Research Paper

E-learning and its Applicability in Libya: Case Study in Al-Jafara University

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Abstract
The tremendous development in information technology, network and communication systems has led to a clear change in all fields, especially in the field of education. Educational institutions are no longer the only educational environment to provide teaching and learning services, with the emergence of the term E-Learning. E-learning is one of the most important applications of communication technology in the field of education, and the term e-learning has emerged due to the learners' need for social interaction. This study aimed to reveal the importance of e-learning from the point of view of the faculty members at the University of Al-Jafara (2021-2022), and the necessary data was collected using a questionnaire whose stability coefficient was (0.804) and was applied to the study sample. Work on how to implement e-learning, and help in getting rid of all the obstacles that prevent the benefit from the importance of e-learning, and the need to combine traditional education with e-education in higher education institutions in the future because of its importance in raising the status of education.
Keywords: *E-Learning, Al-Jafara University, faculty members.*

I. Introduction

E-learning is one of the means that support the educational process and transforms it from the phase of indoctrination to the phase of creativity, interaction and skill development, and it combines all electronic forms of teaching and learning, as it uses the latest methods in the fields of education, publishing and entertainment by adopting computers, their storage media and their networks (Salloum and Shaalan, 2019). Bezhovski and Poorani, (2016) state that the rapid changes in the field of technology have led to the emergence of new patterns of learning and teaching, which further consolidated the concept of individual or self-education; Where the learner continues his learning according to his energy, ability, speed of learning and according to his previous experience and skills (Noesgaard and Ørngreen, 2015). E-learning is one of these developed patterns of so-called distance learning in general and computer-based education in particular. Where e-learning relies mainly on computers and networks in the transfer of knowledge and skills, and its applications include web-based learning, computer-based learning, virtual classrooms, and digital cooperation. The content of the lessons are provided via the Internet, audio tapes, video and CDs (Husam et al., 2021; Elkaseh et al., 2015; Ramadan et al., 2019).

E-learning is a type of learning that has been talked about for a long time and the controversy over the need to integrate it into the educational process, but it has become an urgent necessity for the advancement of education (Abbasi et al., 2020). (Artificial Intelligence), as well as the information technology revolution that stormed the classroom and became an important part of it (Hoerunnisa et al., 2019). This study came to measure the effectiveness of e-learning from the point of view of the faculty members at Al-Jafara University and the importance of applying e-learning as part of the educational process.

The Problem of the Study

E-learning has an essential role in the success of the educational process, in light of the great technological development and with the spread of modern means of communication from a computer, the Internet, and multiple media, such as audio, image, and video, which are means that allowed a large number of people to receive education with ease and ease. With less time and effort. Al-Jafara University did not follow e-learning or distance learning in advance, in addition to the weak infrastructure of e-learning, which requires the adoption of specific software and the provision of internet networks, smartphones and computers for each student. e-learning within the educational process, the effectiveness of e-learning, the extent to which it achieves the objectives of education, its ability to meet the needs of students, and the creation of an interactive environment for learning. Therefore, this study came to overcome the difficulties facing the educational process.

Study Questions

This study seeks to answer the following questions:
1. "What is the level of making e-learning a part of the educational process at Al-Jafara University?"
2. "What is the level of obstacles to the use of e-learning at Al-Jafara University?"
3. "What is the level of interaction of faculty members with e-learning at Al-Jafara University?"

The Objective of the Study

This study aims to reveal the effectiveness of e-learning from the point of view of the faculty members at the University of Al-Jafara. This study also aims to measure the level of making e-learning a part of the educational process and to reveal the level of obstacles to the use of e-learning at the University of Al-Jafara.

The Importance of Studying

The importance of this study can be summarized as follows:

The results of this study benefit the University of Al-Jafara and the institutions of higher education in Libya in improving the performance of the education system at this important stage for building our dear country, developing human cadres, material capabilities and trends in selecting the educational patterns used and setting plans to raise the efficiency of the teacher during the performance of his duty. The study tool is in measuring the effectiveness of the e-learning system in higher education institutions. The research derives its importance as it is contemporary with educational technology and engaging in e-learning programs. The results of this study can be used to improve and develop the educational process. Educational training through in-service faculty training, overcoming weaknesses and supporting strengths.

Limitations of the Study

The results of this study can be generalized in light of the following limitations:

Human limits: This study was applied to (55) faculty members.

Spatial limits: This study was applied at the University of Al-Jafara.

Time limits: This study was applied in the second semester of the academic year (2021-2022).

Objective limits: This study dealt with the importance of e-learning and the effectiveness of distance e-learning at the University of Al-Jafara and used a questionnaire characterized by honesty and a stability coefficient (0.804), and the generalization of the results of this study depends on the seriousness of the response of the study sample to the paragraphs of the questionnaire.

II. Study Methodology

This study relied in its procedures on the descriptive analytical approach, which depends on collecting data from the study sample of faculty members using the questionnaire prepared for this study, and studying and analyzing the responses of faculty members. This study was applied to a sample of (55) faculty members from Al-Jafara University, where the study sample was randomly selected from the study population consisting of (100) faculty members at Al-Jafara University in the second semester of 2021-2022 from various disciplines. in the University. To achieve the objectives of this study, the researchers built a questionnaire consisting of (26) items, and it was directed to faculty members at the University of Al-Jafara who taught during this semester. A paragraph corresponding to a five-fold scale (strongly agree = 5, agree = 4, neutral = 3, disagree = 2, strongly disagree = 1) The paragraphs of the questionnaire were distributed in the following areas:
- Making e-learning a part of the educational process: This field included (9) paragraphs.
- Obstacles to e-learning: This field included (7) paragraphs.
- The interaction of faculty members with e-learning: this field included (10) paragraphs.

The questionnaire was presented in its initial form to five arbitrators with expertise and competence in the field of scientific research and teaching at both the University of Tripoli and the University of Al-Zawiya, to arbitrate the paragraphs of the questionnaire, and knowing the extent of its clarity and comprehensiveness of all aspects of e-learning and making e-learning part of the educational process from the point of view of members The

faculty at Al-Jafara University, as well as the appropriateness of the formulation of the paragraphs, and the expression of opinion on the method of correcting the questionnaire. The opinions of the arbitrators focused on the linguistic reformulation of some of the paragraphs, and the researchers modified the questionnaire in light of the opinions of the arbitrators to make the research appear in the best form. The questionnaire was applied electronically to an exploratory sample other than the study sample consisting of (20) members of the teaching staff at Al-Jafara University, and the Cronbach's Alpha test was used to test the stability of the questionnaire, and the stability rate of the resolution was (0.804).

III. The Result

Data were collected using the study tool, a questionnaire, and then unloaded into an Excel file, organized and entered into the statistical program (SPSS) to analyze the study data after coding the answers. Where descriptive statistics were used to calculate the arithmetic means and standard deviations.

This value is used to determine the length of the staging period as follows:

1- 2.33 weak

2.34–3.67 Medium

3.68–5.00 large

The results were presented and for the analysis of this questionnaire, arithmetic means and standard deviations were calculated, and the results were as follows:

The results of the first question: "What is the level of making e-learning a part of the educational process at Al-Jafara University?"

Table 1: Arithmetic averages and standard deviations of the paragraphs of the field "making e-learning a part of the educational process".

	The Questions	Participants	Mean	Standard Deviation	
1	There is the idea of moving from traditional education to e-learning.	55	3.04	1.39	Medium
2	I am satisfied with using the e-learning system as an alternative to the traditional education system.	55	2.83	1.44	Medium
3	The university provides indicative electronic training courses that explain the mechanism of using the e-learning system for faculty members.	55	2.64	1.39	Medium
4	Faculty members possess sufficient skills to design and produce effective electronic content.	55	2.62	1.41	Medium
5	The e-learning system provides direct communication between members of the educational system (administration, faculty members, and students).	55	2.28	1.34	Weak
6	The university provides appropriate technical support to facilitate the use of technology in educational material.	55	2.26	1.35	Weak
7	E-learning technology effectively contributes to the continuity and success of the educational process.	55	2.18	1.33	Weak
8	The university administration is constantly evaluating the mechanism of distance teaching.	55	2.08	1.24	Weak
9	Faculty members possess sufficient skills to design and produce effective electronic content.	55	2.07	1.23	Weak

It is evident from Table 1 that the paragraphs on the field of "making e-learning a part of the educational process ranged between a weak and a medium degree. A standard deviation of (1.39) at a medium degree, and the paragraph about the university administration constantly evaluating the mechanism of distance teaching and the paragraph about the faculty members having sufficient skills to design and produce effective electronic content with an arithmetic mean of (2.08) and a standard deviation of (1.24) with a weak degree, and in The last rank with an arithmetic mean of (2.07) and a standard deviation of (1.23) with a weak degree.

The results of the second question: "What is the level of obstacles to the use of e-learning at Al-Jafara University"?

Whereas, the researchers extracted the arithmetic averages and standard deviations of the field of obstacles to the use of e-learning at the University of Al-Jafara as follows:

Table 2: Arithmetic averages and standard deviations of the paragraphs of the second field "E-learning Obstacles"

	The Questions	Participants	Mean	Standard Deviation	
1	The power is cut off while you are in the learning process.	55	3.96	0.94	Large
2	There is difficulty in direct communication between faculty members and students (where ideas and opinions can be exchanged through personal confrontation).	55	3.94	0.93	Large
3	The student faces problems and obstacles when studying the material electronically.	55	3.93	0.92	Large
4	Students' interaction with e-learning and courses was affected by difficult or special living conditions.	55	3.92	0.91	Large
5	All faculty members have sufficient and appropriate experience and skills to use computers and the Internet.	55	3.30	1.09	Medium
6	The internet speed is suitable and I can give any lesson without any interruption.	55	3.20	1.47	Medium
7	Training courses were held and faculty members were prepared by the Training Department for the mechanism of using e-learning.	55	1.74	1.04	Medium

It is evident from Table 2 that the paragraphs on the field of "E-learning Obstacles" ranged from a medium degree to a large degree. The paragraph "A power outage occurs while you are in the educational process" came in first place with an arithmetic mean of (3.96) and a standard deviation of (0.94) Significantly, the paragraph, "training courses and the preparation of faculty members by the Training Department for the mechanism of using e-learning," came in the last rank with a mean of (1.74) and a standard deviation of (1.04) at a medium degree.

The results of the third question: "What is the level of interaction of faculty members with e-learning at Al-Jafara University?"

The researchers extracted the arithmetic averages and standard deviations of the field of interaction of faculty members with e-learning at the University of Al-Jafara as follows:

Table 3: Arithmetic averages and standard deviations of the paragraphs of the third field "Faculty members' interaction with e-learning"

	The Questions	Participants	Mean	Standard Deviation	
1	I think that remote tests are an appropriate way to assess students' achievement.	55	3.74	1.12	Large
2	E-learning is more time efficient than traditional education.	55	3.42	1.32	Medium
3	The evaluation methods used are appropriate and carried out in a variety of ways.	55	2.60	1.48	Medium
4	The student is continuously evaluated during the distance education process.	55	1.90	1.28	Weak
5	The educational material is attached to the students easily and conveniently.	55	1.78	1.21	Weak
6	The faculty member answers easily the students' inquiries about the attached scientific material.	55	1.76	1.13	Weak
7	The faculty member is committed to the e-learning system based on the university's plan.	55	1.48	0.64	Weak
8	The educational content includes exercises and assignments to aid learning.	55	1.46	0.93	Weak

Table 3 shows that the paragraphs of the field of "faculty members' interaction with e-learning at Al-Jafara University" ranged between a weak degree, a large degree, and a medium degree. arithmetic of (3.74) with a standard deviation of (1.12) to a large degree, and where the paragraph "e-learning is more effective in terms of using time than traditional education" with arithmetic mean (3.42) and standard deviation (1.32) to a moderate degree, and the paragraph "includes educational content on exercises and assignments that help to learn" came in the last rank with an arithmetic mean of (1.46) and a standard deviation of (0.93) with a weak degree.

IV. Discussing the Results and Recommendations

The results were discussed in light of the study questions sequence as follows:

These results are attributed to the fact that the University of Al-Jafara is one of the universities that adopt face-to-face learning, and it did not plan to adopt e-learning, and this reduces its experience in this field and makes this type of education a new one that needs the practice to improve its level. This result is also because e-learning requires the existence of an infrastructure of computers, phones, and software that is tested and approved in education, and the purchase of special programs for the university to ensure the participation of the largest number of students in e-learning, and because e-learning has become important in being part of the educational process. Also, e-learning requires concerted government and private efforts. In addition, the faculty

members at Al-Jafara University have not received sufficient training to lead the e-learning process in crises. It is possible to benefit from the system and the skills acquired by faculty members, students, and the university administration if this technology is used, or by increasing the effectiveness of group teaching or increasing student independence and acquiring new skills.

The results of the first question: "What is the level of making e-learning a part of the educational process at Al-Jafara University?"

The results of this question indicated the transition from traditional to electronic education, to a moderate and weak degree, and the use of e-learning at Al-Jafara University. This result is attributed to the lack of pre-approved educational software at the university, which made students progress in theoretical aspects, while distance learning is difficult in practical aspects. This result is also because the educational staff at the university is trained in face-to-face education and is not trained in the use of e-learning, while e-learning requires that faculty members do not possess sufficient skills to design and produce effective electronic content. The faculty members at Al-Jafara University are trained in it, which made it difficult to understand the messages and instructions from the first time, and some faculty members are not trained to deal with computers. This result is because the internet speed is not suitable in some areas, and faculty members should be urged to use e-learning as part of the educational process.

The results of the second question: What is the level of obstacles to the use of e-learning at Al-Jafara University?

The results of this question indicated that there are medium and weak obstacles that impede the use of e-learning at Al-Jafara University.

This result is attributed to the lack of pre-approved educational software at the university, which made students progress in theoretical aspects, while distance learning is difficult in practical aspects. This result is also attributed to the fact that the educational staff at Al-Jafara University is trained in face-to-face education, while e-learning requires distance communication and computer competencies, which are competencies that faculty members at Al-Jafara University did not train in, which created difficulties in understanding messages and instructions from the beginning. Once, some faculty members are not trained in dealing with computers and smartphones. This result is because the internet speed is not suitable in some areas, which has created uneven reception and exchange of information, in addition to frequent power outages. This result is attributed to the fact that e-learning is a novelty, and every newcomer faces difficulty, in the beginning, then the experience comes later to remove many obstacles and adapt e-learning to suit the conditions of the learning environment at the university.

The results of the third question: "What is the level of interaction of faculty members with   e-learning at Al-Jafara University?"

The results of this question indicated that the field of interaction of faculty members with   e-learning was moderate and that their interaction ranged between average and weak in some   e-learning activities. The results of this question revealed that the level of interaction of faculty members with e-learning and that interaction of faculty members with e-learning at Al Jafara University School was moderate and weak in many activities. This result is due to the weak interaction of faculty members at Al-Jafara University with evaluation activities, as faculty members do not have specialized programs to control students' implementation of tests. Also, the interaction of faculty members at Al-Jafara University is governed by the continuous availability of the Internet service, which is an intermittent service that makes faculty members stop interacting with students in the event of a service interruption or limits their ability to respond easily to students' inquiries about the educational material. The faculty at the University of   Al-Jafara to attach educational materials is limited due to the low levels of uploading files in the Internet services. This result is also attributed to the fact that the work on e-learning by the faculty members at Al-Jafara University is not used, which made them send focused and deep information, avoiding details, exercises, and assignments, which made the educational materials sometimes dry and boring for students.

V.   Recommendations

1- Standing by all means on the contemporary global trends in the developed countries in the field of preparing and training a faculty member and benefiting from them in proportion to the conditions and capabilities of the education system in our beloved country (Libya).

2- The necessity of planning the preparation of the faculty member, both quantitatively and qualitatively, on sound scientific bases, starting from drawing the strategy for its preparation to descriptive analysis and to the level of the preparation process itself in the scientific and cultural aspects.

3- Moving from traditional education to e-learning in preparing a faculty member, applying modern technology through the use of specialists, software, and program designers to implement the scientific material and transfer it on the Internet and provide it in the form of audio and visual media, and that the skills of using technology and dealing with this software are available to each student and a faculty member alike.

4- Continuous development and human resource development, provided that study plans or courses are reviewed once every two years and the development and determination of the content of faculty member preparation programs.

5- Developing scientific research in the field of faculty member preparation and training, encouraging it and increasing its funding, and that faculty member training institutions adopt the results of scientific research and studies as a basis for developing and improving their practices and activities, and that these research and studies are one of the basic components of the faculty preparation program.

7- Investing in the positive directives for students and faculty members at the university towards e-learning, developing plans and programs to benefit from these directives, and giving training courses in the field of e-learning to both students and faculty members.

8- Training and encouraging faculty members to communicate with students through electronic pages and e-mail.

9- Emphasizing the need for educational institutions to pay attention to the introduction of   e-learning at the university level, and to spread e-culture among students to achieve the greatest degree of interaction with this type of education.

10- Provide an appropriate educational structure for the application of e-learning at the university and remove all human, material and technical obstacles that prevent its spread in the educational system in various stages and fields.

11- The Ministry of Higher Education and Scientific Research should conduct more studies and research to find out the effectiveness of e-learning in the presence of harsh conditions and hold conferences and seminars for the development and advancement of e-learning.

12- The need for the university to offer materials that give the student the skills and techniques of e-learning to facilitate the process of interaction and benefit students with the educational materials presented electronically.

13- The university must conduct more studies and research on how to prepare faculty members in the presence of harsh conditions and hold conferences and seminars for the development and advancement of education because the basis for the advancement of the country is education and a faculty member because of its important role, and to catch up with developed countries and look to the future It has become clear that digital education has become a strategic choice for every country that consciously appreciates the importance of e-learning of great importance in the prosperity and development of society, and an indispensable alternative, but also for building a new generation capable of benefiting, and possessing the knowledge and skills that enable it to engage in Tomorrow's jobs. In the end, we see that the interest in raising the efficiency of the faculty member and the use of modern technology and attention to it leads to reaching an educated and successful generation capable of keeping pace with progress and development and can achieve its goals if the conditions are met for its success so that we can formulate appropriate scientific policies to deal with this future.

VI.   Conclusion

The effectiveness of the faculty members, their characteristics, skills and competence has not stopped since the existence of education, to improve, develop and renew the teaching-learning process. Therefore, many countries of the world have embarked on developing and renewing the educational process, focusing in particular on the process of continuous development of education to reach good outcomes. The majority of educational institutions seek to provide and create a suitable environment for learning because providing such an environment is in the interest of both the student and the faculty member, but before that happens, the faculty member must be well prepared in line with the rapid global changes and developments in all fields.

The teaching process is a complex activity that involves many dynamically interacting variables. There are variables specific to the faculty member, the learner, the subject, the method of teaching, and the educational conditions or conditions. Therefore, it is not possible to determine or define the effectiveness of the faculty member in the light of a simple set of features or conditions. Personal characteristics, or in the light of a set of academic procedures that determine the setting of specific standards to raise the efficiency and training of a faculty member. These current challenges facing the educational process impose on it a change of its philosophy and its classic tools, so that its mechanisms are commensurate with the required ones. In terms of contents, methods and educational means, to fit with the requirements of educational technology, and try to take advantage of the multiple intelligences of students, develop their creativity, and teach them a set of life skills that help them provide better opportunities in life. In line with the requirements of the current technology and information era. Hence, the duty of faculty members to keep pace with development and modern technology and to confront the problems posed by scientific and cultural progress imposed by modern technology for education, and this means that scientific, cultural and technological illiteracy must be combated as an essential step to achieve human development, and to make education outputs in line with the requirements of the evolving labor market.

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