



RESEARCH ARTICLE

The Level of E-Learning Quality Standards in Academic Courses at Private Jordanian Universities: A Student Perspective Evaluation Study

Halaa Abdalmohde Hssien Friehat^{1*}, Khitam Saeed Ali AlSmadi², Tahawil Atalla Saij Hlepan³, Nesreen Bassam Fraid fraihat⁴, Farah Ahmad Mohammad Azmi Alaffouri⁵, Mohammad Mahmoud alsadi⁶

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***Corresponding Author:**

Halaa.frehat@yahoo.com

ABSTRACT

The study aimed to evaluate the level of e-learning quality standards in academic courses at private Jordanian universities from a student's perspective. The study sample consisted of 361 male and female students who took e-learning courses in the first semester of the academic year 2022/2023. To achieve the study's objectives, a questionnaire was constructed to assess the level of e-learning quality standards in academic courses from the students' viewpoint, and its validity and reliability were confirmed. The study results indicated that the level of e-learning quality standards in academic courses was high. The study also showed statistically significant differences at the significance level ($\alpha = 0.05$) depending on the variable of gender in favor of females, as evidenced by their higher mean scores. There were also apparent differences between the mean scores, depending on the variable of educational qualification, in favor of students at the bachelor's level. The study recommended the necessity of periodically evaluating the quality standards of e learning in academic courses.

INTRODUCTION

The development witnessed by the world today in the field of technology and communications imposes on educational systems the need to benefit from all technological innovations that serve and enhance the educational process. Educational institutions, in all their forms, seek to catch up with this development and keep pace with technological advancements, especially in the education sector. These institutions have started to change their vision, philosophy, and objectives according to recent technological innovations.

In the context of increasing student numbers, the abundance of information, the explosion of knowledge, and technological advancement, what is known as e-learning has emerged. E-learning assists learners in studying at the time and place suitable for them through the presentation of diverse educational content containing multimedia elements like texts, drawings, images, videos, and sounds. This content is provided using modern electronic media such as computers, the internet, satellites, television, and mobile phones.

Abdul-Majeed and Al-Ani (2015) point out that the term 'e-learning' appeared in the early '90s as a result of the revolution that occurred in computer technologies. Educational institutions have

exploited this development by using these technologies in classrooms and laboratories. Bates (2009) mentioned that the primary reason for the growth of e-learning is the rapid spread of the Internet.

Multiple definitions have addressed e-learning. Al-Radi (2010) defined it as 'the use of technology in all its forms to convey information to the learner in the least time, effort, and with the greatest benefit.' Al-Ayaseerah (2017) described e-learning as 'a modern educational system that relies on communications technology, modern techniques, computers, and the internet, allowing the learner to interact with knowledge through synchronous and asynchronous modes of education.' McMahon (2018) defined e-learning as 'learning that involves teacher-student communication using technology.'

The aim of e-learning is to make learning more engaging and enjoyable while achieving higher efficiency with the least possible effort and time. This is to attain the quality of learning. The focus of educators has shifted from debating the importance of e-learning and the justifications for adopting it to improving its quality and the efficiency of its outputs. This is to meet the needs of students and the requirements of the job market, as enhancing e-learning has become a necessity in the age we live in.

The quality of e-learning is defined as the ability to provide educational services at a high level of quality that matches exceptional specifications. This is achieved by utilizing available resources to meet the needs and desires of the educational institution's customers (students, parents, employers, and society) in a manner that aligns with their expectations and satisfies their ambitions.

Higher education institutions have sought to achieve quality in their services and educational outputs through the use of modern communication technologies in the educational process, scientific research, and administrative matters. Quality requires continuous assessment of all components of e-learning, based on a set of criteria and specifications that achieve the desired objectives.

Standards are defined as a set of principles and items established by research to be sufficient for issuing judgment on achieving or not achieving specific goals. The standards for the quality of e-learning aim to convince the learner of the effectiveness, strength, and features of e-learning programs that allow them to communicate with teachers, interact with peers, and engage in educational activities, just as in conventional education, in addition to providing the learner with a better quality of education than conventional education.

Therefore, universities that implement e-learning are among the pioneering institutions that contribute to preparing human competencies, raising the community's knowledge level, and thereby achieving comprehensive economic, social, and cultural development.

From this standpoint, private Jordanian universities have endeavored to subject their courses to e-learning as a step towards achieving the desired benefit of advancing the educational process. These universities have sought to provide the maximum standards and principles that ensure the quality of this type of education and achieve the desired objectives.

Study Problem:

The culture of e-learning, which has accompanied the rapid increase in technological developments in knowledge media, has imposed on educational institutions, especially universities, the necessity of having standards that ensure the highest levels of quality in the educational process provided by electronic means and methods. Therefore, the application of standards that regulate e-learning courses is considered important to keep pace with the new developments in educational technology for the development of university education. Additionally, the coronavirus pandemic that the world has gone through has awakened educational institutions to the importance of e-learning and its application to courses, which necessitated the presence of standards to control the quality of the e-

learning process. Such a situation has raised questions about the level of e-learning quality standards for courses at private Jordanian universities.

Study Questions:

The study aims to answer the following questions:

What is the level of e-learning quality standards in the courses at private Jordanian universities from the students' point of view?

Are there statistically significant differences at the significance level ($\alpha=0.05$) in students' estimates of the level of e-learning quality standards in courses at private Jordanian universities, attributed to variables such as gender and educational qualification?

Study Importance:

Theoretical Importance: The current study's importance lies in understanding the significance of e-learning and the quality level of the electronic educational process through the courses offered to students in light of a set of variables that ensure the realization of the desired benefit.

Practical Importance: The current study aims to provide private Jordanian universities with a report that indicates the availability of e-learning quality standards in the courses, which will assist in improving the level of applied courses in the educational and learning environment.

Study Terms:

E-learning Quality Standards (Terminologically): These are a set of principles and clauses aimed at convincing the learner of the effectiveness, strength, and features of e-learning programs that allow them to communicate with instructors, interact with peers, and engage in educational activities, much like traditional education. Additionally, the learner achieves a better quality of education than conventional methods.

E-learning Quality Standards (Procedurally): These are principles that describe the quality of e-learning, which will be measured for availability in the courses at private Jordanian universities through a prepared questionnaire.

E-learning (Terminologically): It is a modern educational system based on communications technology, modern techniques, computers, and the Internet. This allows the learner to interact with knowledge through two modes of education: synchronous and asynchronous.

E-learning (Procedurally): It is the teaching of a course using modern technologies to ensure a state of interaction between the student and the course instructor.

Academic Courses (Terminologically): These are curricula with specific goals, content, and activities that are interrelated in the academic plan.

Academic Courses (Procedurally): These are courses like Arabic Language (A101), English Language (E101), and National Education, which the student studies electronically in private Jordanian universities without the need to attend in-person. These courses are offered electronically, supplemented with videos and audio recordings through the university's e-learning platform, allowing the student to communicate with the course instructor via email or during office hours.

Study Boundaries:

Human Boundaries: Students enrolled in academic courses (Arabic Language Skills, English Language Skills, National Education).

Temporal Boundaries: The first semester of the academic year 2022/2023.

Spatial Boundaries: Private Jordanian universities, represented by Irbid Private University, Amman Arab University, and Al-Isra University.

Related Previous Studies:

This section will include an overview of previous studies reviewed, both Arabic and foreign, arranged chronologically from oldest to newest as follows:

Bates (2009) conducted a study aimed at evaluating the quality of e-learning programs activated in higher education. The study sample consisted of 156 faculty members selected randomly. The study results showed the importance of e-learning quality programs in building a higher education system that includes a range of academic courses, testing and examination systems. The study recommended the necessity of generalizing e-learning quality programs related to higher education and involving students in these programs.

Frydenberg (2010) conducted a study aimed at measuring the impact of quality standards applied in education schools in the United States on educational courses. The study was analyzed and organized in nine educational stages. A quasi-experimental approach was used in the study. The sample consisted of 268 teachers. The study concluded that quality standards are highly compatible with the nature of educational courses and their application methods in educational stages extending from kindergarten to the ninth grade. The study recommended the necessity of periodic measurement of applied quality standards.

Abu Khutwa (2012) conducted a study aimed at evaluating comprehensive quality standards in e-learning courses at the Faculty of Economics at Helwan University. The researcher used a quasi-experimental method with a single group. The study results showed a clear effectiveness of the e-learning courses. Based on the study results, the study recommended the necessity of benefiting from the quality standards applied in the current study on e-learning courses.

Khitab (2013) aimed to prepare a proposed evaluation program based on electronic mind maps for developing the foundations and items of academic courses among students of scientific faculties at Qatar University. The study sample included 280 students selected by stratified random sampling. The study concluded that the proposed evaluation program excelled in developing the foundations for academic courses. The study recommended that those responsible for the educational process at Qatar University should pay attention to electronic mind maps and the need to activate them in various fields.

Also, Al-Dsaimani and Al-Amir (2017) conducted a study aimed at verifying the foundations followed in evaluating e-learning courses in Saudi universities and constructing a proposed concept for a training program aimed at enhancing e-courses and applying e-learning standards to them. The study sample consisted of 63 teachers. The researcher used a measure of e-learning styles. The study results pointed to the effectiveness of the foundations followed in evaluating e-learning courses and recommended the necessity of periodic evaluation of those courses.

Fatoum (2018) conducted a study aimed at evaluating the experience of e-learning courses at Yarmouk University in light of global e-learning standards from the perspective of students and faculty members. The study sample consisted of 361 students registered in e-learning courses, and 17 faculty members who teach e-learning courses at Yarmouk University in the second semester of 2017/2018. The study results showed that the availability of global e-learning standards from the perspective of students and faculty members was moderate. The results showed statistically significant differences in the degree of availability of global e-learning quality standards between students and faculty members. The results also showed no statistically significant differences in the degree of availability of global e-learning standards from the students.

The results showed the presence of statistically significant differences in the degree of availability of global e-learning standards from the students' perspective, attributed to the effect of the variable of the academic year and in favor of the first and second academic years, as well as the third and fourth academic years. The results also showed statistically significant differences in the degree of availability of global e-learning standards from the students' perspective, attributed to the effect of the grade variable and in favor of the acceptable and good grades. The study recommends the generalization of the e-learning courses experience to include specialized courses in addition to general course.

Summary of Previous Studies and the Position of the Current Study Among Them:

The previous studies have been beneficial in identifying the theoretical framework for the study's subjects and variables, as well as the appropriate methodology. In particular, the study by Fatoum (2018) and the study by Bates (2009) were useful in constructing the study's instrument. The current study aligns with previous research in examining the concept of quality in e-learning and the standards used therein. It shares similarities with specific past studies, especially those of Fatoum (2018) and Abu Khattwa (2012), in some of its variables like e-learning. However, it distinguishes itself by the novelty of its subject matter, focusing on the level of availability of quality standards in e-learning courses at private Jordanian universities.

STUDY METHODOLOGY:

The descriptive survey method was employed to achieve the study's objectives.

Study Population:

The study population consists of all students registered in the academic courses (Arabic Language Skills, English Language Skills, National Education) at private Jordanian universities for the first academic semester of the year 2022/2023, totaling 7,075 male and female students. Table (1) shows the distribution of the study population according to the study's variables.

Table (1): Distribution of the Study Population According to the Study's Variables

Total	Count	Sub-Variable	Variables
7075	2059	male	Gender
	5016	female	
7075	1558	Graduate Studies	Academic Qualification
	5517	Bachelor's	

Ministry of Higher Education and Scientific Research (2022)

Study Sample:

The study sample consisted of a random sample of students enrolled in academic courses (Arabic Language Skills, English Language Skills, National Education) in private Jordanian universities, represented by Irbid Private University, Amman Arab University, and Al-Isra University, in the first academic semester of the year 2022/2023. The total number of students in the sample is 361, both male and female. Table (2) shows the distribution of the study sample according to the study's variables .

Table (2): Distribution of the Study Sample According to the Study's Variables.

Total	Number	Variable	Variables
361	139	Male	Gender
	222	Female	
361	112	Postgraduate Studies	Educational Qualification
	249	Bachelor's Degree	

Study Instrument:

The research tool was developed by referring to theoretical literature and some previous studies, such as Abu Khattwa's study (2012) and Al-Desimani and Al-Ameer's study (2017), in order to achieve the research objectives and answer its questions. The final form of the research tool consisted of 7 items. To verify the validity of the instrument, content validity was adopted in terms of phrasing the items and their appropriateness to the field in which they were placed by presenting them to 9 experts. To check for the reliability of the tool, Cronbach's Alpha was used to calculate the internal consistency of the study tool according to its fields. Table (3) shows the reliability coefficients for the areas of the instrument.

Table (3): Cronbach's Alpha Reliability Coefficients for the Items of the Study Tool.

Item	Internal Consistency
E-Learning System Structure	0.73
Assistance and Guidance	0.79
Privacy and Security	0.83
Flexibility and Compatibility	0.85
Participation and Collaboration	0.86
Educational Content	0.91
Assessments	0.87
Overall Score	0.86

The table (3) indicates that the reliability coefficients are acceptable. To judge the level of quality standards in e-learning for the academic courses, the following scale was adopted: low availability score (3.33 or less), medium availability score (2.34-3.67), and high availability score (3.68 or more).

STUDY RESULTS AND DISCUSSION:

Firstly, the results related to the first question, which is: What is the level of e-learning quality standards in academic courses at private Jordanian universities from the students' perspective?

To answer this question, the mean scores and standard deviations were calculated for the level of e-learning quality standards in academic courses at private Jordanian universities from the students' perspective, and table number (4) illustrates this.

Table number (4) shows the mean scores and standard deviations for the level of e-learning quality standards in academic courses at private Jordanian universities, arranged in descending order based on the mean scores.

Rank	Number	Section	Mean Score	Standard Deviation	Grade
1	3	Privacy and Security	4.29	0.67	High
2	4	Flexibility and Compatibility	4.10	0.71	High
3	6	Educational Content	3.89	0.81	High

4	1	Structure of the E-learning System	3.77	0.76	High
5	2	Assistance and Guidance	3.76	0.81	High
6	5	Participation and Collaboration	3.58	0.90	Medium
7	7	Assessments	3.58	0.90	Medium
Overall Score			3.86	0.79	High

It can be observed from Table 4 that the level of e-learning quality standards in academic courses at private Jordanian universities, from the students' perspective, is high, as the overall mean score is 3.86. This result suggests that students find the e-learning management system used in private Jordanian universities to meet e-learning quality standards. The system is characterized by its ease of use, preservation of students' security and privacy, flexibility in login times, and capability for file-sharing. It also offers diverse and varied educational content that accommodates individual differences among students.

The section "Privacy and Security" ranked first with a mean score of 4.29 and a high availability grade. This may be attributed to the fact that students cannot access the system without a unique username and password. The system also provides an integrated database for students and has the capability to offer protection against unauthorized access to preserve user data.

On the other hand, the sections "Participation and Collaboration" and "Assessments" ranked last with a mean score of 3.58 and a medium availability grade. For the "Participation and Collaboration" section, this may be due to the courses being general, meaning students may not be as interested in participating in them as they are in specialized courses. It could also be that students do not exchange files with each other either because they don't know the other students registered in the course or because they come from different majors. As for the "Assessments" section, this could be because students cannot retake exams without a valid excuse, and the timing of exams is standardized for all students, leaving no room for individual control.

Secondly, results related to the second question, which states: Are there statistically significant differences at the significance level ($\alpha=0.05$) in student estimates of the level of e-learning quality standards in academic courses at private Jordanian universities attributed to the variables of gender and academic qualifications?

This question was answered as follows:

1. Gender Variable: Mean scores and standard deviations were calculated, and a t-test was conducted according to the gender variable. Table 5 displays these results.

Table 5: Mean Scores, Standard Deviations, and t-test According to Gender Variable

Significance Level	t-value	Standard Deviation	Mean Score	Number	Gender	Section
**0.004	2.441	0.74	3.79	222	Female	E-Learning System Structure
		0.82	3.64	139	Male	
0.016	0.862	0.88	3.57	222	Female	Guidance and Assistance
		0.90	3.49	139	Male	
0.123	0.886	0.76	3.60	222	Female	Privacy and Security
		0.88	3.55	139	Male	
0.025	0.558	0.89	3.65	222	Female	Flexibility and Compatibility
		0.87	3.58	139	Male	

0.669	0.568	0.85	3.54	222	Female	Participation and Collaboration
		0.79	3.58	139	Male	
0.016	0.889	0.83	3.52	222	Female	Educational Content
		0.76	3.58	139	Male	
0.051	0.526	0.92	3.59	222	Female	Assessments
		0.86	3.56	139	Male	
**0.009	1.639	0.89	3.62	222	Female	Overall Score
		0.77	3.44	139	Male	
		0.82	3.53	361	Total	

To determine whether the differences between the mean scores were statistically significant at the significance level ($\alpha \leq 0.05$), a t-test was applied. The results in Table 5 indicate the presence of statistically significant differences at the significance level ($\alpha \leq 0.05$) according to the gender variable. This is based on the calculated t-value of 1.639 and a significance level of 0.009. The differences were in favor of females, as evidenced by their higher mean scores. This may be attributed to the fact that females are more interactive with modern technologies, which is reflected in their heightened sensitivity towards measuring the quality standards and criteria in e-learning for academic courses.

2. Academic Qualification Variable: Mean scores and standard deviations were calculated, and a t-test was conducted according to the academic qualification variable. Table 6 shows this.

Table 6: Mean Scores, Standard Deviations, and t-test According to the Academic Qualification Variable

Section	Academic Qualification	Number	Mean score	Standard Deviation	t-value	Significance Level
Electronic Learning System Structure	Bachelor's	249	3.79	0.74	1.036	**0.002
	Graduate Studies	112	3.64	0.82		
Assistance and Guidance	Bachelor's	249	3.66	0.87	1.602	0.024
	Graduate Studies	112	3.55	0.82		
Privacy and Security	Bachelor's	249	3.66	0.72	1.032	0.210
	Graduate Studies	112	3.45	0.78		
Flexibility and Compatibility	Bachelor's	249	3.45	0.83	0.528	0.061
	Graduate Studies	112	3.51	0.71		
Participation and Collaboration	Bachelor's	249	3.51	0.82	0.568	0.859
	Graduate Studies	112	3.49	0.76		

Educational Content	Bachelor's	249	3.55	0.82	0.580	0.020
	Graduate Studies	112	3.59	0.71		
Exams	Bachelor's	249	3.69	0.92	0.425	0.080
	Graduate Studies	112	3.46	0.83		
Overall Score	Bachelor's	249	3.54	0.79	1.130	**0.003
	Graduate Studies	112	3.52	0.86		
	Total	361	3.53	0.82		

It is noted from Table 6 that there are apparent differences between the mean scores, depending on the educational qualification variable. Those in the Bachelor's category had the highest mean score of 3.54, followed by those in the Graduate Studies category with a mean score of 3.52.

This may be attributed to the fact that undergraduate students have a better understanding of the electronic learning management system, its features, and advantages, more than graduate students. This is based on the consideration that they form the technology generation who grew up amidst globalization, and thus they are capable of evaluating this technology and the extent to which it can be beneficial.

Recommendations:

Based on the findings of the study, the researcher recommends the following:

- Periodic evaluation of quality standards related to online learning courses.
- Conducting more studies that address the quality standards in online learning, especially since the world is experiencing various crises that occur from time to time.

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