

## The reality of using Moodle In a distance education program

**Tarik Faris Al Soub<sup>a\*</sup>**, Faculty of Art and sciences, Aqaba University of Technology, Aqaba-Jordan  
<https://orcid.org/0000-0002-8868-8342>

**Nidal Zaki Amarin<sup>b</sup>**, Faculty of Arts, Al-Zaytoonah University, Amman-Jordan <https://orcid.org/0000-0001-7730-5265>

### Suggested Citation:

Al Soub, T. F. & Amarin N. Z. (2021). The Reality of Using Moodle In a Distance Education Program. *Cypriot Journal of Educational Science*. 16(5), 2173-2192. <https://doi.org/10.18844/cjes.v16i5.6237>

Received from June 13 2021; revised from August 05, 2021; accepted from October 08, 2021.

©2021 Birlesik Dunya Yenilik Arastırma ve Yayıncılık Merkezi. All rights reserved.

### Abstract

Using e-learning system (moodle) in distance education in time of the Covid-19 has become a reality, and the study was concerned with revealing the degree of faculty members' benefit from the Moodle system, as well as the nature of the challenges they faced, in addition to their vision to develop the use of Moodle system in teaching. The study used the descriptive analysis method, and the results showed that faculty members have benefited from the Moodle system for a high degree, although they indicated that there are significant challenges. The faculty members suggested continuing training on using the Moodle system and updating the version of the system available at the university. Results also showed that there are statistically significant differences in the estimates of the study sample of the reality of employment in favor of female faculty members as well as faculty members with low teaching experience, in the youth group. Accordingly, the study recommends training the teaching staff to use educational platforms and face the challenges facing distance education through these platforms

Keywords: Distance education - Corona pandemic

---

\* ADDRESS FOR CORRESPONDENCE: Tarik Faris Al Soub, Faculty of Art and sciences, Aqaba University of Technology, Aqaba-Jordan E-mail address: [tsoub@aut.edu.jo](mailto:tsoub@aut.edu.jo) / Tel.: +962799229258

## 1. Introduction

The spread of COVID-19 virus globally forced the countries to temporarily close schools and forced faculty members to teach students through distance learning. It is not a difficulty for urban faculty members because they are used to it, so problems arise for faculty members away from the Internet, and students also face difficulties such as weak signal or even lack of internet access which causes disturbances in the teaching and learning process, (Henny,2020)so faculty members and students take quick steps towards distance learning from home.The application of e-learning is not always feasible and reliable, during the COVID-19 outbreak universities and schools carried out e-learning quickly, institutions with little or no experience in e-learning and schools that no longer have e-learning resources face difficulties, particularly when faculty members do not understand how to use online applications (Zaharah & Kirilova, 2020). Universities are making great efforts to develop distance learning, so innovative curricula that have been implemented gradually in classroom practice have become a major concern that can have an impact on how our education will shape in the future. (Cleveland, 2018) stated that when education is from distance instead of classrooms, the most important advice for creating attractive learning spaces via distance learning to support parents and universities while creating an educational environment at home is to provide a lot of information on how to use different interior spaces as diverse and active learning environments.

Jordan responded to the facts, which stressed the perpetuation of the pulse of the educational process for students, and the preservation of students' health at the same time, so education in Jordan was one of the least affected vital areas; Where various educational institutions rushed to e-learning and its platforms in order not to waste the educational process and maintain it and to keep the education wheel continuing in its rotation. Where many successive decisions were issued in cooperation with all concerned parties by activating Defense Order No. (7) The 7Defense, which did not neglect the educational process in order to ensure its continuity and enable it to rely on non-traditional educational methods, emerging platforms and modern electronic means, and the issuance of Council of ministers Resolution 15/ 4/2020, which stipulated that: That educational institutions operating in the Kingdom in accordance with the provisions of the Higher Education Law: "Adoption of non-traditional methods and methods of education, and the various forms of evaluation of student achievement that are carried out by electronic means, or distance education as accepted and approved means and methods in all public and private educational institutions" (The official website of the Jordanian newspaper, Al-Dustour, 2020) which agreed with the vision (Stem, 2019) that online learning is the education that occurs via the Internet, and is often referred to as e-learning among other terms, therefore online learning is only one type of learning yet, it is the universal term for any learning that takes place across the distance outside the classroom and not in the traditional classroom.

The universities began to promote the process of integrating technology into the educational system. Soon, Aqaba University of Technology provided the (Moodle) system as a teaching method used by faculty and students to explain educational materials in all its branches.

## Theoretical Framework

COVID-19 virus posed many enormous pressures and challenges on our lives, society and work, which caused social, , economic, technological and political environments to change dramatically, so information technology in universities turned to distance education, as a way to access and distribute information in all different educational environments. This puts the faculty members at a crossroad and are pressured to increase their productivity and change educational strategies to accommodate

educational changes and reforms, there must be a new vision for faculty members in the distance learning environment, and as a result many universities are searching for systems as a teaching method for success in teaching Distance learning subjects, so all colleges and people associated with them must participate in the development of teaching aids and curricula.

The success of E-Learning depends on the readiness of universities with all its components, the most important of which is the willingness of faculty members and the extent of their skills and competencies necessary for this type of education. The higher their level of readiness, the more distance learning becomes easier to transfer information, and anyone looking for online tips on distance learning will find a lot of information on how to facilitate online learning. Digital technologies are powerful tools that can support teaching in current circumstances. Moreover, digital technologies are an essential part of a strong learning environment. (Arnou, 2020).

Applications, platforms and educational resources facilitate student learning and interaction during university closing, platforms tend to reach broad domains and a strong user base that is categorized based on distance learning needs, most of which provide a good learning environment. Litraeture review (Related Researches)

Nguyen (2007) demonstrated that student responses are effective by creating dynamic educational content via distance learning. This learning is closely related to the concept of interactive learning and faculty members become learners and a facilitators for the education of studnts. (Zhang, 2005).

The ability to choose activities, resources, and methods to participate in lectures increases the probabily that students will understand abstract materials and engage in work that contributes to greater knowledge and competence (Kearns, 2016).

Learning may continue unimpeded for the learner from high-income families, while the learner from low-income families struggles to learn online because of their housing and material conditions and not being able to access different types of facilities (such as libraries and youth centers) which causes the learner to have weak access to the information. (Van Lancker, & Parolin, 2020).

Navaro & Shoemaker (2000) was found that the results of online larning student were good or better than traditional learners regardless of background characteristics, and that students were greatly satisfied with online learning.

The purpose of Alison, Lockman, Barbara & Schirmer (2020) study was to review the research literature on e-learning to identify effective educational practices, limited to studies related to undergraduate and graduate students, and a systematic, experimental, descriptive design. An analysis of patterns in a group of 104 research studies outlined five topics: student engagement, course design factors, student success factors, faculty members, , and student support, and showed that most promising effective strategies in the online environment are the same ones that are effective in face-to-face classrooms including using many teaching methods and resources to meet the different needs of distance learning for students.

Studies have focused on direct comparisons of the effectiveness of face-to-face, mixed-education and direct learning (Carbone, 2018; Harris & Nikitenko, 2014; Jovanovic et al., 2015; Ryan, Kaufman, Greenhouse, She & Shi, 2016; Xu & Jaggars, 2014). The results continuously outlined that there were no statistically significant differences in students' learning among educational methods.

McCarthy (2017) noted in his study of the views of university students regarding the usefulness of teacher notes, face-to-face peer reviews, and online peer reviews, the results show that although students responded positively to providing and receiving feedback from colleagues, they appreciated

comments the faculty members did more than peer feedback and reported their annoyance with providing peer-to-peer feedback. while (Webb & Moallem, 2016) found little direct feedback effect on student performance, although they concluded that the teacher's notes should be repetitive, in time, motivating, useful, and accurate. (Zimbardi et. al., 2017) showed the effect of students' use of comments with subsequent performance on similar assignments. They found that the relevancy and usefulness of the comments had the greatest impact on the improvement with similar tasks, and students who demonstrated high levels of interaction with feedback made the most improvement. Trad et al. (2014) and Cutsinger, Wall, and Tapps (2018)) discussed the issue of teacher presence in educational environments online versus face-to-face ones, and the results revealed an important relationship between the awareness of the teacher presence and the learner satisfaction, but not with respect to subject outcomes.

The study of (Kohn, Maier & Thalmann, 2010) showed that the transmission of knowledge with e-learning in developing countries often fails, resulting in students falling behind at a critical time in their education course. The results of this study indicate that policymakers must develop comprehensive strategies that prepare students to use e-learning, and these strategies include providing coupons for students to connect to the Internet in addition to progressive training in the use of e-learning before a crisis such as the epidemic as a means of pre-empting student education.

The use of digital technology via the Internet is carried out in very different forms and is identified under different names (e-learning, digital learning, online learning, technology-based learning, distance learning). The use of methods in teaching and learning is a combination of activities in various ways to obtain a targeted and effective learning process. Mixed learning combines the online and traditional methods. Theories of education differ on how learning occurs using digital technology and the role of technology in teaching and learning processes. The most widely used and closely related ideas are that digital technology is a medium or an instrument that helps to facilitate the delivery of content and structure, and the organization and communication of teaching, learning and communication activities (Laurillard, 2002; Säljö, 2010). Technology must be used effectively and purposefully by those who develop teaching plans, especially when teaching is done exclusively remotely, and this implies flexibility in the way curricula and activities are organized and implemented and has the potential to stimulate participation, allowing students to organize their learning activities according to their own needs, Students are also allowed to provide feedback about their experiences with the types of activities, support, or guidance provided. Faculty members should at least be aware of the need to differentiate learning needs and capabilities, particularly in distance learning environments. (Holingshead & Chellman, 2019).

### **To improve teaching strategies when it is for distance learning:**

The result of the continuous development of technology is that the distance education has become a common method of teaching, and the distance teaching of subjects requires different methods than the traditional classrooms, When students under quarantine due to the Corona epidemic became distance learners, the dispersion is the most important risk they face, so it will be useful for faculty members to adapt or improve their skills for distance teaching, there are a lot of teaching strategies to improve the e- learning environment when the university is closed in the era of the pandemic of Corona Virus, including five strategies to improve online teaching (Henny, 2020):

1.A virtual attendance strategy in which both students and faculty members are visible and available, so that the teacher welcomes students to the new learning community as any traditional classroom. The process of engaging with online learners without teacher presence in the classroom is important

to create a virtual existence .It starts from the beginning of the presentation of the teaching material and throughout the study period to maintain a good learning environment.

2.Strategy to create a supportive learning environment for learners as an online teacher. Encouraging teachers and student's participation and interaction is the best way to achieve this. Strategies consist of: First in the beginning of the online course, get a personal introductory post, and encourage participants to contribute their CVs to the work of the group. Second: Create an open discussion or a forum where learners can ask for help and assistance from each other, and develop peer support. Third: Prepare smaller groups similar to traditional study groups, to guide supportive colleagues. These strategies will encourage learners to work together as an active learning community, bringing benefits to all concerned individuals.

3.The strategy of the synchronous and asynchronous method via the Internet, using a combinatoin of learning instruments for better participation and the best faculty members across the Internet, which leads to the creation of a mix of traditional learning styles with newer and more collaborative visual learning tools. Working with a combination or mixed activities makes the content more enjoyable, which increases students 'interaction with both the teacher and other learners.

4. The continuous feedback strategy is a basic component in all effective learning processes through e-learning, that must be continuous through the learning process. Providing constructive feedback as soon as possible so that students can identify the behavior or skills that need improvement.

5. The strategy of uploading e-learning content to a mobile phone, allowing students to access the latest study materials and related content anywhere, anytime, quickly and easily, and through this the teacher can feel more confident in his skills and teaching materials via the Internet.

Seth (2020)) indicated five steps to teaching online that the faculty members who urgently need to move from classroom instruction to online teaching and must do efficiently should follow which are:

1.To teach the material it must be determined whether it is "concurrent" (direct) or "asynchronous" (recorded). The teacher already developed presentation materials and educational activities in the classroom, simultaneous online teaching is similar to classroom teaching. And larger classroom faculty members who choose to teach simultaneously may need to use modern and disputed pedagogical strategies. The teacher is required to have skill in video production and editing in addition to time and effort. Which helps the teacher to reuse it. Concurrent learning provides more guidance and structure to students .

2. Obtain the necessary software and hardware to create effective content online. Sound: is done by upgrading the microphone, image: Have a good webcam, available programs, Know the software on your computer, especially PowerPoint and explore registration options in your classroom.

3. In asynchronous, your video content is created: Divide the subject matter topics to put in 5 to 10 minutes of the video, design PowerPoint slides in a clear and easy way, type literal text and determine the program platform that you will use.

4. Improve your learning environment on the Internet. Use your organization's program, organize your content by week, then by lesson and upload your video content and educational material to media platform licensed by your organization or YouTube.

5. Post your prepared attachment to the class. Provide chances for student feedback, use notification tools to keep everyone informed, respond to concerns and solve problems quickly and stay calm and keep going.

The reality of distance education faces major challenges at the level of educational sites, Internet problems, available sites, or the experiences of faculty members or students in using technology, social, political, economic, and other challenges, which have emerged in a large way as a result of the Corona epidemic, it is necessary to use new and developed teaching methods and improve educational sites in universities, even in schools, to address these major challenges facing education.

### **Problem of the study**

Despite the use of online learning in most universities in the world and in Jordanian universities in particular, the use of distance education in all disciplines even the practical ones have become a necessity with the emergence of the Corona pandemic. whereas measures of isolation and closures of many universities forced them to try to transfer the regular education inside the halls to e-learning via the Internet outside the walls of the university and all over the world, and this rapid transition forced many universities to use social media to explain educational materials. In Aqaba University of Technology, the university provided a system (Moodle) as a method of distance education, through which the faculty members s explains the educational materials and communicate with students.

The research problem lies in the reality of using the e-learning system (moodle) in the distance education program as a teaching method at Aqaba University of Technology in the time of the Corona epidemic. The integration of online learning in learning and teaching is considered a difficult phenomenon; Consequently, many faculty members may face various difficulties or challenges. (Mailizar, 2020) As the use of (Moodle) as a method of teaching requires the full experience of the faculty members in its use and communication of students effectively and linking other educational platforms to the system. The emergence of the Corona epidemic was quick and sudden which stopped the wheel of life in all the world caused the faculty members s to be confused and anxious about the way to transfer educational material to students.

### **The problem of the study is summarized into two mains questions:**

**The first question:** What is the reality of using the electronic education system (moodle) in the distance education program as a teaching method at Aqaba University of Technology in the time of the Corona epidemic?

The question is branched into it:

1. What is the degree of benefit from using the electronic education system (moodle) in the distance education program as a teaching method from the viewpoint of faculty members at Aqaba University of Technology in the time of the Corona epidemic?
2. What is the degree of challenges that faculty members face in using the electronic education system (moodle) in the distance education program as a teaching tool in the time of the Corona epidemic?
3. How to improve the experience of Aqaba University of Technology using the electronic education system (moodle) in the distance education program as a teaching method from the opinion of faculty members in the time of the Corona epidemic?

**The second question:** Are there statistically significant differences at the level of significance ( $0.05 \leq \alpha$ ) between the reality of using the electronic education system (Moodle) in the distance education program as a teaching method at Aqaba University of Technology in the time of the Corona epidemic due to demographic variables (gender, college, rank, and experience)?



### **significance of the study:**

Online learning as an alternative to face-to-face education needs to use applications with various goals to achieve successful learning outcomes without sacrificing the learner's achievement. The significance of the study contributes to the following:

1. Helping faculty members and users of the electronic education system (Moodle) as a teaching method to overcome their problems in dealing with the system and raise the level of their skills and determine the extent of benefiting from the system.
2. Providing the authorities responsible for the distance learning program with the results of the study, to develop the e-learning systems at the university.
3. Giving a vision to those concerned with developing e-learning in all universities for future planning for integrating technology and adopting it in all programs.
4. Direct the attention of those in charge of e-learning in other universities to the need to adopt a policy of e-learning and benefit from the experiences of other universities.]

### **Methods of the research**

This study used two methods of scientific research:

- A- An analytical descriptive approach: To review the most important literature related to the reality of using the electronic education system (Moodle) in the distance education program as a teaching method at Aqaba University of Technology in the time of the Corona epidemic. Additionally, previous studies [Ref] were referred to cover the theoretical side from studying.
- B- The field research approach: It was used to cover the applied side of this study, to answer researches questions, and draw the findings results by relying on a questionnaire designed for the purposes of this study in accordance with the recognized practical steps.

### **Study participants**

The study population consisted of all faculty members at Aqaba University of Technology who use the electronic education system (Moodle). The study sample consisted of (109) faculty members. The study sample was the study community because the small study community.

### **Study outcome**

The instruments of study consisted of a three-axis questionnaire to cover the main objective of the study, which is the reality of using the electronic education system (moodle) in the distance education program as a teaching method at Aqaba University of Technology in the time of the Corona epidemic.

The study protocol has been approved by a number of experts in specialized educational administration mainly professors and faculty members in the Jordanian universities. To verify the extent of the validity and reliability of the questionnaires, and asked them to revise and review the clarity of the paragraphs and the quality of their language formulation in the questionnaires. A cut-off percentage of (80%) between experts was considered to confirm the protocol. The number of questionnaire items was changed from (55) items to (52) items after expert agreement.

The Cronbach's Alpha factor was used to assess the internal consistency, where the questionnaire was distributed to an experimental sample from outside the community, reaching to (25) respondents. The results were as shown in Table No. (1) as follows.

**Table (1) shows that the stability coefficients for all variables and fields of study are high, and these are coefficients of stability acceptable to the study**

Paragraph number in the questionnaire	The variable name and dimension Stability coefficient	Coefficient of stability (Kronbach Alpha)
1-28	degree of benefit from using the e-learning system	0.90
29-39	The degree of challenges facing faculty members s	0.92
40-50	How to improve the experience of Aqaba University of Technology	0.89
Total	The questionnaire as a whole	0.91

### Data Analysis

Descriptive and analytical statistics methods were used to answer the study questions through the Statistical Package Program (Spss. V.22.1). Descriptive Statistic Measures were used to describe and analyze the characteristics of the study sample, and to answer the study questions, where arithmetic averages and standard deviations were used.

Multiple analysis of variance was used and shafeh test for statistically significant variables to assess the differences at the level of significance ( $0.05 \leq \alpha$ ) between the reality of using the electronic education system (Moodle) in the distance education program

### The Results:

To answer the question, arithmetic averages and standard deviations were calculated for each paragraph in each field and for the total fields. Tables (5, 4, 3, 2) show the results of that.

**Table (2). Arithmetic averages and standard deviations and the reality of using the electronic education system (moodle) at Aqaba University of Technology in the time of the Corona epidemic**

Domain number	Domain name	Arithmetic mean	Standard deviation	Estimate
1	degree of benefit from the use of the e-learning system	4.01	0.54	High
2	The degree of challenges facing faculty members s	3.81	0.56	High
3	How to improve the Aqaba University of Technology experience	3.47	0.62	Average
The total		3.67	0.55	High

It appears from Table (2) it is clear that all fields were average and the lowest estimate was for the field of (How to improve the experience of Aqaba University of Technology) and the value of the arithmetic average was (3.47), and the highest estimate was for the field (the degree of benefit from using the e-learning system) and the value of the arithmetic His (4.01) and the total was an average estimate, and the mean value was (3.76). As concerns grow about the emerging corona virus. A lot of education leaders made the difficult decision to close universities. To assist in the transition to distance learning, distance learning has become an urgent matter that is required by the restrictions



that the entire world and Jordan in particular, and despite the fact of it being at the forefront of Arab countries that have adopted the introduction of information and communications technology in their educational system, Aqaba University of Technology has also implemented many projects and initiatives to implement distance learning with the aim of developing and improving the teaching and learning process, however, through the researcher's review of available educational literature on the effectiveness of using the electronic education system (Moodle), the researcher noted a lack of this type of studies, as The Corona pandemic has left educational institutions in a state of shock, forcing them to discover how short and weak they are in pursuing educational technology. Educational institutions were failing to experiment with educational applications to practice distance education.

**Second: The scope of the degree of benefit from using the online learning system**

**Table (3). Arithmetic averages and standard deviations for the field of degree of benefit from using the online learning system**

Paragraph number	Paragraph text	Arithmetic mean	Standard deviation	Estimate
1	The faculty members helps achieve the goals of the educational process	4.10	0.93	High
2	Using the system helps improve the learning process	4.09	0.86	High
3	It features the use of a flexible learning method to learn	4.16	0.85	High
4	It makes studying easy and fun	3.62	0.86	Average
5	The system provides its users with learning aids and guidance	3.99	0.93	High
6	Provides a faculty members with instruments and self-learning resources	3.96	0.88	High
7	There are positive indications about the benefits the system has in supporting and facilitating learning	4.05	0.88	High
8	It provides good and integrated services to support the learning process	3.76	0.99	High
9	Helps excite and motivate faculty for learning	4.04	0.96	High
10	It helps to manage the educational process	4.12	0.84	High
11	The university is motivated to use the system as an effective teaching method	4.26	0.73	High
12	Diversity of educational content for the use of other teaching methods	4.21	0.89	High
13	The system helps in evaluating students effectively	4.11	0.85	High
14	Strengthening interaction skills between students and faculty members s through dialogue sessions and voice conversations	4.07	0.86	High
15	The system helps to interact between students and faculty, and to share ideas through various teaching methods	3.85	1.06	High
16	The system helps the learner reach the correct answers	3.88	0.94	High
17	The system assists in preparing and submitting assignments between students and faculty members s	3.68	0.87	High
18	The system is characterized by the effectiveness of research in the scientific material and the use of its options and types	3.92	0.94	High
19	The effectiveness of e-mail in the system in learning management as a teaching method	4.03	0.81	High

20	The system has the ability to manage content scheduling by receiving, displaying, deleting, or posting sub links effectively	4.23	0.86	High
21	Following up on interactions with the system is useful for tracking the progress of faculty members s	4.19	0.78	High
22	The system helps increase the ability to understand scientific material by providing it all the time	4.14	0.79	High
23	Effectiveness of showing distribution in comparison of increasing site services and continuously monitoring them	4.07	0.87	High
24	Common questions in the system make it easy to answer frequent student questions	4.00	0.88	High
25	Describing the curriculum in the system helps to discover the subjects of the subject and prepare it in advance from students	4.02	0.87	High
26	Ease of handling the system	3.86	0.97	High
27	The practice of using the system is useful in strengthening the skills of using more than one teaching method	3.69	0.94	High
28	It helps transfer information between students	3.67	.950	Average
The total		4.01	0.52	High

It appears from Table (3) that the paragraph (motivates the university to use the system as an effective teaching method) had the highest estimate, and the average arithmetic value was (4.26) and the lowest estimate was for the paragraph (the system provides its users with assistance instruments and learning instructions) and the arithmetic value of it (3.62) F) The evaluation of all paragraphs was average, and there was no paragraph that was rated low or high. Also, the value of the total arithmetic average reached (4.01).

### Third: The field of degree of challenges facing faculty members

**Table (4) Arithmetic averages and standard deviations for the field of challenges facing faculty members**

Paragraph number	Paragraph text	Arithmetic mean	Standard deviation	Estimate
29	Corona pandemic increased the material cost of the Internet as a result of distance learning	4.06	0.82	High
30	Lack of training of faculty members s in using the system due to the Corona epidemic	3.98	0.95	High
31	The difficulty of using the system technically and the complexity of dealing with it	3.95	0.96	High
32	Provides internet for faculty members s during the epidemic period	3.91	1.00	High
33	There is a deficiency in the services provided by the system	3.86	1.02	High
34	Failure of faculty members s to have the skills to deal with the system under Corona	3.80	1.01	High
35	Weak computer skills among some faculty members s	3.77	1.02	High
36	System objectives are branched out to commercial objectives rather than educational goals	3.72	0.98	High

37	Difficulty applying electronic tests	3.64	1.03	Average
38	Ease of cheating during system checks	3.60	1.00	Average
39	The emergence of the Corona epidemic has accelerated the use of distance learning	3.56	1.05	Average
The total		3.81	0.56	High

It appears from Table (4) shows that the paragraph (a deficiency in the services provided by the system) had the highest estimate and its mean value (4.06), the lowest estimate was for the paragraph (the availability of the Internet for faculty members during the epidemic period) and the average arithmetic value for it (3.56) and the estimate of the paragraphs was between high and average and there was no paragraph that was low estimate, as well as the value of the total arithmetic value (3.81).

#### Fourth: How to improve the experience of Aqaba University of Technology

Table (5) Arithmetic averages and standard deviations for the field of the electronic university

Paragraph number	Paragraph text	Arithmetic mean	Standard deviation	Estimate
40	System development in terms of programming and constantly updating the version in line with distance learning as a result of the Corona epidemic	3.80	1.13	High
41	Providing 24-hour technical support and maintenance to overcome program malfunctions	3.62	1.07	Average
42	Continuous training in the use of the system	3.68	0.98	High
43	The accreditation of the distance education certificate by the Ministry of Higher Education	3.57	1.01	Average
44	Adjusting the grades of the year's work	3.60	1.06	High
45	Communication via different messages about the dates of the tests	3.63	1.02	Average
46	Reducing tuition fees due to Corona epidemic	3.50	1.12	Average
47	Provide incentive and moral incentives for faculty members	3.47	1.12	High
48	Holding periodic and monthly exams in cooperation with various authorities	3.53	1.06	Average
49	Record lectures and enable students to view them under the supervision of the college	3.52	0.99	High
50	Set aside specific time for meetings with distance learning officials to answer their inquiries	3.65	0.99	Average
51	System interface improvement	3.77	1.13	High
52	Engaging educational platforms, sites and means within the system to assist faculty members to teach students remotely	3.62	1.07	Average
The total		3.62	0.64	Average

It appears from Table (5), it appears that the paragraph (recording lectures and enabling students to view them under the supervision of the college) had the highest estimate and a high degree and the arithmetic value of it reached (3.80), the lowest estimate found for the paragraph (allocating a specific time to meetings with the officials of distance learning to answer their inquiries), and the average value of the arithmetic value reached (3.47), and the total arithmetic value reached (3.62).

The second question: Are there statistically significant differences at the level of significance ( $0.05 \leq \alpha$ ) between the reality of using the electronic education system (Moodle) in the distance education program as a teaching method at Aqaba University of Technology in the time of the Corona epidemic due to demographic variables (gender, college, rank, and experience)?

To answer the question, multiple quadruple contrast analysis was not used, and multiple one-way analysis was used for the presence of cells with less than 5 individuals.

For gender:

Mathematical averages and standard deviations for the levels of gender were calculated and Table (6) shows the results of that.

Table (6). averages and standard deviations for the levels of gender

Paragraph number	the field	Arithmetical average	standard deviation	Estimate
1	The degree of benefit from using the e-learning system	4.01	0.54	High
2	The degree of challenges facing faculty members s	3.81	0.56	High
3	How to improve the experience of Aqaba University of Technology	3.47	0.62	Average
The total		3.76	0.55	High

Table (7). Mathematical Averages and Standard Deviations for the Levels of Gender for the Reality of Using the (Moodle) System in the Distance Learning Program

the field	the level	Arithmetical average	standard deviation
The degree of benefit from using the e-learning system	Male	3.85	0.59
	Female	4.26	0.63
The degree of challenges facing faculty members s	Male	3.72	0.70
	Female	3.91	0.67
How to improve the experience of Aqaba University of Technology	Male	3.39	0.74
	Female	3.55	0.68
The total	Male	3.62	0.59
	Female	3.89	0.60

It appears from Table (7) there is an apparent difference in the values of the arithmetic circles for the levels of gender for the performance of the members of the study sample, and to see If these differences are statistically significant, multiple one way-variance analysis was performed of the reality of using the electronic education system (Moodle) in the distance education program, and table (8) Show the results of that.

Table (8). Analysis of the multiple one way-variance of the impact of gender on the reality of the use of the electronic education system (Moodle) in the distance education program

Source of contrast	Dependent variable	Sum of squares	Degrees of freedom	Average squares	Value of ph	Significance level
<b>Gender</b>	The degree of benefit from using the e-learning system	10.154	1	10.154	*8.66	0.000
	The degree of challenges facing faculty members s	7.215	1	7.215	*3.98	0.000
	How to improve the experience of Aqaba University of Technology	16.995	1	16.995	*10.207	0.000
	The Total	9.123	1	9.123	*7.89	0.000

\* Statistically significant at ( $\alpha \leq 0.05$ ) level

It appears from Table (8) there are statistically significant differences at the level of significance ( $\alpha \leq 0.05$ ) in the degree to which Jordanian government universities practice the reality of using the electronic education system (Moodle) in the distance education program from the viewpoint of faculty members due to the gender variable and was in favor of Females as shown by the values of the arithmetic averages shown in Table (7).

#### Regarding the college

Mathematical averages and standard deviations were calculated for the college levels and Table (9) shows the results.

Table (9). Mathematical Averages and Standard Deviations for College Levels for the Reality of Using the Moodle System in the Distance Learning Program

Domain	Level	Arithmetical average	standard deviation
The degree of benefit from using the e-learning system	Humane	3.84	0.68
	Scientific	3.97	0.56
The degree of challenges facing faculty members s	Humane	3.45	0.80
	Scientific	3.65	0.67
How to improve the experience of Aqaba University of Technology	Humane	3.66	0.87
	Scientific	3.89	0.63
The Total	Humane	3.66	0.67
	Scientific	3.80	0.53

It appears from Table (8) there is an apparent difference in the values of the arithmetic mean for the levels of the college for the performance of the members of the study sample. To know if these differences are statistically significant, the multiple one way-variance analysis was done and table (10) shows the results of that.

Table (10). Analysis of the multiple one way-variance of the impact of the college on the reality of the use of the electronic education system (Moodle) in the distance education program

Source of contrast	Dependent variable	Sum of squares	Degrees of freedom	Average squares	Value of ph	Significance level
<b>Gender</b>	The degree of benefit from using the e-learning system	0.79	1	0.79	1.05	0.35
	The degree of challenges facing faculty members s	0.84	1	0.84	0.83	0.44
	How to improve the	0.31	1	0.31	0.26	0.77

experience of Aqaba University of Technology The Total	1.04	1	1.04	0.84	0.43
--	------	---	------	------	------

It appears from table (10) there are no statistically significant differences at the level of significance ( $\alpha \leq 0.05$ ) in the degree of the practice of Jordanian public universities of the reality of using the electronic education system (Moodle) in the distance education program from the opinion of faculty members due to the college variable.

### Regarding the rank

Mathematical averages and standard deviations for grade levels and table (10) were shown showing the results.

Table (11). Arithmetic averages and standard deviations for the grade levels of the reality of using the electronic education system (Moodle) in the distance education program

Domain	level	Arithmetical average	standard deviation
The degree of benefit from using the e-learning system	professor	3.84	0.68
	Co-professor	3.97	0.56
	Assistant Professor	4.08	0.56
The degree of challenges facing faculty members s	professor	3.45	0.80
	Co-professor	3.65	0.67
	Assistant Professor	3.69	0.64
How to improve the experience of Aqaba University of Technology	professor	3.66	0.87
	Co-professor	3.89	0.63
	Assistant Professor	4.01	0.67
The Total	professor	3.66	0.67
	Co-professor	3.80	0.53
	Assistant Professor	3.90	0.56

It appears from table (10) there is an apparent difference in the values of the arithmetic mean for the levels of rank for the performance of the members of the study sample. To know if these differences are statistically significant, the multiple one way-variance analysis was performed, and table (11) shows the results of that.

Table (12). Analysis of multiple one way-variance of the effect of the rank on the reality of the use of the electronic education system (Moodle) in the distance education program

Source of contrast	Dependent variable	Sum of squares	Degrees of freedom	Average squares	Value of ph	Significance level
Gender	The degree of benefit from using the e-learning system	3.55	2	1.77	4.46	0.01
	The degree of challenges facing faculty members s	5.64	2	2.82	5.37	0.00
	How to improve the experience of Aqaba University of Technology	7.37	2	3.68	6.52	0.00
	The Total	5.01	2	2.50	6.99	0.00

It appears from table (11) shows that there are statistically significant differences at the level of significance ( $\alpha \leq 0.05$ ) in the degree of Jordanian public universities practice of the reality of using the

electronic education system (Moodle) in the distance education program from the viewpoint of faculty members due to the rank variable and to know if The differences are statistically significant. Dimensional comparisons were made in a healing way, and Table (12) shows the results of that.

Table (13). The results of Shafeh comparisons of the effect of the rank on the reality of using the electronic education system (Moodle) in the distance education program

The dependent variable mean	mean 1	mean 2	The difference between the two media	Significance level
The degree of benefit from using the e-learning system	Professor	Co-professor	-0.21	0.12
		Assistant Professor	-0.29	0.01
	Co-professor	Assistant Professor	-0.08	0.69
The degree of challenges facing faculty members s	Professor	Co-professor	-0.37	0.00
		Assistant Professor	-0.31	0.02
	Co-professor	Assistant Professor	0.06	0.83
How to improve the experience of Aqaba University of Technology	professor	Co-professor	-0.27	0.09
		Assistant Professor	-0.43	0.00
	Co-professor	Assistant Professor	-0.15	0.38
The Total	professor	Co-professor	-0.27	0.02
		Assistant Professor	-0.35	0.00
	Co-professor	Assistant Professor	-0.70	0.68

It appears from table (12) the following:

1. With regard to the scope of the degree of benefit from the use of the e-learning system, the differences between faculty members from the rank of professor and between faculty members from the rank of assistant professor and in favor of faculty members from the rank of assistant professor.
2. With regard to the field of degree of challenges facing faculty members the differences between faculty members of the rank of professor and faculty members of the rank of assistant professor and for the benefit of faculty members of the rank of assistant professor and were between faculty members of the rank of professor and faculty members of the rank of associate professor and for the benefit of faculty members of the rank of associate professor.
3. Regarding the field of how to improve the experience of Aqaba University of Technology, the differences were between the faculty members of the rank of professor and the faculty members of the rank of assistant professor and for the benefit of faculty members of the rank of assistant professor.



4. With regard to the college, the differences were between faculty members of the rank of professor and faculty members of the rank of assistant professor and for the benefit of faculty members of the rank of assistant professor and were between faculty members of the rank of professor and between faculty members of the rank of associate professor and in favor of faculty members of the rank of professor participant.

#### Regarding experience:

Mathematical averages and standard deviations were calculated for experience levels and Table (13) shows the results.

Table (14). Mathematical Averages and Standard Deviations for Experience Levels of Reality of Using Moodle System in Distance Learning Program

Domain	level	Arithmetical average	standard deviation
The degree of benefit from using the e-learning system	Less than 5 years	4.16	0.57
	From 5 - 10	4.00	0.48
	More than 10	3.87	0.68
The degree of challenges facing faculty members s	Less than 5 years	3.82	0.63
	From 5 - 10	3.66	0.56
	More than 10	3.47	0.80
How to improve the experience of Aqaba University of Technology	Less than 5 years	4.08	0.64
	From 5 - 10	3.88	0.64
	More than 10	3.77	0.81
The Total	Less than 5 years	3.99	0.55
	From 5 - 10	3.83	0.46
	More than 10	3.68	0.67

It appears from table (13) shows that there is an apparent difference in the values of the arithmetic mean for the levels of experience for the performance of the members of the study sample. To know if these differences are statistically significant, the multiple one way-variance analysis was done, and table (14) shows the results of that.

Table (15). Analysis of the multiple one way-variance of the effect of experience on the reality of using the electronic education system (Moodle) in the distance education program

Source of contrast	Dependent variable	Sum of squares	Degrees of freedom	Average squares	Value of ph	Significance level
<b>The experience</b>	The degree of benefit from using the e-learning system	2.26	2	1.13	2.81	0.06
	The degree of challenges facing faculty members s	4.42	2	2.21	4.17	0.01
	How to improve the experience of Aqaba University of Technology	6.63	2	3.31	5.83	0.00
	The Total	3.99	2	1.99	5.51	0.00

It appears from table (14) shows that there are statistically significant differences at the level of significance ( $\alpha \leq 0.05$ ) in the degree of the practice of Jordanian public universities of the reality of using the electronic education system (Moodle) in the distance education program from the viewpoint of faculty members attributed to the variable of experience in the two fields (the degree of challenges facing faculty members s and how to

improve the experience of Aqaba University of Technology and the macro) and to see if the differences are statistically significant, dimensional comparisons were made in a healing way and table (15) shows the results of that.

Table (16). Results of Shafeh comparisons of the impact of experience on the reality of using the electronic education system (Moodle) in the distance education program

The dependent variable mean	mean 1	mean 2	The difference between the two media	Significance level
The degree of challenges facing faculty members s	Less than 5 years	From 5 - 10	-0.11	0.65
		More than 10	0.19	0.26
How to improve the experience of Aqaba University of Technology	From 5 – 10	More than 10	0.30	0.01
	Less than 5 years	From 5 - 10	-0.01	0.99
		More than 10	0.32	0.03
The Total	From 5 – 10	More than 10	0.33	0.01
	Less than 5 years	From 5 - 10	-0.01	0.98
		More than 10	0.24	0.03
	From 5 – 10	More than 10	0.26	0.01

It appears from table (15) the following:

1. Regarding the field of degree of challenges facing faculty members s, the differences between faculty members were experienced (from 5 to 10) and faculty members with Experience (more than 10) and for the benefit of experienced faculty members (5-10).
2. Regarding the field of how to improve the experience of Aqaba University of Technology, the differences were between experienced faculty members (from 5 to 10) and faculty members with experience (more than 10) and for the benefit of experienced faculty members (from 5-10) and, it was between experienced faculty (less than 5 years) and between experienced faculty (more than 10) and in favor of experienced faculty (less than 5 years).
3. For the college, the differences were between experienced faculty member's (from 5-10) and between faculty members with experience (more than 10) and for the benefit of experienced faculty members (from 5-10), it was among experienced faculty (less than 5 years) and among experienced faculty (more than 10) and in favor of experienced faculty (less than 5 years).

## Discussion

This study aimed to study the reality of using e-learning systems in distance learning through the coronavirus pandemic. The study has assessed the academic staff perspective toward the degree of benefit from the use of the e-learning system, the degree of challenges facing faculty members s, how to improve the Aqaba University of Technology experience. The results show higher estimation of using e-learning system by the academic staff of Aqaba university of technology. Specifically, the degree of benefits from the use of e-learning system was medium (medium=4.01). the level of challenges facing faculty members was high to medium (medium=3.81). Finally, for the improving the Aqaba University of Technology experience exhibits medium level (medium=3.62). In fact, the using of e-learning system in Aqaba university of Technology was an obligatory, and important aspect to facilitate the distance education through the coronavirus pandemic.

The positive results may be explained with many reasons. First, the main scope of Aqaba university of technology lies in technology education and education based on technology. This explanation is supported by the result that there is no significant difference between faculties. In other word, the

information technology faculty members did not show higher significant level in comparison with other faculties. Second, the specialized center in Aqaba university of technology as computer center, online e- Learning center, and traing and consolation centers. These center perform regularly workshops and training about the distance education, using of technology in education, and online resources. Our results were in line with the current evidence. Arnou, 2020 found that the online applications, platforms, and internet resources facilitate the educational process and interaction during the lockdown. A study Navaro & Shoemaker,2000 compares between the traditional learning and online learning, and found the online learning better than traditional learning. The instructor role is very important through the education by online facilities (Trad, Katt & Miller, 2014). The positive prospective of academic staffs enhances the distance education outcomes.

The study performs subgroup analyses in order to give accurate prospective toward e-learning education system. The subgroup analyses were in gender, faculty, academic rank, and experience. In term of gender, females show significantly higher level. There was not significant difference according to the faculty. The humanity and science faculties member show similar level. The academic rank and experience were influential factors. Academic members with lesser academic rank and year of experience show higher and significant level compared with higher academic and more experienced member. These differences can be explained with the two following reasons. First, the academic members with lesser academic rank and year of experience might use more the internet in education. Online courses and workshops, educational pages on social media, and video conferences have been recently increased in educational process. Second, participants with lesser academic rank and year of experience may be more familiar with technology.

#### **Recommendations:**

Carrying out studies on the impact of using distance learning to find out the extent of benefit students gain through educational platforms. The role of using additional teaching aids to enhance the education system in universities, the extent to which students accept the use of distance learning. The role of universities in providing educational materials on the universities site so that students can access them anytime and anywhere.

#### **Conclusion:**

The study shows a positive perspective of academic members toward online resources in distance education. This positive perspective may enhance the distance education outcomes. The study provides the influential factors of using online resources in education.

#### **References:**

- Arnou, C. (2020). Scenario's vooronderwijstijdensenna de corona-crisis. Retrieved, April 20, 2020, from <https://ppw.kuleuven.be/platforml/Blogs/scenario2019s-voor-onderwijs-tijdens-en-nade-corona-crisis>.
- Carbone, D. J. (2018). Assessing learning across pedagogical modalities and learning retrieval conditions for college learners in introductory psychology. *Community College Journal of Research and Practice*, 42(5), 340-349. Available at: <https://doi.org/10.1080/10668926.2017.1310066>.
- Cleveland, B., Soccio, P., Mountain, R., & Imms, W. (2018). Learning Environment Design and Use. Towards Effective Learning Environments in Catholic Schools (TELE): An Evidence-based Approach (2015-2017). Retrieved, April 20, 2020, from: <https://minervaaccess.unimelb.edu.au/handle/11343/218087>.

- Al Soub, T. F. & Amarin N. Z. (2021). The Reality of Using Moodle In a Distance Education Program. *Cypriot Journal of Educational Science*, 16(5), 2173-2192. <https://doi.org/10.18844/cjes.v16i5.6237>
- Cutsinger, M. M., Wall, T. J., & Tapps, T. (2018). Differences of instructor presence levels in predominately online versus predominantly not online courses within the community college setting. *Online Journal of Distance Learning Administration*, 21(2), n2.
- Harris, R. A., & Nikitenko, G. O. (2014). Comparing online with brick and mortar course learning outcomes: An analysis of quantitative methods curriculum in public administration. *Teaching Public Administration*, 32(1), 95-107. Available at: <https://doi.org/10.1177/0144739414523284>.
- Henny. Y.(2020) University of Baturaja Online Learning to Prevent the Spread of Pandemic Corona Virus in Indonesia [hennyulia78@gmail.com](mailto:hennyulia78@gmail.com)
- Holingshead, A. & Chellman, D. (2019). Engaging Learners in Online Environments Utilizing Universal Design for Learning Principles, <https://doi.org/10.1145/3310377.3310383>
- Huang, R., Liu, D., Tlili, A., Yang, J., & Wang, H. (2020). *Handbook on Facilitating Flexible Learning During Educational Disruption: The Chinese Experience in Maintaining Undisrupted Learning in COVID-19 Outbreak*. Beijing: Smart Learning Institute of Beijing Normal University.
- Jovanovic, A., Jankovic, A., Jovanovic, S. M., Peric, V., Vitosevic, B., & Pavlovic, M. (2015). When going hybrid is not enough: Statistical analysis of effectiveness of blended courses piloted within tempus BLATT project. *International Journal of Education and Development using Information and Communication Technology*, 11(2), 138-152.
- Kearns, L.R. (2016). The experience of teaching online and its impact on faculty innovation across delivery methods, *Internet and Higher Education* 31, 71–78
- Kohn, T., Maier, R., & Thalmann, S. (2010). Knowledge transfer with e-learning resources to developing countries: Barriers and adaptive solutions. *ELearning 2010* (pp. 15-29): Springer.
- Laurillard, D. (2002). *Rethinking university teaching: a conversational framework for the effective use of learning technologies*. London, Routledge/Falmer.
- Lockman, A. & Schirmer, B. (2020). Online Instruction in Higher Education: Promising, Research-based, and Evidence based Practices, *Journal of Education and e - Learning Research*. 7( 2) 130-152, 2020 ISSN(E) 2410-9991 / ISSN(P) 2518-0169 DOI: [10.20448/journal.509.2020.72.130.152](https://doi.org/10.20448/journal.509.2020.72.130.152)
- Mailizar, Almanthari, A., Maulina, S. & Bruce, S. (2020). *EURASIA Journal of Mathematics, Science and Technology Education*, 16(7), em1860 ISSN:1305-8223 (online) <https://doi.org/10.29333/ejmste/8240>
- McCarthy, J. (2017). Enhancing feedback in higher education: Students' attitudes towards online and in-class formative assessment feedback models. *Active Learning in Higher Education*, 18(2), 127-141. Available at: <https://doi.org/10.1177/1469787417707615>.
- Navaro, P. & Shoemaker, J.(2000). Performance and perceptions of distance learners in cyber space. *American Journal of Distance Education*. 14(2). 15-35.
- Nguyen, F. (2007). The effect of an electronic performance support system and training as performance interventions. PhD diss., Arizona State University, Tempe.
- Oranburg, S. (2020). Distance Education in the Time of Coronavirus: Quick and Easy Strategies for Professors. Electronic copy available at: <https://ssrn.com/abstract=3553911>
- Ryan, S., Kaufman, J., Greenhouse, J., She, R., & Shi, J. (2016). The effectiveness of blended online learning courses at the community college level. *Community College Journal of Research and Practice*, 40(4), 285-298. Available at: <https://doi.org/10.1080/10668926.2015.1044584>.
- Säljö, R. (2010). Digital tools and challenges to institutional traditions of learning: technologies, social memory and the performative nature of learning. *Journal of Computer Assisted Learning*, 26: 53–64.

- Al Soub, T. F. & Amarin N. Z. (2021). The Reality of Using Moodle In a Distance Education Program. *Cypriot Journal of Educational Science*. 16(5), 2173-2192. <https://doi.org/10.18844/cjes.v16i5.6237>
- Stem, J. (2019). Introduction to Online Teaching and Learning. Retrieved, April 2, 2020 from <http://www.edu/online/documents/otl.pdf>
- The Jordanian newspaper, Al-Dustou(2020). issued by the Jordanian Prime Minister. Archived from the original on April 16, 2020. Accessed on May 16 /52020. <https://www.addustour.com/search.php?todaydate=1586984400/>
- Trad, L., Katt, J., & Miller, A. N. (2014). The effect of face threat mitigation on instructor credibility and student motivation in the absence of instructor nonverbal immediacy. *Communication Education*, 63(2), 136-148. Available at: <https://doi.org/10.1080/03634523.2014.889319>
- Van Lancker, W. & Parolin, Z. (2020). COVID-19, school closures, and child poverty: a social crisis in the making. *The Lancet Public Health*, April 7, 2020.
- Webb, A & Moallem, M..(2018). FEEDBACK AND FEED-FORWARD FOR PROMOTING PROBLEM-BASED LEARNING IN ONLINE LEARNING ENVIRONMENTS, *Malaysian Journal of Learning and Instruction*: 13( 2).
- Xu, D., & Jaggars, S. S. (2014). Performance gaps between online and face-to-face courses: Differences across types of students and academic subject areas. *The Journal of Higher Education*, 85(5), 633-659. Available at: <https://doi.org/10.1353/jhe.2014.0028>.
- Zaharah, Z., & Kirilova, G. I. (2020). Impact of Corona Virus Outbreak Towards Teaching and Learning Activities in Indonesia. *SALAM: Jurnal Sosial dan Budaya Syar-i*, 7(3). <https://doi.org/10.15408/sjsbs.v7i3.15104>
- Zhang, D. 2005. Interactive multimedia-based e-learning: A study of effectiveness. *American Journal of Distance Education* 19 (3):149–62
- Zhao, Y., J. Lei, B. Yan, C. Lai, & H. S. Tan. (2005). What makes the difference? A practical analysis of research on the effectiveness of distance education. Faculty members . *College Record* 107 (8):183684.
- Zimbardi, K., Colthorpe, K., Dekker, A., Engstrom, C., Bugarcic, A., Worthy, P., & Long, P. (2017). Are they using my feedback? The extent of students' feedback use has a large impact on subsequent academic performance. *Assessment & Evaluation in Higher Education*, 42(4), 625-644. Available at: <https://doi.org/10.1080/02602938.2016.1174187>.