Students' perceptions of e-learning and its effects on student outcomes amid the Covid 19 outbreak

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Abstract: The worldwide incidence of COVID-19 disease has risen significantly, as COVID-19 was declared a pandemic disease by WHO on March 11, 2020. Iraq declared the emergency condition, followed by the curfew, in response to the COVID-19 crisis. As a result, after the COVID-19 pandemic, educational facilities were closed and distance learning emerged as a new educational tool to ensure the continuity of education in universities.

With the emergence of the (Covid-19) epidemic in the world today, it has become difficult to collect students in one semester, so higher education in Iraq has become dependent on e learning in all its lessons. Therefore, this study was designed to know the student's outcomes after relying on e-learning and comparing it to the traditional method in education and As well as to see the extent of students' acceptance of e-learning and whether it is considered a successful alternative to traditional education in light of COVID-19.

Keywords: E-learning, COVID-19, Distance Learning, education.

1. Introduction

Iraqi universities have tended to use e learning to limit the spread of Corona virus among students. Online learning is now at the forefront of helping students meet the challenges of learning without face-to-face processes (the traditional method of teaching).

There is a need for students and educators to communicate electronically at this time so that they can carry out the learning processes. This phenomenon of Covid-19 definitely raises difficulties for students and teachers in performing online learning, such as the choice of materials, facilities, applications and contact habits that are various, broadly open and accessible.

Previous study estimated that due to the Covid-19 phenomenon, 53.8% of the population of 194 cities in China experienced psychological consequences, with female gender and student status being the two groups that were psychologically hit hardest[16].

Technologies of Information and Communication (ICTs) can enhance learning Enabling teachers to generate and disseminate instructional material that can be preserved for omnipresent access Place and time regardless. ICTs will expand learning options and also increase the quality of learning. Teaching and studying by supplying teachers and learners with reviews[1].

E learning is a teaching process between the teacher and students by means of electronic media, and it is intended to interact between the teacher and the student, and the media is a tool to do this process [9].

Most universities and institutions nowadays tend to Provide e-learning programs to teachers, employees and students To strengthen mechanisms for the transfer of information and develop The quality of the method of schooling The general method of education. New tech One of the principal variables that may play a major role has been Function in the course of information learning to attain Goals for the schooling process [2].

A strategy to resolve the barriers to e learning in Iraq has been implemented by supplying e-learning units at each university with a workshop under the supervision of the ministry's e-learning team supervising each university in Iraq. The e-learning strategy of Babylon University helps to make available (LCMS),(LMS)and In order to improve the curriculum and encourage more students to enroll and learn, computer management systems. This approach seeks to increase the performance of the instructional method by using innovative strategies in ICT facilities.

With developments in technology, Distance learning and social media for undergraduates, postgraduates, and providers is a modern and increasingly increasing strategy. Distance learning satisfaction is closely related to the previous experience of students in distance learning as well as the perceptions and experiences of teachers. infrastructural and Technical capital have been identified As a big challenge to the   adoption of Learning at a distance,so awareness of technological, financial, administrative, teacher and student barriers It is essential for the efficiency of introduction of Obstacles are necessary [3].

Following the advent of COVID-19, he encouraged the authorities to recommend that universities be closed and that remote teaching in emergency circumstances be initiated to ensure that students are not left unemployed in this pandemic period. The conventional approaches (traditional face-to-face education) have therefore been replaced by the Internet (e learning) today. He observed that developing countries face problems such as low

internet access, inadequate information about the use of ICTs, and weak content creators when compared the developed world with developing countries [4].

For instance, also at the tertiary level in developed countries, providing content such as video and other apps is still new to many educators. This latest paradigm calls for improved technologies and for educators to change their culture in the workplace. Before introducing e-learning, a significant aspect to consider is whether learners are willing and can be effective in an online environment [8].While learners may display success in traditional schooling and the classroom, this alone is not enough to ensure success in an online education situation.

Note:- The number of services and channels that provide student and young people with opportunities to gain appropriate information by The Internet is rising each day

Distance Learning (DL) is an educational area This focuses on making use of The advancement of technologies and educational programs to offer education to students who are not physically on site to pursue their education [7]. In the historical history of distance education, there have been four primary levels, From the primary mode of contact, each with its organizational structure derived:

- Systems of Communications.
- Educational television and radio systems.
- Multimedia systems
- Internet-based systems

2. E-Learning Quality

The growth of online higher education academic programs has driven universities to create procedures and adopt policies to ensure the consistency of their online offerings In the field of learning, education, training, and knowledge sharing, 'quality' has become an increasingly important issue for both researchers and practitioners, especially when facilitated by e-learning [5].

E-Learning is increasingly expanding. Traditional universities and colleges offer an increased number of online courses at all levels of education as a result of increased online enrollment. More commonly, online platforms are often used to increase or replace conventional class-based fully oriented [4].

The quality of distance learning is known as the A characteristic or set of characteristic properties Compliance of object, event, or process with this kind of Requirements previously named.

Key considerations for evaluating the efficacy of the e learning framework The nature of the course design, curriculum support, social support, administrative support, course review, learner characteristics, teacher characteristics, and structural variables [5].

Standards that influence the quality of electronic learning [6]:

- Executive commitment
- Equipment in technology
- Services for students
- Development and Design
- Guidance and facilities for teachers
- Delivery of Program
- Health Financial
- Requirements for legal and administrative   matters
- Program Assessment Review

3. Types of E-Learning

1. Blended learning: It is one of the teaching or learning methods in which e-learning and (traditional) education are combined in one framework.

2. Synchronous E-learning: It is direct education, as it requires learners to be present at the same time in front of computers to conduct discussion and conversation between students themselves and between them and the teacher through chatting, or receive lessons through virtual classes or using other tools.

3. Asynchronous E-learning: It is indirect learning that does not require the presence of learners at the same time, such as obtaining experiences through available websites, CDs, or through e-learning tools such as e-mail or mailing lists. One of the advantages of this type is that the learner gets to study according to the times. Convenience to him, and with the effort he wishes to submit, the student can also re-study the material and refer to it electronically whenever needed.

4 Methodology

His research was divided into two axes:

- The first axis:

This axis is the survey was collected from 150 students from the universities of the College of Pharmacy of Babylon. It shows data on the gender and age distribution of the respondents. Of the 150 students, 100 were women and the remaining 50 were men. Respondents, 128 students, ages 18-19, and section, 20-21 years and 22-23 years. is a descriptive study with a cross-sectional approach. The survey was conducted on a group of students at the Faculty of Pharmacy, University of Babylon. Preparing survey tools that are used to collect data. Includes details provided in questionnaires This:

a) Analysis of knowledge about e learning

b) Types of platforms used in education

c) Analysis of student acceptance of e learning

d) Analysis of e-learning implementation

e) E-learning evaluation analysis

We use the Likert scale survey method for a random 150 students from all levels of college. To collect data from students to find out their knowledge and perception of e learning in light of COVID-19 in terms of (approval, rejection, approval or dissatisfaction) about the use of e-learning. The researchers created a Google form for collecting and analyzing data statistically, and the results were as they are in the search in the form of tables

5. Results and Discussion of the First Phase

A. Analysis of Knowledge About E-learning

Where we developed a questionnaire consisting of a set of questions for the purpose of knowing the extent of the students 'knowledge of e-learning and the answers of the students were as shown in the Figure (1). Where the results are

O (40%) E-learning is an outdoor school learning platform

O (30%) E-learning is one of the media for learning that needs to be connected to the Internet.

O (11%) It is the transition of education from the stage of indoctrination to the stage of creativity, interaction and skill development

O (10%) An educational system to provide educational programs

O (9%)E-learning is E-learning from educational aids outside the classroom.
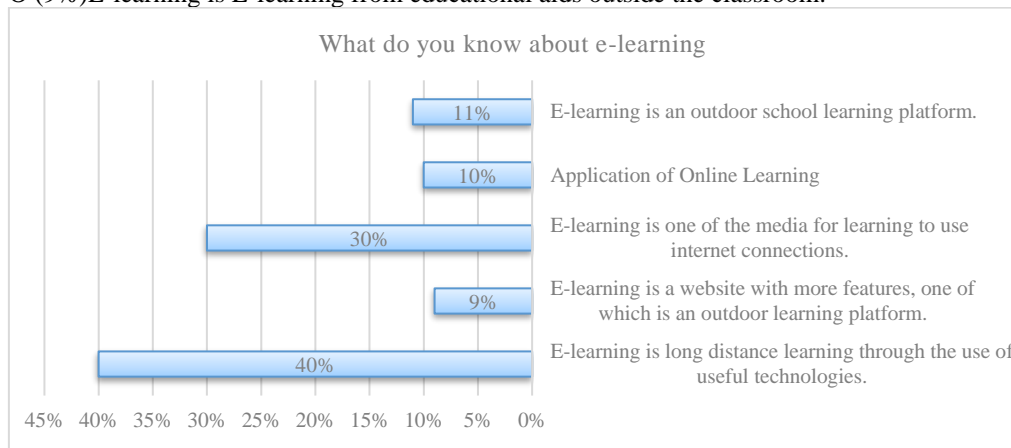

Figure 1. Knowledge Aspects of e Learning

B. Types of Platforms Used in Education

Where we chose a group of platforms used in the college to analyze the educational platforms used by the college's students, as shown in Figure (2).

The questionnaire showed that Google Classroom (50%) is the most used platform, Google Meet(25%),free conference call(12%), Zoom(5%),WhatsApp Group (3%),Moodle(2%),telegram(1%),Skype(1%) and Edmodo(1%)
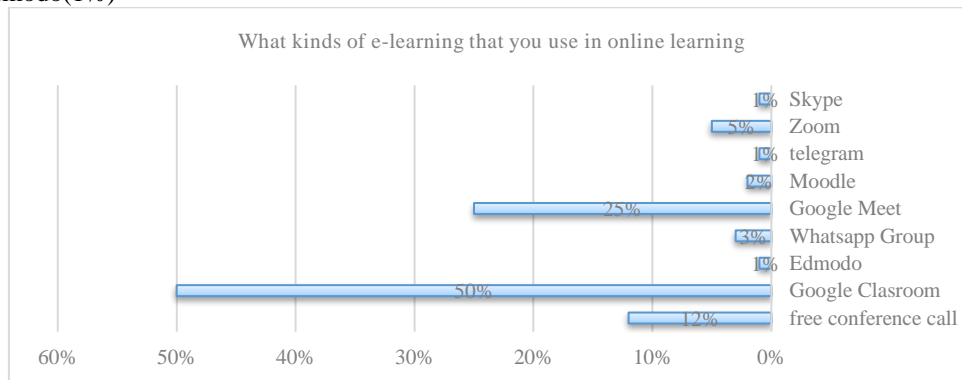

Figure. 2 E-Learning applications used by the students

C. Analysis of Student Acceptance of E-learnings

On the other hand, we analyze students' acceptance of e learning where it appears Agree (40%), Totally Agree (6%), Neutral (20%), Disagree (4%) and Totally Disagree (30%) as shown in Figure (3).

Analysis of student acceptance of e-learning

| Response	Value
Totally Disagree	30%
Disagree	4%
Neutral	20%
Agree	40%
Totally Agree	6%
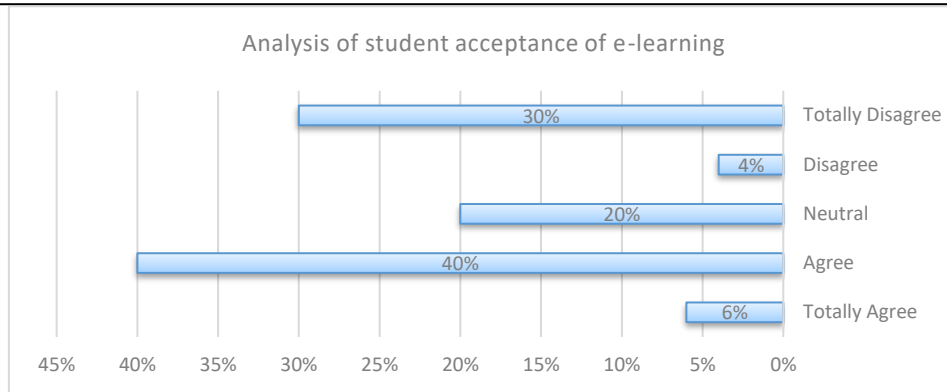
Through a questionnaire that includes a set of points on how students prepare themselves for the e-learning process, where (30%) stated that the preparation process for the e-learning process is easy, (25%) of the students agreed that the educational subject has become more comprehensive in the educational process, (22%) agreed that the school curricula were clear and understandable, (28%) agreed that the educational plan was clear, (40%) agreed that preparing for the electronic exam requires less effort.

It takes a well-planned concept to learn by e-learning, including Those affiliated with the e-learning feature, E-learning must consist of 3 foundational components: e-training (LMS) , e-communication and e-assessment (assessment of learning outcomes indicators)[10].

A sequence of learning steps is an instructional part that will be Through e-learning, students may learn individually, especially when new students first use e-learning in a formal manner. In addition, the teaching aspect will assist in the process of achieving the lecturer's intended learning goals. In the study of the elements of the lesson plan in the class, the same effects are shown. This aspect offers the advantage of presenting information (an overview) of the learning exercises to be carried out in the classroom[10].

D.   Analysis of E-learning Implementation

Here we analyze the students 'acceptance of the lectures through e learning where they answered (1%) totally agree, (11%) agreed, (37%) was neutral, (48%) disagreed, (3%) totally disagreed. Electron as shown in Figure (4).

Implementation of E-Learning

Response	Value
Totally Disagree	3%
Disagree	48%
Neutral	37%
Agree	11%
Totally Agree	1%
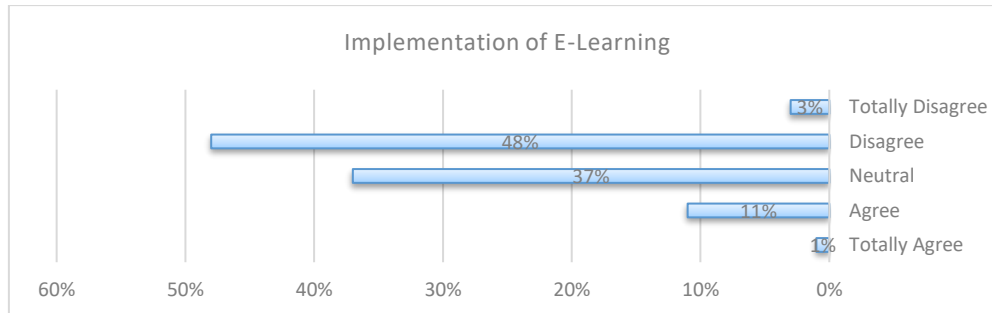
Through a questionnaire that includes a set of points on how to implement the e-learning process, where students answer as follows: (60%) agreed that the use of electronic education provides convenience to students, as lectures can be accessed from any time and location, (53%) provides an appropriate solution for education in light of the current circumstances with the persistence of Corona, (40%) students agreed that e-learning adds more experiences to them, (35%) of students do not agree with the general objectives of e-learning (failure to achieve the general objectives), (25%) agreed that the communication process is ongoing despite the lack of face-to-face presence.

Relevant study results indicate that students are inclined to lectures with e-learning[11]. The availability of interactively used technologies may be a platform for improving higher-order thought skills through dialogue and feedback[12]. This is very much in line with the e-learning system of learning. In e-learning, students can have many opportunities to search for information through the directions and discussions that professors give them.

Three facets of engagement can be accomplished electronically, including perceptual, educational, and social presence[13]. here have been six reasons why blended learning, It is one of the types of e learning[14]:

1. pedagogical wealth
2. personal comfort
3. cost effectiveness
4. access to knowledge
5. social interaction
6. ease of material revision

E.   E-learning Evaluation Analysis

Through the questionnaire, it was found that the evaluation of the lectures received by the students showed that (40%) of the students are neutral, (45%) agree to receive the lectures through e-learning, (8%) not agree with e-learning, and (1%) agree and disagree Strongly In e-learning as shown in Figure (5).
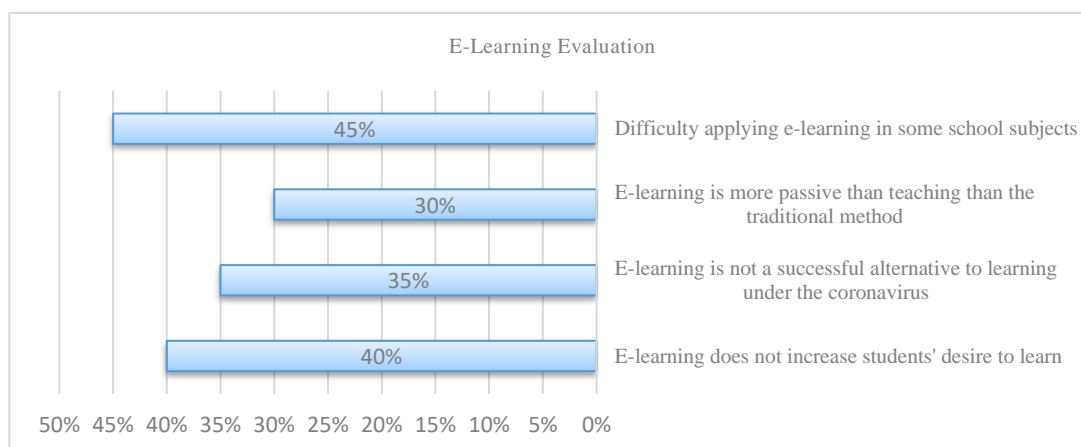

Figure.5 Percentage of students' perceptions regarding evaluation of e-learning implementation

This is related to the students 'reaction to the questionnaire, that is, 41% of students agreed that e-learning does not increase students' desire to learn,(35%) of the students agreed that e-learning is not a successful alternative to learning in light of the Coronavirus, (60%) agreed that it is difficult to apply e-learning in some academic subjects and (50%) of the students agreed that e-learning is more passive than teaching than the traditional method. Nowadays, every person should be able to handle information technology [15]. The ability to use technology will allow students to use information technology such as e learning.

● The second axis: In this part, we measured the difference in students 'performance in the test using the electronic teaching method and the traditional teaching method. Data were collected through the results available to students of the College of Pharmacy. We measured the students 'performance on their exams for the College of Pharmacy students at the University of Babylon. The number of students taking the exams reached more than 1,800 students for two years. The first group consists of (854) male and female students for the academic year (2018-2019). Teaching and examinations were conducted in the traditional way of teaching. The second group consists of (984) male and female students for the academic year (2019-2020). Teaching and examinations were conducted using the e-learning method as shown in the following table 1.

Table 1: Participating students for the year (2018-2019) & (2019-2020)

	2018-2019	NS	M	f	2019-2020	NS	m	f
1	1 stage	195	59	136	1 stage	245	86	159
2	2 stage	172	52	120	2 stage	205	59	146
3	3 stage	193	41	152	3 stage	187	59	128
4	4 stage	159	46	113	4 stage	194	42	152
5	5 stage	135	41	94	5 stage	153	45	108
	sum	854	239	615		984	291	693

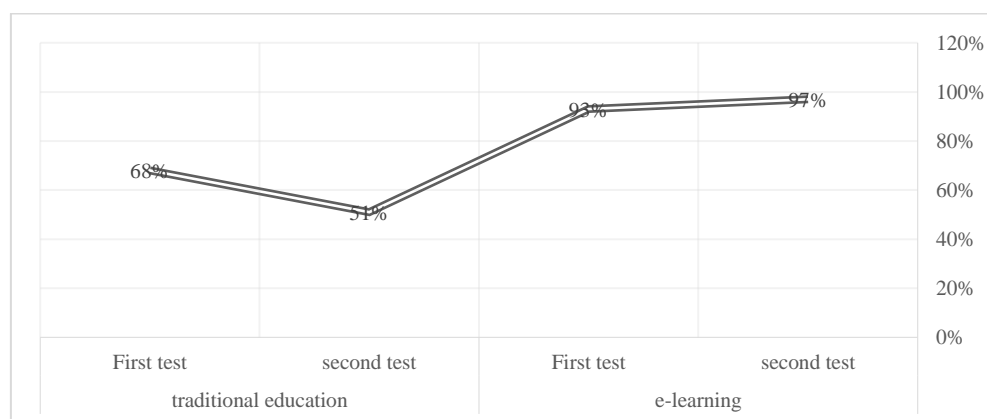## 6. The Effect of E-Learning on Students 'Results

Figure 6. The graph shows the difference between the students' outcomes in e-learning and traditional education

Through this graph Figure (6), we notice the percentage of difference between taking the test in the traditional way and the e-learning method. Where we notice in the year (2018-2019) that two exams were conducted for

students in the traditional way and the results of students in the first test (68%) and in the second test the results of students (51%), and the results showed that the success rate for students in the first year was (59.5%).

After the year (2019-2020), e-learning was used in the tests for the purpose of knowing the students' outcomes in the exams, as two tests were administered to the students and the students 'results were in the first test (93%) and in the second test (97%), meaning that the student's success rate using e-learning is equal to (95%) as shown in Figure (6).

Hence, we note the high success rate, and this Indicates E-effect learning's on success of Babylon University students, College of Pharmacy.

7. Conclusion

With the emergence of the Covid 19 virus, teaching in all Iraqi universities has become dependent on e learning to limit the spread of the epidemic.

Through the results of this research, it was found that e learning has a positive impact on the educational process and can be a successful alternative to the traditional educational process. e learning a need for good planning so that the e-learning tasks can be properly performed.

It is also possible to maintain interaction and communication and solve the minimum requirements of face-to-face meetings via e learning.

It is really important to improve learning by using e-learning in our learning practices. However, we need to be aware of the importance of planning a good Internet connection in order to be accessible to promote e learning.

Also, through this research, the results showed a significant improvement in the students' outcomes with the use of electronic learning in the tests.

With the emergence of the Covid-19 pandemic, Iraqi universities have revitalized e-learning and has proven successful and effective.

Appendices

In order to know the impact of e-learning on the students' level, a set of statistical equations was used to arrive at the results

year	test 1	test2	ST	SE	AV	M	ST	MD
TD	68%	51%	581	436	509	509	103	20%
EL	93%	97%	915	955	935	935	28	3%

NOMENCLATURES
Acronyms
LCMS   Learning Content Management Systems
ICT   information of communication technology
LMS   Learning Management Systems
DL   Distance Learning
TD   Traditional education
EL   e learning
AV   average
M   Median
ST   standard deviation
MD   Measures of dispersion
NS   The number of students
SF   The number of passing the traditional method in the tests
SE   The number of students who passed the tests using e-learning

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