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Research Article

DISTANCE E-LEARNING AND ITS IMPACT ON UNIVERSITY EDUCATION OUTCOMES FROM THE STUDENTS' POINT OF VIEW

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Abstract
This pioneering study aimed to unravel the nuanced impact of distance e-learning on the outcomes of university education, specifically gauging the perspectives of Jordanian university students while considering the variables of gender and academic year. Employing a multifaceted methodology, the research adopted a descriptive approach augmented by an electronically distributed questionnaire, meticulously tailored to assess students' perceptions. A diverse cohort of 1,000 male and female students, selected through a rigorous random sampling method, participated in the study during the inaugural semester of the 2023/2024 academic year. Results unveiled a strikingly high perceived impact of distance e-learning on university education outcomes, with an average score of 3.70 and a standard deviation of 0.62, indicative of a robust consensus among students. Intriguingly, while concerns regarding the negatives of e-learning dominated discourse, the positives of distance education also garnered substantial recognition, albeit ranking slightly lower. Furthermore, the field of outcomes of distance e-learning emerged with a moderate degree of impact, underscoring the multifaceted nature of its influence. Notably, statistical analysis revealed no discernible differences in perceptions across gender or academic year cohorts, suggesting a uniform perspective on the efficacy of distance e-learning among Jordanian university students. These findings not only enrich scholarly discourse but also offer valuable insights for educational policymakers and practitioners seeking to optimize the integration of e-learning modalities in university settings.

Keywords: E-Learning, Distance Education, University Education Outcomes, Higher Education, University Students

INTRODUCTION

The world has witnessed remarkable development in the field of information technology, and the most prominent of these developments is what is known as the field of communications and the information revolution. Perhaps the developments that the world has witnessed today in the field of e-

learning have imposed a new reality on the majority of educational institutions, and these institutions have become responsible before everyone for qualifying individuals, raising their efficiency, and graduating individuals. Able to take responsibility, deal with technological developments, and contribute to the progress and growth of society. E-learning is a new method of education that faces many challenges and obstacles. These challenges have three main aspects: the technological readiness aspect, which is concerned with information and communications, and the executive readiness aspect, which is concerned with the user, meaning the extent to which universities, colleges, companies, government institutions, and organizations are prepared to use e-learning. There is also a psychological aspect. It relates to university professors, trainers, trainees, and students, such as the current educational system, which has been used for hundreds of years. Unsurprisingly, the nature of the human mind opposes change (Manchanda & Arora, 2023; Agyekum & Afutu-Kotey, 2023; Agyekum & Afutu-Kotey, 2023; Faisal& Kisman,2020; Al-Titi and Hamayel, 2017; Shunnar& Sayeh, 2023).

Higher education faces many transformations and challenges as a result of the social, economic, scientific and technological transformations and changes that have occurred at the international level in general and at the Arab level in particular, which makes it need to keep pace with these transformations and changes that have occurred in contemporary societies with the aim of responding to them, confronting them and trying to keep up with them in the correct manner (Bigirwa et.al,2022; Salih,2023; Sharma et.al,2023; Pramana et.al,2022). Despite the significant growth in education and training and the noticeable increase in the numbers of higher education, higher education clearly suffers from the lack of educational and training opportunities for multiple categories of people who aspire to achieve their hopes and ambitions without the need to directly enroll in traditional educational institutions, because their practical life conditions Or economic or social, they do not help them devote themselves to study full-time and enroll in educational institutes far from their places of residence (Aldhafeeri & Alotaibi, 2023; Kumar & Nanda,2022; Syutaridho et.al,2023).

Many researchers, such as (Ashour et.al,2021; Bervell et.al,2023; Eom, 2023; Zelelew et.al,2023; Al-Aswad& Al-Louh, 2017), have emphasized the necessity of keeping pace with the educational shift, which is considered a revolution in the philosophy and policy of education in this era characterized by high and large cognitive culture, as this type of education allows openness to the world through direct dealing with sources of information in an era in which it has become information in all its forms and shapes is available to the whole world through communication channels that have penetrated the centralization of information and broken the barrier of secrecy. The information has become available to everyone on the condition that they benefit from distance education techniques (Agyekum & Afutu-Kotey, 2023; Aljarrah, 2020).

The Internet is an important source of information, as teachers and students in various disciplines resort to it to obtain information by visiting sites available on the network. Obtaining information is not the problem, but the problem is knowing whether the information available on the network has a high degree of accuracy. Accuracy and credibility (Mensah et.al, 2022). Technological progress has led to the emergence of new methods and methods for indirect education, which depend on employing these technological innovations to achieve the required learning, including the use of computers and their innovations, satellites and satellite channels, and the international information network, for the purpose of making learning available throughout the day and night to whoever wants it and in the place and time that suits them. It suits him, using various methods and methods supported by multimedia technology with its various components, to present educational content through an integrated combination of written and spoken language, fixed and animated visual elements, and various audio-visual effects and backgrounds, which are presented to the learner through the computer, which makes the learning process interesting and enjoyable. It is achieved with the highest efficiency, the least effort, and the least time, which achieves the desired and desired quality of education (Manchanda & Arora, 2023; Bigirwa et.al,2022).

There have been many studies that have referred to the process of distance e-learning in its various directions and objectives, including a study (Mehra & Omidian, 2011) which aimed to study students' attitudes towards e-learning at the University of the Punjab in India, and a study (Sorokina, 2012), which aimed to reach The reality of education through the Internet, and its ability to achieve the desired educational goals, as stated in the study (Al-Titi and Hamayel, 2016), which aimed to identify the reality of e-learning in Palestinian universities in light of knowledge management, while the study (Al-Jamal, 2019) aimed to identify on the reality of e-learning in Palestinian universities and its impact on

educational outcomes in light of the Corona pandemic. (Al-Jamal, 2020) also conducted a study that aimed to identify the difficulties facing Palestinian university students in the distance learning system in light of the Corona crisis, and (Hodges et al, 2020) conducted a study to reveal the quality differences between distance teaching in emergency situations and online education. After the previous review of previous studies, both Arab and foreign, the researcher concluded that the topic of e-learning and its importance in communicating with the learner received the attention of researchers, as the studies addressed learners' viewpoints towards e-learning. The researcher benefited from these studies in identifying the fields of study, their variables, and the statistical methods in analyzing their results, as well as in constructing the questionnaire items and their fields. He also benefited from the results, recommendations, and proposals that came out of these studies.

Perhaps the most important characteristic of this current study is that it focused on identifying the reality of distance e-learning in Jordanian universities and its impact on educational outcomes from the student's point of view, as this topic has not been addressed in this way in previous studies - to the best of the researcher's knowledge - which makes it clear to university officials The Jordanian University highlighted the most important positives of e-learning to work on enhancing them and clarifying the negatives of e-learning to work to avoid them from the point of view of students who are considered the focus of the educational process, as well as examining the outcomes of e-learning because of its impact on knowing the extent to which the goals of the teaching and learning process are achieved.

The problem of the study, its questions and hypotheses:

The world began to face a pandemic that invaded most of the world's countries. It began in the Republic of China and then spread to the rest of the world's countries in varying proportions. This pandemic began in Jordan, like the rest of the countries of the world, and as a result, all Jordanian schools and universities were suspended in all Jordanian cities. These measures necessitated... All universities must quickly develop plans in order to limit the continued provision of services to their students during the period of home quarantine imposed by the government to contain this pandemic. All universities in all parts of the world, as well as Jordanian universities, began to continue and broadcast lectures electronically, forcing students to move from traditional in-person education to distance e-learning the fact. This crisis came suddenly and without prior preparation by some universities and students. As the researcher works in the field of university education, and through giving a number of electronic lectures, he noticed many of the positives and negatives that accompanied distance e-learning. Hence, the researcher decided to conduct this study to identify the most important positives to enhance them and note the negatives to reduce them. As well as knowing the outcomes of e-learning from a point of view, knowing that there are many universities, whether in Jordan or countries of the world as a whole, that are still, even now, after the end of the Corona pandemic, continuing to provide e-learning remotely in many academic courses, and therefore this study came in an attempt. To narrow down the precise problem by asking the following main question:

What is the reality of distance e-learning in Jordanian universities and its impact on the outcomes of university education from the student's point of view?

The following sub-questions emerge from the previous main question:

Q1) What are the advantages of distance university e-learning from the student's point of view?

Q2) What are the disadvantages of distance university e-learning from the student's point of view?

Q3) What are the outcomes of university distance e-learning from the student's point of view?

Q4) Are there statistically significant differences at the significance level ($\alpha = 0.05$) in the reality of university e-learning remotely from the student's point of view and its impact on educational outcomes, which are attributed to the gender variable (males, female)s?

Q5) Are there statistically significant differences at the significance level ($\alpha = 0.05$) in the reality of university distance e-learning from the student's point of view and its impact on educational outcomes, which are attributed to the variable of the student's academic year (first, second, third, fourth and more)?

Study hypotheses:

The study seeks to verify the following research hypotheses:

- There are statistically significant differences at the significance level ($\alpha = 0.05$) in the reality of university distance e-learning from the students' point of view and its impact on educational outcomes in light of the Corona pandemic, which is attributed to the gender variable (males, females).

- There are statistically significant differences at the significance level (α = 0.05) in the reality of university e-learning remotely from the student's point of view and its impact on educational outcomes in light of the Corona pandemic, which is attributed to the variable of the student's academic year (first, second, third, fourth and more).

METHODOLOGY

A bibliometric approach was applied in this study to explore the integration of technology in higher education and its relevance in the Philippine context. Recently, bibliometric analysis has gained popularity as a rigorous method for reading, evaluating, and assessing the literature. This approach may effectively identify significant research, authors, journals, organizations, and nations across time, as well as offer a broad overview of voluminous academic literature (Lee et al., 2020). In contrast to other techniques of review, bibliometric analysis takes a macro-level approach and usually displays the dynamics and structure of an area of study (Öztürk, 2021). The field's dynamics and evolution, as well as the relationships between authors, publications, and word concepts inside it, may all be examined from a wider angle using bibliometric analysis. The method and procedures represent all the means that are followed in order to try to reach answers to the questions posed by the study by following specific methods and procedures to achieve this goal.

The descriptive approach was used analytically, and that duet is due to its suitability for this study. The study population consisted of all students at Jordanian universities different. The study sample was distributed electronically through the use of social media such as Facebook. A random sample of students in Jordanian universities reached (1367) questionnaires. When it was done, we recovered (1164) questionnaires, and after excluding the missing and incomplete questionnaires, we left with the (1000) Questionnaire, which was correct. Table (1) next shows the distribution of sample members according to the study variables.

Table 1. Distribution of study sample members according to study variables.

Variables		The number	Percentage
Sex	Male	421	42%
	Female	579	58%
	The total	1000	100%
Academic year	First	218	22%
	Second	213	21%
	Third	254	25%
	Four or more	315	32%
	The total	1000	100%

A questionnaire was prepared to study for the purpose of measurement. The reality of university distance e-learning and its impact on educational outcomes from the student's point of view based on educational literature and previous studies such as a study (Al-Gamal, 2020), study (Aliwi et al., 2021), a study (Agyekum & Afutu-Kotey, 2023), study(Faisal& Kisman,2020), study (Salih,2023), study (Sharma et.al,2023), study (Aldhafeeri & Alotaibi, 2023), a study (Kumar & Nanda,2022), Andmay beIt has formed a questionnaire from two parts.

Section One: This part contains primary data about students who fill out the questionnaire (sex academic year). The second section measures the reality of university distance e-learning and its impact on educational outcomes and consists of (39) paragraphs distributed equally over (3) Areas as follows:

1. The field of advantages of distance e-learning has (13) paragraphs.
2. Area Disadvantages of e-learning Remotely and has (13) paragraphs.
3. E-learning outcomes Remotely and has (13) paragraphs.

The validity and reliability of the study tool are determined. The validity of the tool expresses the validity of the tool used to measure what it was designed to measure, and the validity of the study tool was verified by following the following methods:

Honesty of the arbitrators (virtual honesty):

In this step, an offer questionnaire in its initial form, a number of specialists and experienced people in a number of universities Jordanian universities, such as Al-Balqa Applied University and Yarmouk University holders of doctoral and master's degrees number (15) arbitrators. This is in order to express their opinion on the paragraphs of the questionnaire and their suitability for their fields, in addition to adding, modifying or deleting any other paragraphs. Based on the arbitrators' comments, it was concluded that the procedure had some modifications, which consisted of amending the wording of some paragraphs, deleting some paragraphs, and merging them. Some paragraphs, and so lost the tool, became her final picture composed of (30) paragraphs distributed among the three aforementioned fields, with (10) paragraphs for each field.

Honesty Constructivist (Statistical validity):

To be sure of honesty, the constructivist for the questionnaire paragraphs lost it was completed and applied it to a sample exploratory made up of (30) male and female students from the same study population but from outside the sample initially to study and who did their choice. In the way of randomization, and the following table No. (2) shows the correlation coefficients (Pearson) for the items in each area of the questionnaire and the questionnaire as a whole.

Table 2. Correlation coefficients between the paragraphs and the field You belong for him

The field of advantages of distance e-learning		Area Disadvantages of Distance E-learning		Area Distance e-learning outcomes	
Paragraph	Link	Paragraph	Link	Paragraph	Link
1	**0.654	1	**0.582	1	**0.534
2	**0.624	2	**0.594	2	**0.584
3	**0.587	3	**0.558	3	**0.624
4	**0.524	4	**0.534	4	**0.739
5	**0.531	5	**0.634	5	**0.708
6	**0.602	6	**0.610	6	**0.694
7	**0.721	7	**0.706	7	**0.503
8	**0.631	8	**0.793	8	**0.661
9	**0.557	9	**0.589	9	**0.734
10	**0.602	10	**0.594	10	**0.746

** function Statistically At a significance level (0.01)

It is clear from Table (2) that all Correlation coefficients between the questionnaire items and the total score for the field of study tool function statistically at the significance level (0.01); this indicates belief consistency internal for the questionnaire paragraphs, which confirms the possibility of applying it in the field. To check the tool's stability, the study's internal consistency and reliability of the questionnaire items were examined by calculating the Cronbach's alpha coefficient (Cronbach's alpha). According to the schedule, the next (3):

Table 3. Stability coefficients for fields the study distance university e-learning and its impact on educational outcomes from the student's point of view According to Cronbach alpha coefficients.

Fields of study	Number of paragraphs	Alpha value
Advantages of e-learning	10	0.88
Disadvantages of e-learning	10	0.86
E-learning outcomes	10	0.87
The overall score for the reality of e-learning	30	0.87

By looking at table (3). It turns out that the value of alpha on the reality of university distance e-learning and its impact on educational outcomes from the student's point of view ranged between (0.86) and (0.88); the field of positives of e-learning obtained the highest reliability coefficient. In contrast, the

field of negatives of e-learning obtained the lowest reliability coefficient. The value reached by alpha on the total score (0.87) indicates the accuracy of the instrument used in the study.

After collecting the study data, the researcher reviewed it in preparation for entering it into the computer. It was entered into the computer by giving it specific numbers, that is, by converting the verbal answers into numerical ones. The answer "I strongly agree" is five degrees, "I agree" is four degrees, and the answer neutral is three marks, the answer is two marks: I disagree, and the answer is one mark: I strongly disagree according to the five-point Likert scale. Thus, the questionnaire became a measure of the reality of university distance e-learning and its impact on educational outcomes from students' point of view in a positive direction. The data was statistically processed by extracting numbers and arithmetic means, standard deviations, t-test, and one-way analysis of variance one way ANOVA Cronbach's alpha reliability equation, regression analysis, and test (LSD) for distance comparison, Using the Statistical Package for Social Sciences program (SPSS 21).

In order to make judgments about the arithmetic averages, the score was considered high in the arithmetic averages category (3.67–5.00) average in a category of (33, 2–66, 3) and low in the category of (1,00–2.33) according to the following statistical criterion:

Range = upper scale–Minimum score=5-1=4

Category length = range / number of judgments = = 1.33$\frac{4}{3}$

AndYesThe arithmetic mean value of the expressions in the study tool can be interpreted as shown in the following table (4).

Table 4. The significance of the arithmetic mean.

SMA	Indication
3.67 – 5.00	High
2.33 – 3.66	Medium
1.00 – 2.33	Low

RESULTS AND DISCUSSIONS

Homeowners may anticipate more from the smart homes as HEMS-IoT integrates big data and machine learning techniques into its service layer, especially with regard to energy management (table 1). In order to spot trends in energy use and learn more about the variables affecting these patterns, this part examines the data that HEMS-IoT gathered for the case study. Addresses this section presentation of the results reached by the researcher through the response of the study sample members about the reality of university distance e-learning and its impact on educational outcomes according to the study's questions and hypotheses and in light of treatment the Data statistically communicated study for the following results:

The study's first question states: What are the advantages of university e-learning from a distance? Students?

To answer this question, the arithmetic means, standard deviations, rank, and...the score for each paragraph of the reality of university distance e-learning and its impact on educational outcomes in the scope of the advantages of distance e-learning, which he explains in the following table No. (5):

Table 5. Arithmetic means and standard deviations for the field of advantages of distance e-learning rank descending according to their arithmetic averages.)

Rank	Advantages of distance e-learning	SMA	Standard deviation	Degree
1	Save time and effort in learning and teaching processes	4.63	0.58	High
2	It enables me to retrieve information when I need it	4.61	0.67	High
3	He encouraged me to communicate and exchange experiences in different fields of education	4.58	0.72	High
4	Contributed by providing sound feedback that contributed to improving my knowledge	4.28	0.61	High
5	E-learning has facilitated my understanding and knowledge of the educational material	4.04	0.59	High
6	It increased my participation in various educational topics	3.79	0.52	High

Rank	Advantages of distance e-learning	SMA	Standard deviation	Degree
7	It presents educational materials in a better way than traditional education	3.51	0.63	Medium
8	It contributed to increasing effective communication between me and the teacher	3.42	0.78	Medium
9	E-learning increased my motivation to learn	3.38	0.72	Medium
10	Provides equal educational opportunities for all students	3.18	0.63	Medium
The overall score for the positives of distance e-learning		3.94	0.64	High

It is clear from the previous table (5) that The positives of e-learning came in high on the overall score for the field with a mean score of (3.94) and a standard deviation of (0.64), where (6) items got a high score and (4) items got a medium score, and the paragraph that states: "Save time and effort in learning and teaching processes with an arithmetic mean of (4.63) and a standard deviation of (0.58), followed in second place by the paragraph that states: “It enables me to retrieve information when I need it.” with an arithmetic average of (4.61) and a standard deviation of (0.67). The paragraph in the penultimate place states: “E-learning increased my motivation to learn,” with an arithmetic mean of (3.38) and a standard deviation of (0.72); the last place was given to the paragraph that states: “Provides equal educational opportunities for all students” the mean was (3.18) and the standard deviation was (0.63).

This result can be attributed to the fact that students feel positive about distance e-learning in their universities during their studies, and this naturally made it easier for them to obtain knowledge without putting them through the trouble of coming to the university, which may be financially costly for students, especially students who live in areas far from their universities, and this may be a natural result in that it saves time, effort and money for the student, especially since Jordanian society in general suffers from difficult economic conditions, and the great possibilities of e-learning which it provides through the student’s ability to refer to knowledge at any time and in any place. This is all considered an aspect. Strong positive feedback for distance e-learning emerged from the students’ answers. As for the student’s point of view that distance e-learning has reduced their motivation to learn, it may be due to the lack of direct contact between the student and the teacher, as when the student is in the lecture hall, his mind naturally remains alert to any question the teacher may ask the students, as when we notice the last paragraph Which indicates the lack of equal opportunities for students in e-learning. This may result from the fact that some students may not be able to obtain knowledge like other students due to the decline in Internet services or the lack of sufficient money to subscribe to Internet services, as these services require a subscription to remain available. All of this affects the possibility of benefiting from distance e-learning, This result is consistent with the results of the study (Agyekum& Afutu-Kotey, 2023), study (Bervell et.al, 2023), and study (Al-Titi et.al, 2016).

The second question of the study states: what cons University e-learning from a distance Students?

To answer this question, the arithmetic means, standard deviations, rank, and... the score for each paragraph of the reality of university distance e-learning and its impact on educational outcomes in the field of disadvantages of distance e-learning, which he explains in the following table No. (6).

Table 6. Arithmetic means and standard deviations for the field of disadvantages of distance e-learning rank descending according to their arithmetic averages.

Rank	Disadvantages of distance e-learning	SMA	Standard deviation	Degree
1	Increased psychological pressure	4.69	0.63	High
2	Not meeting my colleagues made me feel isolated	4.58	0.67	High
3	Reduce the number of meetings between me and my fellow students	4.41	0.72	High
4	It contributed to weakening the interaction between me and my fellow students	4.38	0.52	High
5	E-learning increased my behavioral crises	4.27	0.59	High
6	E-learning is not suitable for the courses offered	4.12	0.71	High

Rank	Disadvantages of distance e-learning	SMA	Standard deviation	Degree
7	E-learning has led to a chill in social relations between students	3.96	0.58	High
8	It limited my creativity in answering exams	3.83	0.68	High
9	It increased the burden required of me	3.79	0.53	High
10	E-learning is not suitable for courses of a practical nature	3.74	0.66	High
The overall score for the disadvantages of distance e-learning		4.17	0.62	High

It is clear from the previous table (6) that the disadvantages of distance e-learning came in at a high level in the overall score for the field and in all items, with a mean of (4.17) and a standard deviation of (0.62). The item that states: "Increased psychological pressure" with an arithmetic mean of (4.69) and a standard deviation of (0.63), followed in second place by the paragraph that states: "Not meeting my colleagues made me feel isolated" with an arithmetic mean of (4.58) and a standard deviation of (0.67), the penultimate paragraph came in the paragraph that states: It increased the burden required of me with an arithmetic mean of (3.79) and a standard deviation of (0.53), the last place was given to the paragraph that states: E-learning is not suitable for courses of a practical nature the mean was (3.74) and the standard deviation was (0.66).

This result may be attributed to the fact that distance e-learning leads to the student feeling psychologically distressed as a result of not going to his university and meeting his colleagues and teachers and his inability to practice university life in the desired manner, especially since the university stage may be considered one of the most beautiful academic stages in the student's life, and here it is necessary. It is noteworthy that many Jordanian universities, specifically for first-year students, offer their courses through distance e-learning, and this causes psychological feelings for the student, as the student is essentially experiencing a period of psychological pressure during his presence in the general secondary school stage, which is a pivotal stage in the student's life, and after that... The student takes a university seat and is surprised that his studies will be via e-learning. All of this leads to the student feeling social isolation and psychological instability. The students' answers also confirm that distance e-learning is not compatible with teaching courses of a practical nature, such as medical specializations, engineering specializations, and some humanitarian and educational specializations, and this will certainly affect the educational outcomes through the graduation of students who are not properly trained and qualified. If we compare the positives and negatives of distance e-learning, we find that the negatives outweigh the positives, which is what the students' answers showed, This result is consistent with the results of the study (Aldhafeeri& Alotaibi, 2023), study (Manchanda& Arora, 2023), and study (Ashour et.al,2021).

The study's third question states: "What outputs university e-learning from a distance? Students?

To answer this question, the arithmetic means, standard deviations, rank, and the score for each paragraph of the reality of university distance e-learning and its impact on educational outcomes in the scope of the outcomes of distance e-learning, which it explains in the following table No. (7):

Table 7. Arithmetic means and standard deviations for a range outputs e-learning about b! Count in descending order according to their arithmetic averages.

Rank	Distance e-learning outcomes	SMA	Standard deviation	Degree
1	Save me time and effort	3.72	0.52	Medium
2	It has increased my ability to apply what I learn in the correct fields	3.46	0.58	Medium
3	Enhance student control over the educational process	3.38	0.51	Medium
4	It gained me academic knowledge through the interaction links it provides	3.22	0.62	Medium
5	It increased the exchange of knowledge between me and my colleagues	3.17	0.66	Medium
6	Enhance my ability to analyze information in a logical manner	2.96	0.69	Medium
7	Enhance my ability to collect and formulate information	2.83	0.52	Medium

Rank	Distance e-learning outcomes	SMA	Standard deviation	Degree
8	Gain problem-solving skills	2.67	0.51	Medium
9	Developed by creative thinking skills	2.59	0.73	Medium
10	Improving my performance skills through the use of educational websites	2.42	0.65	Medium
The overall score for distance e-learning outcomes		3.00	0.60	Medium

It is clear from the previous table (7) that the outcomes of distance e-learning came in at a moderate level on the overall score for the field and on all items, with an arithmetic mean of (3.00) and a standard deviation of (0.60). The paragraph that states: "Save me time and effort," with an arithmetic mean of (3.72) and a standard deviation of (0.52), is followed in second place by the paragraph that states: "It has increased my ability to apply what I learn in its correct fields" with an arithmetic mean of (3.46) and a standard deviation of (0.58), and in the penultimate place came the paragraph that states: "Developed my creative thinking skills" with an arithmetic mean of (2.59) and a standard deviation of (0.73), the last place was given to the paragraph that states: "Improving my performance skills through the use of educational websites" with the mean was (2.42) and the standard deviation was (0.65).

This result can be attributed to the fact that the students believe that distance e-learning has contributed to a change that may be somewhat positive and useful by saving time and effort. This may be realistic and logical, but it was not greatly effective, and this is what the results showed that the students feel That distance e-learning has affected them to a moderate degree, and this may also be a result of the nature of the special requirements that distance e-learning imposes on students through the possibility of providing modern electronic devices, whether a smart mobile phone or a laptop computer, and this may not be available to many students. Despite the positive view of distance e-learning, traditional face-to-face education, through student answers, is still dominant in the educational scene and its impact on the student in a positive way, as studying in front of a teacher is certainly not the same as studying in front of a mobile phone or laptop. Here, it is necessary to provide guidance. It is the attention of officials in higher education, represented by universities, to carry out their required responsibilities in order to promote and support distance e-learning, and this may be through holding meetings for students in person to discuss the academic topics that students have received through distance e-learning, and also through helping students who are unable to secure the requirements for this type of education, This result is consistent with the results of the study (Agyekum& Afutu-Kotey, 2023), and study (Kumar& Nanda, 2022).

Arithmetic means and standard deviations were extracted for every field distance e-learning and its impact on university education outcomes from the student's point of view for the tool as a whole, shown in the following table No. (8):

Table 8. Arithmetic averages and standard deviations for the fields of distance e-learning and its impact on the outcomes of university education from the student's point of view arranged in descending order according to their arithmetic averages.

Rank	The field	SMA	Standard deviation	Class
1	Cons Distance e-learning	4.17	0.62	High
2	Advantages of distance e-learning	3.94	0.64	High
3	OutputsDistance e-learning	3.00	0.60	Medium
E-learning as a whole		3.70	0.62	High

It can be seen from the previous table (8) that Distance e-learning and its impact on university education outcomes from the student's point of view came to a degree high with an arithmetic average of (3.70) and a standard deviation (0.62), where it came from area "Disadvantages of Distance E-Learning" ranked first with an arithmetical average (4.17) and standard deviation (0.62) and to a degreeHi. In contrast, he came area "Positives of distance e-learning" came in second place," with an arithmetic average of (3.94) and standard deviation (0.65) and to a degree also high, followed by and in the third and last place is the field"Outputs of distance e-learning" with an arithmetic average (3.00) and standard

deviation (0.6). To a moderate degree, This result may be attributed to the fact that distance e-learning, despite its many positive aspects, still faces difficulties that limit their ability to accept and deal with it in a correct and ideal manner. This may be a result of the lack of practice of e-learning skills by students in previous educational stages, such as School, and this may lead us to direct the attention of educational leaders at various educational levels to the necessity of adopting the ideas of distance e-learning for students and trying to provide all the necessary materials, tools, methods and capabilities for this by providing financial sums for this aspect, This result is consistent with the results of the study (Eom, 2023), and study (Mensah et.al, 2022).

The study's fourth question states: "Are there any statistically significant differences at the significance level? α=0.05) on the reality of university distance e-learning from the student's point of view and its impact on educational outcomes, which is attributed to the gender variable (males, females)?

Arithmetic means, and standard deviations were extracted to answer this question. A test "T" was used to indicate the differences in the reality of university distance e-learning and its impact on educational outcomes, which he explains following table No. (9):

Table 9. Test results "T" to indicate differences in the reality of university distance e-learning and its impact on educational outcomes is due to...For the gender variable(male & Female).

Sex	The number	SMA	Standard deviation	Degrees of freedom	T value	Statistical significance
Male	421	3.35	0.64	43	-1.179	0.362
Feminine	579	3.52	0.71	68		

*Function at the level of significance (0.05≥ α).

Illustrated by the schedule (The results of the study showed that there were no statistically significant differences at the level of significance (0.05≥α) on the reality of university distance e-learning and its impact on educational outcomes depending on the gender variable (males, females), where the statistical significance was greater than>0.05, which is not statistically significant. This is due to the fact that distance e-learning and the results obtained are similar for males and females. This may be because the male or female students live in the same conditions, so no differences appear for them. This confirms that the positives, negatives and outcomes of distance e-learning are real and are felt by all students, male and female. Based on this result, we reject the null hypothesis for this question, This result is consistent with the results of the study (Bigirwa et.al, 2022), and study (Al-Gamal, 2020).

The fifth question of the study states: (Are there any statistically significant differences at the significance level?α=0.05) in the reality of university distance e-learning from the student's point of view and its impact on educational outcomes, which is attributed to the variable of the student's academic year (first, second, third, fourth and more)?

To answer this question, arithmetic means, and standard deviations were extracted and a test "F" and the results of the one-way analysis of variance test for the significance of the differences in the reality of university distance e-learning and its impact on educational outcomes, which he explains the following table No. (10).

Table 10. Arithmetic means, standard deviations, and test results "F" and the results of the one-way analysis of variance test for the significance of the differences in the reality of university distance e-learning and its impact on educational outcomes is due to...For a variable, the student's academic year(First, second, third, fourth or more))

Academic year	The number	SMA	Standard deviation	Source of variance	Sum of squares	df	Mean squares	p-value	.sig
First	218	3.61	0.58						
Second	213	3.57	0.62	Between Groups	2.746	12	0.383		
Third	254	3.60	0.69						
Four or more	315	3.46	0.72	Inside Groups	12.236	9	0.374	2.389	0.362
The total	1000	3.56	0.65	the total	16.735	11			

It is clear by reviewing Table 10 that the results of the study showed that there were no statistically significant differences at the level of significance (0.05≥α). The reality of university distance e-learning and its impact on educational outcomes is attributed to a variable. The student's academic year, where the statistical significance was greater than>0.05, is not statistically significant. This is due to the fact that e-learning and the results obtained are similar for all students, regardless of their academic level. This may be because the students were exposed to e-learning in one period, and regardless of their academic level, whether they were students in the school stage that precedes the period of entry into university study or at the various levels of university study, starting from the first year of study up to the year of university graduation. This confirms that the positives, negatives, and outcomes of distance e-learning are real and are felt by all students. Based on this result, we reject the null hypothesis for this question, this result is consistent with the results of the study (Eom, 2023), and study (Al-Gamal, 2020).

The limitations of this study are determined, the study addresses the reality of university distance e-learning from the student's point of view and its impact on educational outcomes. Human limitations, The study is limited to students at Jordanian universities. Time limits, the study was conducted during the first semester of the university year (2023/2024). Spatial boundaries, various Jordanian universities, such as Al-Balqa Applied University, the University of Jordan, Yarmouk University, the Jordan University of Science and Technology, and Ajloun National University.

CONCLUSION

After analyzing the results and discussing their interpretation, I have reached its results until the impact of distance e-learning. On the outcomes of university education from the point of view, students at Jordanian universities scored high with an average score of (3.70) and a standard deviation of (0.62) as for the fields of study, the field of negatives of e-learning came in first place with an arithmetic average reach (4.17) and a standard deviation of (0.62) with a high degree. In contrast, the field of positives of distance e-learning came in second place, with an arithmetic mean (3.94) and standard deviation (0.65), and also with a high degree, it was followed in third and final place by the field of e-learning distance learning outcomes. With an arithmetic mean (3.00), a standard deviation (0.60) and a moderate degree, the results indicated there are no statistically significant differences at the significance level (0.05≥α). In the reality of university distance e-learning and its impact on educational outcomes... For a variable at Sex (males, females) and the student's academic year (first, second, third, fourth or more). In light of the results and objectives of the study, it is recommended researcher With the following: Universities should work to design educational materials that suit e-learning and keep pace with its requirements. Training faculty members well on the mechanisms and techniques for using e-learning. Work as much as possible to give equal opportunities to all students during electronic lectures. Holding courses for students on the e-learning mechanism. Finding mechanisms that enhance the exchange of knowledge between students during lectures. Working on interactive involvement of students during electronic lectures.

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AUTHOR CONTRIBUTIONS

The authors' contribution to the study is determined by their participation in trying to achieve the optimal completion of the study, as the role of the first author is represented in choosing the title of the manuscript and determining the questions of the study, in addition to discussing the results and verifying the references used. As for the second author, his role was to refer to previous relevant studies in addition to contributing to the interpretation of the results. As for the third author, his role was to conduct the data collection process from the study sample and conduct the appropriate statistical analysis. As for the fourth author, his role was to proofread the manuscript linguistically and grammatically, in addition to ensuring the documentation process for the references used, in addition to contributing to referring to some previous relevant studies.

CONFLICTS OF INTEREST

All of us authors declare no conflicts of interest

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