

THE EFFECTIVENESS DEGREE OF DISTANCE LEARNING AT ZARQA UNIVERSITY IN LIGHT OF CORONA PANDEMIC FROM FACULTY MEMBERS' AND STUDENTS' POINT OF VIEW

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ABSTRACT

This study aims at finding out the effectiveness degree of distance learning at Zarqa University in light of Corona Pandemic from faculty members' and students' point of view. The descriptive survey methodology is used. The study is applied to a stratified random sample of faculty members and students at Zarqa University, whose number was (210) faculty members and (1261) male and female students. The questionnaire, which consists of (40) items, distributed into three domains, is used as a tool to collect data, after ensuring its validity and reliability. The findings show that the mean of the effectiveness degree of distance learning at the university is medium from faculty members' point of view with a mean (3.67) and a standard deviation of (0.47). The study found that the effectiveness degree of distance learning at the university is also medium from the students' point of view. The mean is (3.36) with a standard deviation of (0.62). The findings indicate that there are significant differences at ($\alpha \leq 0.05$) between the views of faculty members and students' views on the overall degree and the three domains in favor of faculty members. There are no significant differences at ($\alpha \leq 0.05$) of the degree of effectiveness of distance learning at the university from the faculty members' point of view due to the academic rank and gender variables. While there are significant differences attributed to the variable of the faculty, in favor of the humanities faculties. There are significant differences in the degree of effectiveness of distance learning at the university from the students' point of view in the total score and the three domains attributed to gender, in favor of males. There are significant differences due to the variable of the faculty in the domains of (Distance learning effectiveness and Distance learning system) in favor of humanities faculties. There were no significant differences in the domain of (Distance learning obstacles).

Keywords: Degree of Effectiveness, Distance Learning, Zarqa University, Corona Pandemic (Covid-19)

INTRODUCTION

The world is facing the Corona crisis, which has put it in front of many challenges that cannot be avoided or overlooked, and imposed on countries all over the world to coexist with this crisis in light of different and unstable circumstances, and perhaps other data that it has not experienced before. Among the most prominent and important of these data is the issue of distance learning, or what is called “e-learning”, which is considered direct education, as the educational content is presented through electronic means.

As a result of the outbreak of the Corona pandemic around the world during the past year (2020), this damage affected the countries of the Middle East and Africa region, and to limit the spread of the epidemic infection, governments in this region began to restrict the movement of citizens and close schools and universities in the beginning of March of the year (2020). These schools and universities are still closed to the present time. There are more than (100) million students outside the classroom. The numerical modeling predictions indicated a decline in learning outcomes according to what was documented in school analyses, and to mitigate the negative impact of this closure of schools and universities in the Middle East and North Africa region, learning in this region has become remotely via the Internet (Azzi - Huck, Blom & Bend, 2020).

E-learning is a form of distance learning that relies on the capabilities and tools of the International Information Network, the Internet, and computers in studying specific educational content through continuous interaction between the teacher, the learner, and the content. It is, as described by some researchers, an educational system to provide educational or training programs to learners or trainees at any time and in any place, by employing interactive information and communication technologies such as the Internet, local or satellite channels for television, magnetic and cellular disks, e-mail, computers, and teleconferences to provide a multi-source interactive environment in a simultaneous or asynchronous way inside the classroom, without committing to a specific location, depending on the self-learning and the interaction between the learner and the teacher (Astatieh, 2007; Salem, 2004).

The debate about e-learning has evolved over the past years, and visions have varied and trends have differed regarding its concept. E-learning has other names, such as: digital learning, smart learning, imaginative learning, artificial learning, e-learning, virtual learning, direct learning, and universal learning. This type of education, with its different names, is based on the philosophy of distance learning that focuses on self-learning for learners, transforming the teaching process into a learning process, as the learner relies on himself to a large degree, and that the direct relationship between the faculty member and the student is absent (Al-Shehri, 2014). Al-Owaid & Al-Hamid (2003) added that this learning aims to create an interactive environment rich in applications that depend on computers and the Internet, and enables the student to access information and learning resources whenever he wants and from wherever he is.

The outbreak of the Corona virus (Covid-19) and the closures of schools, universities, and other educational institutions at the national level, can be used as the best test for interventional and technological measures for distance learning, but unfortunately a few educational systems have reached this point, and China is one of the countries, in which education continued regardless of the closure of universities and schools, and this was done *via* the Internet, and distance learning, while there were countries and school and university systems less prepared (Kaliopé, Azzi - Huck & Tigran, 2020). From this standpoint, Zarqa University began to directly promote the process of

integrating technology into the educational system, and worked to activate electronic platforms and distance learning, and asked teaching staff members in all faculties to implement this through the decisions of the Council of Deans in line with the decisions of the Council of Higher Education and Scientific Research based on Defense Order No. (7) in this regard. Accordingly, this study comes to know the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic (Covid-19) from the point of view of faculty members and students.

STUDY PROBLEM

The Corona virus (Covid-19) forced all students and teaching staff members in schools and universities around the world to use technology and employ it in the educational learning process, after this virus abolished the idea of learning in traditional classrooms. Online learning is no longer limited to specific groups or individuals, as all those in the education system use electronic applications, so that the matter in the education sector turns into compulsory technology.

The development of the Coronavirus and its widespread around the world prompted all countries to resort, forcefully, to use the means of distance learning to achieve social distancing, with the existing disparity in technical and information capabilities from one country to another, according to the readiness to employ this method, and train teachers and teaching staff members, and the nature of students and their ease of use and familiarity with this method. The Corona virus (Covid-19) has put billions of people around the world face-to-face before the "distance learning" system (Nassar, 2020).

Jordan is one of the countries where the Corona virus has spread, and all schools, universities, and educational institutions have been closed, and the need has become urgent to educate students using distance learning as the main and the only indispensable means of educating students and providing them with the required skills, experiences, and information, since the school, especially high school and university, with their various specializations, are the main source of distance learning, whether in terms of organizing, preparing, and presenting it to students *via* the Internet, the university administration has an important role in this scope. The effectiveness of this type of education depends on this administration, the extent to which students and faculty members are accepting, and the degree of availability of the necessary electronic equipment and devices and their constant maintenance to ensure the success of the educational learning process.

In light of the above, the study problem is identified in the following question:

How effective is distance learning at Zarqa University in light of the Corona pandemic from the point of view of faculty members and students?

STUDY QUESTIONS

The study questions included the following sub-questions:

Q1: What is the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from point of view of faculty members?

Q2: What is the effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the point of view of students?

Q3: Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University between the views of faculty members and the views of students?

Q4: Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University from the point of view of the teaching staff due to variables: academic rank, gender, and faculty?

Q5: Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University from the viewpoint of students due to the variables of sex and faculty?

OBJECTIVES OF THE STUDY

This study aims to identify:

1. The degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the point of view of faculty members.
2. The degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the point of view of students.
3. Statistically significant differences in the degree of effectiveness of distance learning at Zarqa University between faculty members and students.
4. The statistically significant differences in the degree of effectiveness of distance learning at Zarqa University from the point of view of faculty members are due to variables of academic rank, gender, and faculty.
5. The significant statistical differences of the degree of effectiveness of distance learning at Zarqa University from the students' point of view is due to the variables of gender and faculty.

IMPORTANCE OF STUDYING

The importance of this study stems from the importance of the topic it addresses, which is represented in distance learning in light of the Corona pandemic and its degree of effectiveness and importance in facing this pandemic, according to what Zarqa University did in this regard. It is expected that this study would benefit:

- Administrative leaders at Zarqa University, by knowing the degree of effectiveness of distance learning.
- Teaching staff and students, by knowing the importance and necessity of distance learning in light of the Corona pandemic.
- Researchers in this scope in light of the theoretical literature and previous studies presented in this study and a tool whose validity and reliability have been verified, so that it can be a starting point for other studies.

TERMINOLOGY OF STUDY

Distance Learning

It is one of the modern forms of education, its basic idea is to deviate from the traditional character of education, and it is based on the principle of separating the learner, teacher, and writers in the educational environment and using the latest technologies to facilitate communication between them, especially for students who cannot adhere to a specific time schedule for their full-time occupation or living in remote areas (Nasser, 2019). It is also known as a formal system of teaching and learning, which was specially prepared for remote work through electronic means of

communication (Al-Shomali, 2017), and is distinguished by its ability to create educational opportunities in cases where traditional education is difficult or impossible to implement.

Coronavirus (Covid-19)

The World Health Organization (2020) defined this pandemic as one of the infectious diseases caused by the last virus that was discovered from the Corona virus strain, and it is a family of viruses that may cause disease to animals and humans alike, in addition to the respiratory diseases it causes, whose severity ranges from common colds to more severe diseases such as Middle East Respiratory Syndrome and Severe Acute Respiratory Syndrome (SARS) and are characterized by rapid spread.

Effectiveness

It could be indicated that Bernard defined effectiveness as the degree at which the organization can reach its goals and achieve them, while Al Far mentioned that effectiveness means the extent of the organization's ability to survive, grow, and adapt without looking at the goals it seeks to achieve. Effectiveness is defined procedurally as: the degree obtained by the members of the study sample from students and members of the teaching staff at Zarqa University for their responses to the paragraphs of the questionnaire for the degree of effectiveness of distance learning at Zarqa University used in this study.

Limits of the Study

The current study is limited to students and faculty members at Zarqa University for the academic year 2020/2021.

Study Limitations

The generalization of the results is limited to the study population from which the sample is drawn, and similar populations.

Theoretical Literature

The concept of distance learning, its development, advantages, and disadvantages has been addressed as follows:

LITERATURE REVIEW

Education and e-learning is one of the methods of distance learning through the use of computers, its networks, and its multimedia, including sound, image, graphics, search mechanisms, libraries, and Internet portals. The following is a review of previous Arab and foreign studies related to distance learning or e-learning according to the date of their publication from the oldest to the most recent.

The study of Hussamou & Al-Abdullah (2011) aimed to know the reality of e-learning at Tishreen University from the point of view of faculty members and students. Two questionnaires

were used, the first was applied to a sample of the teaching staff at Tishreen University, whose number reached (113) members, and the second was applied to a random sample of fourth-year students at Tishreen University, the number of its members was (774) students. The results showed that there were no statistically significant differences between the average grades of the teaching staff according to the variables of scientific rank and specialization on the axis of "the extent of using e-learning and its pros, cons, and obstacles," and the existence of teams on the axis of "negatives" according to the variable of specialization and in favor of the literary specialization. There was no statistically significant difference between the average scores of students on the e-learning axis and its obstacles according to the specialization variable. The interest of faculty members and students in e-learning was minimal. The sample members emphasized the role of this type of education in increasing computer skills. The most disadvantages of it are that it reduces the burden of teaching staff, and that sitting in front of the computer causes many diseases.

Mehra & Omidian (2011) conducted a study aimed at examining the attitudes of students at the Indian University of Punjab towards e-learning. The study data were collected by surveying a sample of postgraduate students, who were (400) students. The study found that (76%) of students have negative attitudes towards e-learning, (82%) of students realize the benefits of e-learning, and (57%) of students decide to adopt e-learning. Another study aimed to benefit from contemporary global trends in developing a proposal for developing remote education in the universities of the Kingdom of Saudi Arabia, and using the descriptive approach by reviewing global experiences in distance learning and comparing it with the reality of distance learning in the Kingdom of Saudi Arabia. The results of the study indicate that the institutional, organizational, and administrative structure of the study sample in the comparative countries is more organized, combining the central and decentralized patterns of performance, and the internal structure is compatible with the institutional structure in general. There was great interest in the comparative countries with regard to the technical aspect and the qualification of the teaching staff and workers in their institutions. Distance learning in the Kingdom of Saudi Arabia is somewhat behind the developing countries, and one of the most important challenges facing remote higher education in the Kingdom is the development of qualitative public higher education.

RESEARCH METHODOLOGY

In this study, the descriptive survey methodology is used as the appropriate method for the study topic and its problem. Surveying and reviewing the relevant studies are used to clarify the nature of the topic, the foundations and the theoretical perspectives on which the subject of the current study is based. The questionnaire was used to collect data after confirming its validity and reliability.

Study Community

The study community includes all faculty members and students at Zarqa University for all faculties with their different departments for the academic year (2020/2021).

Study Sample

The sample is chosen from the study population using the random stratified method, as the number of teaching staff reached (210) faculty members, (156) males and (54) females, and (1261) male and female students, (682) male students and (579) female students, from Zarqa University. Table 1 shows the distribution of the study sample according to the study variables.

| Category | Variable | Variable Categories | Number | Percentage (%) |
|-----------------|---------------|---------------------|--------|----------------|
| Faculty Members | Academic Rank | Assistant Professor | 106 | 50.50% |
| | | Lecturer | 43 | 20.50% |
| | | Associate Professor | 40 | 19.00% |
| | | Professor | 21 | 10.00% |
| | | Total | 210 | 100% |
| | Gender | Male | 156 | 74.30% |
| | | Female | 54 | 25.70% |
| | | Total | 210 | 100% |
| | Faculty | Humanities | 108 | 51.40% |
| | | Scientific | 102 | 48.60% |
| Total | | 210 | 100% | |
| Students | Gender | Males | 682 | 54.10% |
| | | Female | 579 | 45.90% |
| | | Total | 1261 | 100% |
| | Faculty | Humanities | 780 | 61.90% |
| | | Scientific | 481 | 38.10% |
| | | Total | 1261 | 100% |

Study Tool

To achieve the objectives of the study by answering its questions, a questionnaire was developed for this purpose, referring to the relevant theoretical literature and previous related studies. The questionnaire included, in its initial form, (40) items distributed in three areas, namely: the effectiveness of distance learning, distance learning system, and barriers to distance learning. Table 2 shows the distribution of the items of the questionnaire (the study tool) among the three scopes.

| Scope | Number of Items |
|------------------------------------|-----------------|
| effectiveness of distance learning | 14 |
| distance learning system | 18 |
| barriers to distance learning | 8 |
| Total | 40 |

The questionnaire is designed according to the quintuple Likert-scale. The alternatives of the answer were: strongly agree and give five degrees, agree and give four degrees, neutral and give three degrees, while the alternative do not agree was given two degrees, and the alternative strongly disagreed with one degree.

Validity of the Study Tool

The validity of the study tool is verified by presenting it to a number of experienced and competent referees who are members of the teaching bodies in Jordanian universities. They were asked to express their opinions regarding the items of the tool in terms of their belonging to the scope that they fell under, the accuracy of their linguistic formulation, and the extent of their clarity, and adding, modifying, or deleting what they deem appropriate of the items. The approval percentage of (80%) or more of the opinions of the arbitrators was adopted to maintain the item, and to delete or amend the item if it obtained less than this percentage, and in light of all that, the arbitrators' observations and suggestions were taken into account, and the required amendments were made to the items that some arbitrators requested to amend, and no items were deleted, and the questionnaire remained as it is, consisting of (40) items, in their final form, distributed over the three areas of the tool. Taking into account the opinions, observations, and suggestions presented by the arbitrators, regarding the items of the tool, is considered evidence of the validity of the tool, which increases the degree of reliability of the results reached by this study.

Validation of Tool's Construct

Validity of the tool's construct was verified using the internal consistency method, which is one of the methods used to find construct validity. The correlation coefficient between each scope of the study tool and the overall degree of the tool was found. Table 3 shows the results.

| Scope | Domain is the value of the Pearson correlation coefficient |
|------------------------------------|---|
| effectiveness of distance learning | 0.73 * |
| distance learning system | 0.69 * |
| barriers to distance learning | 0.77 * |

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

It can be seen from Table 3 that all the values of the Pearson correlation coefficient between each scope of the study tool and the total score of the tool were statistically significant at the level ($\alpha \leq 0.05$), which indicates the validity of the internal consistency and hence the construct validity of the tool, as this shows the values of the Pearson correlation coefficient. (Pearson), which ranged between (0.69) for the scope of distance learning system and (0.77) for the scope of distance learning barriers.

Stability of Study Tool

The stability of the study tool (the questionnaire) was confirmed by applying the tool to a sample consisting of (30) members of the study community, including faculty members and students, and from outside the study sample, and the tool was re-applied again to the same sample members with an interval of two weeks using the test and retest method, and the Pearson correlation coefficient was calculated between the two applications, and the value of the correlation coefficient was (0.92) for the overall score of the tool.

The stability of the tool was also confirmed by finding its internal consistency parameter, using the Cronbach Alpha equation for each of the three domains. Table 4 shows the results of stability using the two methods.

| Scope | The stability parameter evaluated by using the test-retest method | Values of the stability parameter using the internal consistency method using the Cronbach-alpha equation |
|-------------------------------|--|--|
| Efficacy of distance learning | 0.86 | 0.84 |
| Distance learning system | 0.88 | 0.87 |
| Barriers to distance learning | 0.91 | 0.88 |
| Total | 0.92 | - |

The results in Table 4 show that the values of the stability parameter using the test-retest method ranged for scopes between (0.86 - 0.91) and for the overall score (0.92), and with the internal consistency method, the values of the Cronbach-Alpha equation ranged between (0.84 - 0.88). And all the values of the two methods are statistically significant at ($\alpha \leq 0.05$). These values are acceptable for the purposes of the present study.

Study Variables

This study included two types of variables:

First: the intermediate independent variables, represented by the following:

- The academic rank, and it has four levels: (Lecturer, Assistant Professor, Associate Professor, Professor).
- Gender, and it has two categories: (males and females).
- Faculty, and it has two levels: (scientific, humanitarian).

Second: The dependent variable:

It is represented in the degree of effectiveness of distance learning at Zarqa University from the point of view of faculty members and students.

Statistical Treatment

To answer the study questions and to find the validity and reliability of the tool, SPSS statistical packages were used, and the following statistical treatments were performed:

- To answer the first and second questions, the arithmetic means, standard deviations, and ranks of the items were extracted.
- To answer the third and fourth questions, multiple analysis of variance (MANOVA) was used.

- To answer the fifth question, t-test for two independent samples was used.
- To verify the construct validity of the instrument, the Cronbach Alpha equation was used.
- To verify the stability of the study instrument, the Pearson Correlation Coefficient and the Cronbach Alpha equation was used.

Study Procedures

After determining the study population, selecting the sample, and obtaining official approvals, the questionnaires were distributed to the members of the study sample, including faculty members and students. The researchers familiarized the respondents with the importance of the study and answered the inquiries and observations made by the respondents regarding the paragraphs of the questionnaire, and all the distributed questionnaires were retrieved and the data were entered into the statistical packages for social sciences program.

In order to determine the degree of effectiveness of distance learning at Zarqa University from the point of view of faculty members and students, the following equation was applied:

$$1.33 = \frac{4}{3} = \frac{1 - 5}{3} = \frac{\text{The upper value of alternative} - \text{the min. value of the alternative}}{\text{The number of levels}}$$

Thus, it is:

- Low degree from 1 - 2.33
- Intermediate degree from 2.34 to 3.67
- The high score is from 3.68-5

PRESENTATION AND DISCUSSION OF RESULTS AND RECOMMENDATIONS

The results of the first question, which states: "What is the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the faculty members' point of view?"

To answer this question, averages and standard deviations were calculated and the ranks were determined for the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the point of view of the faculty members, according to each of the three scopes of study (the effectiveness of distance learning, the distance learning system, and obstacles of distance learning) and the overall degree. Table 5 shows the results.

| No. | Scope | Arithmetic Mean | Standard Deviation | Rank | Efficacy |
|---------------|------------------------------------|-----------------|--------------------|------|----------|
| 3 | Barriers to Distance Learning | 3.85 | 0.6 | 1 | High |
| 2 | Distance Learning System | 3.71 | 0.63 | 2 | High |
| 1 | Effectiveness of Distance Learning | 3.53 | 0.61 | 3 | Medium |
| Overall Score | | 3.67 | 0.47 | - | Medium |

It can be seen from Table 5 that the arithmetic average of the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the viewpoint of the faculty members was medium, as the arithmetic mean was (3.67) with a standard deviation (0.47). The scopes of “distance learning obstacles” and “distance learning system” came with a high degree of effectiveness, with two arithmetic averages (3.85) and (3.71), ranking first and second respectively. As for the scope of "effectiveness of distance learning", it came in the third and final rank, as it reached an arithmetic average (3.53) and a medium degree.

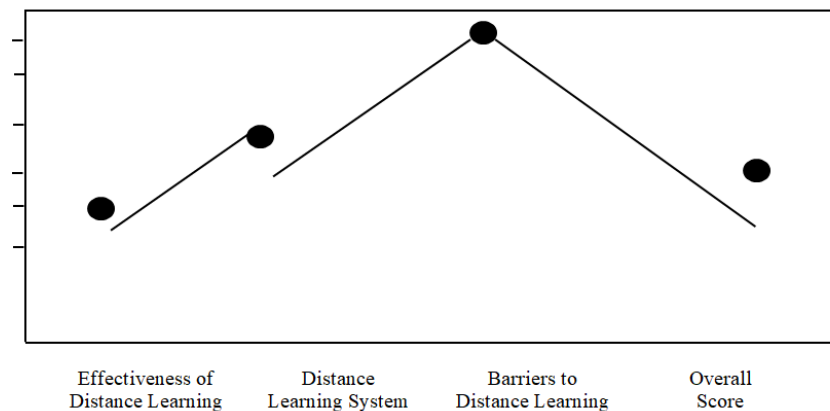


FIGURE 1
THE DEGREE OF EFFECTIVENESS OF DISTANCE LEARNING AT ZARQA UNIVERSITY IN LIGHT OF THE CORONA PANDEMIC FROM THE POINT OF VIEW OF FACULTY MEMBERS ACCORDING TO THE THREE SCOPES

This result may be attributed to the awareness of faculty members at Zarqa University about the essence of distance learning, its importance, and degree of effectiveness in the current circumstance through what they have seen from the results of students and their responses to the programs offered by this type of education, especially since the current reality that Jordan and all countries are experiencing in light of the epidemic, the rapidly spreading Corona pandemic, which requires protection, prevention, and social distancing, and as a result, universities and schools were closed, and this imposes the continuation of the educational process by using distance learning to ensure the isolation of students from each other and their stay in their homes to keep them from contracting this deadly disease. Perhaps this result is due to the high level of obstacles facing the process of implementing remote education, which faculty members cannot overcome or surpass, which in turn affected the degree of effectiveness of this type of education. This result may be attributed to technical difficulties in the distance learning system, parents' lack of conviction about the effectiveness of distance learning, and the lack of computers for a good proportion of student families, in addition to the financial cost of the Internet, which is difficult, or even impossible, for poor families to pay for.

Results of the Second Question, which States

What is the effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the students' point of view? This question was answered by calculating the

arithmetic means and standard deviations and determining the ranks of the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the student’s point of view for the overall degree and for the three scopes represented: the effectiveness of distance learning, distance learning system, and barriers to distance learning. Table 6 shows that.

| Table 6 ARITHMETIC MEANS, STANDARD DEVIATIONS, AND RANKS OF THE DEGREE OF EFFECTIVENESS OF DISTANCE LEARNING AT ZARQA UNIVERSITY IN LIGHT OF THE CORONA PANDEMIC FROM THE VIEWPOINT OF STUDENTS, ARRANGED IN DESCENDING ORDER | | | | | |
|--|------------------------------------|-----------------|--------------------|------|----------|
| No. | Scope | Arithmetic Mean | Standard Deviation | Rank | Efficacy |
| 3 | Barriers to Distance Learning | 3.75 | 0.89 | 1 | Medium |
| 2 | Distance Learning System | 3.33 | 0.85 | 2 | Medium |
| 1 | Effectiveness of Distance Learning | 3.29 | 0.82 | 3 | Medium |
| Overall Score | | 3.36 | 0.62 | - | Medium |

It is noted from Table 6 that the arithmetic average of the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the student’s point of view was medium, as the arithmetic mean reached (3.36) with a standard deviation (0.62). The three scopes obtained a medium degree of effectiveness, as the arithmetic averages ranged between (3.57) and (3.29). The scopes of “distance learning barriers” came in the first rank with an arithmetic mean (3.57) and a standard deviation (0.89). The scope of “distance learning system” ranked second with an arithmetic mean (3.33) and a standard deviation (0.85), and the scope of "effectiveness of distance learning" came in third and last place, with an arithmetic mean (3.29) and a standard deviation (0.82). Figure 2 shows the degree of effectiveness of distance education at Zarqa University in light of the Corona pandemic from the students' point of view according to the three scopes.

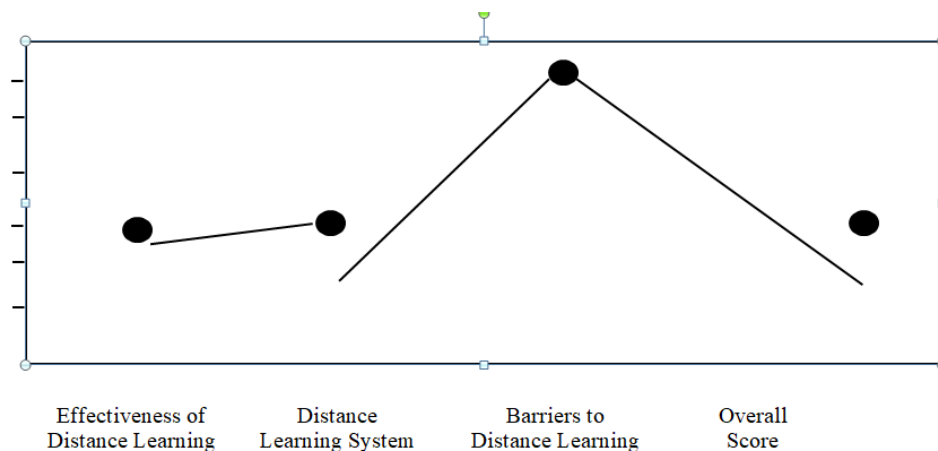


FIGURE 2
THE DEGREE OF EFFECTIVENESS OF DISTANCE LEARNING AT ZARQA UNIVERSITY IN LIGHT OF THE CORONA PANDEMIC FROM THE STUDENTS' POINT OF VIEW ACCORDING TO THE THREE SCOPES

This result may be due to the fact that students are the real stakeholders, and that they are the direct beneficiaries of distance learning, and their perceptions of the degree of effectiveness of this type of learning are closer to the truth in their self-appreciation of the extent of benefit and the extent of learning they have achieved from studying the prescribed courses remotely. Although the scope of "distance learning obstacles" came in the first rank, its degree of effectiveness was medium, which may mean that students are able to overcome some obstacles, and they do not see that there is a great difficulty in their use of the distance learning system, and that they possess the skills of distance learning and computer skills and thus they can acquire knowledge and information that is transmitted to them *via* the Internet. In addition, students learn from each other through communication with each other, especially when they face difficulties in their learning process by means of distance learning, as well as when they perform exams, their need for each other, their cooperation with each other, and their repeated inquiries, all of this would remove barriers and obstacles in the student's way (Al-Ramahi & Odeh, 2020).

Results of the Third Question, which States

Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University between the views of faculty members and the views of students?

To answer this question, t-test for two independent samples was used to reveal the differences between the views of faculty members and the views of students regarding the degree of effectiveness of distance learning at Zarqa University. Table 7 shows the results.

| Scope | Application | Arithmetic Mean | Standard Deviation | Freedom Degrees | T-value | Indication Level |
|----------------------------------|----------------|-----------------|--------------------|-----------------|---------|------------------|
| Effectiveness of remote learning | faculty member | 3.53 | 0.61 | 1469 | 4.11 | 0.00* |
| | Student | 3.29 | 0.82 | | | |
| Distance learning system | faculty member | 3.71 | 0.63 | 1469 | 6.2 | 0.00* |
| | Student | 3.33 | 0.85 | | | |
| Barriers to distance learning | faculty member | 3.85 | 0.6 | 1469 | 4.34 | 0.00* |
| | Student | 3.57 | 0.89 | | | |
| Total Score | faculty member | 3.67 | 0.47 | 1469 | 6.96 | 0.00* |
| | Student | 3.36 | 0.62 | | | |

Table 7 shows that there are statistically significant differences at the level of (0.00) between the views of faculty members and the views of students regarding the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic in the overall degree, as the

value of “T” reached (6.96) in the three scopes, as the T-values ranged between (4.11 - 6.20), the difference was in favor of the faculty member, whether for the total degree or for the three scopes.

This result may be attributed to the fact that the faculty member is more aware, knowledgeable, experienced and perhaps more practicing and a committing to apply distance learning in accordance with what the university requires of him in light of the current situation and the controls imposed by the Corona pandemic, which must be adhered to so as to maintain the university’s employees, including administrators, faculty members and students, and among these controls and conditions is social distancing between individuals and university affiliates. In addition to closing universities and suspending working hours in them, to prevent any direct contact or interaction between students, their professors, and administrators on the one hand, and the students themselves on the other hand. This result may also be attributed to the fact that professors, regardless of their specializations, degrees, and academic ranks, are older than students and have more experience in life matters, and their look on matters differs from their students, especially about crises and difficult situations represented by epidemics and diseases and the need to prevent them in order to preserve their lives and the lives of students. This influence of the teachers’ role may be transferred to parents through their children or contact the university administration to know what the current situation is and its reflection on the epidemiological situation in the country.

Results of the Fourth Question, Which States

Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University from the point of view of faculty members due to variables: academic rank, gender, and faculty?

This question was answered by using multiple analysis of variance (MANOVA) to identify the differences in the degree of effectiveness of distance learning at Zarqa University from the point of view of faculty members according to the variables of academic rank, gender and faculty. Table 8 shows that.

| Scope | Variance Source | Squares Sum | Freedom Degrees | Squares Average | "q" value | Significance Level |
|------------------------------------|-----------------|-------------|-----------------|-----------------|-----------|--------------------|
| Effectiveness of Distance Learning | Rank | 0.254 | 3 | 0.085 | 0.229 | 0.876 |
| | Gender | 0.188 | 1 | 0.188 | 0.508 | 0.477 |
| | Faculty | 2.633 | 1 | 2.633 | 7.125 | 0.008* |
| | Error | 75.393 | 204 | 0.37 | | |
| | Total | 2700.168 | 210 | | | |
| Distance Learning System | Rank | 0.511 | 3 | 0.17 | 0.44 | 0.725 |
| | Gender | 0.162 | 1 | 0.162 | 0.418 | 0.519 |
| | Faculty | 3.08 | 1 | 3.08 | 7.954 | 0.005* |
| | Error | 78.996 | 204 | 0.387 | | |
| | Total | 2980.343 | 210 | | | |

| | | | | | | |
|-------------------------------|---------|----------|-----|-------|-------|--------|
| Barriers to Distance Learning | Rank | 1.068 | 3 | 0.356 | 1.01 | 0.389 |
| | Gender | 0.354 | 1 | 0.354 | 1.005 | 0.317 |
| | Faculty | 0.043 | 1 | 0.043 | 0.122 | 0.727 |
| | Error | 71.938 | 204 | 0.353 | | |
| | Total | 3185.429 | 210 | | | |
| Overall Score | Rank | 0.155 | 3 | 0.052 | 0.244 | 0.866 |
| | Gender | 0.019 | 1 | 0.019 | 0.088 | 0.766 |
| | Faculty | 1.837 | 1 | 1.837 | 8.651 | 0.004* |
| | Error | 43.314 | 204 | 0.212 | | |
| | Total | 2879.252 | 210 | | | |

It is noticed from the results in Table 8 that there are no statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University from the point of view of the teaching staff in the three scopes (distance learning effectiveness, distance learning system, barriers to distance learning) and the overall score is attributable to the variables of academic rank and gender. While the results show that there are statistically significant differences at the level of ($\alpha \leq 0.05$) due to the faculty variable in the two scopes: the effectiveness of distance learning, the distance learning system, and the overall score. When referring to the arithmetic means of the responses of the sample members of the teaching staff, the differences appeared to be in favor of the humanitarian faculties.

The absence of statistically significant differences according to the variables of academic rank and gender may be attributed to the fact that these two variables were not among the variables affecting the responses of faculty members, as the members of the sample in the same faculty regardless of their academic ranks live the same conditions within the faculty in a single organizational climate and are subject to leaders, the administrators themselves, and the same instructions are applied to them, as is the case for the teaching staff of both genders. Therefore, there were no statistically significant differences in their responses according to these two variables.

Results of the Fifth Question, which States

Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University from the viewpoint of students due to the variables of gender and faculty?

To answer this question, MANOVA was used to reveal the differences in the students' viewpoint regarding the degree of effectiveness of distance learning at Zarqa University according to the difference in the study variables (gender, faculty). Table 9 shows that.

| Table 9 MULTIPLE ANALYSIS OF VARIANCE (MANOVA) TO REVEAL DIFFERENCES IN THE STUDENTS' VIEWPOINT REGARDING THE DEGREE OF EFFECTIVENESS OF DISTANCE LEARNING AT ZARQA UNIVERSITY ACCORDING TO THE STUDY VARIABLES (GENDER AND FACULTY) | | | | | | |
|---|-----------------|-------------|-----------------|-----------------|-----------|--------------------|
| Scope | Variance Source | Squares Sum | Freedom Degrees | Squares Average | "q" value | Significance Level |
| Effectiveness of Distance Learning | Rank | 5.366 | 1 | 5.366 | 8.065 | *0.005 |
| | Gender | 15.26 | 1 | 15.26 | 22.934 | *0.000 |

| | | | | | | |
|-------------------------------|---------|-----------|------|--------|--------|--------|
| | Faculty | 837.076 | 1258 | 0.665 | | |
| | Error | 14493.128 | 1261 | | | |
| | Total | 5.038 | 1 | 5.038 | 7.122 | *0.080 |
| Distance Learning System | Rank | 21.105 | 1 | 21.105 | 29.834 | *0.000 |
| | Gender | 889.945 | 1258 | 0.707 | | |
| | Faculty | 14928.475 | 1261 | | | |
| | Error | 9.251 | 1 | 9.251 | 11.817 | *0.001 |
| | Total | 0.352 | 1 | 0.352 | 0.45 | 0.503 |
| Barriers to Distance Learning | Rank | 984.819 | 1258 | 0.783 | | |
| | Gender | 17093.592 | 1261 | | | |
| | Faculty | 1.747 | 1 | 1.747 | 4.647 | *0.031 |
| | Error | 11.67 | 1 | 11.67 | 31.046 | 0 |
| | Total | 472.87 | 1258 | 0.376 | | |
| Overall Score | Rank | 14725.853 | 1261 | | | |
| | Gender | 5.366 | 1 | 5.366 | 8.065 | *0.005 |
| | Faculty | 15.26 | 1 | 15.26 | 22.934 | *0.000 |
| | Error | 837.076 | 1258 | 0.665 | | |
| | Total | 14493.128 | 1261 | | | |

The results indicated in Table 9 that there are statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of effectiveness of distance learning at Zarqa University in light of the Corona pandemic from the viewpoint of university students in each of the three areas of the study tool and the total score attributable to the gender of students and in favor of males. Also, statistically significant differences were found at the level ($\alpha \leq 0.05$) due to the faculty variable in the two scopes (effectiveness of distance learning and the distance learning system) and for the benefit of human faculties. There were no statistically significant differences for this variable in the scope of "barriers to distance learning" from the point of view the students also.

This result may be attributed to the gender variable, which was in favor of males, that males may be more daring, active, and inquiring about the topics presented in the remote education method compared to females who may be predominantly shy, modest, and adhering to social controls, values, and customs that have defined females' specific roles, from which they cannot be deviated from. This commitment is considered a moral indicator for women in the Arab society in general and the Jordanian society in particular, so her movement is restricted by these controls and values, while the young man can go out whenever he wants (if there is no curfew) and call or go anywhere or to any colleague with almost complete freedom. In this scope, therefore, he may as a result be more familiar with technological issues and electronic devices, and he may be more knowledgeable than his colleague regarding technical matters and what is happening in the world of technology and computer developments.

With regard to the issue of the faculty (scientific - humanities), which resulted in favor of the humanities faculties, this may be attributed to the fact that the human faculty with its curricula and specializations, the nature of the study, the methods of teaching, and the interaction between the faculty members and students takes a different character from what is prevalent in the scientific faculties with pure scientific specializations and the nature of the relationship between students and

their professors, and perhaps this is due to the flexibility that prevails in the interaction between the professors and their students, which may be reflected in their teaching methods, especially that there are many topics that students study that emphasize the human ethical aspect which may be represented in the behavior of teachers inside the university campus and classrooms, and this does not mean that scientific faculties are devoid of such behavior, but humanities faculties, with their departments, heads and teaching staff, may be more inclined to creative human interaction.

RECOMMENDATIONS

In light of the results of this study, the researchers made a number of recommendations and proposals as follows:

- Increasing the interest of those responsible for public and private Jordanian universities, including deans of faculties and heads of academic departments, in the importance of distance learning and working to provide it for students in all specialties, especially at the present time as the Corona epidemic invaded all countries of the world.
- Providing support, encouragement, and material and moral motivation for faculty members to practice e-learning and distance learning, and encourage technicians and administrators and motivate them to provide the required services and support them in the process of practicing this type of education.
- Conducting a study similar to the current study on Jordanian public universities and comparing its results with the results of the current study.
- Conducting an evaluation study for the experience of distance learning in public and private Jordanian universities.

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