THE EFFECTIVENESS OF E-LEARNING IN PALESTINIAN AND JORDANIAN UNIVERSITIES: FACULTY MEMBERS' PERSPECTIVE

巴勒斯坦和约旦大学电子学习的有效性：教师的观点

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Abstract

The current study explores the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members. To achieve the objectives of the study, the descriptive survey research approach is used. The study sample consisting of 93 faculty members in Palestine and Jordan was selected by the available sampling method. The study instrument represented by a 40-item questionnaire was distributed to the study sample. The findings show the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of the faculty members with a mean of 3.84, which is considered high according to the scale prepared for the study. The findings also indicate that there are no statistically significant differences among the means of the responses of the study sample members regarding the effectiveness of e-learning in Palestinian and Jordanian universities due to the variables (country, university type, and academic rank), where the value of its significance level is greater than (0.05). Considering the previous results, the study recommends working on developing plans and programs for the mechanism of implementing e-learning in Palestinian and Jordanian universities and giving training courses in the domain of e-learning to students and faculty members continuously.

Keywords: E-Learning, Palestinian Universities, Jordanian Universities, Faculty Members

摘要 本研究从教师的角度探讨了巴勒斯坦和约旦大学电子学习的有效性。为了实现研究目标，使用了描述性调查研究方法。由巴勒斯坦和约旦的 93 名教师组成的研究样本是通过可用的抽样方法选择的。 以 40 项问卷为代表的研究工具被分发给研究样本。调查结果显示，从教职员工的角度来看，电子学习在巴勒斯坦和约旦大学的有效性为 3.84，根据为研究准备的量表，这被认为是高的。调查结果还表明，由于变量（国家、大学类型和学术排名），研究样本成员对巴勒斯坦和约旦大学电子学习有效性的反应均值在统计上没有显着差异，其中 其显着性水平的值大于（0.05）

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。考虑到之前的结果，该研究建议为在巴勒斯坦和约旦大学实施电子学习的机制制定计划和方案，并不断为学生和教职员工提供电子学习领域的培训课程。

关键词: 电子学习、巴勒斯坦大学、约旦大学、教职员工

I. INTRODUCTION

For a time, the Internet is perceived as a place to chat, read newspapers, shop, and check out forums. The use of the Internet in learning institutions has arisen through the knowledge exchange by using the means of communication, as there are websites for schools and universities on the Internet. The perception of the Internet, smartphones, and computers has changed, and it has become seen as an essential learning tool, as the number of schools and universities connected to the Internet is increasing day by day. The increase in the number of teachers and students using computers, the Internet, and smartphones during the learning process is due to the characteristics of e-learning and its positive effects.

Distance learning technology is a method to obtain knowledge and discoveries as they occur, as societies that do not employ distance learning technology are regarded as uncivilized societies, creating difficulties for them to coexist in this era of information flow. Given the clear significance and various advantages of distance learning technology [13], it is now the focus of attention and international and regional educational institutions, which are keen to introduce the system of distance education technology in their educational institutions. Considering the information revolution, universities are keen on the demand for e-learning technology to include it in university learning as a learning method and as the main source of scientific courses in various disciplines in particular.

E-learning is defined as the education provided on the Internet by using modern electronic technologies to access everything related to learning materials outside the confines of the traditional learning classroom [11]. E-learning is in line with the basis of the open education system to employ capabilities and energies by introducing modern technology to prepare a generation of students capable of facing future professional, social, and economic challenges. The use of modern technology in distance learning and training has led to get high flexibility in terms of place and time, distribution of learning opportunities on a large scale, select ways to access information and resources available for training, and adapt to all students [12].

E-learning is of great importance in improving the effectiveness of teachers, increasing their experience in preparing educational materials, assisting them in accessing information sources, obtaining images, videos, and research papers via the Internet for use in explaining and clarifying the educational process, and providing educational material in its electronic form for students and teachers, along with special lessons for distinguished teachers [15]. For example, the shortage of distinguished educational cadres makes it confined to certain schools and a limited portion of students benefit from them. The shortage of academic and training cadres in some educational sectors can also be compensated for through virtual classes.

E-learning helps the student understand and delve deeper into the lesson, as the students can return to the lesson at any time and perform their homework by referring to the various sources of information on the Internet or the electronic material that the professors provide to their students supported by multiple examples. Therefore, the student retains the information for a longer period because it is now supported by sound, image, and understanding [9]. The introduction of the Internet as an essential part of the educational process is of great benefit in raising the scientific and cultural levels of students [16].

Likewise, it is evident that there is great importance for e-learning in general and in universities in particular, and that many researchers advocate the use of this type of education as it is considered as one of the latest methods of learning, especially that depends on the Internet. With that being said, conducting domain studies aimed at identifying the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members is on the rise among researchers.

II. PREVIOUS RESEARCH WORK AND STUDIES

Little research work has been written on the concept of e-learning though it is of high significance in the learning-teaching process. Al-Alawneh's study [2] evaluates the e-learning experience in Palestinian universities amid

COVID-19, according to the quality standards of the Jordanian Higher Education Accreditation Commission (JHEAC). To achieve the objectives of the study, a mixed descriptive approach, both quantitatively and qualitatively, is adopted. The study sample selected by the availability sampling method consists of 275 participants out of 1000. A questionnaire based on the quality standards of the Jordanian Higher Education Accreditation Commission, consisting of 70 items, and a 7-question interview is used as a study instrument for collecting data related to the subject of the study. After preparing the study instruments, their validity and reliability were ensured.

Having applied the study instruments, the findings indicate that the level of e-learning experience in Palestinian universities amid COVID-19 is of a high degree according to the quality standards of the Jordanian Higher Education Accreditation Commission. It is also found that there are no statistically significant differences at the significance level $(0.05 \geq \alpha)$ in the mean of the responses of the study sample members in the level of the e-learning experience in Palestinian universities amid COVID-19 according to the quality standards of the Jordanian Higher Education Accreditation Commission due to the variables of gender, the educational system of the university and the faculty. The study also shows that there are many obstacles accompanying the e-learning experience, such as the weakness of the technological infrastructure, the difficulty of understanding and studying the materials because they are not computerized via the Internet, the weak process of student assessment and control, as well as the inappropriateness of the home environment for distance education. Based on these findings, several recommendations are made to enhance the reality of the e-learning experience in Palestinian universities.

Another related study by Al-Fishawy [5] measures the effectiveness of the pattern of digital game stimuli in an e-learning environment in treating speech disorders in first cycle primary education in the Kingdom of Bahrain. To achieve the objectives of the study, a descriptive-analytic approach is adopted. The research instruments include a form of primary data prepared by the researcher, the Goodenough-Harris Draw-A-Man Test (GHDAMT) to measure IQ, the form of the socio-economic and cultural level of the Bahraini family (prepared by the researcher), the speech disorders scale (prepared by the researcher), and an e-learning environment based on digital game stimuli (prepared by the researcher). The study sample comprises 20 students with speech disorders from the students of first cycle primary education, with an average age of 8.5 years. The students are randomly divided into two experimental groups as follows: the first experimental group trained in the style of digital gaming stimuli (badges) and the second training group trained in the style of digital gaming stimuli (leaderboard).

The findings indicate that there are statistically significant differences between the means of the scores of the children of the two experimental groups for digital game stimuli (Badges-Leaderboard) in the pre- and post-measurements on the speech disorder scale toward the post-measurement. The findings also show that there are no statistically significant differences between the means of the scores of the children of the two experimental groups for digital game stimuli (Badges-Leaderboard) in the post and follow-up measurements. Besides, the results demonstrate that there are no statistically significant differences between the means of the scores of the children of the first experimental group (The style of digital gaming stimuli (badges) and the means of the degrees of the scores of the children of the second group (The style of digital gaming stimuli, the leaderboard) in the post-measurement on the speech disorders scale due to the effect of the style of the digital game stimuli (Badges- Leaderboard).

In the same context, Abed's study [1] identifies the effectiveness of e-learning in developing self-achievement and learning skills in teaching the teaching aids course among female students of Al-Aqsa Community College in Gaza considering local crises. To achieve the objectives of the study, a descriptive-analytic approach is adopted. The research sample consists of 100 students of the teaching aid course, where the group is exposed to the research instruments: an achievement test and a scale for self-learning skills before and after the completion of the experiment. The findings indicate that there are statistically significant differences ($\alpha = 0.05$) between the scores of female students of Al-Aqsa Community College in Gaza in the cognitive achievement of the teaching aids course and the self-learning skills scale before and after the application in favor of the post application. The findings show that e-learning means and tools have revealed effectiveness with a high achievement rate (1.41) in developing cognitive achievement and 1.33 in developing self-learning skills.

Likewise, the study of Al-Fawara [4] identifies the effectiveness of e-learning amid

COVID-19 from the viewpoint of primary school teachers in the Directorate of Education of the North-West Badia district. To achieve the study objectives and answer the study questions, the descriptive-analytic approach and a random sample of 150 male and female teachers were used. A 4-domain study instrument is prepared as follows: the effectiveness of e-learning with 8 items, secondly, the interaction of teachers with e-learning with 9 items, the interaction of students with 6 e-learning items, e-learning requirements with 7 items, and then its validity and reliability are ensured. The findings indicate that the effectiveness of e-learning amid COVID-19 from the viewpoint of the primary-stage teachers in the Directorate of Education of the North-West Badia district is of a medium degree, where the domain of teacher interaction with e-learning is ranked first, while the domain of e-learning requirements is ranked last. The results also showed that there are no statistically significant differences at the significance level (a = 0.05) among the responses of the study sample members on the domains of study due to the variables of gender, academic qualification, and several years of experience. The study recommends holding a training course for primary school teachers to provide them with the skill of preparing e-educational content for students in the correct manner in terms of how to interact with students and how to present educational content to them appropriately.

Besides, Al-Muaither and Al-Odan's study [6] aim to evaluate the Higher Diploma in E-Learning Program of the Department of Educational Technologies at Princess Nourah Bint Abdulrahman University considering ISTES standards. To achieve the objectives of the study, the case study approach through self-evaluation of the Higher Diploma Program is adopted by balancing its reality, keeping pace with ISTES standards, and identifying its availability in it. Having applied the study instruments represented in the content analysis questionnaire, the analysis model, and the open interview with the diploma students, the results show that the objectives of the higher diploma courses in e-learning achieve all the seven criteria in varying proportions in line with the domain of objectives related to them. In detail, the highest standards achieved are the first criterion (Delegated Learner), whereas the two weakest criteria are the second (Digital Citizen) and the sixth (Creative Communicator). The study recommends reconsidering the objectives of the diploma courses and strategies for teaching them and adding some important topics to the subjects to achieve the standards at a

higher degree.

Furthermore, the study of Ibrahim and Al-Falkawi [10] addresses one of the most important factors for the success of university learning by activating e-learning, explaining its role in achieving the necessary competencies for faculty members at Kuwait University, and keeping pace with the tremendous technological development witnessed by the current era. The importance of an integrative feature between the educational environment and the faculty member is raised, explaining that real competence does not rest in the number of faculty members and the traditional means, but in the presence of a highly qualified teacher who has developed greatly, and the availability of competencies represented in the implementation of e-learning. This study has many educational dimensions to address the issue of e-learning at a broad regional level by applying to a sample of 74 faculty members from the Faculty of Education at Kuwait University to develop faculty members. Previous relevant studies from the Gulf state that the Arab world and foreign countries clarify the most important foundations for the success of the e-learning process based on three domains: identifying the extent of achievement of the e-learning competencies related to the use of computers, use of the Internet, and class management system.

The results indicate that the e-learning competencies related to computer use and Internet use are achieved to a high degree by faculty members in the Faculty of Education at Kuwait University, while the competencies related to the classroom management system are achieved to a medium degree. The study recommends holding training courses and workshops to train faculty members on learning management systems websites such as Blackboard and Moodle, encouraging materially and morally faculty members to use learning management systems, and providing technical support centers specialized in everything related to computers, the Internet, and learning management systems in each college in Higher education institutions to assist faculty members in the event of any technical problem related to the competencies of e-learning.

In the same mood, Al-Faqawy's study [3] aims to identify the role played by the use of the Edmodo educational platform in improving the tenth-grade students' learning of the concepts of physics, and the platform's ability to possess higher-order thinking skills while learning the concepts of physics. The qualitative study approach is used for its suitability for the objectives of the study. To collect the study data,

instruments including an interview with a male teacher and a female teacher, and five female students participating in that platform are used, along with using numerous publications adopted by teachers adopted while teaching students using the platform. The study evaluates the role achieved because of using this platform, represented by teachers and students changing their attitudes toward methods of teaching physics by using the Edmodo platform, and their possession of skills to deal with it. Thus, it contributes to achieving better learning of physics concepts and achieving better results in international tests. The study recommends supporting and disseminating the Edmodo platform to all teachers in the educational domain, considering the inclusion of higher thinking skills in physics curricula, providing physical and technical facilities for physics teachers to implement and manage classes with high efficiency, applying such a study to other scientific and humanities subjects, and expanding the sample size to ensure the extent of the feasibility of using the platform in the teaching process.

On the other hand, another related study by Awad and Helles [7] aims at identifying the trend toward distance learning technology and its relationship with some variables among graduate students in Palestinian universities. To achieve the objectives of the study, a descriptive analytical method is used. The study sample consists of 91 male and female students studying in graduate programs in the faculties of education in the Palestinian universities (Al-Aqsa University, the Islamic University of Gaza, and Al-Azhar University). Also, a scale prepared to measure the trend toward distance learning technology is used. After analyzing the data, the results show that the attitudes of graduate students in Palestinian universities to the domains of the instrument as a whole are relatively 2.72, indicating that the attitudes of graduate students in Palestinian universities toward distance learning technology are positive at the level of the instrument as a whole. The results show that there are no statistically significant differences in the responses of study students in Palestinian universities toward learning about distance learning technology according to the variables of gender, educational level, and general assessment at the level of the instrument as a whole. The findings also indicate that there are statistically significant differences in the responses of study students in Palestinian universities toward distance learning technology according to the university variable in favor of the Islamic University of Gaza.

Against the previous analysis of the related studies, it is evident that all studies dealt with topics related to the use of e-learning in terms of its effectiveness, evaluation, and achieving its objective. Also, the researchers do not work on dividing the studies into local, national, and international, considering that this science is a unified science for all regions, as all researchers seek to complete the findings of their fellow researchers. Importantly, previous studies demonstrate that the latest study is in 2022 and the oldest study is 2022, indicating that e-learning is one of the significant topics that researchers have been interested in. The current study benefits from previous studies in developing a perception of the research template, the methodology, the sample size, the study instrument's construction, and statistical processing. Thus, the researchers have helped in forming questions and the structure of the research so that this research would be an extension of previous studies and an addition to the scientific research concerned with e-learning.

III. PROBLEM OF THE STUDY

Recently, trends relating to the domain of e-learning technology concerned with organized, designed, planned, and intended education are on the increase considering the characteristics and needs of students to provide different educational experiences by using various electronic resources [18]. E-learning technology enables learners to obtain the largest possible amount of information in its various forms considering the current information flow, as e-learning has become one of the modern teaching patterns that are used in all Arab and foreign universities. The study by Salwatr [14] reveals that e-learning is interesting and motivating, and there should be in-depth studies to identify its ability to achieve the desired results according to each educational institution. More importantly, through the experience of researchers in the academic and educational domains, a large and unknown gap is noticed, related to the achievement of the desired educational outcomes from e-learning [17]. Accordingly, the problem of the study rests in exploring the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members.

IV. RESEARCH QUESTIONS

Considering the research problem, the following questions are formulated:

1. What is the effectiveness of e-learning in Palestinian and Jordanian universities from the

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viewpoint of faculty members?

2. Are there statistically significant differences in the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members according to the country variable?

3. Are there statistically significant differences in the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members according to the university type variable?

4. Are there statistically significant differences in the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members according to the academic rank variable?

V. RESEARCH OBJECTIVES

The following objectives were formulated to answer the research questions:

1. Recognize the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members.

2. Determine whether there are statistically significant differences in the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members according to the country variable.

3. Identify whether there are statistically significant differences in the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members according to the university type variable.

4. Realize whether there are statistically significant differences in the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members according to the academic rank variable.

VI. SIGNIFICANCE OF THE STUDY

The significance of the study lies in the importance of its subject, which is the effectiveness of e-learning in Palestinian and Jordanian universities by addressing the subject of e-learning theoretically. It is also hoped that this study can open new horizons for researchers to access serious and practical research related to e-learning by reaching its effectiveness. University students, faculty members, deans of faculties, heads of departments, and university administration, especially Palestinian and Jordanian, can also benefit from this study. The significance of the study is also reflected in the presence of a gap in the e-learning studies, bringing together the countries of Palestine and Jordan, as this study is the first of its kind, according to the researchers' experience, and is

an enrichment of educational literature and previous studies in the domain of e-learning.

VII. LIMITATIONS OF THE STUDY

The findings of this study can be generalized considering the following limitations:

1) Human Limitations

This study is limited to a sample of all faculty members from Palestinian and Jordanian universities.

2) Spatial Limitations

This study was conducted in all public and private universities in Palestine and Jordan.

3) Temporal Limitations

This study was conducted in the summer semester of the academic year 2021/2022.

VIII. RESEARCH TERMS AND DEFINITIONS

In this study, the terms "E-Learning" and "Faculty members in Palestinian and Jordanian universities" are mentioned, and their procedural definitions are as follows:

E-Learning is an interactive system linked to the educational learning process, and this system relies on the existence of a digital electronic environment that provides the student with courses and activities through electronic networks and smart devices [8].

Faculty members in Palestinian and Jordanian universities are a group of scientifically qualified individuals who hold postgraduate degrees and teach students various courses in Palestinian and Jordanian universities.

IX. RESEARCH METHODS AND PROCEDURES

To achieve the objectives of the study, the descriptive survey research approach is used. It is defined as a method of research that deals with the interpretation of the existing situation of the phenomenon or problem by defining its circumstances and dimensions and describing the relationships among them to attain an accurate and integrated practical description of the phenomenon or problem based on the facts associated with it.

A. Research Population and Sample

The study population consists of all faculty members who teach in Palestinian and Jordanian universities, where the availability sampling method is used due to the inability to reach the entire study population. With that being said, 100 questionnaires are distributed, and 93 valid questionnaires are returned. The following is a

description of the characteristics of the study sample according to its variables, as shown in Table 1.

Table 1.
Distribution of the study sample according to its independent variables

Variable	Variable Categories	Number	Percentage
Country	Palestine	31	33.3
	Jordan	62	66.7
	Total	93	100.0
University Type	Public	56	60.2
	Private	35	37.6
	Total	2	2.2
Academic Rank	Instructor	35	37.6
	Associate Professor	33	35.5
	Professor	25	26.9
	Total	93	100.0

B. Research (Study) Instrument

After reviewing the study literature and previous studies related to the subject, the research instrument, i.e., the questionnaire is prepared, which includes two sections: the first section is the definitive data, and the second section is the data of the study variables. The number of items for the study instrument is 40 divided into two domains, where the first domain consisting of 20 items is about the effectiveness of the e-learning environment, and the second domain consisting of 20 items is about the effectiveness of e-learning outcomes. The instrument is designed based on a 5-dimension Likert Scale, and the items are constructed in a positive direction. The following scales of measurement are given to the items: Strongly agree: five degrees, agree: four degrees, neutral: three degrees, disagree: two degrees, and strongly disagree: one degree.

C. Research (Study) Instrument Validity

The instrument validity is ensured by presenting it to a group of validators with expertise and experience in the domain of educational sciences and e-learning. As a second procedure, they are requested to express their opinion on the questionnaire's items by deleting,

modifying, suggesting new items, and determining the appropriateness of the instrument for the subject of the study. Based on the clarifications of the validators, the study instrument is modified to be in its final form consisting of 40 items, and accordingly, the instrument has content validity.

D. Research (Study) Instrument Reliability

To check the instrument reliability, a sample survey of 93 faculty members is adopted, and then an internal-consistency approach (Cronbach's alpha) is used to compute the reliability coefficient. The reliability coefficient is 0.89 for the first domain, 0.91 for the second domain, and 0.95 for the total score. These values that are attained for the reliability coefficients are suitable and meet the purpose of the study.

E. Statistical Analysis

After collecting and encoding the required data, it is processed using the appropriate statistical methods using the Statistical Package for the Social Sciences (SPSS). Frequencies, means, standard deviations, Cronbach's alpha, and t-test for two independent samples were also used. To achieve the objectives of the study, a questionnaire consisting of 40 items was used and distributed to a sample of 93 faculty members. To read between the lines of the results of the study, the following means are used as follows: the mean, which is greater than 3.5, indicates a high degree of effectiveness, the mean ranging between 2.5 and 3.5 indicates medium degree, and the mean less than 2.5 indicates a low degree of effectiveness.

X. RESULTS/FINDINGS

A. What Is the Effectiveness of E-Learning in Palestinian and Jordanian Universities from the Viewpoint of Faculty Members?

To answer this question, the means and standard deviations of individual responses related to each item of the study instrument are calculated. Table 2 illustrates these findings.

Table 2.
Means and standard deviations related to the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members

No. of Items	The Sequence in the Questionnaire	Items	Means	Std. Dev.	Degree
1.	1	The Effectiveness of the E-Learning Environment	3.8501	0.4995	High
2.	2	The Effectiveness of E-learning Outcomes	3.8488	0.4766	High
		Total Degree	3.8495	0.4351	High

As shown from the data in Table 2, the effectiveness of E-learning in Palestinian and

Jordanian universities from the viewpoint of faculty members is of a high degree in all domains. Relating to the first domain of the effectiveness of the e-learning environment, it is ranked first with a mean (3.85) and a standard deviation (0.49), and this degree is considered high. Regarding the second domain related to the effectiveness of e-learning outcomes, it is ranked second and last with a slight difference, as it obtains a mean of 3.84 and a standard deviation of 0.43, and its degree of effectiveness is also high. Concerning the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members, it is regarded as high, in terms of the mean, which is 4.84 and the standard deviation (0.43).

These findings confirm that the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members is of high degree. This result agrees with the results of Al-Alawneh's study [2], which confirms that the level of e-learning experience in Palestinian universities amid COVID-19, according to the quality standards of the Jordanian Higher Education Accreditation Commission, is of high degree. This result also is in line with the results of the study of Ibrahim and Al-Falkawi [10], which indicates that the e-learning competencies related to computer use and the use of the Internet are achieved to a high degree among faculty members at the Faculty of Education at Kuwait University.

However, it also differs from the results of Al-Fawara's study [4], which indicates the effectiveness of e-learning amid COVID-19 from the perspective of the primary-stage teachers in the Directorate of Education of the North-West Badia district, in general, is of a medium degree.

B. Are There Statistically Significant Differences in the Effectiveness of E-Learning in Palestinian and Jordanian Universities from the Viewpoint of Faculty Members According to the Country Variable?

To answer this question related to the country variable, the t-test for independent samples is used. Table 3 illustrates these findings.

Table 3.
The results of the T-test for the independent samples in the means of the responses of the study sample members toward the effectiveness of e-learning in the Palestinian and Jordanian universities according to the country variable

Variable	Country	Number	Means	Std. Dev.	T-Value	Sig. Level*
The Effectiveness of the E-Learning Environment	Palestine	31	3.8226	0.43400	-0.373	0.71
	Jordan	62	3.8638	0.5321		
The Effectiveness of E-learning Outcomes	Palestine	31	3.8226	0.3462	-0.428	0.69
	Jordan	62	3.8619	0.5320		
Total Degree	Palestine	31	3.8226	0.3495	-0.419	0.67
	Jordan	62	3.8629	0.4743		

* Statistically significant at the significance level ($\alpha = 0.05$)

As shown in Table 3, there are no statistically significant differences at the significance level ($\alpha = 0.05$) in the means of the responses of the study sample members toward the effectiveness of e-learning in Palestinian and Jordanian universities according to the country variable, as the value of the significance level for the total score is 0.67, and this value is greater than 0.05. In other words, this result means that there are no statistically significant differences at the significance level ($\alpha = 0.05$) in the means of the responses of the study sample members toward the effectiveness of e-learning in Palestinian and Jordanian universities due to the country variable.

C. Are There Statistically Significant Differences in the Effectiveness of E-Learning in Palestinian and Jordanian Universities from the Viewpoint of Faculty Members, According to the University Type Variable?

To answer this question related to the university type variable, the t-test for independent samples is used. Table 4 illustrates these findings.

Table 4.
The results of the T-test for the independent samples in the means of the responses of the study sample members toward the effectiveness of e-learning in the Palestinian and Jordanian universities according to the university type variable

Variable	University Type	Number	Means	Std. Dev.	T-Value	Sig. Level*
The Effectiveness of the E-Learning Environment	Public	56	3.8333	0.5189	0.00	0.1
	Private	35	3.8333	0.4426		
The Effectiveness of E-learning Outcomes	Public	56	3.8482	0.4683	0.20	0.83

	Continuation of Table 4					
	Private	35	3.8268	0.4940		
Total Degree	Public	56	3.8403	0.4381	0.109	0.91
	Private	35	3.8303	0.4164		

* Statistically significant at the significance level ($\alpha = 0.05$)

As shown in Table 4, there are no statistically significant differences at the significance level ($\alpha = 0.05$) in the means of the responses of the study sample members toward the effectiveness of e-learning in Palestinian and Jordanian universities according to the university type variable. In other words, this result means that there are no statistically significant differences at the significance level ($\alpha = 0.05$) in the means of the responses of the study sample members toward the effectiveness of e-learning in Palestinian and Jordanian universities due to the variable of university type.

D. Are there Statistically Significant Differences in the Effectiveness of E-Learning in Palestinian and Jordanian Universities from the Viewpoint of Faculty Members According to the Academic Rank Variable?

To answer this question related to the academic rank variable, One-Way ANOVA "Analysis of Variance" is used. Table 5 illustrates these findings.

Table 5.
The results of the one-way ANOVA (analysis of variance) in the means of the responses of the study sample members toward the effectiveness of e-learning in the Palestinian and Jordanian universities according to the academic rank variable

Domain	Source of Variation	Sums of Squares	Degrees of Freedom	Mean Square	F-Value	Sig. Level
The Effectiveness of E-learning Outcomes	Between Groups	1.345	2	0.672	2.800	0.066
	Within Groups	21.611	90	0.240		
	Total	22.955	92			
The Effectiveness of the E-Learning Environment	Between Groups	0.978	2	0.489	2.210	0.116
	Within Groups	19.915	90	0.221		
	Total	20.893	92			
Total Degree	Between Groups	0.898	2	0.449	2.445	0.092
	Within Groups	16.521	90	0.184		
	Total	17.418	92			

* Statistically significant at the significance level ($\alpha = 0.05$)

As shown in Table 5, there are no statistically significant differences at the significance level ($\alpha = 0.05$) in the means of the responses of the study sample members toward the effectiveness of e-learning in Palestinian and Jordanian universities according to the scientific rank variable, as the value of the significance level for the total score is 0.09, and this value is greater than 0.05. in other words, this result means that there are no statistically significant differences at the significance level ($\alpha = 0.05$) in the means of the responses of the study sample members toward the effectiveness of e-learning in Palestinian and Jordanian universities due to the scientific rank variable.

XI. CONCLUSION

In a nutshell, the current study explores the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of faculty members. The findings show the effectiveness of e-learning in Palestinian and Jordanian universities from the viewpoint of the faculty members with a mean of 3.84, which is considered high according to the scale prepared for the study. The findings also indicate that there are no statistically significant differences among the means of the responses of the study sample members regarding the effectiveness of e-learning in Palestinian and Jordanian universities due to the variables (country, university type, and academic rank), where the value of its significance level is greater than 0.05. Considering the previous results, the study recommends working on developing plans and programs for the mechanism of implementing e-learning in Palestinian and Jordanian universities and giving training courses in the domain of e-learning to students and faculty members continuously.

XII. RECOMMENDATIONS

Given the results and discussion of the research paper, the current research paper

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recommends working on developing plans and programs for the mechanism of implementing e-learning in Palestinian and Jordanian universities, giving training courses in the domain of e-learning to both students and faculty members, encouraging faculty members to use e-learning and to communicate with students through electronic pages, urging the university administration in Palestine and Jordan to continuously introduce the method of e-learning, work to provide all the requirements to create an appropriate learning environment for the application of e-learning, and conducting more similar studies and applying them to other countries and comparing their results with the results of the current study.

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