

Attitudes of Students and Faculty Members at Israa University towards Distance Learning in Light of the Corona Pandemic

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Abstract

This study aimed to identify students' attitudes and faculty members at Israa University towards distance learning in light of the Corona pandemic. A questionnaire was developed that included two pictures (student photo/faculty member photo). Each image in the questionnaire consisted of (30) items distributed into three areas: Learning and teaching, assessment and testing, and learning and communication management, where acceptable coefficients of validity and reliability were achieved for the two questionnaire images, and applying them to an available sample of Al-Israa University students and faculty members, consisted of (365) male and female students, and (119) faculty members during the first semester of the academic year (2020-2021 AD). The study results revealed that the attitudes of students and faculty members at Israa University towards distance learning in light of the Corona pandemic came at a medium level. The presence of statistical differences in students' attitudes at Israa University towards distance learning due to the gender variable and the differences were in favor of males. There were no statistically significant differences in Al Israa University students' attitudes towards distance learning due to the vari of college. The variablee results also revealed no statistically significant differences in the faculty members' attitudes at Al-Israa University towards distance learning due to the variable of academic rank. In light of the study results, the researchers recommended developing the values of self-awareness and twenty-first-century skills such as self and continuous learning, and interest in developing distance learning applications and platforms, and conducting future studies on distance learning and the effectiveness of educational platforms and electronic applications in light of various variables.

Keywords: distance learning, students, faculty members, universities, Israa University, corona pandemic

1. Introduction

The world woke up to the nightmare of the Corona pandemic when China announced the outbreak of this deadly fast-spreading virus on December 31, 2019, as it began to appear in the city of Wuhan, and not three months passed until this virus spread to various parts of the world, and caused panic and fear due to its rapid spread and a large number of patients and deaths. People were forced to change their lifestyle, quarantine was imposed on people, the movement was paralyzed in various sectors, and the education sector was one of the sectors most affected by this epidemic (Al-Dahshan, 2020).

The universities decided to suspend work hours to preserve citizens' and students' safety, and according to the statement issued by UNESCO, the crisis affected nearly (57.8) million undergraduate students around the world. As countries tended to pursue distance learning through electronic educational platforms, and students in more than 102 countries worldwide were forced to stay in their homes and learn using modern technologies. After educational institutions viewed distance learning and the use of technology in education as a luxury, they now view technology and employ it in distance learning, which is imperative, especially since the Corona pandemic continues for a long period that lasts no less than a year (Mujahid, 2020).

In light of the pandemic developments, it has become imperative for educational systems to search for educational options free from the restrictions and controls of learners' physical presence in universities. There, the only inevitable option was "Distance Learning" (Al-Khamisi, 2020). As universities began to use various tools and platforms to teach students via the Internet as a result of the closures due to the Corona pandemic, and

many platforms brought teachers together with their students, including "ZOOM," "Teams," "WhatsApp," and "Facebook." Various applications have been used to manage the learning process, to do electronic tests such as Google Drive and others, and to conduct quarterly and final evaluations for students (Al-Shammari, 2020).

These modern technological platforms, tools, and various applications used in distance learning have brought about a change in the education systems of higher education institutions; E-learning has been introduced into learning and education management processes to facilitate these applications for distance teaching, electronic testing, encourage self-learning and achieve flexibility in the learning process (Basaran & Yalman, 2020).

One of the essential advantages of distance learning compared to face learning is that it is a flexible system that does not require attendance at the place of study. It is based on individual learning, where the responsibility for learning rests with the student himself, with the possibility of direct, remote encounters through technological media. The target group is individuals who were prevented by circumstances from attending universities, communicating with them, and sending educational materials through modern media (Khamis, 2013).

Distance learning through the Internet is divided into two parts: synchronous and asynchronous; synchronous distance learning includes an electronic class that the teacher and all students attend at certain times, and it allows holding a conference as in an actual classroom setting, and in such an educational system, every student has the opportunity to ask questions to the teacher and get a response in real-time, as for the second section, asynchronous remote education, lessons are recorded in advance, and each student can join these lessons whenever they want to (Ruiz, Mintzer, & Leipzig, 2006).

Some researchers believe that asynchronous distance education has some disadvantages, the most important of which are the limited interaction between teacher and student, low student participation rates, and lack of opportunity to ask questions (Chhanda, 2019). To face the challenges and problems, Skinner (2009) indicated that faculty members resort to the second form of distance learning, which is simultaneous communication (in real-time) via the Internet within e-learning management systems that use a variety of applications and video conferencing. According to this system's applications, the teacher who runs the session can upload the content of the lessons in various forms such as presentations, image and document files, publish live video content using a webcam, and share the screen and audio with the participants. Also, the teacher using the system can use the digital blackboard, give questionnaires and tests to the participants and carry out a group work activity; participants can also interact with each other and the teacher, ask questions, and exchange information and signals about their current situations (agree/disagree, happy/sad/surprised/confused, faster/slower).

The electronic tests are distinguished from the traditional ones by many advantages, the most important of which is preserving the test's confidentiality, shortening the response time, and correction. The speed of decision-making due to the existence of automatic correction, the impartiality, and objectivity in the correction, the production of items characterized by novelty, flexibility, and modernity, and the ease of application and access to and send to many numbers at one time, and the lack of the material cost of the test, electronic tests are also not without flaws. The most important of these is the need to possess skill in preparing the test electronically, the difficulty of measuring higher skills, the expectation of failure during the work of the test, in addition to the limited integrity, and the possibility of fraud during the test (Hassanein, 2017).

After the application of distance learning in universities, the attitudes of students and faculty towards this learning system varied between positive and negative, and this is based on the capabilities it provides, the background it requires, the accuracy of the information it provides, its ability to simulate the real reality, deepen the link between theory and practice, and save time, effort and costs (Ibrahim, 2010).

Therefore, those in charge of universities' educational process always need to make reviews and evaluations of distance learning systems from the users' point of view of this educational system. In this regard, Basaran & Yalman (2020) pointed to the need for more comprehensive measurement tools to re-examine and determine the readiness of students and faculty members and their attitudes towards the distance learning experience; this is because the positive trends towards distance learning, as indicated by Aydin (2012), contribute to enhancing and raising students' motivation towards education, accelerating the learning process, and achieving educational goals. Therefore, the researchers' interest in studying trends towards distance learning systems came to reveal how students and faculty members interact with distance learning. The ability of the learner to understand topics is not related to his level of mental development only. Rather, it also depends on the extent of its attachment to the topic being studied, its tendencies and trends in how the subject is taught because interests, tendencies, and attitudes are the basis of the learner's motivation towards learning (Ibrahim, 2010).

1.1 The Study Problem and Its Questions

The world is witnessing a significant event, the Corona pandemic, as researchers at the Royal College in London estimate the death of (20) million people in the event of therapeutic intervention and (40) million deaths in the absence of treatment intervention. In addition to the spread of the virus between people and the inability to stop it, education may threaten a huge crisis, perhaps the most dangerous in the current era. As of March 28, 2020, the Coronavirus pandemic caused more than 1.6 billion children and youth to be cut off from education in 161 countries. Whereas it is difficult to predict when the Corona crisis will end globally and in the Arab world, and from the standpoint of the education process, it must not stop whatever the obstacles, it becomes necessary to research mechanisms to confront the crisis to ensure the continuity of providing education to university students (Ghanayem, 2020). Therefore, it is imperative to know these students' attitudes and their teachers in universities regarding distance learning in light of the Corona pandemic. This study was based on the recommendations of many previous studies to conduct a study on the attitudes of students and faculty members about distance learning, such as the Aqel Study (2014), the study of Azmi, Ismail, and Mubariz (2014), the study of Hassanein (2017), the study of (Roy, Ray, Saha, & Ghosal, 2020), and the study of Basaran & Yalman (2020).

Whereas, the two researchers are faculty members at Al-Isra University and practiced distance learning with their students based on university decisions in light of the Corona pandemic, the administration of Israa University was adopted in line with the decisions taken by the government, which falls within the precautionary measures that have been issued to confront the emerging Coronavirus, and based on the directives of the Ministry of Higher Education and the keenness of Israa University for its students and the continuity of the educational process, it was decided to move towards distance learning, the university directed its students to use the e-learning portal link to enter the e-learning system daily to receive directives for distance education from faculty members, in addition, faculty members were provided with a training course on how to use distance learning platforms, and directed them towards using the two modes of synchronous and asynchronous learning (Isra University, 2020).

Therefore, in light of the above, distance learning usually results in positive or negative trends. These trends give an accurate indication of the distance learning path and the extent of his closeness to students and faculty members or their distancing from their tendencies and interests, which helps decision-makers in the amendment, development, and improvement. Therefore, this study came to try to reveal the attitudes of students and faculty members at Isra University towards distance learning in light of the Corona pandemic by answering the following questions:

1. What is the level of students' attitudes at Isra'a University towards distance learning in light of the Corona pandemic?
2. What is the level of faculty member's attitudes at Israa University towards distance learning in light of the Corona pandemic?
3. Are there statistically significant differences in the attitudes of students at Israa University towards distance learning in light of the Corona pandemic due to the variables of gender and college type?
4. Are there statistically significant differences in the faculty member's attitudes at Israa University towards distance learning in light of the Corona pandemic due to the academic rank variable?

1.2 Objectives of the Study

1. Uncover the attitudes of students and faculty members at Israa University towards distance learning in light of the Corona pandemic?
2. Disclosure of statistically significant differences in students' attitudes and faculty members at Israa University towards distance learning in light of the Corona pandemic attributable to the gender variable, the type of college among students, and academic rank among faculty members?

1.3 Research Hypotheses

The current research includes the following two hypotheses:

1. There are no statistically significant differences at the level of significance ($\alpha = 0.05$) in the level of students and faculty members' attitudes at Isra'a University towards distance learning in light of the Corona pandemic due to the variables of college type and gender.
2. There are no statistically significant differences at the level of significance ($0.05 = \alpha$) in the level of student and faculty members' attitudes at Isra'a University towards distance learning in light of the

Corona pandemic due to the academic rank variable of faculty members.

1.4 The Importance of the Study

The study's importance lies in dealing with the Corona pandemic, which has occupied the minds of all humanity, so it became the talk of old and young, where this virus caused the closure of various sectors. The education sector is one of the sectors most affected by this pandemic, where education has been transformed into a distance through various educational platforms, and students have been taught remotely for two semesters. This necessitated knowing their attitudes and those of the faculty towards distance learning in light of some variables, and the importance of the study appears as follows:

- Enriching theoretical literature on distance learning and realizing the benefit of the educational library in this field helps researchers and students understand and benefit from this topic.
- Give the university administrators a clear picture of students' and faculty members' attitudes towards distance learning in light of the Corona pandemic, which helps them make appropriate decisions in this field.
- According to the distance learning system, university administrations' knowledge of the strengths and weaknesses of the distance education system, especially in the teaching and learning axis, the evaluation and tests axis, and the learning and communication management axis.
- This research may open new ways and approaches for researchers to study the distance learning system in light of new variables, whether in universities or schools.

1.5 The Limits of the Study

The study was applied within the following limits:

- Objective limits: revealing the attitudes of students and faculty members at Israa University towards distance learning in light of the Corona pandemic.
- Human limits: The study was applied to a sample of students and faculty members.
- Spatial limits: The study was applied at Al-Isra University, a private university located in the capital, Amman, in the Hashemite Kingdom of Jordan.
- Temporal limits: The current study was applied in the first semester of the academic year (2020-2021 AD).

1.6 The Study Determinants

The generalization of the study results is determined in light of the following:

- The psychometric characteristics of the students' and faculty members' attitudes survey about distance learning represented by validity and reliability.

1.7 Conventional and Procedural Definitions

This study includes the following Conventional and procedural definitions:

1.7.1 The Trend

"It is a hypothetical structure composed of thoughts, feelings, and actions, among which there is a strong correlation, which makes them act as a single unit that appears in the individual's feeling and behavior towards certain topics in terms of preference or disfavor" (Hassanein, 2017, p. 25), attitudes are "behavioral tendencies to approach or avoid, preferring and not preferring the subject of the direction, and the trends towards distance learning refer to the individual's reactions towards distance learning" (Ibrahim, 2010, p. 95).

1.7.2 Procedurally

The direction in this study is defined by the degree of the study sample members of students and faculty members at Isra'a University on the study tool that was developed for this purpose.

1.7.3 Distance learning:

It is distance university learning via the Internet and its applications on the Internet, whether it is simultaneous learning (real-time and different places) or asynchronous learning (different times and different places), and it employs methods, methods, and techniques that are flexible and respond to their needs and suits their abilities and individual differences between them" (Abdul Majeed & Al-Ani, 2015, p. 14).

The current study is defined as the synchronous and asynchronous distance learning process in all faculties of

Al-Isra University through various internet applications imposed by the Corona pandemic circumstances during the academic year 2020/2021.

- Coronavirus: It is a widespread family of viruses known to cause diseases ranging from common colds to more severe diseases, and it is a new strain of the virus that has not been previously discovered in humans, coronaviruses are zoonotic; that is, they are transmitted between animals and humans, and common signs of infection include: Respiratory symptoms, fever, cough, shortness of breath, and breathing difficulties. In more severe cases, the infection may cause pneumonia, severe acute respiratory syndrome, kidney failure, and even death (World Health Organization, 2020).

- Al-Isra University: It is one of the Jordanian private universities, established in 1991 and is located in Al-Taneeb, Queen Alia International Airport, south of the capital Amman.

2. Previous Studies

Hussein (2011) conducted a study to identify the trends of distance learners towards the necessity of employing educational technology in colleges of education in Sudanese universities that have adopted the distance learning system and that in this system's programs and curricula. To identify these trends, a sample consisted of (218) male and female students in the Faculties of Education in Sudanese universities was selected. A questionnaire was designed to measure the attitudes of remote learners towards employing educational technology in the programs. The descriptive-analytical method was used, and many results were reached, the most prominent of which are: The presence of positive trends among remote learners in the colleges of education in Sudanese universities towards employing educational technology in distance learning programs. There were statistically significant differences between the attitudes of remote learners in the Faculties of Education in Sudanese universities due to the university's difference in favor of the remote students at the Open University of Sudan.

Al-Ghamdi's study (2012) aimed to evaluate the distance learning system's effectiveness in Saudi universities. The study sample consisted of (531) male and female students studying at King Abdulaziz University in Saudi Arabia, and to achieve the objectives of the study, a questionnaire was prepared, according to the following axes: (admission and registration, electronic courses, electronic tests, the Department of Learning and Communication). The study reached many results, the most important of which are: There is a deficiency in the effectiveness of the admission and registration system, the results indicated that he obtained an average performance rating, and there is a deficiency in the effectiveness of the e-courses system, as the results recorded his obtaining an average performance rating, the effectiveness of the electronic test system in the distance learning system was high, and the effectiveness of the learning and communication management system in the distance learning system was high. And the existence of statistically significant differences between the results of the responses of the sample members due to a variable: the college (for the College of Arts in most of the axes), gender (for female students in two axes), skill in the field of computer and Internet use (for highly skilled students).

Akl (2014) conducted a study that tried to uncover the faculty members' attitudes in Jordanian public universities towards distance learning and their relationship to some variables, a stratified random sample consisting of (298) faculty members at the University of Jordan were selected. A questionnaire consisting of (55) items was applied; the results concluded that faculty members' attitudes in Jordanian public universities towards distance learning were positive and moderate. And it was found that there were no statistically significant differences attributed to the variable of academic ranks and statistical differences in trends attributed to academic specialization. The differences were in favor of human faculties compared with scientific ones.

Azmy, Ismail, and Mubarez (2014) conducted a study to demonstrate the impact of e-learning on developing the attitudes of educational technology students on distance learning. The research used the semi-experimental approach to develop the ability to deal with e-learning systems among educational technology students. And the development of positive trends towards distance learning among students of educational technology. The research covered two axes of distance education and trends. The research group consisted of (30) students from the third year in the Department of Educational Technology, Faculty of Specific Education. The research tools were represented in measuring the attitude of educational technology students towards distance learning. The research results revealed that one of the most important areas for students to use the Internet in distance learning is knowledge, general culture, personal research, assistance in conducting learning and developing skills in all fields of educational technology. The research found several obstacles that students face in using the Internet in distance learning; the field related to educational barriers was one of the highest, followed by the physical, technical, cognitive, and ethical dimensions. The research showed that all of the sample members use the Internet, half of them have a home subscription, and even non-participants are considering a subscription.

Khellaf's study (2015) aimed to explain a proposed conception to activate the role of distance education at Taif University in light of some contemporary global trends. The study used a comparative study method. The study came in several axes. The first axis referred to distance education in terms of its inception, concepts, characteristics, justifications, principles, and goals. The second axis also dealt with some contemporary global trends in the field of distance university education, presenting some global experiences in the field of distance university education as well as achieving satisfactory results that reflected on the quality of the educational process in university education, some experiences were also presented in order to benefit from them in identifying and formulating the features of the proposed scenario for applying distance education at Taif University, and among the experiences: The Canadian Virtual University Experience, the Intercontinental University of America Experience, the University of Michigan, and the Massey University of New Zealand. The study also reviewed the comparative analysis of distance learning experiences from the Canadian Virtual University, the American Intercontinental University, the University of Michigan, and Massey University in New Zealand. The fourth axis talked about the proposed vision for activating distance education in terms of the principles and philosophical foundations on which the proposed vision of distance education is based, and features of the proposed vision for a distance education system at Taif University, and the provision of an electronic, technical environment that stimulates learning, and participation with university colleges in providing distance study programs, providing qualified workforce to contribute to the provision of e-learning services and distance education, strengthening internal and external partnerships in the field of e-learning, and contributing to building a knowledge economy through the products of the Deanship and its scientific contributions.

Awad and Halles (2015) conducted a study aimed at identifying the trend towards distance learning technology and its relationship to some variables among graduate students in Palestinian universities; the study sample consisted of (91) male and female students studying in postgraduate programs in the Faculties of Education in Palestinian universities (Al-Aqsa, Islamic, and Al-Azhar), to achieve the objectives of the study, the researchers used the descriptive and analytical approach and used a scale that was prepared to measure the trend towards distance learning technology. After analyzing the data, the study resulted in the following results: Attitudes of graduate students in Palestinian universities in the fields of the tool as a whole towards distance learning technology are positive, and there are no statistically significant differences in the responses of studies students in Palestinian universities towards learning about distance learning technology. Depending on the variable of gender, educational level, and general estimate at the tool's level as a whole. And there are statistically significant differences in the responses of students of studies in Palestinian universities towards distance learning technology, depending on the university variable and in favor of the Islamic university.

Hassanein (2017) study aimed to identify the open learning students' attitudes regarding electronic tests. It was applied to a sample of (283) students from the Education Program at the Arab Open University, Jordan Branch, and for the purposes of the study, a questionnaire consisting of nine paragraphs were prepared, and the study reached results that confirm the students' tendency to use electronic tests, and their preference for paper tests, for several reasons related to The ease of performing this type of test, the speed of extracting its results, freedom from the restrictions of time and place, and the ability to use mobile phones in conducting the electronic test. The study recommended providing the necessary infrastructure for the expansion of electronic testing, especially in open distance learning. The appropriate environment is created to conduct these tests, provide appropriate hardware and software for that, and qualify students and faculty members to efficiently deal with exams.

(Junior, Botelho, Rego, Faiad, & Ramos, 2019) conducted a study aimed at uncovering Brazilian students' attitudes towards distance learning via the Internet and the degree of predictability of their self-perception of performance in the training course. The study sample consisted of (593) university students majoring in public administration in different Brazilian universities, and a quantitative correlation and explanatory approach were followed through the survey. The results revealed that there were statistically significant differences between students' attitudes and the reason for choosing to enroll in distance learning via the Internet. The results also revealed differences in students' positive beliefs about online distance learning, their negative evaluations compared to face-to-face training courses, and their self-efficacy perceptions in online learning.

Al-Shammari (Al-Shammari, 2020) conducted a study in which he tried to reveal the attitudes of Kuwaiti university students towards the use of social media in distance learning in light of the Corona pandemic, (116) male and female students were selected from the College of Law and the English Language Department at Kuwait University. A distance learning questionnaire was applied to them, the results of the study revealed positive trends among university students in the use of means of communication in distance learning, and the results also revealed the high level of students' use of distance learning methods in education.

(Roy, Ray, Saha, & Ghosal, 2020) conducted a study aimed at uncovering university students' perceptions of distance learning in light of the Corona pandemic, and applied during flipped classroom sessions based on the Zoom app on the Internet. A sample of (199) male and female students in the Department of Anatomy at the Institute of Higher Medicine in India was selected. A special questionnaire was applied to them on their perceptions of distance learning on the Zoom platform. The study results indicated that (92%) of students prefer learning through the Zoom platform when compared to sending the material in the form of text. About 53% of the students said that they were unable to keep up with this type of education, and there were mixed reactions about the continuation of this pattern after the closure.

A study conducted by Basaran & Yalman, 2020, aimed to develop a scale to assess university students' attitudes in Turkey towards using interactive web conference systems in distance learning lessons. A questionnaire on distance learning trends has been prepared, consisting of (29) items. It was applied to a sample of (596) university students in a program on distance learning in theology, and the applications used in distance learning were the (Adobe Connect) application for video conferences. The application of (Moodle) as a learning management system and a factor analysis was used, where four factors were found: trends towards teleconferencing, user preferences for the remote web conferencing system, and user attitudes towards the use of web conferencing systems, and the problems the user faces while using web conferencing systems.

2.1 Comments on Previous Studies

In light of the review of previous studies that dealt with distance learning, the current study's goal appeared consistent in many aspects of previous studies. Some studies dealt with university students' attitudes, perceptions, and opinions towards distance learning, as in the study of Azmi, Ismail & Mubariz (2014), Awad and Hellas (2015), Hassanein (2017), (Junior, Botelho, Rego, Faiad, & Ramos, 2019), (Al-Shammari, 2020), and (Roy, Ray, Saha, & Ghosal, 2020) study. In contrast, one study dealt with faculty members' attitudes towards distance learning, a study by Aqeel (2014). The current study came to try to combine the attitudes of students and faculty members at Isra'a University in Jordan towards distance learning in light of the Corona pandemic. The current study is also distinguished by the fact that it is one of the rare studies that have been applied to Jordanian universities, specifically private universities switched to distance learning system due to closures that were a result of the spread of the Coronavirus in Jordan. This study revealed the trends of both students and faculty members after a full year of Distance learning.

The researchers have benefited from previous studies in identifying the methodology of descriptive studies and developing the current study questionnaire. The two researchers have benefited from previous studies in identifying the methodology of descriptive studies and developing the current study questionnaire.

3. Study Methodology

The descriptive approach was followed, based on a realistic description of students and faculty attitudes towards distance learning and quantifying it by collecting and analyzing quantitative data to answer the descriptive study questions.

3.1 The Study Population

The study population consisted of students of the University of Israa, located in the Jordanian capital Amman, in various university majors, and their number is (5527) male and female students in addition to the faculty members at the university of various academic ranks, who are (237) faculty members, as the application was carried out in the first semester of the academic year (2020/2021 AD).

3.2 The Study Sample

An available sample of (7%) of Isra'a University students in various disciplines was chosen. Their number is (365) male and female students, in addition to an available sample of (50%) of the faculty members and their number (119) faculty members at Isra University in the Jordanian capital Amman, where the application was carried out electronically via an electronic link that was made through the Google Drive application. And sending it by social media to students and faculty members during the academic year (2020/2021 AD), and Table (1) shows the distribution of the study sample according to the variables:

Table 1. Distribution of the study sample from Al Israa University students and faculty members according to the study variables

Sample type	Variable	Variable class	Repetition	Percentages
Student sample	Gender	Male	159	43.6
		Female	206	56.4
		Total	365	100.0
	College type	Scientific	194	53.2
		humanitarian	171	46.8
		Total	365	100.0
Faculty members sample	Academic rank	Assistant Professor	78	65.5
		Associate Professor	28	23.5
		Full Professor	13	11.0
		Total	119	100.0

3.3 The Study Tool

The researchers developed a questionnaire for distance learning trends after referring to the theoretical literature and previous studies in this field, where the questionnaire included two pictures: A picture of students' attitudes towards distance learning and a picture of faculty members' attitudes towards distance learning. The questionnaire (students' picture/faculty members' image) was formed in its initial form of (28) paragraphs distributed into three areas: The field of learning and teaching and its items (1-10), the field of evaluation and tests, and its items (11-18), and the field of learning and communication management and its items (19-28).

3.3.1 The Validity of the Tool

In their two forms directed to students and faculty members, it was presented to (8) arbitrators specialized in educational psychology, measurement, and evaluation to ensure the validity of the questionnaire of trends towards distance learning. And after placing their remarks and suggestions on the questionnaire in its two forms, the most important of which were: Two items were deleted: Paragraph (8) of the first field, deleting item (26) of the third field, and adding (4) paragraphs are: Adding two paragraphs for the first field, one item for the second field, and one item light of the amendments that have been made, the final questionnaire has become composed of (30) items distributed into three areas: The field of learning and education and its paragraphs (1-11), the field of evaluation and tests and its paragraphs (12-20), and the field of learning and communication management and its paragraphs (21-30), the paragraphs were written in a positive direction, except (9) paragraphs, which were negatively worded: (3, 6, 8, 11, 17, 19, 20, 28, 30).

In order to verify the indicators of construct validity, and accessible survey sample was chosen to consist of (20) male and female students and (20) faculty members from the same study community at Al-Isra University, and they are not the study sample, then calculate the correlation coefficients between the paragraphs and the domain to which they belong, as it was found that all the items have statistically significant correlation coefficients, which are as follows:

Table 2. Correlation coefficient between the item and the total score of the study tool in its two forms (students' image/faculty members' image)

Item	Correlation coefficients (students' picture)	Correlation coefficients (faculty members' picture)	Paragraph	Correlation coefficients (students' picture)	Correlation coefficients (faculty members' picture)	Item	Correlation coefficients (students' picture)	Correlation coefficients (faculty members' picture)
1	.688**	.704**	11	.546*	.695**	21	.666**	.659**
2	.803**	.714**	12	.701**	.664**	22	.483*	.566**
3	.722**	.732**	13	.520*	.638**	23	.803**	.847**
4	.723**	.709**	14	.572**	.830**	24	.450*	.622**
5	.551**	.729**	15	.599**	.799**	25	.645**	.595**
6	.754**	.733**	16	.734**	.830**	26	.667**	.525*
7	.800**	.851**	17	.598**	.732**	27	.719**	.688**
8	.647**	.501*	18	.702**	.776**	28	.495*	.606**
9	.735**	.795**	19	.491*	.598**	29	.706**	.654**
10	.730**	.884**	20	.671**	.601**	30	.739**	.701**

* Significant at the significance level (0.05)

** Significant at the significance level (0.01)

The construct validity indicators were also calculated for the domains with each other and with the total score by calculating the correlation coefficients between them, as it was found that all the correlation coefficients between the domains and the total degree are statistically significant, as follows:

Table 3. Correlation coefficient coefficients between fields with each other and with the total degree of the study tool in its two forms (students' image/faculty members' picture)

Questionnaire image	Field	Learning and education	Assessment and tests	Department of Learning and Communication	Total degree
Questionnaire (students' picture)	Learning and education				
	Assessment and tests	.674**			
	Department of Learning and Communication	.855**	.637**		
	Total degree	.943**	.834**	.929**	
Questionnaire (faculty members' picture)	Learning and education				
	Assessment and tests	.841**			
	Department of Learning and Communication	.860**	.726**		
	Total degree	.968**	.907**	.927**	

* Significant at the significance level (0.05)

** Significant at the significance level (0.01)

3.3.2 The Reliability of the Tool

An exploratory sample was chosen in an available way, and it consisted of (20) male and female students and (20) faculty members from the same study population at Al-Isra University, and they are not the study sample. The test was applied again on them after (16) days, and calculate the reliability constancy by (Test-Retest) by computing the Pearson Correlation Coefficient and calculate the reliability stability by (Test-Retest) by computing the Pearson Correlation Coefficient whereas, the total reliability repetition of "students' image" was (0.94), and total reliability repetition of "faculty members' image" was (0.93). The reliability on the pre-scale was also calculated using the Cronbach (alpha) equation for internal consistency, where the overall Cronbach alpha reliability, "students' image," reached (0.93). The overall questionnaire's reliability, "faculty members' image" reached (0.91), and the following Table shows the reliability ratios.

Table 4. Repetition reliability coefficients and reliability of internal consistency "Cronbach Alpha" for domains and the overall score of the social consensus scale

Questionnaire axes	(students' version)		(faculty members' version)	
	Test/retest reliability	Internal consistency	Test/retest reliability	Internal consistency
Learning and education	0.90	0.88	0.89	0.85
Evaluation and tests	0.88	0.84	0.88	0.83
Department of Learning and Communication	0.89	0.86	0.87	0.84
Overall reliability of the trend questionnaire	0.94	0.93	0.93	0.91

3.3.3 Key to Correcting the Questionnaire

The questionnaire consisted of (30) items. A five-point scale was developed to answer the paragraphs of the questionnaire, where the grading ranged between the following: strongly agree (5) degrees, agree (4) degrees, neutral (3) degrees, disagree (2) two degrees, and not Strongly agree (1) degree, high scores describe positive trends, while low scores that approach the lower grades from low trends are described. The performance was divided into the paragraphs of the questionnaire for attitudes towards distance learning into three levels according to the range of the category that ranges between (1-5), which are as follows:

- Averages ranging between (1-2.33) indicate a low level of attitudes towards distance learning.
- Averages ranging between (2.34-3.67) indicate the average level of trends towards distance learning.
- Averages ranging between (3.68-5) indicate a high level of attitudes towards distance learning.

In order to determine the direction of the trend towards distance learning (positive/negative), the hypothetical average was calculated, which is as follows: Sum the values of alternatives (1 + 2 + 3 + 4 + 5) and then divided them by the number of alternatives, which are: (5) alternatives, the result becomes (3), which is the hypothetical average. If the arithmetic average is higher than (3), the trend towards distance learning is positive, and if the arithmetic average is less than (3), the trend towards distance learning is negative.

3.4 Study Variables

The study included the following variables:

- The level of attitudes towards distance learning and has three levels: (low, medium, and high).
- Gender: It has two categories: (male and female).
- College type: It has two categories: (scientific, humanitarian).
- College type: It has two categories: (scientific, humanitarian).
- Academic rank: It has three categories: (Assistant Professor, Associate Professor, Full Professor).

3.5 Statistical Methods

The following statistical methods were used:

- To answer the first and second questions, arithmetic averages and standard deviations were used.
- To answer the third question, binary variance analysis was used.

- To answer the fourth question, a one-way analysis of variance was used.

4. The Study Results and Its Discussion

The following is a review of the results that were reached, as follows:

The results of the first question and its discussion, which states: “What is the level of student's attitudes at Isra'a University towards distance learning in light of the Corona pandemic?”

To answer this question, arithmetic averages and standard deviations were calculated for students' attitudes at Isra'a University towards distance learning in light of the Corona pandemic, and Table (5) illustrates this.

Table 5. Arithmetic averages and standard deviations of student attitudes at Isra'a University towards distance learning in light of the Corona pandemic, arranged in descending order according to the arithmetic averages

Rank	N.	Field	Arithmetic average	Standard deviation	Level	Trend curve
1.	1	I think that distance learning has become a particular necessity in light of the corona pandemic.	3.61	1.465	Average	positive
2.	4	Distance learning helps me become more self-reliant in the learning process.	3.57	1.331	Average	positive
3.	9	I prefer distance learning because I can return to the educational material after the distance learning lecture ends.	3.53	1.401	Average	positive
4.	10	I believe that distance learning helps improve the quality of education outcomes.	2.87	1.487	Average	positive
5.	7	I feel happy when I start the distance learning lecture.	2.83	1.494	Average	positive
6.	5	The distance learning system includes educational activities that increase my love for the subject.	2.74	1.432	Average	positive
7.	2	I prefer studying remotely to going to university and studying face to face.	2.69	1.634	Average	positive
8.	3	I see the lecture given remotely quickly forgotten.	2.58	1.442	Average	positive
9.	6	I lose motivation to study due to the distance learning system.	2.53	1.485	Average	positive
10.	11	I see that distance learning focuses on the cognitive side and neglects the skillful side.	2.52	1.242	Average	positive
11.	8	I find it difficult for me to understand some of the subjects through distance learning.	2.30	1.416	Low	positive
The total score for the learning and teaching axis			2.89	1.170	Average	
1.	14	I prefer online electronic tests because the result appears faster.	3.87	1.355	Average	positive
2.	16	I love remote electronic tests because the test can be taken anytime and anywhere.	3.79	1.312	Average	positive
3.	15	I like online electronic exams because they are objective in correcting the test.	3.73	1.307	Average	positive
4.	13	I prefer online electronic tests because it is easier to deal with.	3.70	1.375	Average	positive
5.	18	I feel more reassured when taking the test electronically.	3.56	1.345	Average	positive
6.	12	I prefer the remote test compared to the paper-based test at the university.	3.29	1.427	Average	positive
7.	19	I believe that remote exams allow ample room for exam cheating.	2.91	1.481	Average	negative
8.	20	I see that I am evaluated unfairly during distance learning.	2.57	1.321	Average	negative

9.	17	I think that online electronic exams are not suitable for all courses.	2.48	1.356	Average	negative
		The overall score for the assessment and exams axis	3.32	1.047	Average	Average
1.	25	Free electronic applications are available for learning management, file download, and lecture recording.	3.66	1.523	Average	positive
2.	29	Distance learning saves a lot of time.	3.59	1.369	Average	positive
3.	26	The university provides effective educational platforms.	3.54	1.291	Average	positive
4.	22	I find the remote lecture display times appropriate.	3.47	1.350	Average	positive
5.	27	The teacher's style is compatible with the distance learning system.	3.47	1.306	Average	positive
6.	21	Distance learning programs increase my chance to communicate with students and teachers in a better way.	3.15	1.456	Average	positive
7.	23	The way the educational material is displayed remotely achieves the learning objectives.	3.14	1.414	Average	positive
8.	24	My internet bundles are enough to follow my lessons and do my homework.	2.71	1.572	Average	negative
9.	28	I am facing a problem with sound and picture quality during the distance learning lectures.	2.71	1.335	Average	negative
10.	30	Distance learning lost my direct social communication skills.	2.51	1.465	Average	negative
		The total score for the Learning and Communication Management axis	3.19	.882	Average	positive
The total score of the students' attitudes survey at Al-Isra University towards distance learning			3.12	.965	Average	positive

**The hypothetical average (3), if the arithmetic average is higher, the trends are positive, and if they are lower, they are negative.*

Table (5) shows that the level of students' attitudes at Isra'a University towards distance learning in light of the Corona pandemic was average, as the arithmetic average of the total score for the level of trends was (3.12) with a standard deviation (0.965), the field of "assessment and tests" ranked first among the fields with an arithmetic average of (3.32) and a standard deviation (1.047), while the field of "learning and communication management" came in the second rank with an arithmetic average of (3.19) and a standard deviation (0.882), and in the last rank came the field of "learning. And education "with an arithmetic average of (2.89) and a standard deviation (1.170).

Determining students' positive and negative attitudes towards distance learning depends on the rise and fall of the arithmetic averages, so that the higher the arithmetic mean, this indicates that the trends towards distance learning are positive. Vice versa as well, the result of the question indicates the existence of a discrepancy in opinions, paragraphs of the questionnaire, and students' attitudes towards distance learning. It is closer to positivity, as the reason for this is due to the necessity of switching to distance learning in light of the current conditions, and it is the spread of the Coronavirus. It reaches the stage of the societal epidemic, so distance learning has become the best option and the best solution for the continuity of the education process in universities. Therefore, students' attitudes towards distance learning under these circumstances are positive as it is the best solution to protect society and continue the process of learning and education.

The result is also attributed to students passing through the distance learning experience for two previous semesters before applying the current study tool to them as they have experience in dealing with distance learning tools and platforms, it is not a new experience for them, which made their attitudes closer to the positive.

This result may also be attributed to the proliferation of free and accessible educational platforms and electronic applications, which provide great capabilities to view and download educational materials and provide high degrees of broadcast quality in concurrent distance learning lectures.

This result is attributed to the flexibility of education, the university and the faculty taking into account the students' conditions, and the provision of effective means of communication that helps students to hear and attend lectures at various times and in different forms, In addition to the flexibility of the tests and assignments, which contributed to raising the level of students' attitudes towards distance education. The field of evaluation and tests came first among the fields, perhaps because the nature of the exams that are presented to students is characterized by flexibility in performance, objectivity in correction, and the speed of obtaining the result and achieving an atmosphere of safety and reassurance in the performance of the exam. In addition to the students' feeling that the questions are appropriate to their abilities and levels, and the consistency of the pattern of tests with teaching methods contributed to the formation of positive trends towards evaluation and testing remotely, more than the process of learning and teaching and managing distance education.

As for the paragraphs of the first field, "Learning and Teaching," item (1) came, which states, "I believe that distance learning has become a special necessity in light of the Corona pandemic." In the first place, with an arithmetic average of (3.61), this may be attributed to the Corona pandemic circumstances and the closures of various sectors and institutions, the most important of which was the education sector and universities. The students' opinion went that distance learning is the best option; rather, it is the only one for the continuity of education and the preservation of the permanence of work and learning, especially in light of the spread of the epidemic and its continuation for a long time, and the absence of a date for the end of this epidemic. Paragraph (8) states, "I find it difficult for me to understand some of the study materials that are taught from a distance." With an arithmetic average of (2.30), the reason may be due to the good capabilities provided by distance learning systems and the quality of the educational platforms that are used in synchronized lectures, which allows the teacher to lecture and meet with a large number of students at the same time, and to communicate between them simultaneously. With a high quality of sound and image, the platforms also provide many features that help the teacher manage to learn and manage the virtual lecture positively with students and with high quality. And it gives the teacher and the student the opportunity to publish and download study materials and present the study content in various forms such as text, image, image, video, demos, and others.

As for the field of "evaluation and tests," item (14), which states "the best electronic remote tests, because the result appears faster," came first among the items of this field, with an arithmetic average (3.87) and a high level of positive trends, this indicates that students like their test results to appear quickly, and this is what electronic tests provide remotely. The results appear quickly, while students used to be bored waiting for indirect tests at the university because they need a long time to be corrected, checked, recorded, and then presented to the students. Simultaneously, these steps are concluded in distance learning directly, effortlessly, and with a high degree of credibility and accuracy.

While item (17), which states: "I see that remote electronic tests are not suitable for all academic courses," came in the last rank between paragraphs of this dimension and with an average of (2.48) to indicate that the high capabilities available in electronic test applications have been developed to suit various tests, where the teacher can evaluate the various aspects of students' learning, as for the field of "Learning and Communication Management," Paragraph 25 which states: "Free electronic applications are available for learning management, downloading files and recording lectures came in the first place with a thematic average of (3.66) and this may be attributed to the electronic development in this field, especially in the programming of applications and electronic platforms, in addition to the companies' provision of free copies that have great features and allow students and teachers to use and benefit from them in the learning and teaching process. While paragraph 30 states: "Distance learning has made me lose my direct social communication skills." In the last rank, with arithmetic average (2.51) to indicate negative trends among students towards distance learning in this aspect, as this system made them lose direct contact in universities, and meeting with their teachers and colleagues on campus, as this system made them lose direct contact in universities, and meeting with their teachers and colleagues on campus, this indicates that the university is not only for the development of the knowledge aspect, but that the development of the personal and social aspects is no less important than the academic achievement, and these aspects can only be developed through direct contact.

A study revealed the existence of positive trends among Sudanese university students towards distance learning, and with the results of Al-Ghamdi's study (2012), which indicated a medium level in the effectiveness of distance learning in Saudi universities, which revealed the existence of positive trends among Sudanese university students towards distance learning and with the results of Al-Ghamdi's study (2012), which indicated a medium level in the effectiveness of distance learning in Saudi universities where the effectiveness of the electronic tests system in the distance learning system was high, and the effectiveness of the learning and communication management system in the distance learning system was high. And with the results of the study

of Awad and Helles (2015) that resulted in positive trends among Palestinian university students, and with the results of Hassanein (2017) study, which revealed positive trends for students of the Arab Open University in Jordan towards electronic tests, and their preference for paper tests, it also agreed with the results of the study (Al-Shammari, 2020), the results of which revealed positive trends among Kuwait University students in using the means of communication in distance learning. It agreed with the results of a study (Roy, Ray, Saha, & Ghosal, 2020) at the Institute of Higher Medicine in India; where the results of which revealed that (92%) of students prefer learning through the Zoom platform when compared to sending the material in the form of text, and 53% of the students said that they were unable to keep up with this type of education. This question's results differed from the results of a study (Junior, Botelho, Rego, Faiad, & Ramos, 2019), which revealed negative trends for distance learning in Brazilian universities.

The results of the second question and its discussion, which states: "What is the level of attitudes of faculty members at Al-Isra University towards distance learning in light of the Corona pandemic?"

To answer this question, arithmetic averages and standard deviations were calculated for faculty members' attitudes at Israa University towards distance learning in light of the Corona pandemic, and Table (6) illustrates this.

Table 6. The arithmetic averages and standard deviations of the attitudes of faculty members at Israa University towards distance learning in light of the Corona pandemic, arranged in descending order according to the arithmetic averages

Rank	N.	Domain	Arithmetic average	Standard deviation	Level	Trend curve
1.	1	I think that distance learning has become a special necessity in light of the Corona pandemic.	4.29	.857	High	positive
2.	5	Distance learning platforms help me showcase educational activities in a variety of ways.	3.76	.927	High	positive
3.	4	Distance learning helps in developing students' self-reliance.	3.63	1.016	Average	positive
4.	9	I prefer distance learning because the student can return to the recorded lecture at any time he wants.	3.40	1.092	Average	positive
5.	7	I feel so happy to start a distance learning lecture.	3.13	.962	Average	positive
6.	3	I see that students quickly forget the lecture given remotely.	2.99	.970	Average	Negative
7.	6	I lose my motivation to teach due to the distance learning system.	2.97	.938	Average	Negative
8.	10	I believe that distance learning helps improve the quality of education outcomes.	2.78	1.051	Average	Negative
9.	8	I find it difficult for me to explain some of the course materials remotely.	2.75	1.129	Average	Negative
10.	2	I prefer teaching remotely to going to college and teaching face to face.	2.42	1.190	Average	Negative
11.	11	I see that distance learning focuses on the cognitive side and neglects the skillful side.	2.26	.753	Low	Negative
		The total score for the learning and teaching axis	3.13	.636	Average	positive
1.	14	I prefer online electronic tests because the result appears quickly without any effort to correct it.	3.66	.950	Average	positive
2.	16	I prefer remote electronic tests because the test can be taken anytime and anywhere.	3.58	1.037	Average	positive
3.	15	I prefer online electronic exams because they are objective in correcting the test.	3.45	1.014	Average	positive
4.	18	I prefer the remote assessment because it makes the	3.15	1.022	Average	positive

		student feel more comfortable when performing the test.				
5.	13	I prefer online electronic exams because they are easier to set up.	2.93	1.039	Average	Negative
6.	12	I prefer the remote evaluation compared to the paper-based assessment at the university.	2.72	1.008	Average	Negative
7.	17	I think that online electronic exams are not suitable for all courses.	2.18	.954	Low	Negative
8.	20	I see that there is an injustice in the remote evaluation of some students.	2.09	1.066	Low	Negative
9.	19	I believe that remote exams allow ample room for exam cheating.	1.47	.649	Low	Negative
		The overall score for the assessment and exams axis	2.80	.619	Average	positive
1.	27	My teaching style is compatible with the distance learning system.	3.81	.856	High	positive
2.	26	The university provides effective educational platforms.	3.54	1.040	Average	positive
3.	25	Free electronic applications are available for learning management, file download, and lecture recording.	3.45	1.191	Average	positive
4.	29	Distance learning saves a lot of time.	3.42	.987	Average	positive
5.	23	The way the educational material is displayed remotely achieves the learning objectives.	3.24	.974	Average	positive
6.	21	Distance learning programs increase my opportunity to communicate with my students in a better way.	3.23	1.123	Average	positive
7.	22	I find the remote lecture display times appropriate.	3.22	1.166	Average	positive
8.	24	My internet bundles are enough to keep track of my students' learning.	3.05	1.346	Average	positive
9.	28	I am facing a problem with sound and picture quality during the distance learning lectures.	2.80	.988	Average	Negative
10.	30	I see that distance learning has lost students' social communication skills.	2.18	.863	Low	Negative
		The total score for the Learning and Communication Management axis	3.19	.549	Average	positive
		The total score of the questionnaire for the attitudes of faculty members at Al-Isra University towards distance learning	3.05	.534	Average	positive

**The hypothetical average (3), if the arithmetic average is higher, the trends are positive, and if they are lower, they are negative*

Table (6) shows that the level of attitudes of faculty members at Isra'a University towards distance learning in light of the Corona pandemic was average, as the arithmetic means of the total score for the level of trends was (3.05) with a standard deviation (0.534), the field of "Learning and Communication Management" ranked first among the domains, with an arithmetic average (3.19) and a standard deviation (0.549). In contrast, the field of "learning and education" ranked second, with an arithmetic average (3.13) and a standard deviation (0.636), and in the last rank came the field of "evaluation and tests" with arithmetic average (2.80) and a standard deviation (0.619). The high of the arithmetic averages indicates positive trends towards distance learning, while the decrease of the averages indicates negative trends towards distance learning. The total degree results tend to be positive in the opinion of the faculty members, and the reason for this may be due to the pandemic conditions that the world is going through and the necessity to switch to distance education to maintain the continuity of education in universities. The average degree and the tendency towards positivity may also be due to the great potential provided by educational platforms that allow teachers to view educational materials in different ways. It gives them distance teaching of both simultaneous and asynchronous types, even in the process of simultaneous teaching and the feature of meetings and visual lectures through distance learning applications, so

that a large group of students is taught with high quality of sound and image.

Since faculty members taught their students during the previous two semesters through distance learning platforms, they have experience in dealing with electronic academic content, mechanisms of communication with their students, appropriate teaching methods for distance learning, and how to evaluate their students electronically, so their attitudes came closer to positive.

The field of "Learning and Communication Management" came first with an arithmetic average of (3.19), and this field tends to show positive trends, and this may be because the faculty members believe that they have the ability and high efficiency in managing remote e-learning through educational platforms, and the ability to achieve their academic goals through educational platforms, and the reason for this result may be due to the great potential provided by distance learning tools, educational platforms, and applications used in distance learning, where the teacher can manage the class and communicate with his students and display the academic content differently, and with high quality.

As for the field that came in the last rank, it is the field of "assessment and tests," and its arithmetic average is (2.80), the average level corresponds to the negative trend, and the reason for this result may be due to the faculty members' convictions of the necessity of direct testing inside the classroom, and their inability to control the fraud and help that take place in the tests. In addition to their inability to make open-ended questions for several considerations, including the exam time, the students' lack of familiarity with this type of exam, and the difficulty of correcting them electronically, so most teachers resort to using objective questions.

As for the paragraphs of the first field, "Learning and Teaching," item (1) states, "I believe that distance learning has become a special necessity in light of the Corona pandemic" came in the first place, with an arithmetic average of (4.29). This result indicates that the students' opinion is consistent with the faculty members' opinion, as the Corona pandemic casts its shadow on all sectors and indicates everyone's need for the continuity of education in light of the pandemic. Distance learning is the best option in light of this situation. Paragraph (11) states: "I see that distance learning focuses on the cognitive aspect and neglects the skillful aspect." Came in the last place, with which states of (2.26), and this result may be attributed to the fact that some educational goals and educational content related to skills need practical practice in laboratories and campuses to master it, and students do not have the materials and equipment at home due to their high price and their lack of availability.

As for the field of "evaluation and tests," item (14), which states "the best electronic remote tests because the result appears quickly without making any effort to correct it," came first with an arithmetic average (3.66), and with a high level of positive trends, which indicates that distance learning applications save effort and time for teachers. In addition to the high accuracy of the correction, this item raised its level and was positive according to their views.

While item (19), which states, "I believe that remote exams allow a wide scope for cheating in exams," came last among the paragraphs of this dimension, with an arithmetic average of (1.47). Perhaps the reason for this result is that what occupies the minds of teachers in the tests is their inability to control the cases of cheating that occur during the test, as the students' self-consciousness was not developed, and this made the faculty members see in their directions the negative of this item in distance learning.

As for the field of "Learning and Communication Management," item (27), which states: "My teaching style is compatible with the distance learning system." came in the first place with an arithmetic average of (3.81), and this may be attributed to the fact that e-learning applications provide faculty members with the ability to practice and apply any teaching method they wish to apply in a distance learning lecture. Paragraph 30 states: "I believe that distance learning has made students lose their social communication skills." Came at the last rank, with an arithmetic average of (2.18), indicates negative trends among faculty members towards distance learning in this aspect because social communication skills require direct contact, and students' practice of direct experience to learn these skills.

The results of this question are in agreement with the results of the Aql study (2014), as its results concluded that the attitudes of faculty members in Jordanian public universities towards distance learning were positive and medium, and it was found that there are no statistically significant differences attributed to the variable of academic ranks.

The results of the third question and its discussion, which states: "Are there statistically significant differences in the attitudes of students at Israa University towards distance learning in light of the Corona pandemic due to the variables of gender and type of college?"

To answer this question, arithmetic averages and standard deviations were calculated for students' attitudes at

Isra'a University towards distance learning in light of the Corona pandemic attributable to the variables of gender and college type, and Table (7) illustrates this:

Table 7. The differences in the arithmetic averages between students' attitudes at Isra'a University towards distance learning in light of the Corona pandemic according to the gender variables and the type of college

variable	Variable category	N	The field of teaching and learning	The field of evaluation and tests	Field of Education and Communication	Total degree
Gender	Male	159	3.22	3.64	3.40	3.40
	Female	206	2.63	3.08	3.03	2.90
College type	Scientific	194	2.98	3.39	3.26	3.20
	humanitarian	171	2.79	3.24	3.12	3.03

Table (7) results showed that there are apparent differences between the arithmetic averages in the fields and the overall degree of students' attitudes at Isra'a University towards distance learning in light of the Corona pandemic attributable to the two variables of sex (male/female) and the type of college (scientific/humanitarian). To determine the statistical differences, Two- way MANOVA) was calculated, and Table (8) explains that:

Table 8. Multiple binary variance analysis of the impact of gender and college type on fields and the overall degree of student attitudes at Isra'a University towards distance learning in light of the Corona pandemic

Source of contrast	Domains	Sum of squares	df	Average of squares	P-value	Sig
Gender Hotelling's Trace V: 0.80 Sig: 0.00	Learning and education	29.101	1	29.101	22.537	.000
	Assessment and tests	26.156	1	26.156	25.512	.000
	Department of Learning and Communication	11.413	1	11.413	15.287	.000
	Total degree	21.514	1	21.514	24.650	.000
College type Hotelling's Trace V: 0.005 Sig: 0.653	Learning and education	1.747	1	1.747	1.353	.246
	Assessment and tests	1.041	1	1.041	1.015	.314
	Department of Learning and Communication	1.206	1	1.206	1.615	.205
	Total degree	1.338	1	1.338	1.533	.216
Error	Learning and education	466.129	361	1.291		
	Assessment and tests	370.105	361	1.025		
	Department of Learning and Communication	269.503	361	.747		
	Total degree	315.081	361	.873		
Total	Learning and education	498.614	364			
	Assessment and tests	398.722	364			
	Department of Learning and Communication	283.098	364			
	Total degree	339.246	364			

The following can be seen in Table (8):

- The existence of statistically significant differences ($\alpha = 0.05$) attributed to the effect of gender in all fields and the overall degree of student attitudes at Isra'a University towards distance learning in light of the Corona pandemic, and the differences were in favor of males. This result indicates that males tend to distance learning than female students; perhaps the reason for this result is that the male needs more time and effort to work and save the tuition fees incurred by them, especially as they study at a private university. The reason may also be due to society's nature and its culture that allows the student to go out of the house

and spend many times outside the home under low parental supervision. On the contrary, females are due to society's culture, which imposes control and accountability in the event of leaving home. Therefore, females tend to teach directly on campus more than males to go out and spend time with their female colleagues on campus. Also, male students deal more with electronic applications and digital games, enhancing their computer skills needed for distance learning and bringing them closer to technology than females. Within the limits of their review, the researchers did not find results that are consistent with the results of the question in the gender variable. Still, the results of the current study differed in the students' gender variable with the Al-Ghamdi study results (2012), which indicated the existence of statistically significant differences in students' attitudes towards distance learning due to the gender variable in favor of females. The results also differed with the results of Awad and Helles (2015) study, which resulted in no statistically significant differences in the responses of studies students in Palestinian universities towards learning about distance learning technology, depending on the gender variable.

- There are no statistically significant differences ($= 0.05$) due to the effect of the type of college in all fields, and the overall degree of student attitudes at Isra'a University towards distance learning in light of the Corona pandemic, and this result indicates that students in scientific colleges do not differ in their attitudes towards distance learning from students in humanitarian colleges, the reason for this result may be due to the fact that all students in scientific or humanitarian colleges are subject to the same conditions of educational programs, exams, and duties, which leads to their compatibility in trends towards distance learning, and the reason for this may be attributed to the nature of the Corona pandemic that affected all students, and it has transformed distance learning into an imperative to ensure the continuity of university education, in addition to that electronic platforms provide tremendous potentials that allow teachers to present educational content in more than one way and style, and the existence of effective educational platforms that bring together teachers and students within the visual and audio communication feature, this provides high-quality, simultaneous instruction in which the teacher and the student interact.

- The results of the current study regarding the faculty type variable are in agreement with Al-Ghamdi's (2012) study, which indicated that there were no statistically significant differences in students' attitudes towards distance learning due to the variable of college type.

The results of the fourth question and its discussion, which states: Are there statistically significant differences in the attitudes of the faculty members at Israa University towards distance learning in light of the Corona pandemic due to the variable of academic rank?

To answer this question, arithmetic averages and standard deviations were calculated for the attitudes of faculty members at Al-Isra University towards distance learning in light of the Corona pandemic attributable to the academic rank variable, and Table (9) illustrates this:

Table 9. The differences in the arithmetic averages between the attitudes of the faculty members at Isra'a University towards distance learning in light of the Corona pandemic according to the academic rank variable

Variable	Variable category	Sample number	The field of teaching and learning	The field of evaluation and tests	Field of Education and Communication	Total degree
Academic rank	Assistant Professor	78	3.13	2.86	3.21	3.08
	Associate Professor	28	3.00	2.58	3.06	2.90
	Full Professor	13	3.39	2.92	3.38	3.25

The results of Table (9) showed that there are apparent differences between the arithmetic averages in the fields and the total degree of the faculty members' attitudes at Isra'a University towards distance learning in light of the Corona pandemic due to the scientific rank variable (assistant professor/associate professor/professor). To determine the statistical differences, the one-way ANOVA analysis was calculated, and Table (10) shows that:

Table 10. One way ANOVA analysis of the impact of academic rank on fields and the overall degree of attitudes of faculty members at Israa University towards distance learning in light of the Corona pandemic

Domains of the questionnaire		Sum of squares	df	Average of squares	P Test	Sig
Learning and education	Between groups	1.362	2	.681	1.704	.186
	Within groups	46.343	116	.400		
	Total	47.704	118			
Assessment and tests	Between groups	1.822	2	.911	2.435	.092
	Within groups	43.381	116	.374		
	Total	45.203	118			
Department of Learning and Communication	Between groups	.924	2	.462	1.547	.217
	Within groups	34.631	116	.299		
	Total	35.555	118			
Total degree	Between groups	1.210	2	.605	2.165	.119
	Within groups	32.403	116	.279		
	Total	33.613	118			

Table (10) shows that there are no statistically significant differences ($= 0.05$) due to the impact of the academic rank in all fields, and the total degree of the attitudes of faculty members at Isra'a University towards distance learning in light of the Corona pandemic, this result indicates that the attitudes of the faculty members of the University of Isra'a, regardless of their academic ranks, are compatible, and this result may be attributed to the nature of the distance learning experience that was recent among all faculty members at the University of Israa, this led to the convergence of their attitudes towards this pattern of learning, and this result may also be attributed to the nature of the Corona pandemic that swept the countries of the world and affected all sectors, specifically the education sector, which led to the closure of universities, and this made the attitudes of the faculty members in light of the corona pandemic compatible, because it is the best solution under these circumstances, and this result is also attributed to the fact that the university held training courses for all faculty members of different academic ranks in how to deal with distance learning platforms, and management of digital content, electronic tests, and the method of evaluating students necessary for distance learning, which made them equal in digital experience to deal with distance learning.

This question's results are in agreement with the results of the Aqel Study (2014), as its results concluded that there are no statistically significant differences attributable to the variable of academic ranks.

5. Recommendations

In light of the results of the current study, the researchers recommend the following:

- Paying attention to the field of remote electronic evaluation and tests, especially concerning controlling the process of assistance and cheating in exams and developing a new method of monitoring.
- The interest of universities in developing important values that appeared in distance learning is the most important of which is self-consciousness while performing tests.
- The necessity of focusing in university education, whether in distance learning or face education, on twenty-first-century skills that develop important skills for students such as self-learning, interest in modern technology, critical and creative thinking, and continuous learning.
- Universities focus on developing interactive platforms that support the process of distance education and developing interactive digital content.
- Universities focus on blended education even after the end of the Corona pandemic so that the culture of e-learning and continuous and self-learning will prevail among university students.
- The shift towards crisis management and establishing an important department in the university that takes care of this aspect, relying on future predictions, and managing crises and disasters in universities.
- Conducting future studies on distance learning and the effectiveness of educational platforms and

electronic applications in distance learning effectiveness in light of various personal and demographic variables.

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