation of E-Learning and user satisfaction. *17*(2), 1-11.
- Rathnasekara, K., Suraweera, Namali, Yatigamma, Kaushalya J Asian Association of Open Universities Journal. (2023). The impact of self-efficacy beliefs of employees on contextual issues of online learning: with reference to the banking sector in Sri Lanka.
- Riandi, M. H., Respati, Harianto, Hidayatullah, Syarif %J International Journal of Research in Engineering, Science Management. (2021). Conceptual Model of User Satisfaction as Mediator of E-Learning Services and System Quality on Students' Individual Performance. *4*(1), 60-65.

- Rijal, M. S., Sholihah, Nida Anisatus, % Jurnal Pendidikan Dan Kewirausahaan. (2022). Penerapan Sistem E-Learning untuk Meningkatkan Produktifitas Kerja Karyawan di Era Pandemi Covid-19. *10(1)*, 254-266.
- Rodriguez, J., Walters, Kelley %J World Wide Journal of Multidisciplinary Research Development. (2017). The Importance of Training and Development in Employee Performance and Evaluation. *3(10)*, 206-212.
- Rosita, R., Stefvy, Stefvy. (2021). Analysis of the Effect of Employee Training and Development on Employee Achievement PT Pacific Medan Industry Medan.
- Rughoobur, S., Soujata, Hosanoo, Zuberia Aminah J Quality Assurance in Education. (2021). An evaluation of the impact of confinement on the quality of E-Learning in higher education institutions. *29(4)*, 422-444.
- Saluy, A. B., Widya, Asep Medy, Kemalasari, Novawiguna. (2021). The Impact of the Leadership, Work Motivation, and Training on Employee Performance at PT ADI TERA.
- Sekaran, U., & Bougie, R. . (2016). Research methods for business: A skill building approach. John Wiley & Sons.
- Seoane, R. C., Jiménez, Juan E, Gutiérrez, Nuria J Psicothema. (2021). Web-Based Training Program for Writing Instruction: Preservice Teachers' Beliefs Profiles and their Satisfaction. *33(4)*, 571-578.
- Setyabudi, A., Gunarto, Muji, Marjukah, Anis. (2021). The Effect of Job Training on Employee Performance with Employee Status as a Moderating Variable.
- Setyowati, W., Santoso, Suryo Budi, Astuti, Herni Justiana. (2020). The Effect of Motivation and Islamic Leadership on Employee Work Performance with Discipline as an Intervening Variable (Case study on Baitut Tamwil Muhammadiyah (BTM) in Central Java). ICBAE 2020: Proceedings of the 2nd International Conference of Business, Accounting, and Economics, ICBAE 2020, 5-6 August 2020, Purwokerto, Indonesia,
- Shahzad, A., Hassan, Rohail, Aremu, Adejare Yusuff, Hussain, Arsalan, Lodhi, Rab Nawaz %J Quality, quantity. (2021). Effects of COVID-19 in E-Learning on Higher Education Institution Students: The Group Comparison between Male and Female. *55(3)*, 805-826.
- Shahzad, M. B. (2023). COVID-19 pandemic and changes in the educational system: Is this a solution for educating children of deprived communities across the globe?

- Sharma, S., Kothari, Paras, Rathore, Rajesh, Patil, Venkat. (2021). Employee Perceptions for E-Learning Adoption in Corporate Sector Industries in India.
- Simanjuntak, D. C. Y., Halim, Richardo Thomas, Halim, Reynoldo Thomas %J Journal of Research in Business, Economics, Education. (2021). The Influence of Work Environment, Work Motivation and Training on Employee Performance in PT. Lima Benua Medan. 3(3), 1917-1926.
- Sinaga, M., Riyanto, Setyo %J ECOBISMA. (2021). Training and Development to Improve Employee Performance. 8(2), 66-71.
- Sofiadin, A. M. J. J. o. I. S. D. T. (2020). Defining Sustainable E-Learning: A Meta-Synthesis. 2(2), 72-84.
- Soni, V. D. J. A. a. S. (2020). Global Impact of E-Learning during COVID-19.
- Stollar, F., Cerutti, Bernard, Aujesky, Susanne, Scherly, Daniel, Nendaz, Mathieu, Galetto-Lacour, Annick. (2021). E-Learning Modules to Improve Clinical Reasoning and Practice: a Prospective Comparative Study.
- Subramaniam, R., Nakkeeran, Senthilkumar. (2019). Impact of corporate E-Learning systems in enhancing the team performance in virtual software teams. In *Smart Technologies and Innovation for a Sustainable Future* (pp. 195-204). Springer.
- Susilowati, N., Wijaya, Angga Pandu, Lianingsih, Susmy %J JPBM. (2021). Does Work Motivation have Roles in Employee Performance? Insight from Kampung Marketer Social Entrepreneurship. 7(1), 27-42.
- Sutisna, S., MZ, Masydzulhak Djamil, Iqbal, Ali %J Dinasti International Journal of Management Science. (2021). The Effect of Leadership and Motivation on Teacher Performance And Work Commitment as Intervening Variables (Case Study At Smk Bina Pendidikan 3 Bogor). 2(6), 925-942.
- Tang, K.-Y., Chang, Ching-Yi, Hwang, Gwo-Jen %J Interactive Learning Environments. (2021). Trends in Artificial Intelligence-Supported E-Learning: A Systematic Review and Co-Citation Network Analysis (1998–2019). 1-19.
- Taye, M. (2021). *The Effect of Training on Employee Performance: The Case of Elfora Agro Industries Plc* ST. MARY'S UNIVERSITY].
- TEALB. (2023). The Egyptian Arab Land Bank. <https://www.ealb.ps/ar/page/brief>

- Thanji Meenakshi, T. S. I. C. p. a. p. f. r. s. t. d. t. P. D. t. a. m. i. a. t. t. e. s. c. i. o. a. (2018). Effectiveness of Online Learning Methods Offered by Educational Institutions A Learners Perspective.
- Thapa, P., Bhandari, Suman Lata, Pathak, Sharada %J PloS one. (2021). Nursing Students' Attitude on The Practice of E-Learning: A Cross-Sectional Survey Amid COVID-19 in Nepal. *16*(6), e0253651.
- TNB. (2023). The National Bank.  
<https://www.tnb.ps/en/page/our-profile>
- Tyurina, Y., Troyanskaya, Marija, Babaskina, Liudmila, Choriye, Ruzimurat, Pronkin, Nikolay %J International Journal of Emerging Technologies in Learning. (2021). E-Learning for SMEs. *16*(2), 108-119.
- Utami, T. L. W. J. D. I. J. o. B. (2021). Technology adoption on online learning during Covid-19 pandemic: implementation of technology acceptance model (TAM). *4*(1), 8-19.
- Vadikalur, K., Sankar, Jayendra P. (2020). Factors Affecting the Quality of E-Learning during the Covid-19 Pandemic From The Perspective of Higher Education Students.
- Van Assen, M. F. J. P. P. C. (2021). Training, Employee Involvement, and Continuous Improvement—The Moderating Effect of A Common Improvement Method. *32*(2), 132-144.
- Vanthinh, D. J. M., Enterprise, Benchmarking in the 21st Century. (2016). The Role of E-Learning. 239.
- Vate, U.-L., Poonsri, J Journal of Computing in Higher Education. (2020). The psychological impact of E-Learning on social network sites: online students' attitudes and their satisfaction with life. *Journal of Computing in Higher Education*, *32*(1), 27-40.  
<https://doi.org/10.1007/s12528-019-09222-1>
- Veeramanickam, M., Ramesh, P J Advances in Engineering Software. (2022). Analysis of quality of learning in E-Learning platforms. *172*, 103168.
- Wang, X.-Y., Li, Guang, Malik, Sumaira Anwar, Ahsan J Economic Research-Ekonomska Istraživanja. (2022). Impact of COVID-19 on achieving the goal of sustainable development: E-Learning and educational productivity. *35*(1), 1950-1966.

- Wang, Y., Huang, Xinzhuo, Schunn, Christian Dieter, Zou, Yan, Ai, Wenguo %J Higher Education. (2019). Redesigning Flipped Classrooms: A Learning Model and its Effects on Student Perceptions. *78*(4), 711-728.
- World Health Organization, W. (2023). Coronavirus disease (COVID-19). [https://www.who.int/health-topics/coronavirus#tab=tab\\_1](https://www.who.int/health-topics/coronavirus#tab=tab_1)
- Xhelili, P., Ibrahim, Eliana, Rruci, Erinda, Sheme, Kristina J International Journal on Studies in Education. (2021). Adaptation and perception of online learning during the COVID-19 pandemic by Albanian university students. *3*(2), 103-111.
- Yang, C. (2021). A Study on Blended Learning of High-quality Translation Courses in the Post-epidemic Era. *E3S Web of Conferences*,
- Zhang, D., Zhou, Lina, Briggs, Robert O, Nunamaker Jr, Jay F %J Information management. (2006). Instructional Video in E-Learning: Assessing the Impact of Interactive Video on Learning Effectiveness. *43*(1), 15-27.
- Zhao, Y., Wang, Ning, Li, Yixuan, Zhou, Ruoxin, Li, Shuangshuang %J British Journal of Educational Technology. (2021). Do Cultural Differences Affect Users' E-Learning Adoption? A Meta-Analysis. *52*(1), 20-41.
- Zheng, H., Qian, Yu, Wang, Zongran, Wu, Yonghe J Sustainability. (2023). Research on the Influence of E-Learning Quality on the Intention to Continue E-Learning: Evidence from SEM and fsQCA. *15*(6), 5557.
- Zulfiqar, S., Zhou, Rongting, Asmi, Fahad, Yasin, Affan J Cogent Education. (2018). Using a simulation system for collaborative learning to enhance learner performance. *5*(1), 1424678.

## **Appendix**



**Birzeit University**

**Faculty of Graduate Studies**

**MBA program**

Greetings,

I am currently pursuing a Master of Business Administration degree at Birzeit University.

In partial fulfillment of the degree, I am conducting a research study on

**“The Impact of E-Learning on Employees’ Performance in the Palestinian Banking Sector”.**

We believe that employees are the bloodstream, the most valuable assets, and the primary source of competitive advantage in banks, as their market value depends on their human capital, so E-Learning is a necessary training method to improve their skills, knowledge, and capabilities to achieve the bank's goals of survival and growth.

This questionnaire is the data collection tool for the study. You are kindly requested to answer the questions accurately; your answers will reflect positively on the credibility of the results and will lead to the success of this scientific research.

Accordingly, we would like to inform you of the following:

- The information contained in this research will only be used for scientific research purposes and will be treated confidentially.
- This questionnaire consists of (3) parts and takes approximately (5-10) minutes to complete.
- If you are interested in receiving a copy of the research findings, please write down your E-mail address: -----.

We thank you in advance for your kind cooperation and valuable contribution to enriching this study, and we wish you continued health and wellness.

Researcher: Hiba Salah Alden

Supervisor: Dr.Samir Baidoun



**A- Personal Information:**

**1- Gender:**

A: Male ( )      B: Female ( ).

**2- Age:**

A: Less than 25 years old ( )    B: 25 – 34 years ( )    C: 35 – 44 years ( )

D: 45 years and above ( ).

**3- Qualification:**

A: Diploma ( )      B: Bachelor ( )      C: Master ( )      D: Ph.D. ( )

H: Other ( ).

**4- Work experience:**

A: Less than 5 years ( )      B: 6-10 years ( )      C: 11-15 years ( )

D: 16 years and above ( ).

**5-Computer proficiency:**

A: Elementary ( )      B: Average ( )      C: Expert ( ).

**6-The number of training courses employees obtained during COVID-19:**

A: 3 courses or less ( )    B: 4-6 courses ( )    C: 7-10 courses ( )

D: 11 courses and more ( ).

## **B - E-Learning in the Bank:**

### **1. Please give your opinion on the Quality of the E-Learning**

<b>NO.</b>	<b>Statements</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1.	I can gain access to the learning site at any time.					
2.	Very accurate, current, and related to the course content.					
3.	I feel the communication quality of the Internet is good.					
4.	I am satisfied with the quality/quantity of the course materials.					
5.	Information is available in the appropriate format.					

## 2. E-Learning offers you the required Flexibility

NO.	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Supports group meetings, chats, and instant communications without any physical restrictions.					
2.	Taking training via the Internet saved me a lot of time.					
3.	Taking training via the Internet allowed me to arrange my work schedule more effectively.					
4.	Taking training via the Internet allowed me to take the training I would otherwise have missed.					

## 3. Please give your opinion on the Perceived Usefulness of E-Learning that are

NO.	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Enables me to accomplish the tasks assigned to me more quickly.					

2.	Improves my ability to accomplish the tasks assigned to me.					
3.	Increases my productivity in accomplishing tasks assigned to me.					
4.	Enhances my effectiveness in accomplishing the tasks assigned to me.					
5.	E-Learning would be useful for me to construct knowledge in my work context.					
6.	E-Learning would allow me to organize my learning more efficiently.					
7.	Using E-Learning would increase the efficiency of my job-related learning.					
8.	Using E-Learning at my job would allow me to acquire job-related.					

**4. Your opinion on the Ease of Use of E-Learning that are**

<b>NO.</b>	<b>Statements</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1.	I find it easy to perform work using E-Learning.					
2.	I find that E-Learning is clear and understandable for me.					
3.	I find E-Learning easy to use.					
4.	Learning to operate an E-Learning system would be easy for me.					

**5. You get the required Technical Support provided by the bank**

<b>NO.</b>	<b>Statements</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1.	My bank provides easy access to the Internet.					
2.	My bank has up-to-date ICT infrastructure.					
3.	I can get technical support from technicians.					
4.	IT support is available 24*7 (All days a week and round-the-clock support).					

**6. Please give your opinion on the Organizational Support for E-Learning at your bank**

NO.	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I am always supported and encouraged by my boss to E-Learning to perform my job.					
2.	The administration has provided most of the necessary help and resources to get us used to E-Learning quickly					
3.	The bank I work for rewards employees for using newly acquired knowledge and skills at work.					
4.	The bank I work for has a performance appraisal system that links financial rewards to the use of newly acquired knowledge and skills.					

## C. Employees' Performance:

### 7. The Impact of E-Learning on Employees' Performance

NO.	Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	I try to acquire new ways and working methods to perform and develop the work.					
2.	I strive to improve my job performance continuously.					
3.	E-Learning has increased my job satisfaction.					
4.	E-Learning system improves productivity in doing my job.					
5.	Using an E-Learning system improves my effectiveness in doing my job.					
6.	Overall, E-Learning is useful in doing my job.					
7.	I am satisfied with the effects of using E-Learning on my job.					
8.	I collaborate with my co-workers to complete the required tasks					

## 9. Benefits

In your opinion, which of the following is a Benefit of E-Learning in the bank (more than one answer can be chosen)?

NO.	Benefits	Options
1.	Developing employee skills.	
2.	Saving cost.	
3.	Saving employee time.	
4.	Increase the quality of work.	
5.	Ensuring quick resolution of issues.	
6.	Better position in working	
7.	Takes into consideration the individual trainees' differences.	



## 9. Challenges

Based on your opinion, which of the following Challenges is an obstacle to the use of E-Learning in the bank (more than one answer can be chosen)?

NO.	Challenges	Options
1.	Employee resistance to E-Learning.	
2.	Lack of supportive culture in the bank.	
3.	Lack of technical support.	
4.	Insufficient computer and Internet skills.	
5.	Trainers' knowledge and skills to teach.	
6.	Concerns about privacy or confidentiality online.	

7.	Lack of interaction with the trainers.	
8.	Physical health barriers such as eye strain.	

**10. In your opinion, which of the following developments in learning technologies will have the greatest impact on training activities in the next five years?**

1. Face-to-Face Learning
2. E-Learning
3. Virtual Classrooms and Webinars