



RESEARCH ARTICLE

Section: *Digital Humanities***Faculty engagement with e-learning tools in Jordan: Practices and constraints**

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ABSTRACT

This study examined the extent to which faculty members in Jordanian universities use e-learning tools and the obstacles they face in doing so. The data were collected in the 2020–2021 academic year, when Jordanian universities were teaching largely online because of the COVID-19 pandemic. A descriptive survey design was adopted, and a 32-item questionnaire, comprising a 15-item scale on the use of e-learning tools and a 17-item scale on obstacles, was administered to a random sample of 350 faculty members at universities in the central region of Jordan. Faculty members used e-learning tools at a positive level ($M = 3.61$ out of 5). They used them most often to involve students in learning activities, to direct them to educational websites, and to assign readings, and least often to exchange assignments by e-mail or to ask students to gather information from the web. The obstacles were rated high overall ($M = 3.84$). The most serious were the density of course content, weak Internet connections, and the low effectiveness of the devices available in universities, whereas weak training and the limited skills of lecturers and students were rated as moderate. The findings suggest that infrastructural and curricular constraints, more than a lack of competence, limited the use of e-learning during this period. The study recommends investment in network infrastructure and equipment, the redesign of course materials for online delivery, and continued professional development for faculty members.

KEYWORDS: e-learning tools; faculty members; obstacles; higher education; emergency remote teaching; Jordan

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1. Introduction

This century has witnessed many changes in all areas of life. Among the most prominent are the electronic technological fields that have emerged tremendously, such as mobile phones, computers and the Internet, accompanied by a set of recent developments, and new challenges. These challenges and developments resulted in the fading of spatial and temporal barriers, which provided rapid and effective communication through the role of communication and information technology in the flow of information and news to facilitate the process of communication between others, especially between the teacher and the student.

Where education is one of the most important basic ingredients upon which countries and governments rely in building their future in the age of information and electronics; With the emergence of personal computers and their operational programs, along with information and communication technology and the Internet, and their continuous development, e-learning (E-Learning) appeared and spread rapidly, and it became clear that it has a brilliant future, to the extent that it is expected to become one of the most widespread methods of education and training (Al-Subaie and Manasra, 2017).

Educational institutions are social institutions that play a leading role and a major responsibility in achieving the development of intellectual capital, technological progress, the development of the knowledge economy, and the balance between preserving self-identity and openness to the global community. Education in all parts of the developed world is witnessing changes and transformations as a result of contemporary technological, informational and civilizational developments, and ways of utilizing them optimally. Perhaps this represents the real challenge for educational institutions in less developed societies in particular. On the contrary, developed societies took the reasons for development and worked to keep pace with modern developments to serve their interests and achieve their desired goals.

E-learning in its various forms is among the most prominent of the alternatives that have emerged from these developments, as this type of education contributes to facilitating communication between teachers and students, and students among themselves, through discussion boards, e-mail, and virtual dialogue rooms, where e-learning contributes to a statement of different points of view and a sense of equality. Ease of access to the teacher, the possibility of modifying the teaching method, providing study over time, continuity of access to the curriculum, ease and multiplicity of methods for assessing learners' development, taking into account individual differences and transforming education into self-learning (Al-Hazmi, 2019).

With e-learning, the role of the lecturer and the learner has clearly changed. The lecturer is no longer a tutor or the learner a passive recipient. It was necessary for them to be active during the educational situation. The curricula, their content, activities, presentation methods, and evaluation methods were affected, and the learners acquired self-education skills. Proficiency has become the first criterion for education systems and equal opportunities (Al-Baghdadi, 2015).

The COVID-19 pandemic turned this expectation into an immediate necessity. In March 2020, universities in Jordan, as in most countries, suspended face-to-face teaching and moved their courses online within days, and teaching remained largely online during the 2020–2021 academic year. Hodges et al. (2020) describe this shift as emergency remote teaching rather than planned online learning, since courses designed for the classroom had to be delivered remotely without the time, training, or infrastructure that well-designed online courses require. Studies conducted during this period identified technical, financial, and institutional challenges to the use of e-learning (Almaiah et al., 2020; Dhawan, 2020) and showed that Jordanian students' acceptance of online learning depended on the quality of instructional delivery and assessment as well as on their own financial and emotional circumstances (Al-Salman & Haider, 2021). A dataset collected from Jordanian university students in the same period also documented the psychological effects of relying on e-learning tools (Haider & Al-Salman, 2020). Faculty members, who carried the burden of this transition, have received less attention, although their use of e-learning tools largely determines the quality of what students receive. An exception is Haider et al. (2022), who examined Jordanian university instructors' practices and perceptions of online testing, but that study concentrated on assessment rather than on the wider use of e-learning tools.

E-learning is therefore no longer a secondary option for universities but a component of teaching that must be planned, supported, and evaluated. Against this background, the present study examines the extent to which faculty members in Jordanian universities used e-learning tools during the 2020–2021 academic year and the obstacles they faced, from their own point of view.

Within language and discourse studies, corpus-based research illustrates how digital analytical tools can support the examination of media representations and political discourse (Haider, 2019a, 2019b, 2019c). These applications provide a disciplinary context for discussing faculty engagement with digital resources, although they do not directly establish the effectiveness of e-learning or explain its barriers. In the age of electronics, information networks, and the Internet, the lecturer plays a major role in preparing a qualified educated student who is trained in the skills of using e-learning tools, self-learning, research and investigation, and how to deal with available information, selecting and organizing it, in particular, which contributes to developing his personality in an integrated manner, developing his self-confidence and enabling him to contribute effectively to solving the problems of his society. The role of the lecturer differed in light of e-learning from traditional education, and evaluating and knowing the reality of using e-learning tools is one of the most important factors contributing to its success, especially by lecturers. Recently, several attempts appeared to apply e-learning in the field of education, but few attempts have been made to evaluate and know the reality of those experiences from the point of view of the faculty members, and the obstacles they face.

The study seeks to achieve the following objectives:

1. Exposing the reality of the use of e-learning tools by faculty members in Jordanian universities.
2. Identifying the obstacles that face faculty members in universities located in the central region in using e-learning tools.

This study is characterized by the fact that it examines an important topic, which is the reality of the use of e-learning tools by faculty members in Jordanian universities and the obstacles they face from their point of view. It is hoped that this study will be able to achieve its desired goals and be able to:

1. To highlight the importance of e-learning because of its great importance in facilitating the educational process, as it is one of the modern strategies in teaching.
2. Knowing the reality of using e-learning tools by faculty members in Jordanian universities and the obstacles they face from their point of view.
3. The importance of this study also lies in the fact that it is one of the few studies that take place in Jordan - according to the researchers' knowledge - in the field of research on the reality of the use of e-learning tools by faculty members in Jordanian universities and the obstacles they face from their point of view, which may enrich the Educational literature related to e-learning.

Accordingly, the problem of the current study is determined in identifying the reality of the use of e-learning tools by faculty members in Jordanian universities and the obstacles they face from their point of view, by answering the following questions.

The study attempts to answer the following research questions:

1. What is the reality of using e-learning tools by faculty members in universities located in the central region of the Hashemite Kingdom of Jordan from their point of view?
2. What are the obstacles facing faculty members in universities located in the central region of the Hashemite Kingdom of Jordan in using e-learning tools from their point of view?

2. Literature Review

With the tremendous developments of information technology, and due to the successive changes that the world is witnessing today, of knowledge progress that took place at rapid rates and resulted in a revolution of information that led to a significant change in the concepts that individuals deal with. The most important of which is the concept of education, which was affected by the development of information and communication technology. It also resulted in a reconsideration of the teaching method used in educational institutions with the use of computers, mobile phones and the Internet in education, and the development of means of communication. Educational technology has had a role and contribution in modernizing traditional education methods and investing its challenges to the emergence of e-learning.

2.1. Theoretical Perspective

Two bodies of theory help to explain why faculty members adopt e-learning tools or refrain from using them. The Technology Acceptance Model holds that the use of a technology depends chiefly on its perceived usefulness and perceived ease of use (Davis, 1989), and the Unified Theory of Acceptance and Use of Technology adds facilitating conditions, that is, the organizational and technical infrastructure available to support use (Venkatesh et al., 2003). Research with Jordanian professionals similarly suggests that users' trust in the output of a digital tool shapes whether they adopt it (Haider, 2026b). Research on technology integration in teaching distinguishes, in a similar way, between first-order barriers, which are external to the teacher and include equipment, access, time, training, and support, and second-order barriers, which are internal and concern teachers' beliefs about teaching and learning (Ertmer, 1999). These distinctions are used in this study to interpret the obstacles reported by faculty members, which include both external conditions, such as weak Internet connections, insufficient computers, and limited class time, and internal ones, such as adherence to traditional teaching methods and the belief that e-learning wastes time.

2.2. The Concept of E-Learning

E-learning is an integrated system based on the effective use of information and communication technology in the teaching and learning processes, by creating an environment rich in computer and Internet applications, enabling the learner to access learning resources at any time and any place in order to achieve mutual interaction between the elements of the system. E-learning is one of the new trends in the education system, and e-learning is the most commonly used term, and other terms such as (Electronic Education/ Online Learning/ Virtual Learning) are also used.

Al-Qudah and Muqablah (2013) defined e-learning as: learning based on the use of computers and the Internet to deliver educational content to learners through communication between the teacher and the learner, and between the learner and the educational content in an interactive way that enables him to learn.

Basilaia and Kvavadze (2020) see that e-learning is an organized process that aims to achieve educational outcomes using technological means that provide sound, image, films and interaction between the learner, content and educational activities at the appropriate time and place.

The description of e-learning includes many communication technologies that rely on electronic components in their production such as radio, video and television. Perhaps the association of the concept with the use of computers and networks in the contemporary period narrows the definition and excludes the trend towards the inclusion of the concept of radio and television, even if it is described by electronic means of communication. Accordingly, e-learning is defined as an interactive system for distance education, provided to the learner according to demand, and depends on an integrated electronic digital environment aimed at building courses and delivering them through electronic networks, guidance and direction, organizing tests, managing and evaluating resources and processes (Abdulaziz, 2010).

The researchers believe that e-learning is a broad term provided by educational institutions or used by the student on his own. It relies on several unconventional electronic means in transferring knowledge and in communicating and interacting with its fellow teachers; Which leads to bypassing the concept of the process of learning and teaching the classroom, and allows the teacher to support and assist the learner at any time, whether synchronously or asynchronously.

One of the most important advantages of e-learning is that it overcomes the problem of the growing number of learners with the narrowness of the halls and the lack of available capabilities, especially in colleges and theoretical disciplines. On the use of all possible technical means to create a link between the lecturer and the learner, and it is possible to call supervisors via the Internet screen if the need arises, and it is also possible to organize meetings with students through the Internet at a small cost, which achieves the pleasure of learning, as technology provokes and attracts the lecturers towards learning. And the possibility of teaching some topics that were not teachable before through the ability of computers in simulation and modeling (Ismail, 2010; Esteitia and Sarhan, 2008). Haider and Al-Salman (2022), for example, examined the effects of intralingual subtitled videos on Jordanian university students' foreign language learning.

The literature attributes several advantages to e-learning over traditional instruction, including flexibility of time and place, access for learners of different ages and circumstances, lower costs of buildings and transport,

and the ability to record and track the progress of each learner (Dhawan, 2020).

In addition, e-learning is expected to play a growing role in education in the future, as the current generation is distinguished by its attachment to smart phone devices and the use of various applications. Therefore, integrating technology into the educational process has become a global trend, and interaction with educational activities through mobile devices has become a catalyst for learning instead of being satisfied with traditional study (Yulia, 2020). More recently, artificial intelligence tools that give learners automated feedback on their work have extended this trend (Haider, 2026a).

2.3. Elements of E-Learning Systems

Among the most important elements of education and e-learning systems and their role in the development of education:

2.3.1. E-Learning Environment

It is a flexible environment for learning without a floor, walls or ceiling to transcend the limits of time and place in which learners sit in front of computers in their universities, colleges, schools, homes or anywhere else. They study programmed courses on the computer, through websites, or through various electronic platforms and communicate with their professors simultaneously or asynchronously to obtain dialogue, resources, information, etc., and follow up with their colleagues and lecturers (Abdulaziz, 2010).

Mansour (2008) indicates that the e-learning environment differs from the traditional learning environment in terms of form, equipment, activities, and the interaction of learners with the environment. It can make sound and image and use digital cameras, and send them via e-mail to their colleagues on another site, or have discussions with them via the web interactively, and he believes that the design of the electronic learning environment aims primarily for the learner to learn by himself and himself. Therefore, it includes a degree of freedom for the learner, the work of the mind and thinking, and the cooperation of the learners with each other and with the professors in order to achieve the desired goals.

Ahmed and others (2006) consider that the e-learning environment is the environment that transcends the geographical and time limits for providing and benefiting from the educational service, and the best example of this environment that transcends the geographical and time limits for providing and benefiting from the educational service. The best example of this environment is network-based learning, and he believes that in order to achieve an effective use of the e-learning environment, a number of requirements must be secured, including:

- Educational institutions adopt the e-learning system and consider it a national goal that overcomes many of the difficulties of traditional education.
- Determining funding bodies and establishing the infrastructure for e-learning.
- Reconsidering curricula, courses, educational programs and materials to conform to the requirements of e-learning.
- Moving trends towards technological innovations in general, and education and e-learning systems in particular.
- Lifting all restrictions imposed by traditional systems on the enrollment of learners in e-learning programmers.

Ibrahim (2002) defines the components of the e-learning and teaching environment in four elements: electronic classrooms, electronic courses, electronic libraries, and electronic laboratories, and indicates that teaching and learning is summarized in the skills of dealing with computers and its capabilities, Internet services and how to employ them.

Azmi (2001) distinguishes between the electronic learning environment and the virtual learning environment, and sees that the e-learning environment is the virtual learning environment, and believes that the e-learning environment is a physical learning environment that has its components, specifications and preparation, which are classes that are equipped to train students to use all means E-learning in CDs, books and electronic courses, that is, communicating via the Internet with their colleagues, teachers, lecturers, and administration to connect to the global network, and all these procedures are carried out under the supervision

of the lecturer or teacher.

There are a number of software packages that have been developed to manage the various processes of e-learning called E-Learning Environments (ELE), and in fact there is no simplified definition of this e-learning used to describe the software in any server. It is designed to organize or manage the various processes of learning, such as the provision of educational materials, follow-up of students, and assignments. It can be said that the concept of the electronic learning environment does not mean the electronic school environment in its broad and comprehensive concept of all its facilities, but it means the program designed to organize and manage the teaching and learning processes that usually take place inside classrooms, which can be called electronic classrooms (Hassani, 2008). Cloud-based resources are now also developed specifically for training and practice, such as subtitle corpora built for translation students (Haider et al., 2026). Such cloud-based workflows have also been evaluated empirically against traditional, desktop-based ones (Haider, Obeidat, et al., 2025).

E-learning environments are based on the individual's participation in learning activities, which creates an atmosphere of demand for education, and the desire to follow it, unlike traditional methods that may create a safe atmosphere of boredom and distance from it, and the learner acquires the skills of how to learn, which means his lifelong learning that helps him to develop itself.

2.3.2. E-Books and Courses

The electronic course is all educational activities and materials whose production and evaluation depends on the computer (Abdulaziz, 2010). Electronic courses can be classified into:

- 1- Electronic courses that are highly relied upon in providing the educational material, and courses that support the traditional educational content in the book or course of the educational material.
- 2- Courses that are presented on the computer using multimedia software and there is no requirement to have an internet connection, and courses that are published on the Internet and depend on the skills of using the Internet in studying the course.
- 3- Courses that are prepared by the lecturer using special software such as authoring programs, multimedia and presentations to achieve the special needs of learners in the classroom, and courses that come ready by companies and bodies specializing in authoring the software.
- 4- Courses that are published free of charge on the Internet, and others require special fees and subscriptions to obtain the services of these courses, and in general, the electronic courses are according to what was mentioned

A- An electronic course recorded on CDs, which is easy to transfer and download on various devices, and it is called an electronic book.

B - An electronic course published on the Internet, which is designed in a more complex way, so that the learner can communicate with his colleagues and professors, participate and search for information from different sources.

2.3.3. Conditions for Effective E-Learning

In order to ensure the success of e-learning, providing social preparation for members of society to accept this type of education, and the need for educators to contribute to the design and increase of this type of education, and providing the infrastructure for this type of education helps to transfer education from one place to another. And the development of training programs for students, lecturers and administrators to benefit from the maximum degree of educational technology and e-learning, and that the success of e-learning technology depends on determining the quality of the programs used in authoring the software. Determining the appropriate learning strategy for students and using the strategy of blending e-learning with traditional education, taking into account the nature of the curriculum and educational material (Hassani, 2008; Abdulaziz, 2010).

Yulia (2020) and Basilaia and Kvavadze (2020) suggest that e-learning can be effective if the lecturers do the following:

- 1- Organizing educational content: the lecturers may resort to adopting an educational design to prepare an educational material that effectively achieves the goals, studying the educational needs of students, defining the appropriate goals and means to achieve them, and choosing instruments for measurement

and feedback.

2- Choosing the appropriate educational aids: In e-learning, the choice of educational aids is determined by choosing the appropriate educational software for communication, and the effective and widespread means of communication among students.

3- Determining measurement instruments: Because e-learning suffers from a weakness in the reliability of assessment and the difficulty of controlling the implementation of tests, and the monitoring process is impossible to avoid cheating, teachers have resorted to formative assessment during interaction with students, or using real assessment. Haider et al. (2022) documented how Jordanian university instructors approached online testing under these conditions.

4- Individualizing learning and meeting different learning needs and styles: by taking into account the diversity of learning styles among students, their computer competencies, their circumstances in terms of study times and the different quality of their networks and devices.

5- Professional growth: the teacher constantly improves his electronic competencies, and improves the level of readiness to use modern technology in the education process.

2.4. Obstacles to E-Learning

Despite the importance of e-learning, it has several obstacles that prevent its use in the educational process. Among the most important of these obstacles: the lack of clarity of the method and objectives of this type of education for those responsible for educational operations, and technical illiteracy, which requires a great effort to train and qualify the lecturer and the student in preparation for this experience, and the material cost of purchasing the necessary equipment and other auxiliary devices and maintenance, weakening the role of the lecturer as an important educational supervisor and its connection direct with his students and thus his ability to directly influence. The weakening of the role of universities and colleges as an important educational institution in society, which has its role in raising successive generations, the weak infrastructure, whether in equipment or prepared cadres, and the high cost of designing and producing educational software (Al-Subaie and Manasra, 2017; Abu Alama and Mohamed, 2017).

Among the main negatives are as follows:

It is highly dependent on technology. Although e-learning is available to all individuals, many of them may not have smart phones, computers or a network.

Low level of motivation and organization, because e-learning is subjective, some people may find it difficult to motivate themselves to learn, resist playing, and organize the learning process.

- Isolation and loneliness, which arises due to the interaction of students with computers and smart phones rather than their direct communication and interaction with each other (Dhawan, 2020).

2.5. Empirical Studies

In a study conducted by Basilaia, Kvavadze, (2020) which aimed to study the experience of moving from school education to online learning during the spread of the Corona virus epidemic in Georgia. The study was based on the statistics of the first week of the teaching process in a private school and its experience in moving from face-to-face education to e-learning during the Corona pandemic. Online teaching The researchers found that the transition between traditional education and online education was successful. The system and the skills acquired by teachers, students and school management in the post-epidemic period can be used in different cases, such as those with special needs who need extra hours, or by increasing the effectiveness of group teaching or increasing student independence and acquiring new skills. Online delivery also raises the question of access for learners with disabilities. Research on subtitling for Deaf and hard-of-hearing audiences shows that digital audiovisual content must be deliberately designed, for example by describing sounds and music, if it is to be accessible to them (Haider & Sahari, 2026; Haider, Sahari, et al., 2025).

Almaiah et al. (2020) examined the use of e-learning systems in universities during the pandemic and identified change management, technical problems with e-learning systems, and the lack of financial support among the critical challenges to their use. In Indonesia, Mailizar et al. (2020) surveyed 159 secondary school mathematics teachers on the barriers to e-learning during the pandemic and found that barriers at the student

level had the strongest impact on e-learning use, followed by school-level and curriculum-level barriers, while teachers' demographic characteristics were not related to the barriers they reported.

In Jordan, Al-Salman and Haider (2021) surveyed 4,037 undergraduates at four Jordanian universities about emergency online learning. Better instructional delivery and assessment strengthened students' favorable views of online learning, whereas financial and emotional difficulties reduced their interest in it, and students considered arts and humanities courses better suited to online teaching than science courses.

Haider et al. (2022) surveyed Jordanian university instructors on their practices and perceptions of online testing during the COVID-19 period. Their study is one of the few in Jordan to examine faculty members rather than students, although it was limited to assessment.

The study conducted by Aljaser (2019), which aimed at identifying the effectiveness of the e-learning environment in developing the academic achievement, the trend towards learning English for fifth grade students. The e-learning environment, a test setting, and a scale were designed to assess the attitude towards learning English. The quasi-experimental approach was applied to a sample of fifth grade students, divided into a control group taught through the traditional method, and an experimental group taught through the e-learning environment. The results of the study showed that there were statistically significant differences in favor of the experimental group in both the post-achievement test and the measure of attitude towards learning English.

Bashir (2019) modeled e-learning interactivity, learner satisfaction, and continuance learning intention in Ugandan higher education institutions. Using a survey design, the study administered a 28-item questionnaire to 232 learners and found that e-learning interactivity had a three-factor structure consisting of learner–interface interaction, feedback interaction, and learner–content interaction.

Gumbo et al. (2012) evaluated the impact of an in-service training programme on 304 technology teachers in two provinces of South Africa. Questionnaires administered at the start and at the end of the programme showed significant improvements in the teachers' perceived knowledge and understanding of technology education, which underlines the value of continuous training for teachers before and during service. Edirisingha et al. (2007) examined the effectiveness of e-learning by integrating podcasts into the English and Communication course for first-year undergraduate students at Kingston University. Six podcasts were created to improve learning methods and skills and help students to prepare the quarterly work that is required of them during the study period. The experience was evaluated through two observation groups, personal interviews for students (6 students) and a questionnaire applied to students (35 students) at the end of the semester. The research described contexts for teaching and learning and how to introduce podcasts as part of blended learning and measure its ability to achieve the desired results. The study found the effectiveness of e-learning through the use of podcasts in activating the learning process and helping students to perform semester work. The students' attitudes towards learning were positive.

The studies reviewed show that e-learning can improve achievement and attitudes when it is planned and supported (Aljaser, 2019; Edirisingha et al., 2007), that training raises teachers' competence with technology (Gumbo et al., 2012), and that the sudden move to online teaching during the pandemic exposed technical, financial, and curricular barriers (Almaiah et al., 2020; Mailizar et al., 2020). Most of these studies, however, focused on school teachers or on students, and the Jordanian research on emergency online learning has examined mainly students' views and well-being (Al-Salman & Haider, 2021; Haider & Al-Salman, 2020), while work on Jordanian faculty members has concentrated on online assessment (Haider et al., 2022). Less is known about how faculty members in Jordanian universities used e-learning tools during this period and which obstacles they considered most serious. The present study addresses this gap by surveying faculty members at universities in the central region of Jordan, and it draws on the previous studies in building its theoretical framework and interpreting its results.

3. Methodology

3.1. Research Design

To answer the study questions and achieve its objectives, the researchers used the descriptive-analytical approach; it fits with the nature of this study, which aims to reveal the reality of the use of e-learning tools by faculty members in Jordanian universities and the obstacles they face from their point of view.

3.2. Population and Sample

The study population consists of faculty members in universities located in the central region of the Hashemite Kingdom of Jordan, for the year (2020/2021). The study sample consisted of (350) faculty members, who were selected randomly.

3.3. Research Instrument

There are many scientific research instruments that are used in collecting information and data, and based on the nature of the data to be collected, and the method used in the study. It appeared that the most appropriate instrument to achieve its objectives is: the questionnaire, which was designed after reviewing the literature, scientific research methods, and field studies related to the subject of the study.

The questionnaire consisted of 32 statements. Statements 1–15 measured the use of e-learning tools, and respondents rated each on a five-point frequency scale (always = 5, often = 4, sometimes = 3, rarely = 2, never = 1). Statements 16–32 measured the obstacles to e-learning, and respondents rated each on a five-point agreement scale (strongly agree = 5, agree = 4, neutral = 3, disagree = 2, strongly disagree = 1). Mean scores were interpreted with an equal-interval criterion, in which the range of the scale ($5 - 1 = 4$) was divided by the number of categories (5), giving an interval of 0.80. For the use scale, means of 1.00–1.80 were classified as high negative, 1.81–2.60 as negative, 2.61–3.40 as neutral, 3.41–4.20 as positive, and 4.21–5.00 as high positive. For the obstacles scale, the same intervals were labelled very low, low, moderate, high, and very high.

3.4. Validity of the Instrument

The instrument was presented to (8) experienced and specialized referees; to know their opinions about the consistency, clarity, and comprehensiveness of the questionnaire, as this included the affiliation of the items to the scale as a whole. The questions were amended and formulated based on the referees' recommendation, and in light of the referees' proposals for modification, the modifications agreed upon by the referees were carried out. In light of this, a number of them were modified and deleted, in addition to reformulating some statements to indicate directly and briefly what the statement aims for, which established its face validity.

3.5. Reliability of the Instrument

To verify the internal consistency of the instrument, Cronbach's alpha was calculated on a pilot sample of 30 faculty members with characteristics similar to those of the study sample. The coefficient for the questionnaire as a whole was .810, which indicates good internal consistency and is adequate for the purposes of the study.

3.6. Data Analysis

The responses were analyzed statistically. Means and standard deviations were calculated for each statement and for each scale, the statements were ranked by their means, and the means were interpreted according to the criterion described above.

3.7. Scope of the Study

Spatial limits: This study was applied in universities located in the central region of the Hashemite Kingdom of Jordan.

Time limits: This field study was conducted during the academic year 2020-2021.

Human limits: members of the teaching staff in universities located in the central region of the Hashemite Kingdom of Jordan.

Objective limits: The study dealt with the reality of the use of e-learning tools by faculty members in Jordanian universities and the obstacles they face from their point of view.

3.8. Operational Definitions

Procedural e-learning tools: the tools, mechanisms, devices and equipment used in e-learning represented by (educational computer, mobile phone, Internet and other e-learning techniques and tools) to deliver educational content to learners through communication between the lecturer and the learner, and between the learner and

the educational content in an interactive way that enables him to learn .

Procedural obstacles facing faculty members: It is the total score that the examinee obtains through his answers to the statements of the scale used in the current study, (which is represented in a group of obstacles that hinder faculty members from using e-learning tools).

4. Results and Discussion

4.1. Faculty Members' Use of E-Learning Tools

Results related to the first question: What is the reality of the use of e-learning tools by faculty members in Jordanian universities from their point of view?

To answer this question, the arithmetic means and standard deviations of the responses of the sample members were calculated, and Table (1) shows the results.

Table (1) the arithmetic mean and standard deviation of the responses of the sample members towards the use of e-learning tools

No	Statements	Mean	S.D	Level
1	I send assignments by e-mail and assign students to submit assignments by e-mail.	2.95	1.12	Neutral
2	I ask the students to gather information using the web.	2.98	1.05	Neutral
3	I feel that using e-learning tools increases my motivation towards teaching.	3.01	1.20	Neutral
4	I regularly follow courses on e-learning tools and programs that develop my skills.	3.22	1.11	Neutral
5	I present the materials and their activities using the presentation software (Power Point)	3.81	1.28	positive
6	I involve students by using e-learning techniques because it enhances their different skills.	4.08	0.99	positive
7	I believe that e-learning is one of the most important good alternatives for developing education, as it contributes to the dissemination of science and knowledge.	3.64	1.01	positive
8	I use e-learning permanently and regularly.	3.42	0.99	positive
9	I assign the students scientific duties such as reading books, articles and publications through e-learning techniques.	4.02	1.03	positive
10	I use e-learning continuously in the educational process.	3.62	1.12	positive
11	I allow sufficient time for discussion and group work through e-learning techniques.	3.80	0.99	positive
12	I assign the students to prepare assignments through presentations (Power Point) and other technical programs.	3.99	1.05	positive
13	I communicate with colleagues and technicians electronically through e-learning techniques.	3.58	1.09	positive
14	I direct students to educational websites on the World Wide Web.	4.03	1.10	positive
15	My use of e-learning makes me satisfied with explaining educational materials to students.	3.95	1.02	positive
	Total	3.61	positive	

It is evident from Table (1) that the arithmetic averages of the answers of the study sample members to the reality of using e-learning tools ranged between the positive and neutral levels, and with an arithmetic mean that ranged between (2.95 and 4.08). The overall score of the instrument came at a positive level, with a mean of (3.61), where the highest for the statement was "I involve students using e-learning techniques and tools because it enhances their different skills", followed by "I direct students to educational websites on the World Wide Web" (M = 4.03), while the statement "Send assignments to E-mail and assign students to submit assignments via e-mail." with the lowest arithmetic mean (2.95), and with a deviation (1.12).

This result is consistent with studies showing that training and direct experience strengthen teachers' use of technology (Gumbo et al., 2012) and that students respond positively when e-learning tools such as podcasts are integrated into a course (Edirisingha et al., 2007). The pattern of the statements, however, deserves closer attention. The statements rated highest describe uses that extend familiar classroom practice, such as directing

students to websites, assigning readings, and preparing presentations, whereas the statements rated neutral concern regular training in e-learning ($M = 3.22$), the motivational value of e-learning tools ($M = 3.01$), and interactive uses such as exchanging assignments by e-mail ($M = 2.95$) and asking students to gather information from the web ($M = 2.98$). In terms of the Technology Acceptance Model, faculty members appear to have accepted the usefulness of e-learning tools for delivering content (Davis, 1989), while the more interactive and student-centred uses that distinguish planned online learning from emergency remote teaching (Hodges et al., 2020) remained less common.

The results showed that the reality of the use of e-learning tools by faculty members came at a positive level, and the researchers attribute the result: to the lecturers' awareness of the requirements of teaching educational materials using e-learning, and their experience in this field to facilitate the learning and teaching process, and the spread of technology increases and encourages the use of education electronic, which indicates an agreement, with a (positive) degree, on the importance of e-learning in teaching educational materials. It should also be remembered that the data were collected while online teaching was compulsory, so the positive level partly reflects necessity rather than choice.

4.2. Obstacles Facing Faculty Members

Results related to answering the second question: What are the obstacles facing faculty members in using e-learning tools from their point of view?

To answer this question, the arithmetic means and standard deviations of the responses of the sample members were calculated, and Table (2) shows the results.

Table (2) Arithmetic mean and standard deviation of the responses of the sample members to the obstacles facing faculty members in using e-learning tools

No	Statements	Mean	S.D	Level
1	Lack of clarity on the goals of e-learning for lecturers and students.	3.62	1.12	High
2	Weakness of lecturers and students in using e-learning techniques and tools.	3.12	1.03	Moderate
3	Weak interaction between lecturers and students directly.	3.61	1.19	High
4	Weak training and qualification of lecturers and students on e-learning techniques.	3.10	1.01	Moderate
5	Increasing the material cost of purchasing the necessary equipment and appliances.	3.80	0.88	High
6	The difficulty of implementing some means in e-learning	3.87	1.20	High
7	The lecturer stuck to traditional teaching methods.	4.07	0.99	High
8	Believing that using e-learning is a waste of time.	4.01	0.98	High
9	The lack of computers for students to use e-learning.	3.99	1.02	High
10	Class time is not enough to use e-learning in teaching educational materials.	4.05	0.67	High
11	The low effectiveness of educational devices and technologies available in universities and colleges.	4.16	0.75	High
12	Lack of encouragement from the educational supervisor for teachers to benefit from e-learning.	3.85	1.21	High
13	The weakness of the Internet when using e-learning.	4.22	0.75	Very high
14	The density of the scientific material in the courses hinders the use of e-learning.	4.30	0.60	Very high
15	Lack of students' knowledge of using the types of e-learning.	3.76	1.22	High
16	Low motivation of students towards the use of e-learning.	3.84	1.04	High
17	The low suitability of the educational material for e-learning.	3.92	0.99	High
	Total	3.84	High	

It is evident from Table (2) that the arithmetic means of the answers of the study sample members to the obstacles facing the faculty members ranged from the moderate to the very high level, with an arithmetic mean that ranged between (3.10-4.30), and the total score of the instrument came at a high level, with a mean of (3.84), Where the highest for the statement was "the density of the scientific material in the approved courses hinders the use of e-learning." Then it was followed by "the weakness of the Internet when using e-learning," while the statement "weak training and qualification for lecturers and students on e-learning techniques.", the

lowest arithmetic average (3.10), with a deviation (1.01) The current study agrees with the study of Abdul Rahman (2013), which aimed to identify the obstacles to the application of e-learning from the point of view of teachers of the basic stage, and the most important results indicated that teachers are not ready to apply e-learning, and the lack of infrastructure, and the lack of keeping pace with The current curricula for the application of e-learning in the basic stage.

The obstacles were rated high overall, but their ranking is informative. The most serious obstacles were the density of course content ($M = 4.30$), weak Internet connections ($M = 4.22$), and the low effectiveness of the devices and technologies available in universities ($M = 4.16$), followed by lecturers' adherence to traditional teaching methods ($M = 4.07$) and insufficient class time ($M = 4.05$). By contrast, weak training ($M = 3.10$) and the limited skills of lecturers and students in using e-learning tools ($M = 3.12$) were the least serious. In Ertmer's (1999) terms, the respondents located the main barriers in first-order, external conditions, namely infrastructure, equipment, time, and curricula, rather than in their own competence. This agrees with Almaiah et al. (2020), who identified technical and financial issues among the critical challenges to e-learning use during the pandemic, and with Mailizar et al. (2020), who found that teachers attributed the strongest barriers to factors outside themselves, particularly at the student level. The high ratings given to adherence to traditional teaching methods ($M = 4.07$) and to the belief that e-learning is a waste of time ($M = 4.01$) nonetheless indicate that second-order barriers, which concern beliefs about teaching, were also present. Because these statements describe lecturers in general, respondents may have attributed such attitudes to their colleagues rather than to themselves, which would explain how they coexist with the positive level of use reported in Table (1).

5. Conclusion

This study examined the use of e-learning tools by faculty members at universities in the central region of Jordan and the obstacles they faced during the 2020–2021 academic year. Faculty members reported a positive level of use, concentrated in practices that transfer classroom tasks to digital media, and a high level of obstacles, most of which concerned infrastructure, equipment, curricula, and time rather than their own skills. Improving the use of e-learning in Jordanian universities therefore depends as much on institutional investment and the redesign of courses as on training.

In light of the findings of the study, the researchers recommend the following:

1. Holding courses and workshops for lecturers and students alike, developing the reality of using e-learning tools, and training them on how to use it.
2. Interest in providing e-learning tools to include all universities and colleges, linking all universities and colleges to the Internet and providing computers in proportion to the number of students in universities and colleges.
3. Modifying the curricula of academic courses to match their application in e-learning.
4. Removing the obstacles to e-learning by providing Internet labs in universities and colleges, in proportion to the number of students and academic courses.
5. Conducting more educational studies on the reality of using e-learning tools in terms of dimensions and applications in educational and other institutions.

The study has several limitations. The data were collected during a period of compulsory online teaching, so the results describe e-learning under emergency conditions and may not reflect faculty members' practices after the return to campus. The sample was drawn from universities in the central region of Jordan only, and the data were self-reported and may therefore be affected by social desirability. The analysis was descriptive, and differences by gender, years of experience, academic rank, and type of university were not examined. Future research should compare the current situation with the pandemic period, test the effect of these variables, and combine questionnaires with interviews or data from learning management systems.

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