

# REQUIREMENTS TO ENHANCE THE EFFECTIVENESS OF E-LEARNING PLATFORMS AND THEIR INFLUENCE ON THE QUALITY OF EDUCATION AT JORDANIAN UNIVERSITIES' FACULTIES OF FINANCE AND ADMINISTRATIVE SCIENCES AND COLLEGES OF HOSPITALITY IN LIGHT OF THE CORONA PANDEMIC

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## ABSTRACT

*The research seeks to examine the needs for improving the efficiency of e-learning platforms in light of the Corona Pandemic as well as their impact on the quality of education in Jordanian institutions.*

*In order to establish the data's eligibility for factor analysis, we used version 20 of the SPSS to analyze 37 elements on the Likert scale before doing axial components analytics. It has been evaluated.*

*Incentives are lowered by early hypotheses that ELPs are more efficient and acceptable. incentives. When the incentive effect was 0.031 (-0.248), the likelihood of increasing the efficiency of e-learners was increased. Researchers do not think that the incentives can benefit as they initially thought.*

**Keywords:** Covid -19, E-Learning Platforms, Education Quality, Hospitality School, Finance And Administrative School.

## INTRODUCTION

The consequences of this 2019-20 coronavirus pandemic have impacted worldwide education systems, which have caused schools and universities to be prevalent. In 73 nations, governments announced closures on March 16, 2020, including 56 countries which shuttered schools nationwide and 17 countries which closed schools in a certain range. More than 421 million pupils worldwide suffered from national school closures, while 577 million pupils were at danger with small-scale school closures. The shutdown of schools and colleges, as a result of the propagation of the Virus COVID-19, drove out of school one student out of five worldwide, (Alsoud & Harasis, 2021 )Evaluation of COVID-19 has resulted in a large-scale shutdown of elementary, secondary and post secondary education, including colleges and universities, in the efforts to stop it spreading via non-pharmaceutical treatments and preventative measures such as social distance and self- isolation.

As of May 3rd, Jordan has reported 459 cumulative cases of COVID-19. While Jordan's case load may seem little in contrast to the over 3 million confirmed cases worldwide, the nation

is not taking any risks and appears to be limiting the disease's spread so far. Since March 15th, 2020, a nationwide shutdown of kindergartens, schools, colleges, and other educational institutions has been in effect, impacting 2,372,736 students.

According to a UNESCO study, the majority of education systems in the 61 nations surveyed adopted remote learning methods. Schools, instructors, families, and students have embraced e-learning in general, where instruction is done remotely and on digital platforms. There are notable outliers, such as Sweden, which did not shut its primary schools, and Belgium and Norway, where a few educational facilities remained partly open for children whose parents work in critical areas. Furthermore, governments all around the globe use World Bank-supported technology to offer remote learning possibilities for children when schools are closed. The World Bank provides a database of the measures implemented by nation (UNESCO, 2021).

Prior to the onset of the crisis, the usage of digital material in education was very rare across the globe. (Brown-Liburd & Joe, 2020). Only 20% of nations used digital learning tools in the classroom, and only in a few schools. Only 10% of nations have more strong digital learning capabilities, making certain instructional resources accessible outside of the classroom. The World Bank reports that no nation has an uniform digital curriculum for teaching and learning. These figures provide a picture of the efforts that governments and schools have to make to quickly transition to remote learning in order to guarantee learning continuity.

To make an acceptable transition to online learning, three criteria must be met: access to the internet, the proper technology, and the ability to utilize the technology. The European Data Portal developed an interactive map, displayed in figure 3, to help students understand how school closures affect them and how they may obtain online education. The map was produced by merging data from a 2015 survey conducted by the organization for Economic Co-operation and Development (OECD) and reusing data from the World Bank's aforementioned dashboard. The restrictive restrictions on schools, the number of pupils impacted, and access to the internet and technology are shown for European nations. Since can be seen from the high percentages in figure 3, Europe's digital infrastructure is very advanced, as most schools and homes have internet connection. Furthermore, in a debate on quality assurance in medical education, (Vroeijenstijn, 1995) stated his first thoughts that quality is in the eye of the beholder and that any definition of quality must take into consideration the views of many stakeholders. For example, governments may define quality in terms of attrition rates, through put, the profession may define quality in terms of skills and attributes developed during the course of study; students may consider the concept in terms of individual development and preparation for a position in society; and academics may define quality in terms of knowledge transfer.

## LITERATURE REVIEW

Because of the severe breakout of this worldwide pandemic Covid-19, the majority of the globe is under quarantine, and many cities have transformed into phantom cities, with the impacts seen in schools, colleges, and universities as well. All of this online teaching and online learning may be referred to as a cure for the problem. The Corona Virus has forced educational institutions to shift from an offline to an online method of instruction. This catastrophe will force institutions that were previously resistant to change to embrace contemporary technologies. This disaster will demonstrate the profitable side of online teaching and learning. We can reach to a huge number of pupils at any time and in any area of the globe by using online teaching modalities. All institutions must develop several online instructional methods and attempt to utilize technology more effectively. (Affouneh et al., 2020) Many colleges across the globe have completely digitalized their operations in response to the present crisis. In the middle of this turmoil, online learning is emerging as a victor ludorum. As a result, improving the quality of online teaching–learning is critical at this time. Following the Covid-19 epidemic, online education in Chinese colleges has grown at an exponential rate. Normal classrooms were

transformed overnight into e-classrooms, implying that educators changed their whole educational approach to address new market realities and adapt to shifting circumstances. During this difficult period, the issue is not whether online teaching–learning techniques can offer excellent education, but rather how academic institutions will be able to embrace online learning on such a large scale (Carey, 2020).

In response to the facts of reality, Jordan have responded to all their efforts to adopt a wise royal approach which emphasized the pulse of education for students and the conservation of students' health. At the same time they use this method for distance education as a means of achieving social distance education. Where various educational institutions have rushed to e-learning and its platforms or distance education to not overlook and continue the education process and to keep the wheel of education rotating, as many successive decisions, in cooperation with all concerned authorities, have been taken for these purposes through the activation of the Educational Training Center. (Li, 2018; Asghar et al., 2021; Hwang & Xie, 2018). Adoption of non-traditional learning modes and methods and different types of student achievement assessment by electronic means or distance learning, in all governmental and private educational institutions, within the Kingdom and for the current academic year 2019/2020 and thus the state of Jordan.

The Universities started promoting technology integration in the training system, promptly instructed and instructed faculty representatives to implement electronic platforms and distance learning by means of the decisions taken by the appropriate councils of deans according to the decisions taken by the Higher Education Council on the basis of Defense Order No. 7 in that respect.

In this regard, the Jordanian Government made a remarkable effort for university and faculty members to get out of a pandemic problem immediately in order to preserve the safety of students and to preserve the smooth nature of education in Jordan, and thanks to its efforts with the various support and safety institutions, it has largely succeeded.

In recognition of the intricacy of its features and the commonality of these barriers, the higher education issue is a global and national problem par excellence: As for the most significant difficulties in the pandemic period: Higher education:

Distance education will be a concrete reality in the educational process, which must be adapted by institutions, staff, students and society. In order to decrease or cancel some stagnant specialties which will progressively vanish in the job market, we must rethink our study programs in proportion to the next stage.

The creation of an e-learning platform has the same restrictions as the creation of a website, but it also includes certain unique characteristics due to its usage for learning. An e-learning platform's structure consists primarily of three actors: the student, the instructor, and the platform administrator. A teacher's function may be split into teacher-designer, teacher-trainer (or teacher-tutor), teacher-corrector, and so on. Administrators of educational resources and administrators of schooling are likewise subsets of the job of administrator. Each position has its own set of modules for management (Adedoyin & Soykan, 2020).

Quality in education has been identified as a concern that should direct our efforts to enhance teaching and learning processes. E-learning is the most recent effort to enhance learning by using technological advancements. (Shahzad et al., 2021; Tezcan-Unal et al., 2018; Karam et al., 2021). Digital transformation is not a new phenomena; it has been following higher education institutions for many years (Zongozzi, 2020; Leszczyski et al., 2018; Abad-Segura et al., 2020). The digital transformation of higher education institutions is a topical issue that several stakeholders in education must be concerned about; abilities to apply ICT in all spheres of life are on an incremental level, so universities must be up to the task of preparing potential professionals to face challenges and provide solutions (Bond et al, 2018; Han & Ellis, 2018; Pham et al., 2019; Wagner et al., 2008), and this entails preparing potential professionals to face challenges and provide solutions. In the context of higher education institutions, digital

transformation may be defined as the total of all digital procedures needed to complete a transformation process that allows higher education institutions to optimally use digital technology (Wang et al., 2020). This process also includes appropriate strategic planning, the development of trust, process thinking, the amalgamation and reinforcement of all parties involved, as well as separate, collaborative, and organizational knowledge (Parker, 2020). According to Hiltz & Turoff, (2005), the current transformation will be viewed as revolutionary changes in the specifications of higher education as a process and as an institution in the next 50 years because the transformation has moved face-to-face instructional programs using objectivist, teacher-centered teaching methods for thousands of home-grown, provincial, and domestic universities. According to these academics, online learning is a new social process that has been gaining traction as a substitute for traditional face-to-face classrooms, but when examined from the viewpoint of replacement processes that have been labeled as disruptive processes. (Arkorful & Abaidoo, 2015) Because of the Covid-19 pandemic, novelties in higher education that would normally take many years due to differing managerial regulations were presented quickly within a few number of days (Strielkowski, 2020), and this has also turned the branding of online learning as a disruptive process.

While assessing the assumptions surrounding the digital transformation of higher education institutions. Digitalization at higher education institutions should not be referred to as e-learning since online learning is just one of many aspects of higher education institutions' digital transformation. Online learning is the use of technology equipment, tools, and the internet for educational purposes (Means et al., 2009); Tallent-Runnels, et al., (2006) added that the persistent increase in technological innovation and internet accessibility has increased motivation for online learning since the turn of the millennium, but Joshi, et al., (2020) concluded that the instructional achievement of online learning is debatable due to the absence of face-to-face relationships among learners, learners and instructors, and learners and instructors. Hodges, et al., (2020) distinguished properly prepared online learning experiences from crisis-response courses. These researchers went so far as to call online education during the epidemic "emergency remote teaching," as opposed to quality or successful online learning.

Effective online education includes online teaching and learning, as well as the promotion of several research works, principles, prototypes, theories, ethics, and evaluation of benchmark concentrations on quality online course design, teaching, and learning (Aidos et al., 2021; Bozkurt & Sharma, 2020; Anwar et al., 2020), because it has been established that effective online learning is a byproduct of careful design and planning of interdisciplinary courses (Omotayo & Haliru, 2020; Branch & Dousay, 2015; Demirbilek, 2014). The lack of a careful design and development approach in the migration process resulted in the rejection of the current online education experience during this pandemic as successful online education and instead as emergency remote teaching (Vlachopoulos, 2020).

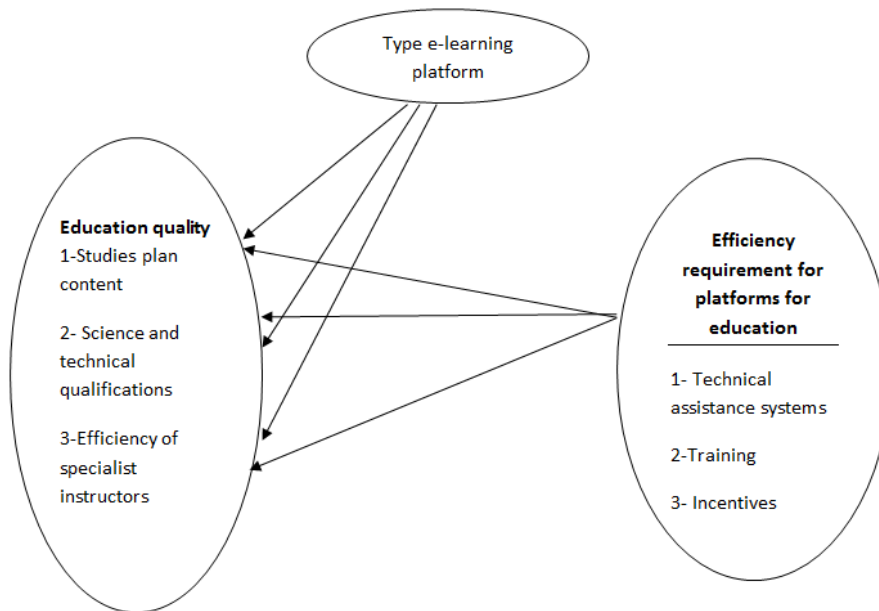
## METHODOLOGY

SPSS version 20 was used in our study of 37 Likert items to find the components of the scale which fit into the factor analysis, before we did axial component analysis to find out whether the data could be used in the factor analysis. The cost was estimated.

The correlation matrix revealed that several coefficients with values of 0.3 or higher were identified. According to the Kaiser-Meyer-Okin score, which measures how well two variables correlate, the correlation matrix was factorable. This technique used the Axial Components Analysis utilizing Varimax Rotation. The rotational component matrix was able to identify the significant loading axial factors.

## Hypothesis

- H 1: There is a statistically significant connection between assistive technological systems and increased e-learning platform efficiency.
- H: 2 There is a statistically significant connection between training and increased e-learning platform efficiency.
- H 3: There is a statistically significant connection between the existence of incentives and increased e-learning platform efficiency.
- H 4: There is a statistically significant connection between e-learning platform efficiency and increasing educational quality in the faculties of finance and administrative sciences and hospitality.



**FIGURE 1**  
**THE MODEL OF THE STUDY**

<b>Variable</b>	<b>Group</b>	<b>Frequency</b>	<b>Percentage</b>
Age	Less than 25 years	28	7.0
	26-35 year	172	43.0
	36-45 year	108	27.0
	46-55 year	72	18.0
	56 year and more	20	5.0
Academic ranks	Instructor	72	18.0
	Assistant Professor	180	45.0
	Associated Professor	80	20.0
	Professor	68	17.0
Type of University	Government	232	58.0
	Private	168	42.0
E- Learning Platforms	Google class room	76	19.0
	Zoom	76	19.0
	Microsoft teams	160	40.0
	Moodle	72	18.0
	Blackboard	16	4.0
Total		400	<b>100.0</b>

Table (1) reveals the following:

The greatest percentage of the distribution of people based on age (43.0 percent ) was for age (26 - less than or 35 years), followed by the percentage (27.0 percent ) for age (46 - less than or 55 years), and the lowest percentage (5.0 percent ) for age (56 - less than or 65 years) (equal

to or greater than 55 years and over). The rank (associate professor) had the greatest percentage of the distribution of people according to the academic rank variable (45.0 percent), while the rank (professor) had the lowest percentage (17.0 percent) (professor). The number of those working in public universities reached (232) with a percentage of (58.0%), while those working in private institutions reached (168) with a percentage of (58.0%). (42.0 percent ). The platform (Microsoft teams) had the greatest proportion of people distributed according to the variable of the educational platform utilized (40.0%), while the platform (Microsoft teams) had the lowest percentage (4.0%). (Blackboard).

### Analyze the Factors

We utilized the SPSS version 20 in analyzing 37 elements of the Likert scale to arrive at the result in factor analysis, before conducting axial component analysis, to determine the data's eligibility for factor analysis. It was assessed.

Many coefficients with values of 0.3 or higher were found in the correlation matrix. The Kaiser-Meyer-Olkin score was 0.900, and the Bartlett's Test of Sphericity achieved statistical significance, indicating that the correlation matrix is factorable. The Axial Components Analysis using Varimax Rotation method was employed.

We have five items by rotated component matrix was identified the strong loading axial factors by Rotation Sums of Squared Loadings result.

Reliability: To ensure the tool's reliability, we used the Cronbach's Alpha equation to sample the original research, in order to know the stability of the internal consistency for each area of study, as shown in table (2):

<b>Paragraph</b>	<b>Factor loading</b>	<b>Cronbach's Alpha</b>
1	0.731	0.850
2	0.624	
3	0.576	
4	0.560	
5	0.575	
6	0.588	
7	0.597	
8	0.554	
1	0.620	0.82
2	0.740	
3	0.517	
4	0.599	
5	0.666	
6	0.548	
7	0.481	
8	0.763	
1	0.498	0.88
2	0.594	
3	0.415	
4	0.674	
5	0.665	
6	0.683	
1	0.526	0.86
2	0.528	
3	0.668	
4	0.586	
5	0.539	
1	0.511	0.88

2	0.614	0.82
3	0.701	
4	0.574	
5	0.528	
1	0.521	
2	0.498	
3	0.682	
4	0.722	
5	0.558	

The first hypothesis is that there is a statistically significant relationship between auxiliary technological systems and increased e-learning platform efficiency.

To test this hypothesis, a simple regression analysis was performed to determine the relationship between technical support systems and increased e-learning platform efficiency, as shown in the table 3:

Table 3 THE RESULTS FOR SIMPLE LINEAR REGRESSION									
R	R Square	Adjusted R Square	F	Sig*	Regression coefficients				
					Domain	$\beta$	Std. Error	T	Sig*
0.519	0.270	0.268	146.879	0.00*	Technical assistance systems	0.794	0.066	12.11	0.000*

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

We can see from the previous table that there is a positive correlation between technical assistance systems and increased e-learning platform efficiency, with the correlation coefficient reaching (0.519), and the results of the regression analysis also revealed a statistically significant effect of technical assistance systems, with the value of (P) reaching (146.879). Furthermore, the findings revealed that the explained variance was (0.268), indicating that the proportion of effect of technical help systems reached (26.8 percent), and the beta value was (0.794). This implies that technical support solutions have a beneficial effect on improving the efficiency of e-learning platforms, and therefore the first hypothesis is accepted.

The second hypothesis is that the effect between training and the efficiency of e-learning platforms is statistically significant.

To test this hypothesis, a simple regression analysis was performed to determine the relationship between training and improving the efficiency of e-learning platforms, as shown in the table below:

Table 4 THE RESULTS FOR SIMPLE LINEAR REGRESSION									
R	R Square	Adjusted R Square	F	Sig*	Regression coefficients				
					Domain	$\beta$	Std. Error	T	Sig*
0.087	0.007	0.005	3.01	0.084	Training	0.126-	0.073	1.735-	0.08

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

It is clear from the previous table that there is a weak correlation of training and an increase in the efficiency of e-learning platforms with a correlation coefficient (0,087) reached and results from regression analysis show no statistically important effect on training with a (P) value (3,01), statistically significantly greater than (0,00), which is a statistically significant effect for training

The third hypothesis: The existence of incentive and increased efficiency of e-learning platforms have a statistically meaningful impact. In order to prove this hypothesis, the impact of incentives and the improvement of efficiency in e-learning platforms was found in a simple regression analysis as shown in the table5.

R	R Square	Adjusted R Square	F	Sig*	Regression coefficients				
					Domain	$\beta$	Std. Error	T	Sig*
0.184	0.034	0.031	13.904	0.00*	Incentives	0.248-	0.066	3.729-	0.000*

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

The previous table shows that the weak incentive correlation is presented and that the efficiency of e-learning platforms is increasing if the coefficient of correlation reaches (0.184). The results showed a statistically significant effect of incentives where the value of (P) reaches (13.904) with statistics less than 0.00, which is confirmed by the results of the retrogression analysis. The findings also revealed that the variance described was (0.031), which meant that the proportion of incentive effect was (3.1%) with beta value (-0.248). This implies that incentives have a negatively effect on the increase of the efficiency and acceptability of the initial hypothesis of e-learning platforms.

Fourth hypothesis: The efficiency level of e-learning platforms and the improvements in the education quality in the faculty of finance, administration and hospitality are statistically significant.

A simple regression analysis has been performed to validate this idea, in the following table: Between enhancing education quality and boosting e-learning platform efficiency:

R	R Square	Adjusted R Square	F	Sig*	Regression coefficients				
					Domain	$\beta$	Std. Error	T	Sig*
0.139	0.019	0.017	7.840	0.00*	Quality Education	0.299	0.107	2.800	0.000*

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

In addition to the results of a regression analysis, the previous table showed a statistically significant effect on the quality of education where the value of (P) is achieved, and the results of a weak positive relation with improving quality of education and increasing the efficiency of eLearning platform where the correlation coefficient is achieved (0.139). (7.840), This was verified via a t-test with a statistical significance of less than (0.00). The findings also revealed that the variance explained was (0.017), which means the percentage of the effect of education quality improvements (1.7 percent) achieved and the beta value reached (0.299). This implies that improved educational qualities have a favorable effect on enhancing the efficiency and acceptability of the fourth hypothesis of e-learning platforms.

## RESULT



The results of the regression analysis showed a statistically significant impact of support systems, with the coefficient of determination (P) reaching 0.519. (146.879). These results showed that the percentage of impact that technical assistance systems had achieved was 26.8 percent, as well as the beta value, which was set at 0.268. (0.794). To paraphrase, this tells us that technological support solutions help to improve the e-learning platform's efficiency, and the first hypothesis thus has been accepted.

The emergence of the Covid-19 epidemic has led to a problem for Jordan. The issue may be called online and on-line education as a remedy, affouneh et al suggests. The sensible royal strategy of Jordan stressed the momentum of education for pupils and the preservation of the health of kids. You utilize this kind of distant learning to achieve social distance learning. In order to protect the safety of students and keep the smooth character of education in Jordan, the Jordan government has made an excellent effort to help university and faculty personnel get out of a pandemic issue quickly.

The structure of the ELP comprises mainly three actors: the student, the teacher and the administrator of the platform. E-learning is the latest attempt to improve learning via technology developments. For many years, digital transformation has not been the subject of new occurrences. Online learning is a social activity that has become a replacement for conventional classrooms. Digitalization should not be called e-learning in higher education institutions, since online learning is just one of many elements of digital transformation in higher education. In the next 50 years, the present change is going to be seen as revolutionary since the transformation has shaped hundreds of local, regional and national universities from objective teacher-centered ways of teaching.

It is clear that there is a weak correlation between training and an increase in the efficiency of e-learning platforms. This can be deduced from regression analysis results, which show no statistically significant correlation between training and e-learning platform efficiency (0.087) that has been reached and results from the analysis of regression equations show no statistically significant impact on training ( $P = 3.01$ ), significantly greater than zero ( $P = 0.00$ ), which is a statistically significant impact on training.

The connection between incentives and the efficiency of e-learning platforms is given, and when that correlation rises, the efficiency of e-learning platforms improves (0.184). With statistics smaller than 0.00, the findings of the retrogression analysis supported the results, which revealed a statistically significant impact of incentives when the value of (P) reached (13.904). It was found that the percentage of the incentive effect was 3.1 percent and the coefficient of variation was 0.031. (-0.248). This means that incentives decrease the chances of early hypotheses about e-learning platforms becoming more efficient and acceptable.

Using regression analysis, the study also found a statistically significant impact on education quality when P is accomplished, and also a statistically significant impact on education quality and enhancing the eLearning platform's efficiency when the correlation coefficient is accomplished (0.139). (7.840), In this case, a t-test with a statistical significance of less than was used to see whether the results met a threshold of significance (0.00). a calculation found that variance explained was 0.017, which indicates that only 17.3 percent of the impact of education quality increases (about 1.7 percent) was realized, while the estimated beta value also increased by 0.014 (0.299). This statement indicates that enhanced educational characteristics are advantageous when it comes to making e-learning platforms more efficient and acceptable.

On 16 March 2020, Governments declared that schools will be shut down by 56 nations throughout the country and 17 countries that closed schools in a specific range. Worldwide, more than 421 million students were at risk from national school closures and, in small-scale school closures, 577 million students. As a consequence of the spread of the COVID-19 virus, a student out of five students globally was shutdown from schools and universities, (Escale & Harassis,2021) An interactive map was created on the European Data Portal to enable students to see how school closures impact them and how they get education online. The plan was

created by combining data from the OECD's 2015 survey and the reuse of data from the abovementioned dashboard by the World Bank. European countries exhibit severe limitations on the number of schools, the number of students affected and Internet access and technology.

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