



A study of the effectiveness of E-learning in Gaza Strip during COVID-19 pandemic, The Islamic University of Gaza "case study"

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Abstract: In conjunction with the suspension of the face to face education process, it became necessary to move towards alternative methods (the E-learning mechanism). During this study, a general definition of the E-learning process, its components and characteristics reviewed. also discuss the current situation and the reality of E-learning, including the advantages and disadvantages of E-learning and the challenges faced by both professors and students. The study is based on reviewing many previous studies and collecting the necessary data and information Using questionnaires and interviews, the Islamic University was also emphasized as a case study, where the sample of the questionnaire was 500 students from the Islamic University of Gaza. Then, the data is analyzed, discussed, and results presented. In the summary of the study, it appears that the E-learning process still requires a great effort to develop and solve its problems, especially in Gaza Strip, which suffers from many daily problems such as electricity cuts and the instability of the Internet. The study recommends developing the e-learning system, improving the quality of the Internet, supporting the educational sector with the tools necessary to develop e-learning, as well as improving the mechanism of interaction between teachers and students, in addition to improving the quality of electronic exams and developing the relationship between the student and e-learning.

Keywords: E-learning, COVID-19, educational development, E-learning challenges, E-learning Trends.

I. INTRODUCTION

At the beginning of March 2020, the COVID-19 pandemic cast a shadow over the education sector in the Gaza Strip, which prompted the Ministry of Education to close all educational institutions to prevent the spread of the virus and start work in accordance with the mechanism of E-learning in universities, through data of Gaza, the economic conditions constitute a major obstacle facing the residents of Gaza Strip, where a third of Palestinian families have one computer, while the remaining two-thirds of the families do not have the money to buy these devices, which makes the E-learning process almost impossible. Online education is considered a new matter for the Palestinians considering the lack of previous experiences before the COVID-19 pandemic, and the electricity crisis is one of the most prominent obstacles to the educational process of all types of learning in the Gaza Strip, especially if the ministry uses E-learning, as electricity reaches the homes of Gazans for just 8 hours a day, and may not reach more than 4 hours only.

E-learning presents a brand different learning technique, in which the users can learn through internet via the terminal. E-learning points out on the technology to convert and guide education, which is likewise identified as online learning or networked learning. E-learning can be considered both as a support learning sets to classical education and a self-learning situation of going on learning (Mukherjee & Nath, 2016). Covid-

19 pandemic has obliged the world's academic strategy to switch to online teaching and reconsidered the influence of E-learning mechanisms to learning and teaching. Online learning and teaching are becoming the future of education by overtaking the regular classroom setting. E-learning media show a pivotal position in determining the realization of online learning and teaching. However, there is a demand to appreciate their mechanisms, the requires prompting their employment, and how each one relates to learning and teaching(Balida & Encarnacion, 2020).

In advancing societies, E-learning is still a somewhat unfamiliar approach in the educational organization. This is because, the classical system of education, which contains cooperation between professors and scholars, is still prominent as sources are diminished in some of these societies. Even though, there is a growing realization of E-learning, however, learners in the building up communities have economic constraints which cause it problematic for them to participate in the program as it is costly(Anene, Anene, & Bello, 2018).

E-learning has a strong-entrenched character in higher education, and it has been established to have a high effect on building up the efficiency of learning, it is a different asset in this modern stage, because of the rising opportunity of Various instruments and technologies of communication devices. While the phenomenon took off overseas in the early-1990s and has all but exploded internationally since (a new review pointed out that Total enrolment in US distance learning programs reached 6.36 million as of fall 2016, a rise of approximately 6% over the year before 1), it was only in around 2006 that it came out to take hold narrowly and only now that we're starting to see its proliferation(Benharzallah, 2020).

The E-learning Center was established at the Islamic University in 2001 with the aim of supporting and facilitating the use of modern technologies such as computers and communications in the educational process. One of the most important services provided by the center is the electronic course delivery service through the electronic education management systems through the Internet, in addition to other services such as training teachers on designing electronic educational courses and training students to use them in the best way. The center also provides specific training services to include different segments of the Palestinian society, especially those interested in E-learning and pre-university education from professors and developers of educational curricula and policies at the national level (ELC, 2020).

Among the electronic services provided by the Islamic University is the Moodle system, which is a learning management system, where is considered a tool to support the E-learning process, in addition, it is an open source program. It is used in more than 235 countries, the courses that use MOODEL to manage the educational process are 7 and a half million courses, and the number of users is 72 million users. One of the advantages of Moodle as a system is that it is an open source system, available to everyone and free of charge, it is considered one of the content management systems, the learning management system is a virtual learning environment, an adjustable learning environment, designed using educational principles and adopted by UNESCO and the Open University in Britain, with the aim of spreading education Mail at the lowest costs(ELC, 2020).

1.1 The Importance of study

The importance of this study appears in that it studies the current situation of E-learning in Gaza Strip with the aim of evaluating E-learning as a possible basic alternative in light of the difficulty of returning to face education now, and it clarifies whether it can be relied upon as an additional method in the future in addition to traditional methods, and what are the possible developments to support E-learning in Gaza Strip. This paper includes data that includes many questionnaires and interviews that explain the opinions of students on one side and teachers on the other side, and the results are effectively presented using tables and curves.This paper contains recommendations and observations for future research.

1.2 Methodology

This study was conducted in light of the conditions that Gaza Strip is going through under the circumstances of Covid-19. The study depends in its content on previous studies on this topic as well as studying the current

situation of E-learning, in addition to conducting questionnaires and interviews to collect the data necessary to achieve the main objectives of the study, which are as follows:

- Study the current situation of E-learning in Gaza.
- Contribute to finding solutions to overcome challenges in the application of E-learning.
- Study whether it is possible to rely on E-learning as an additional means in the future in addition to the traditional methods.
- Study possible developments to support E-learning in the Gaza Strip.

Also, to achieve these goals, the following basic steps must be taken:

- Interact with the data and the current situation to derive the research questions.
- Analysis of the research questions.
- Classifying information into topics and styles.
- Determine the final goals and topics that fall within the research.
- Provide explanations based on the research questions.
- Create and write a report.

II. RESEARCH GAP

The study deal with many previous studies on E-learning, but what distinguishes this study is different in terms of temporal and spatial limits, as this study aims to analyze and understand the reality of E-learning in the Islamic University of Gaza, and to analyze the challenges facing E-learning in the current period, whether with teachers or Students at the university, and thus it will be the first studies dealing with this topic in the current period. This article is also distinguished by its scientific and practical importance, as it represents a starting point for researchers in dealing with e-learning in the rest of the Palestinian universities, and of practical importance, as this study contributes to providing recommendations and suggested solutions for the university administration to overcome the challenges of e-learning and develop the educational system.

III. LITERATURE REVIEW

Mourali et al. (2020) stated that E-learning or electronic learning, literally means learning on the internet.(Sangrà, Vlachopoulos, & Cabrera, 2012)identified four definitions classes, where each class concentrate on a specialized situation of the neologism: technology, education, communication and pedagogy. The first grade, Technology-Driven Definitions, portrays E-learning as the practice of technology such as the web and electronic media for learning. The second one, Delivery-System-Oriented Definitions, displays E-learning as a mean of obtaining education. However, in the third class, Communication-Oriented Definitions, E-learning is considered like a communication, interaction and collaborative tool. The last category, Educational-Paradigm-Oriented Definitions, present E-learning as a unique approach of learning. However, learning requires adjust remarkably rapidly and the theory and operates of E-learning must constantly be adapted to these requires. Currently, most of the attempts are focused on to the smart E-learning. Personalization is one of the promising subjects(Agrebi, Sendi, & Abed, 2019) and can be considered as an essential aspect of E-learning.

Rangara-Omol (2017) reported that the roots of the term 'E learning' is obscure (Moore, Dickson-Deane, & Galyen, 2011)but it able to be identified with the establishment of learning via the internet and computers. Various copies and blends of learning arrangements under ubiquitous names have occurred and are in usage since the mid-1990s. All modern terminologies of distance education (DE)attendant with E learning have one major purpose; to utilize technology to mediate academic purposes, events and progressions(Addah, Kpebu, & Frimpong Kwabong, 2012). Then, irrespective of the associated technology or terminology, the attract of 'learning' in the E-learningmust not be lost. E-learning consists of television, broadcasts and narrowcasts, computer mediated processes as video technologies, , the world-wide web (www) and the internet(Dabaj &

YETKİN, 2005), virtual learning, distributed learning, online learning, , network and web-based learning (Gandhi, 2011) and mobile learning.

Universally, educational organizations have been enclosed for weeks, or even months, in progression. To make matters worse, nobody is sure when we will appreciate to work naturally due to the coronavirus pandemic is indicating no flag of retreat anytime recently (Bekou, 2020). There are boundless opportunities of learning and teaching processes immediately associated to E-learning. There are equally various practices in numerous practices that relate to it. It's still exert to grow both in variety and imagination and excitement from both technology suppliers and employees. E learning is generally characterized in various situations with differing notions and implementations (Rangara-Omol, 2017). (Njenga & Fourie, 2010) provide a collection of terminologies generally related with E learning which they duplicate are inflicting vagueness to professionals.

Njenga and Fourie (2010) also indicated that most educators are not sure of what E learning is. Could it be equivalent to distance education? Is it just the utilization of online methods to promote or enrich the learning tests? Is it stashing the whole course or portions of it online for students to access? Or is it a new form of collaborative or cooperative learning? Obviously, any of these questions could be utilized to depict a side of E learning and completely often confuse the ignorance educator.

Yousef Al-Absi, Peneva, and Yordzhev (2020) described that the successful complementarity of information technology in higher education will participate to the solution of several issues facing developing countries. Admittedly, there are several problems on the way, such as lack of investment in physical origins; paucity of eligible academic staff; reluctance of certain girls to sign up in universities Owing to the conservative culture society. Remains, the application of Information technology in higher education in Arab countries, should not be depending on technical decision but on strategic planning as a national choice to enhance higher education so it can meet the economic and social improvement requirements (Al-Absi, 2017).

Hujran, Aloudat, Al-Hennawi, and Ismail (2013) concluded that the awareness of student about the availability of E-learning tools is considered a significant success factor for such tools (Bhuasiri, Xaymoungkhoun, Zo, Rho, & Ciganek, 2012). Understanding the level of student awareness is essential since the expected benefits of introducing E-learning in student's institute, such as enhancing the quality of teaching and gains in efficiency, effectiveness, and cost savings (Selim, 2007), cannot be fully realized if students do not understand or lack the needed understanding about the benefits of E-learning tools in their institution (Bhuasiri et al., 2012). Therefore, creating technology awareness is highly needed as a requirement for building and promoting effective E-learning systems in education sector. Lack of awareness about E-learning tools is a common problem among students in developing countries (Maldonado, Khan, Moon, & Rho, 2011; Mirza & Al-Abdulkareem, 2011).

Mukherjee and Nath (2016) indicated that that in considering the relationship between technologies, pedagogy, and content, it is significant to reconnoiter how teaching and learning can alter consequently utilizing a specific technology. E-learning has been around for longer than most would recognize, even it has just lately become a more common contender with traditional classroom teaching. Despite there are several features and imperfections for both E-learning and classroom learning, the basic determining agent for the utilization of either is each individual's personal learning mode. For example, a floppy timetable, capacity to function via problems on their own, and personal stimulation appears eligible. E-learning would absolutely be appropriate for this special individual. Although, if someone favors working in teams and reacting with other people on an ordinary foundation, classroom learning might have a tougher pager. Generally, the completed manufacturer is a superior education and a more trust.

Due the speed of change and the resulting require for persistent promotion and booster of staff abilities, the significant of efficiency E-learning can't be overrated. Like employers explore more about the features of self-oriented, just-in-time learning and better comprehend how persons teach online, their capacity to utilize E-learning as a cost-effective, extremely floppy training option will rise. Undoubtedly, numerous sorts of practicing will invariably be more active confronting. By including E-learning for routine, proficiency-based

training, employers can introduce more concentrated and influential experimental learning prospects when groups are fetched together. Governments and donors in emergent nations recognize the decisive significance of education for economic and social improvement.

IV. THE REALITY OF E-LEARNING

The COVID-19 pandemic come over the education sector in Gaza Strip in early of March 2020, prompting the Ministry of Education to close all educational institutions to prevent the spread of the virus and start working according to the E-learning mechanism in universities. The E-learning process began amid a state of tension and confusion between students and teachers, due to the lack of preparation of the teaching staff, as well as the students, for such experiences and the lack of previous experience, especially because of the economic situation in the Gaza Strip for more than 10 years.

The Palestinian people, in general, suffer from a great lack of capabilities that reduces the effectiveness of E-learning and limits the opportunities for fair access to information, at the level of the proportions of families that have some information and communication technology tools available at home in the Gaza Strip, according to the latest statistics issued in 2017, the rate of ownership of a desktop computer (9.0%), while the percentage of owning a smartphone was (75.5%), while owning a tablets and iPads was (14.3%).

During conferences held by the Ministry of Education, it indicated that E-learning is only a service provided by the ministry to students and is not considered a substitute for face education, due to many problems in the E-learning system, the most important of which is that it does not achieve equitable access for all students. This may be due to old reasons that are considered a reason for the lack of readiness of the educational system to implement the system directly and comprehensively, as there is no formal training for students and teachers on the foundations of E-learning, and there are no previous studies specializing in studying E-learning and analyzing the situation in the Gaza Strip to support the E-learning process.

During a meeting organized by the Independent Commission for Human Rights to discuss E-learning in light of the continuing crisis of the Corona pandemic and the imposition of social distancing measures, academics, university presidents, representatives of the Ministry of Education and Higher Education, UNRWA, and civil society and human rights institutions in the Gaza Strip recommended the issuance of E-learning law, and work to form a national committee for E-learning to exchange experiences between academic and educational institutions, and to prepare the infrastructure for education by setting clear policies and standards, and to provide assistance to educational institutions to face challenges, especially those related to the lack of capabilities in the Gaza Strip to ensure that students are empowered with their right to Education.

Gaza Strip suffers from several problems that prevent access to the necessary and appropriate competence to apply E-learning at all educational levels. The problem of electricity cuts is one of the most difficult problems and most prominent during the past period (10 years), where the average hours of electricity reach only 6 hours, and in the best case it may reach 8 hours, in addition to the irregularity in the schedule of electricity distribution, which causes a major obstacle to attending lectures and effectively following up on study assignments. The economic problem and the general conditions of students are an additional obstacle to E-learning in the Gaza Strip.

The higher education system does not operate independently of other social systems, such as the health system. Where there is great harmony between the two systems. Al-Yazouri stated that the application of E-learning represents a difficult option for some levels, especially for first-year students, who need to communicate with the university community and get to know the professors and lecturers, and the sensory environment for higher education through positive engagement and interaction in the field environment and access to laboratories and laboratories Associated with health, engineering and medical sciences. He also added that these fields cannot fulfill their requirements, "E-learning, therefore, we hope to be able to combine education, face-to-face and electronic education mainly for first year students and for the rest of students in specialized courses."(Al-Yazouri, 2020).

Al-Yazouri (2020) talked about a number of challenges that faced E-learning during the second semester of the academic year 2019-2020, including: uneven performance in some universities, the lack of a technical infrastructure equipped like servers to host remote education platforms (servers), and high-quality Internet packages. High for academics to help them communicate with students. The second challenge, according to Al-Yazouri, is that an important part of academics and lecturers are not capable of E-learning applications and tools, pointing out that some higher education institutions offer a lot of training programs to raise teachers' efficiency in electronic communication and to prepare material electronically in the field of education and evaluation. As for the third challenge, it is that some students are limited in capabilities and do not have modern, qualified devices, whether at the level of computers or mobile phones, through which you can download software for communicating with the professor or the university.

On the other hand, the E-learning process in Gaza Strip can be strengthened by using special methods and techniques that are appropriate to the situation experienced with Gaza students, which are technical methods related to the mechanism of presenting lectures, how to present and evaluate assignments, as well as the mechanism for conducting examinations electronically.

The Islamic University of Gaza activated the E-learning process in conjunction with the beginning of the suspension of face education in universities, but at the beginning there was a state of confusion and the E-learning process was not arranged in an appropriate way to achieve a balance with face education. The reasons for this confusion are due to the students' lack of sufficient experience in dealing with similar situations as well as the lack of knowledge in using effective communication applications (E-learning applications) such as Zoom, Google-Meet, and others, in addition to the fact that the suspension of face education came at a critical time where The Palestinian people in Gaza suffered from a severe siege and a long power outage, as well as there was no clearly defined mechanism to deal with the current situation and the challenges facing the university and students in general.

In order to develop the E-learning process, universities have used multiple methods that depend on different determinants in order to reach the best possible benefit from E-learning and adopt it as an alternative method in light of the current situation. Among these methods is the mechanism of presenting the lectures and how they reach all students, despite the inability of the students' part to follow the lectures at the specified broadcast time due to the electricity crisis, as the lectures are displayed directly, recorded and uploaded to an approved university platform to enable students to watch them later. In another direction, the evaluation process did not depend on one type of evaluation, and it varied between a short exam, a comprehensive exam, weekly assignments, research reports and other methods of interaction and term evaluation. Likewise, for the program used for communication and presentation of lectures, the Islamic University of Gaza has adopted the model platform as a basic and approved platform, in addition to a communication program with the aim of flexible communication between teachers and students. After applying the previous methods, many important questions and addresses aimed at developing the educational process and the E-learning system appeared on several axes, the most important of which are the evaluation mechanism and its coordination with the E-learning system, the mechanism for delivering lectures and how to present them effectively, as well as the program used, the mechanism of communication between the teacher and students and how its administration, the efficiency of examinations via E-learning, the importance of developing students' and teachers' skills, and the future outlook for E-learning.

Education is one of the basic human rights that can never be dispensed with. Many human rights declarations and international laws have documented this right. Perhaps the basis for their establishment is due to the content of Article 26 of the Universal Declaration of Human Rights. "Everyone has the right to education. Education must be provided free of charge, at least in the elementary and basic stages. Elementary education is compulsory. And to make the arts education and the professional education available for all. High learning will be available for every one according to their efficiency." (UN, 1948).

Education in Palestine is considered an important aspect of Palestinian life, but wars and political conflicts have led to a great influence in this aspect. However, there is a special law on education, and the most prominent of its texts is Article No. (Palestinian Constitution, 2017), which states that:

1. Education is compulsory until the end of the tenth grade.
2. Education shall be free of charge in all governmental educational institutions.

The E-learning experience was imposed on everyone, but it had a different role with people with disabilities, as they have the right to learn like everyone else and with interruption of learning in their own centers and according to Article 4 of the Declaration on the Rights of Persons with Disabilities issued by the United Nations, which states that the person A person with a disability enjoys the same civil and political rights. This is what other humans enjoy, as special conditions have been created that suit them in the study process through the work of recording their lectures and lessons (Walker, 2013).

V. E-LEARNING CHALLENGES

In this study, it reviews the most important challenges facing the E-learning process from several directions (professors and students). In many cases, students find it difficult to manage their time through online learning. Whereas, online learning is completely new to them and requires extensive work, adequate management of time, amount of lectures and assignments involved. It is possible for students to begin to lose hope once they find it difficult to learn online. This requires motivation to complete tasks and engage students in their learning. So lack of motivation is a common challenge for all students. Unfortunately, there has been no prior preparation and adequate training in universities and schools to transfer lessons and lectures over the Internet as a primary method. In this case, the onus is placed on professors to adapt themselves and their students to a new way of learning.

It is difficult for professors, students and parents to start using a Learning Management System or any other digital tool without additional training required. Where a state of confusion arose due to the amount of data they deal with in an attempt to convert to a digital world, in addition to the frustration of facing the unknown. Classroom versus online classroom instruction has variations in outcomes. Professors may have difficulty expressing the educational content of their students, especially long and complex assignments or assessments. Also, since the educational content is not immediately responded to, teachers may have a hard time knowing whether class is too difficult or too easy for students which affects student evaluation as well as the semester works submission mechanism.

Millions of people around the world face technical difficulties due to the high utilization rate of online learning systems, video streaming software, and other digital tools. As the video and audio quality is poor, and various Internet problems. Students may have Internet connection problems that are either unstable or the current data plan is not sufficient to cover the progressive E-learning needs. Although the comfort of working and studying from home sounds like a cheerful idea, the idea may discourage teachers from the extra workload of preparing for an online class. In addition to various documents and announcements, professors are responsible for facilitating online discussion boards when promoting engagement and collaboration. Often, moderation involves a great deal of reading and providing effective feedback to each student. Moreover, student questions may appear at different times throughout the day, giving teachers a difficult time delegating time to each student and task (Wu, 2020).

The Gaza Strip faces many challenges in implementing e-learning. The problem of constant electricity cuts prevents students from following lectures and carrying out the required duties, in addition to the poor economic situation where the Palestinian people have a large deficit in the necessary tools through which E-learning can be effectively pursued, as well as Students in the Gaza Strip suffer from poor internet conditions that affect the quality of e-learning. Also, E-learning in the Gaza Strip came at a critical period, as students were unable to receive adequate training to use E-learning.

The importance of continued critically reflective academic practice to assure the best learning outcomes possible for all student cohorts is emphasized in focusing on social relationship and community building in the online environment, rather than a dominant concern with the technological complexities of the online space. In doing so, some of the student anxieties and issues associated with external delivery modes may be overcome and benefit the students through the pedagogical methods employed in the online environment.

developing the sense of community and belonging needed to better facilitate an interactive and engaging online learning experience for external students and seek to reduce the barriers often felt by isolated students.

This may therefore encourage student intrinsic motivation to participate in the content and make meaningful contributions to different online communities of learners. Sharing reflective experiences of assessment and delivery with others becomes an important part of enhancing student learning experiences and developing strong communities of practice within higher educational contexts. As a firm believer in the importance of lifelong learning and development, the importance of ongoing and continual critical reflective practice and improvement is crucial. This aids in providing relevant and current examples of practice, while also ensuring that students are being equipped with knowledge and skills that are relevant, beneficial and enable them to exhibit best practice in their own future work endeavors (Gillett-Swan, 2017).

VI. DATA ANALYSIS

During the present study, various information and data were obtained on the subject of E-learning in Gaza Strip, as well as an assessment of the current situation of E-learning in the universities of Gaza Strip, in addition to conducting questionnaires and interviews to collect the necessary data to achieve the main objectives of the study, which are as follows:

Online interview was conducted with Dr. Moataz Saad, President of the Center of Excellence for E-learning at the Islamic University, which was as follows:

Table 1: Electronic interview data, (Saad, 2020).

NO.	Question	Answer
1	What is the approved online teaching platform?	Model Platform.
2	What is the mechanism for uploading recorded lectures? Weekly, daily, monthly? directly? Or through an intermediary program such as YouTube?	Daily
3	How are students evaluated during the COVID-19 period and E-learning accreditation?	Electronic and oral assignments and tests.
4	How are teachers evaluated during the COVID-19 period and E-learning accreditation?	An electronic course evaluation form was prepared.
5	What are the types of questions that can be prepared via Moodle?	<ul style="list-style-type: none"> • True or false • Multiple-choice • Matching • Ranking • Drag and drop into text • Drag and drop on the image • Complete the blank • Digital
6	What kind of questions are most frequently used by model by teachers in preparing exams?	True, False, Multiple Choice, and Match.
7	How would you rate the role of social media in supporting E-learning via Moodle? What is the most prominent means of communication in support of E-learning?	Social media is supportive, not critical, in the education process
8	Are electronic exams a good alternative to face exams, and are they sufficient?	To some extent, moreover, there is no alternative in the present status.
9	Are student's GPA and term rates affected by E-learning, negatively or positively?	Not much affected, many electronic tests distributed normal.

10	Have teachers been trained on E-learning before COVID-19 lockdown? How many percent of trainees are there?	Yes, almost all teachers.
11	What percentage of teachers use Moodle during COVID-19 lockdown?	90%
12	How much did teachers use Moodle before COVID-19 lockdown?	30%
13	Have students been trained in E-learning and using model before COVID-19 was closed? What is the training mechanism? In the absence of prior training, what are the methods used by the university to remedy this defect, especially first-year students?	Yes, through computerized midterm exams before the closure of COVID-19, and training was conducted for students at the beginning of the school year, especially for new students.
14	Has the university faced difficulties, whether in material or human capacity, in applying E-learning? If yes, what are the most prominent of these challenges?	There were some material and human difficulties that were overcome, such as poor infrastructure and a lack of human cadres for technical support.
15	How do students actually benefit from E-learning?	Most of the students were able to achieve the minimum educational subject.
16	What is the most prominent role the university has provided in making the idea of E-learning successful?	Issuing regulations and guidelines, teacher training, student training, follow-up and guidance.
18	How does the university administration evaluate E-learning? What are the most important plans to develop it? What are your recommendations in particular?	The university is preparing long-term plans to develop E-learning.
19	Has the university benefited from the experiences of other universities or countries in E-learning?	Of course, yes.
20	Did the university use consultants or human cadres other than the university's staff during E-learning?	Many employees have been seconded from other departments in the university.
21	Will E-learning be used after the circumstances of the Corona virus are gone? How?	Sure, possible programs or some courses.

From [Table 1](#), it appears that the Moodle platform has been adopted as a basic tool for E-learning at the Islamic University of Gaza, which may reduce students' distraction and confusion. Through this platform, students' results are evaluated using oral and electronic exams that appear as true or false, multiple choice, matching and others. As for social media, they are considered as helpful tools, according to Dr. Moataz. As for the prior training process for professors, Dr. Moataz pointed out that the university has conducted comprehensive training for a large number of them, and this justifies the university's adoption of the Moodle platform as a basic platform where professors received appropriate training on it, and also indicated that students have previous experience in using the platform through Midterm electronic exams. In the context of talking about the efficiency of the educational process using E-learning at the university, he indicated that students receive at least the minimum scientific value they need in light of the current crisis, and also indicated that the university is working according to a strategic plan that ensures the continuation of the educational process now and in the future.

Also, a comprehensive questionnaire was conducted for students of the Islamic University of Gaza regarding E-learning and assessed the current state of the education process at the university, and the questionnaire was electronic due to the circumstances of Covid-19 in the countries that do not allow it to be done on paper, many questions were used and were answered by 500 students where they The results are as follows:

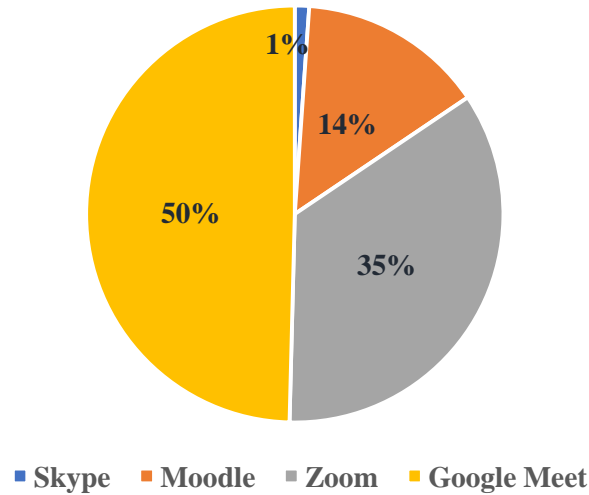


Figure 1: Count of "What is the best application for present lectures?"

Figure 1 shows that 50% prefer to use Google Meet while 35% prefer to use Zoom App. This may be due to the fact that Zoom does not allow more than 40 free minutes for one meeting, while Google Meet allows more minutes than others and the number of more members as well, while a commitment of 14 % Only in the model platform as a tool for presenting lectures, and this may be due to the severe pressure on the platform and the huge amount of data on it.

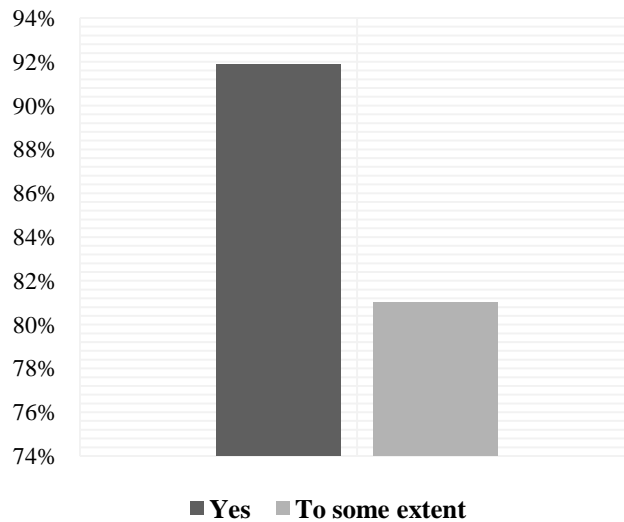


Figure 2: Count of "Dose the quality of the internet effect on lecture reception?"

Through Figure 2, it appears that the Internet problem affects a large part of students, as the decline and low quality of the Internet in Gaza Strip affects 92% of students significantly, while 8% affects them to some extent.

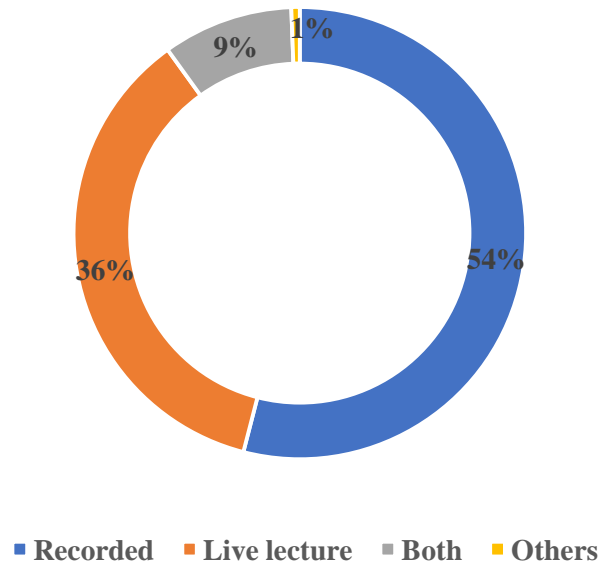


Figure 3: Count of "What is the best way to present the lectures?"

54% of students prefer recorded lectures, due to the constant power outage in Gaza Strip, which prevents a large number of students from attending live lectures, and 9% prefer to work using both methods together.

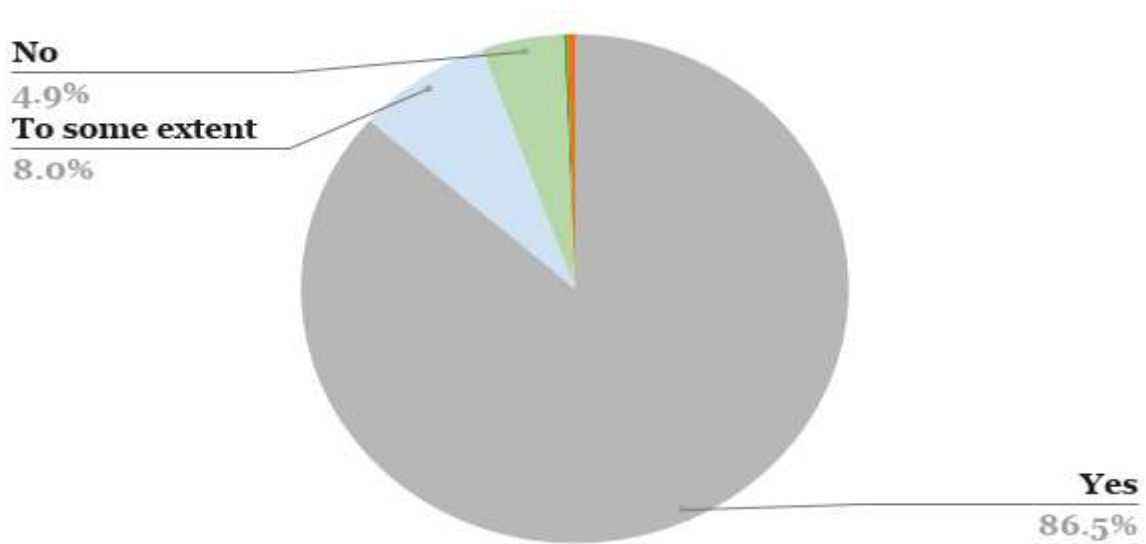


Figure 4: Count of "Is it necessary to have a discussion lecture if the Recorded Lectures method is used?"

As a result of what has been mentioned previously regarding the problems of the Internet and electricity, students prefer having a discussion lecture between the regular lectures, with the aim of discussing the unclear points in the recorded lectures where the student cannot interact with the professor during them, so 85.5% of them wish to discuss what was explained during the recorded lectures.

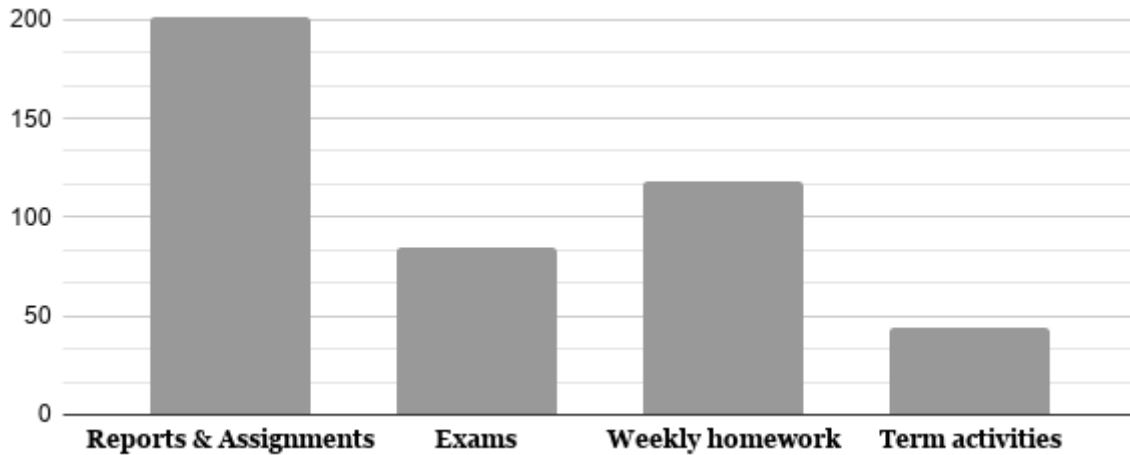


Figure 5: Count of "What is the appropriate evaluation mechanism on E-learning?"

From the attached results at [Figure 5](#), it appears that students prefer to use reports and assignments to evaluate performance in E-learning. This may be due to problems that appear during electronic exams, which are related to technical problems, power outages, or recurrent internet problems in Gaza Strip. This can be effectively positive as it supports the development of students' skills in preparing reports and working under pressure, as well as supporting research skills and E-learning.

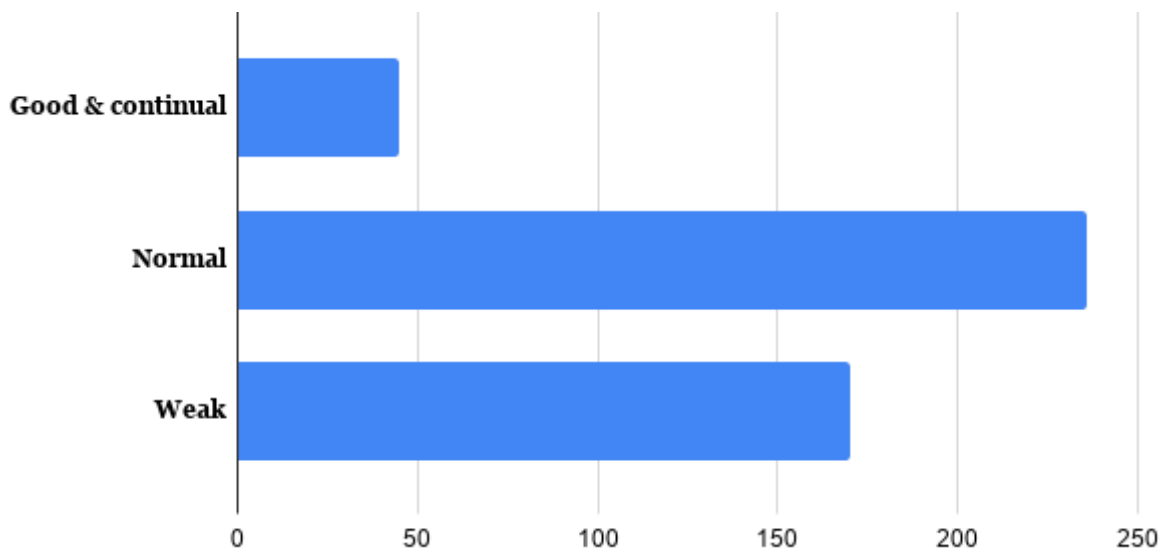


Figure 6: Count of "How strong is communication between teachers and students?"

Through the results, it appears that the process of communication between professors and students is not as it should be, this may be due to the lack of training in such a case, and this may also be due to the reasons for the privacy of social media sites, as it appeared through the questionnaires that the most important Applications used to communicate with professors, (WhatsApp, Facebook Messenger with high percentage) and (Moodle with low percentage).

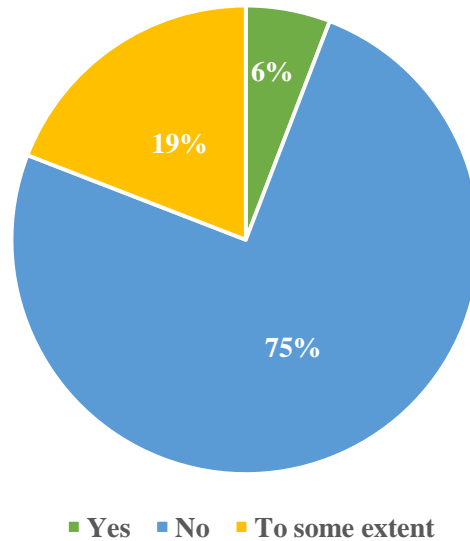


Figure 7: Count of "Is E-learning considered an appropriate measure for students 'level?"

Through the Figure 7, it appears that 75% of students believe that E-learning is unfair with regard to student's levels. This may be due to a problem of trust among students and E-learning, since it is considered a new tool as a basic and only alternative to regular education. This brings us to an important question for students, "Do you think there are gaps in the electronic examination system?" The results of this question appear in Figure 8.

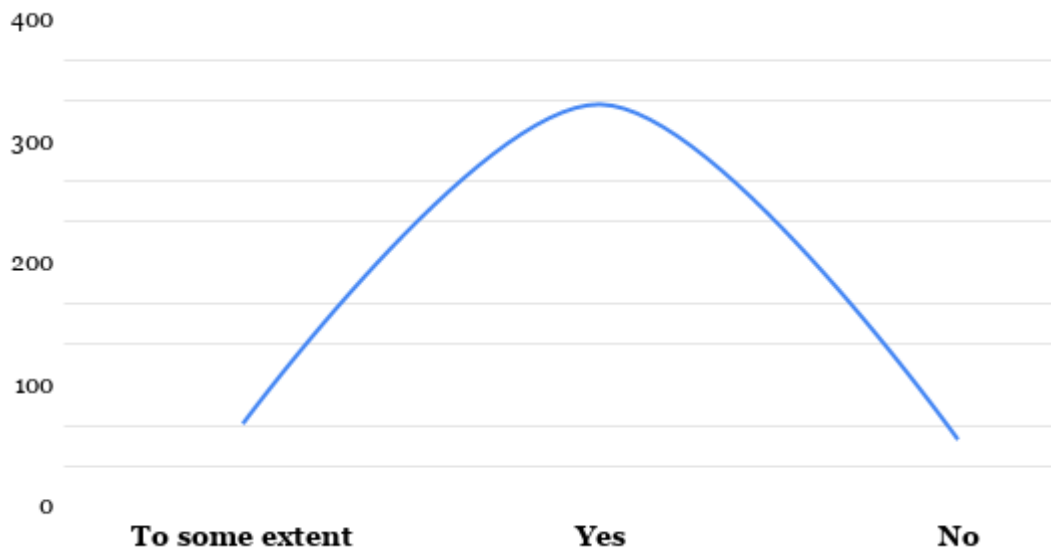


Figure 8: Count of "Do you think there are gaps in the electronic examination system?"

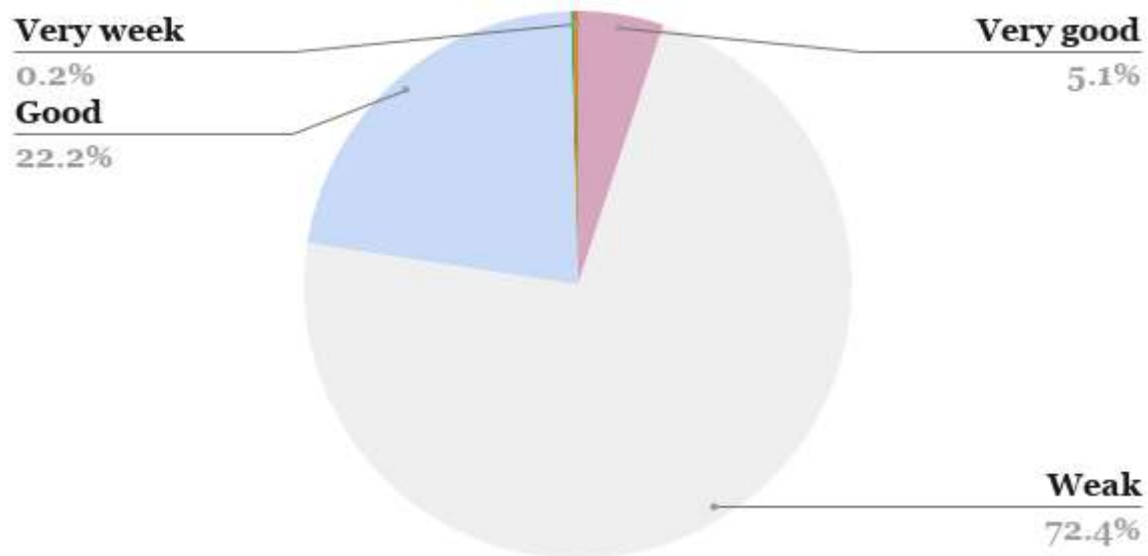


Figure 9: Count of "How well do first-level students understand and interact with the E-learning system?"

Through the questionnaire, first-level students and the extent of their interaction and their benefit from E-learning in light of the Covid-19 period was discussed. The question was whether the E-learning process was effective for first-level students, and the results were as shown in [Figure 9](#).

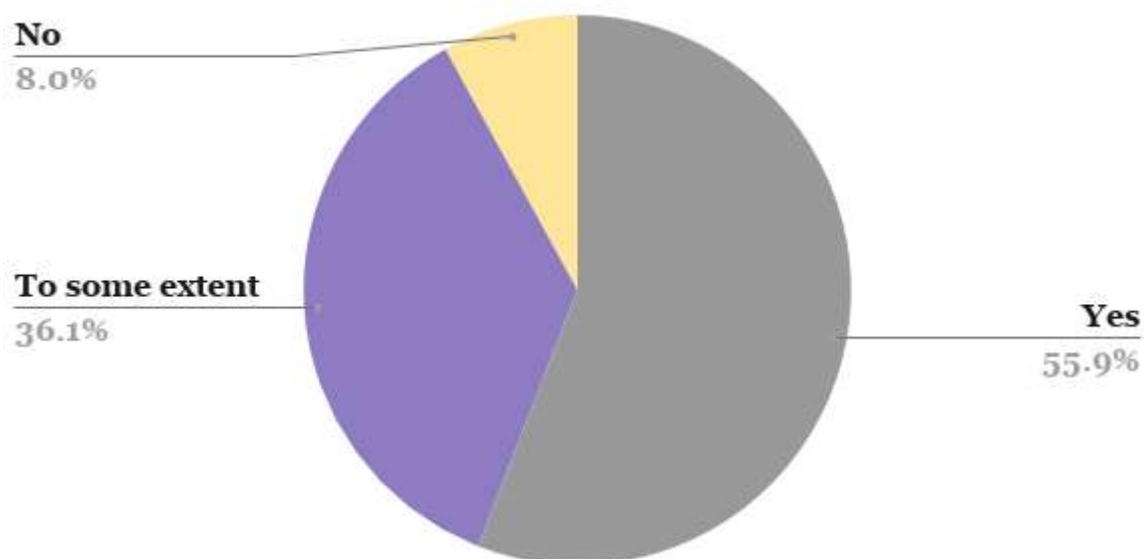


Figure 10: Count of "In E-learning, should the evaluation mechanism differ for postgraduate students?"

As for postgraduate students, the matter is somewhat different, according to the results of the questionnaire, students prefer different methods of dealing and evaluation that are compatible with the nature of their studies and their own curriculum, as well as with regard to examinations and evaluation methods.

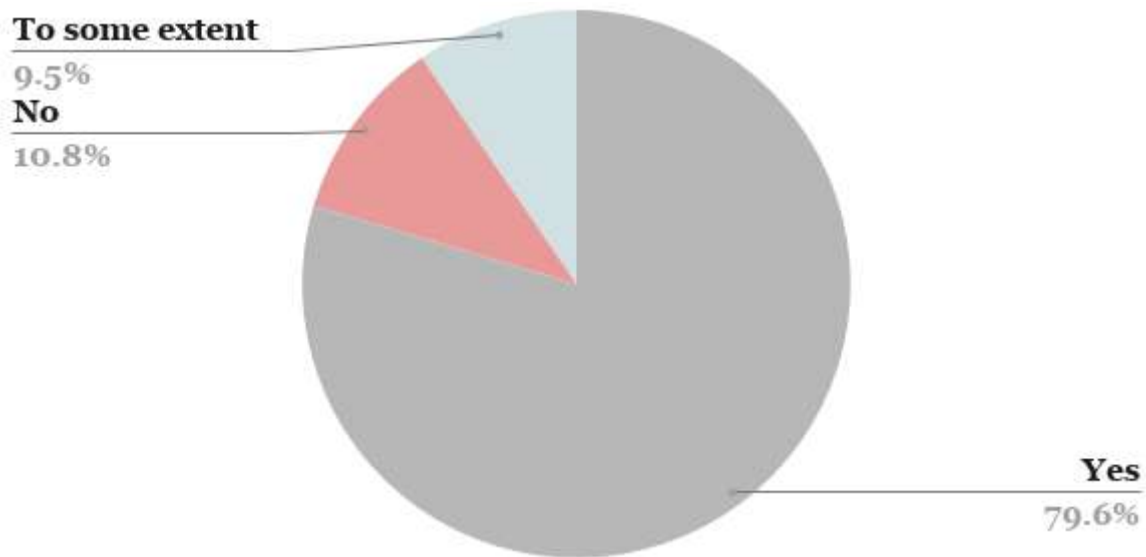


Figure 11: Count of "Does E-learning affect students' ability to manage their time?"

A large number of students expressed a positive impact of E-learning, as it appears through the results [Figure 11](#) that 79.6% of students believe that E-learning helped them develop time management skills, and this is what was discussed earlier in the study.

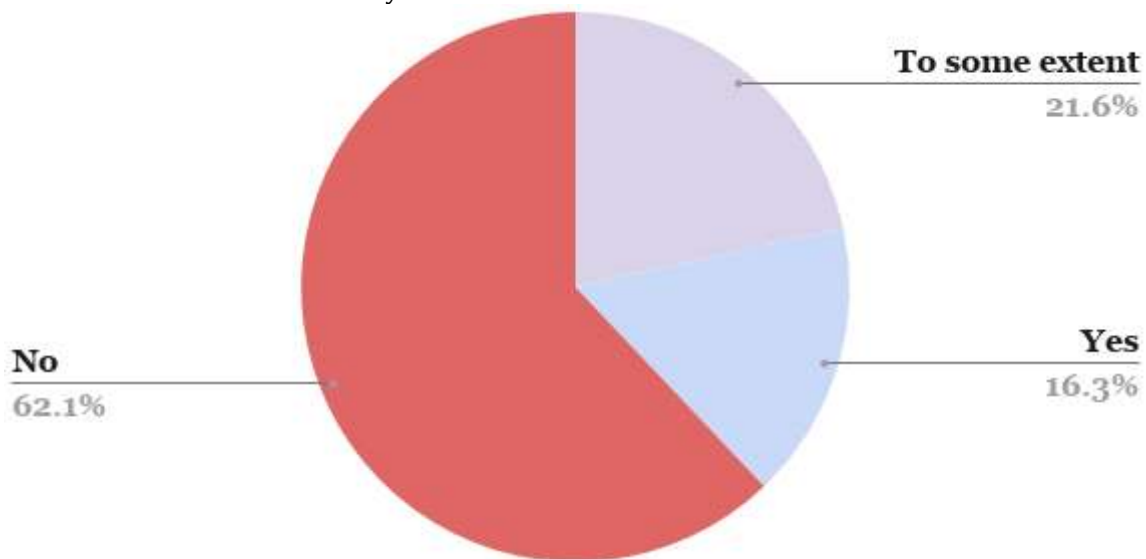


Figure 12: Count of "Do you think that it is possible to rely on E-learning as a primary method in the future?"

At the end of the questionnaire, the possibility of continuing E-learning in the Gaza Strip in the future was indicated, as the students were asked for their opinion and their answers were as shown in [Figure 12](#), as 62% answered no, while the percentage varied between yes and perhaps

VII. DISCUSSION

At the end of the study, it becomes clear that the E-learning process still requires a great effort to develop it and solve its problems, especially in Gaza Strip, which suffers from many problems daily such as electricity cuts and unstable internet conditions, as well as the difficult Palestinian reality, as it was found that there is a pre-existing system working to develop this system in particular and the educational system in general.

VIII. CONCLUSION

The most important results of the study came as follows:

- The Moodle platform has been adopted as a basic tool for E-learning at the Islamic University of Gaza
- The university has conducted comprehensive training for a large number of professors.
- Students of The Islamic University of Gaza have previous experience in using the platform through Midterm electronic exams.
- 50% of students prefer to use Google Meet while 35% prefer to use Zoom App, while a commitment of 14 % Only in the model platform as a tool for presenting lectures.
- The decline and low quality of the Internet in Gaza Strip affects 92% of students significantly, while 8% affects them to some extent.
- 54% of students prefer recorded lectures, due to the constant power outage in Gaza Strip.
- 85.5% of students prefer having a discussion lecture between the regular lectures, with the aim of discussing the unclear points in the recorded lectures.
- The Islamic University of Gaza's students prefer to use reports and assignments to evaluate performance in E-learning.
- The process of communication between professors and students is not as it should be at The Islamic University of Gaza.
- 75% of students believe that E-learning is unfair with regard to student's levels.
- 72.4% of first-level students believe that E-learning is somewhat weak in terms of the extent of their interaction and benefit.
- 79.6% of students believe that E-learning helped them develop time management skills.
- 62.1% of students do not believe that it is possible to continue E-learning as the primary method of education.

IX. RECOMMENDATIONS

After studying the effectiveness of E-learning and evaluating the current education situation in Gaza Strip, and through data, interviews and results that come out during this study, the process of developing the educational system, including e-learning in Gaza Strip, needs many important points, which are as follows:

1. Developing the e-learning system and adopting several platforms as means of exchanging lectures and discussions.
2. Improving the quality of the Internet and supporting the educational sector with the tools needed to develop E-learning.
3. Improving the interaction mechanism between professors and students.
4. Ensure the asynchronous availability of the lectures, so that these lectures or any other video or audio content are easily and directly accessible.
5. Lectures are arranged in an orderly procedure according to the weekly load, and teachers' commitment to specific dates.
6. Follow-up of students and the general situation of the country, as the teacher must take into account the circumstances surrounding the students in order to reach the best possible results.
7. Determine office hours between the teacher and his students, in order to break the deadlock, which helps build trust between students and E-learning.
8. Improving the quality of electronic exams and developing the relationship between the student and E-learning.
9. Supporting students' skills and holding training courses aimed at developing E-learning skills.

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