RESEARCH ARTICLE

# Evaluating E-learning implementation at Oran Graduate school of Economics ESEO


| | |
|---|---|
| **Boutiba Mokhtaria** | MCA at Oran Graduate School of Economics ESEO<br>LAMAPE Research Laboratory (ESEO)<br>Algeria<br>Email: mokhtaria .boutiba@ese-oran .dz |
| **Bendoukha Fatima** | MCB at Oran Graduate School of Economics ESEO<br>LAMAPE Research Laboratory (ESEO)<br>Algeria<br>Email: bendoukhaf@yahoo.fr |
| **Meliani Khaled** | MCB at SALHI Ahmed Naama University Center<br>LAMAPE Research Laboratory (ESEO)<br>E-mail: meliani.khaled@cuniv-naama.dz<br>Algeria |



| | |
|---|---|
| **Doi Serial** | https://doi.org/10.56334/sei/8.10.68 |
| **Keywords** | Conditions- Effectiveness- E-learning –Oran Graduate School of Economics – Motivation. |



**Abstract**

The integration of E-learning in Algerian higher education institutions has become a fundamental means to gain information as well as to generate knowledge. As all the Algerian universities, the Graduate School of Economics of Oran ESEO has had the initiative to applying this innovative learning methodology through the employment of well-established digital learning platforms and applications.

The aim of this study is to detect whether there are favourable educational conditions at the level of Oran Graduate School of Economics ESEO to ensure the effectiveness of E-learning, and to identify the obstacles facing students and teachers.

A quantitative study has been deployed by using questionnaires administrated digitally to students and teachers so as to elicit data on the availability of suitable conditions for e-learning and its leading role in improving students' motivation and academic achievement.

The results have revealed that the pedagogic conditions impact directly the effectiveness of E-learning to ensure successful learning. Hence, the investigation has put forward several recommendations and suggestions to access knowledge through electronic technologies and media.



**Citation.** Boutiba M., Bendoukha F., Meliani Kh. (2025). Evaluating E-learning implementation at Oran Graduate school of Economics ESEO. *Science, Education and Innovations in the Context of Modern Problems, 8*(10), 764–773. https://doi.org/10.56352/sei/8.10.68

**Issue**: https://imcra-az.org/archive/384-science-education-and-innovations-in-the-context-of-modern-problems-issue-10-vol-8-2025.html





| Received: 02.01.2025 | Accepted: 15.06.2025 | Published: 08.08.2025 (available online) |
|---|---|---|


## 1. Introduction

Teaching and learning methodologies within the Algerian universities were less developed and mainly face to face. After the spread of Covid-19, most of higher education departments have no to adopt new pedagogies and options in teaching-learning process. Moreover, to keep the wheel of education turning, shifting toE-learning was a must. (Hichem, 2021)

Accordingly, « *E learning has a well-established role in higher education, and it has been found have a great influence on increasing the effectiveness of learning, It is a new asset in this modern era, and it's getting popular day by day among high*

*education students in Algeria, because of the increasing availability of Various means and technologies of communication devices. »*(Ben Herzellah, 2021, p. 74)

Indeed, teachers and students at the Oran Higher School of Economics have been able to access many free and smart online tools such as online teaching/learning applications (Zoom and Meet) and a digital learning platform and various dissemination tools.

**Research Problem:**

In order to try and answer the following question:

"*Are there favourable conditions to ensure the effectiveness of E-learning at OranGraduate School of Economics?"*

*W*e have chosen a descriptive quantitative study, by administrating two online questionnaires: the first is intended for students and the second for ESEO teachers. Purposefully, the inquiry can be summarized in the following questions:

- Are there suitable E-learning conditions at ESEO?
- Is the implementing of E-learning atESEO effective?

Taking into account the questions raised by the problem, the following hypothesescould be created:

*H1: The learning /teaching conditions favour E-learning at ESEO.*

*H2: The implementation of E-learning at ESEO is effectiveto increase the motivation of students.*

**Research Objectives:**

The main objectives are:

- Presentation of the advantages and limits of E-learning in ESEO;
- Determine if E-learning is an effective instructing method that contributes to the success of the learning activity.

**Research Methodology**: In order to respond to our problem and to test our hypotheses, we will adopt the following approach:Our scientific approach constitutes a two-part approach. The first part concerns the theoretical aspect, and the second is practical.

We have selected a descriptive quantitative study through two online questionnaires on May 2022: The first part was devoted to 100 students (First and second cycle) from ESEO and the second part was dedicated to 43 teachers (differents specialities) at the same school. As already mentioned the main objective of our study is to investigate whether ESEO provides fortunate conditions to ensure the effectiveness of E-learning; in addition to identify the difficulties encountered by ESEO students and teachers during this process of teaching/learning.Once the online questionnaire was filled out, we used the SPSS/V23 software for data collection and descriptive analysis.

**State of the Art :**

- (Guessouri, 2023) exposed in the article « The Algerian University's Experience in E-learning in the Midst of the COVID-19 Pandemic Crisis » the most important laws and regulations adopted by the Ministry to lessen the effects of the global crisis on the level of scientific and pedagogical university education and to evaluate the Algerian experience in teaching and learning at the university level.
- (Ben Herzellah, 2021) exposed in the article « E-learning at the Algerian University: Reality and challenges » the reasons for the delay of the success of E-learning in Algeria and to clarify the great efforts exerted by the Ministry of Higher Education to ensure the success of E-learning in the belief that E-learning is the future model of education.
- (Hichem, 2021) exposed in the article « Innovative Pedagogies in the Pandemic Era and Beyond » the E-learning experience at University of Ahmed Draia as a model. The latter has proven its success in the use of technology in the educational process; it has been able to shift from on-site to online education.

2. **E-learning Definition**

Technology has been the main source for the development of the concept of e-learning, that is to say, using technology to provide solutions to improve knowledge and performance.
"*E-learning has been defined through its technical and technological components that have entered the educational process, changing its features and leading to the emergence of new types of education go under e-learning."* (Bellatreche & Aloutti, 2020, p. 269)
The development of knowledge and skills through the use of information and communication technologies (ICT) to support interactions for learning-interactions with content, with learning activities and tools, and with other people . (Rossiter , 2009)

All forms of electronic supported learning and teaching which are procedural in character and aim to effect the construction of knowledge with reference to individual experience practice and knowledge of the learner. (Tavangarian, Leypold, Nölting, & Röse, 2004)
*" E-learning is the appropriate application of the Internet to support the delivery of learning, skills and knowledge "* (Ben Herzellah, 2021, p. 76)
*"E-learning is based on three fundamental criteria:*

- *E-learning is networked, which makes it capable of instant updating, storage/retrieval, distribution and sharing of instruction or information…*
- *It is delivered to the end-user via a computer using standard Internet technology…*
- *It focuses on the broadest view of learning solutions that go beyond the traditional paradigms of training …*". (ROSENBERG & Marc , 2001, pp. 28-29)

3. **The benefits of E-learning in Algerian higher education:**

*"In Algeria, the integration of ICT at the level of the university is relatively recent. Therefore, there's certain awkwardness in handling this new issue. The double problem which emerges is: First, the training of trainers as to their aptitude to handle the new technologies and adopt the adequate pedagogies. Second, the question of the readiness of the Algerian learners: to what extent are they ready 'and able to adopt new learning strategies involving the use of computer and internet?* "(Djoudi, 2020, p. 4)

The benefits of e-learning can be summarized as follows:

- **Accessibility:** The most important benefit of opting for e-learning is accessibility. Today, thanks to the multiple apps and platforms available, there are plenty of courses you can enroll in. Unlike traditional methods, there is no longer a need to go through the entire application process, fill out the forms and wait for the results to find out if you have been admitted to the course or not.
- **E-learning allows rapid dissemination of lessons:** Unlike traditional teaching methods, E-learning modules allow for rapid delivery. This is because each course is concise, strictly covers a particular topic, and is completed in a single session. This eliminates time spent on individual student questioning. Additionally, learners can set and set their learning pace by watching and reviewing lessons, unlike listening to a lecture in a classroom..
- **Cost Savings**: Online learning is cost effective in various ways considering that travel costs, study materials, course fees, accommodation, etc. are factors that are not taken into account. Even the cost of additional coaching and trainers is reduced, representing a considerable saving in an otherwise traditional mode of learning.
- **Learn at your own pace:** Self-paced learning is defined as a specific method of learning in which the learner is able to control the amount of material they consume as well as the length of time they need to learn new information properly.

4. **E-learning Obstacles in Algerian universities:** (Guessouri, 2023)

- Poor infrastructure, human resources, loaves, devices and advanced pedagogical means and the march to the higher education sector in the light of e-learning ;
- The lack of applications and platforms dedicated to virtual education and poor students training in e-learning and experience showed the low level of the university student, and his inability to browse and participate in various virtual universities and websites to complete his education ;
- The high prices of modern means and the cost of regular maintenance of technological means and the speed of the development of technology ;
- The lack of a qualified and specialized technical hand, which makes the reliance on the experience of the near-total and requires large financial expenses and high training of human resources on it ;
- Resistance and rejection by some teachers of this modern technology and adherence to the old teaching methods ;

- The lack of information security that threatens to penetrate the university's information systems and smuggling, the sabotage of the electronic pedagogical props and the penetration of the content of the scientific subject and the examinations.

## 5. Implementing E-Learning at OranGraduate School of Economics

Within the period of the COVID-19 pandemic, Algerian universities had to face a completely exceptional situation to do with this exceptional and difficult situation. As matter of a fact ,the use of e-learning represented the unique solution to guarantee the sustainability of the 2019-2020 academic year. In order to prevent the spread of the virus, the Ministry of Higher Education and Scientific Research (MESRS) decreed the total closure of the majority of universities according to a note submitted by the State. As a result, the academic institutions have been forced to suspend all the educational and supervision activities in the interest of students and to initiate confinement.

On April 2, 2020, the MESRS demanded all heads of universities and colleges to provide online courses by applying the online learning and teaching methodology. This requires a lot of effort, including the adoption of new information and communication technologies to ensure quality and positive results of online learning and teaching.

Consequently, after the outbreak of the Covid 19 epidemic, the Ministry of Higher Education and Scientific Research in Algeria issued instructions (health protocol) adapted to the exceptional situation that the country is going through stipulates that "Learning and Online teaching is a recognized teaching method in higher education courses for students.

Subsequently, most higher education establishments, including the higher school of economics in Oran, switched to the E-learning and hybrid system. The first measure taken by the higher school is perhaps to maintain and strengthen distance in making use of this strategy. The health situation has imposed a paradigm shift in the exercise and organization of the educational act: (ESEO, 2020)

- The adoption of a mixed teaching system for the modules of the fundamental and methodological units of the second cycle.
- The implementation of a hybrid-type pedagogy for the subjects of the economic block and the mathematics block for the preparatory classes.
- Adoption of distance learning (EAD) for the other modules at different levels.
- The teaching of the fundamental and methodological units and of the modules of the block of economics and mathematics will be done in three waves.
- The number of weeks per face-to-face wave is 4 weeks.
- The 3 waves are distributed as follows: Wave 1: students of the 1st year of preparatory classes, Wave 2: students of the 2nd year of preparatory classes and students of the 3rd year of the second cycle, Wave 3: students of the 1st year and the 2nd year of the second cycle.(ESEO, 2020)

Furthermore, with the unpredictable arrival of Covid-19, the shift to E-learning has been vital and evident. School officials chose the Moodle platform (elearning.ese-oran.dz) for several reasons to ensure educational continuity during the academic year. The latter is used to host online courses, conferences, course materials from teachers, notes from students of different cycles. The Oran Higher School of Economics also has a website, which displays all the educational and scientific research activities that take place within the school (national and international conferences, national and international colloquia, seminars, study days, professional days, announcements, etc.). (Manal, 2020)

In addition, the college has opted for the use of videoconferencing platforms (Google Meet, Zoom Meet, etc.). Teachers have taken the incentive to use these videoconferencing applications to facilitate synchronous lessons with students, which allows them to ask their questions, exchange with their colleagues and be up to date with their teachers. And to facilitate the dissemination of lessons and be closer to students, school officials have created departmental 'Facebook' pages and upload recorded live lesson sessions to the school's YouTube channel for students can review the sessions held. These can be reinforced by course presentations in PPT format with audio recording. (ESEO, 2020)

## 6. Research Results :

### 6.1 Analysis and Discussion of the Results of Students Survey

To address our problem, we will begin with the descriptive analysis of the first questionnaire, which is intended for students.

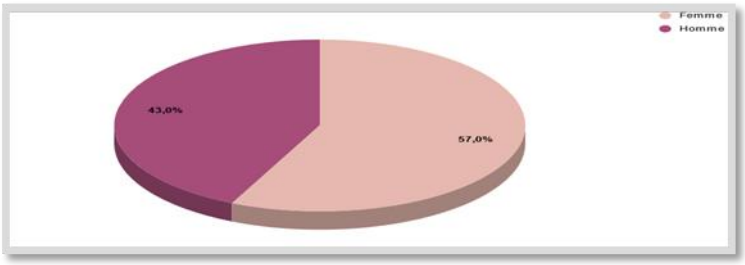


**Figure 01: Presentation of the gender of the students.**
**Source: Generated by SPSS software.**

The results show that 57% of the responses to our survey were from Female and 43% from Male out of 100 students.With the highest proportion of 60% of students from the third year of the second cycle, 24% of students from the second year of the second cycle, the lowest proportion being 2% for students from the first year of the first cycle, 6% for students from the second year of the first cycle, and 8% for students from the first year of the second cycle.

**Table 01: Are E- learning conditions favourable for students ?**

| | Frequency | Percentage |
|---|---|---|
| Yes | 36 | 36,0% |
| No | 64 | 64,0% |
| **Total** | 100 | 100,0% |

**Source: Generated by SPSS software.**

The result of this part of study shows that 36% of students said they had favourable online learning conditions during confinement.
While 64% of students faced the following obstacles:

- The teachers rate in explaining lessons on Google Meet and the inability to record those lessons ;
- Some students are not equipped with all the tools they might need, such as computers, smartphones and internet access ;
- Student demotivation and lack of interaction with teachers (some teachers do not answer students' questions) ;
- Difficulty of the technical modules (71% of students find it more complicated to understand the technical modules);
- Computing teachers Incompetence ;
- Defavorable learning environment.

Most importantly, the results show that 19% of the students were satisfied about e-learning, while 31% of them are not satisfied with the impact of e-learning on their academic results of their academic results during the COVID-19 pandemic.

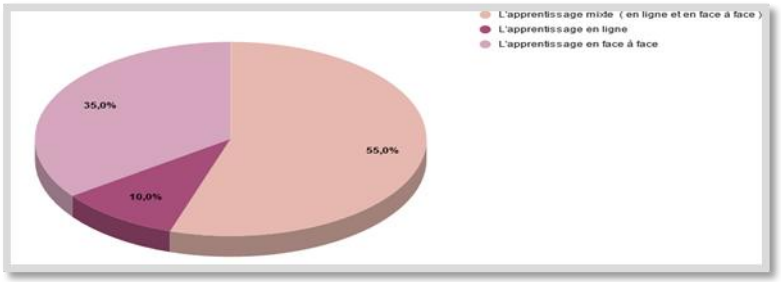


**Figure 02: Preferred Learning Methods by Students.**
**Source: Generated by SPSS software.**

From the graph, we identify the proportion of students who respond on their preference when it comes to the type of learning they want after the coivd-19 pandemic. We find that 35% of respondents prefer the face-to-face learning method, while 55% prefer blended learning (face-to-face and E-learning). Another 10% prefer fully online learning.

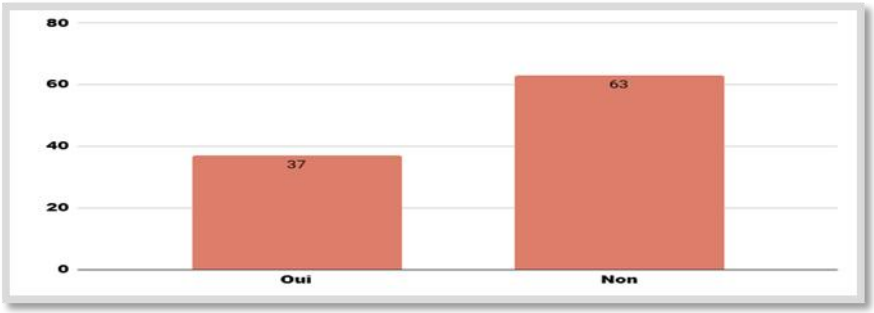


**Figure 03: The Effectiveness of E-learning**
**Source: Generated by SPSS software.**

The result above shows that 63% of students say the e- learning methodology is not effective, while 37% find it rather effective.

**Table 02: The impact of e-learning on students' academic results**

| | Frequency | Percentage |
|---|---|---|
| Strictlydisagree | 10 | 10% |
| Disagree | 21 | 21% |
| Neutral | 50 | 50% |
| Agree | 16 | 16% |
| Strictlyagree | 3 | 3% |
| **Total** | 100 | 100% |

**Source: Generated by SPSS software.**

The results show that 16% of students were rather satisfied with the impact of E-learning during the pandemic on their academic results, while 21% of them stated that they were somewhat satisfied. 10% of students were not satisfied at all, 50% were neutral, and 3% of them were very satisfied with their academic results during the COVID-19 pandemic.

According to the results, 7% of students strictly disagree that e-learning does not motivate students, while 39% agree with this idea. However, 30% are neutral, 20% disagree, and 4% of them strictly agree.

**Table 03: E- learning motivates students.**

| | Frequency | Percentage |
|---|---|---|
| Strictlydisagree | 4 | 4,0% |
| Disagree | 39 | 39,0% |
| Neutral | 30 | 30.0% |
| Agree | 20 | 20,0% |
| Strictlyagree | 7 | 7,0% |
| **Total** | 100 | 100,0% |

**Source: Generated by SPSS software.**

The survey of the first questionnaire was carried out among students of the Graduate School of Economics of Oran for the purpose of determining whether there are conducive learning conditions at the level of the ESE of Oran which allow ensure the effectiveness of e-learning.

- ❖ E-learning is related to several factors, among them there are computer skills and connection quality. 78% of students confirmed that they have moderate computer skills, which offers the possibility of taking online training.
- ❖ 31% of respondents encounter problems when using the school platform, among these problems we find the poor quality of the internet connection, difficulties in downloading and viewing or re-viewing lessons. Moreover the impossibilityto have access to the platform.
- ❖ During the lockdown, 64% of students said they have adverse and disapproving learning conditions and they faced several obstacles and challenges, including: difficulty of understanding technical modules, internet connection problems, technical problems ,and lack of face-to-face contact with them.
- ❖ Based on the results obtained, it seems that the majority of learners agree on the fact that learning promotes the development of computer skills and 25% of them confirm that e-learning does not allow them to manage their time well.
- ❖ The results reveal a preference of 78% of students for face-to-face exams and this justifies that there are other factors that negatively influence the preference of E-learning.

### 6.2 Discussion and Analysis of the Teachers Survey:

**Table 04: Presentation of the gender of teachers.**

| | | Frequency | Percentage |
|---|---|---|---|
| **Gender** | **Female** | 25 | 58,1% |
| | **Male** | 18 | 41,9% |
| | **Total** | 43 | 100,0% |

**Source: Generated by SPSS software.**

The results show that 58.1% of the responses to our survey were from Female and 41.9% from Male, with an average of 25 women and 18 men out of 43 teachers.The results indicate that 11.6% of teachers have teaching experience of less than 5 years. 25.6% have teaching experience ranging from 5 to 10 years. Among the teachers who responded to the survey, half have teaching experience ranging from 10 to 20 years, while 11.6% of the respondents have more than 20 years of experience.

From the teachers' responses, we find that the largest proportion, 79.1%, did not teach online prior to the Covid 19 pandemic period, otherwise, 20.9% have experienced teaching online, before the outbreak of the pandemic.

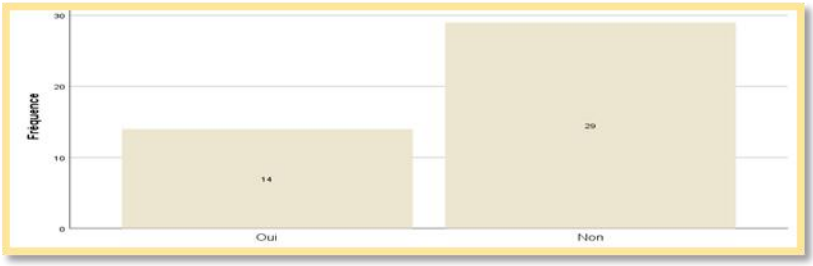


**Figure 04: Are the online teaching conditions favourable?**

**Source: Generated by SPSS software.**

According to the above bar chart 32.6% of teachers had good online teaching conditions, on the other hand 67.4% of them had adverse and no favourable online teaching conditions for the following reasons:

- The students absenteeism rate is very high;
- The problem of low internet speed and disconnection ;
- Lack of videoconferencing equipment and rooms and staff responsible for handling the material with good skills ;

- The limited interaction with teachers students and the absence of the necessary tools to facilitate the explanation such as writing boards, etc ;
- The applications used are for free and therefore not efficient ;
- Students demotivation ;
- Privacy and security issues.

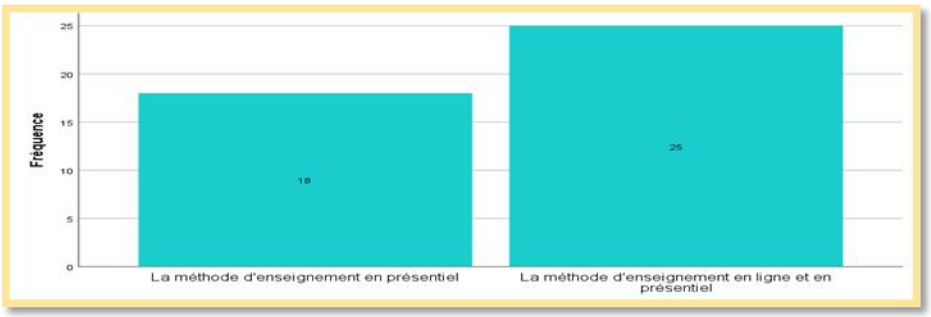


**Figure 05: Preferred Learning Methods by teachers.**
**Source: Generated by SPSS software.**

From the graph, we identify the proportion of teachers who respond on their preference when it comes to the type of learning they want after the coivd-19 pandemic. We find that 42% of respondents prefer the face-to-face learning method, while 58% prefer blended learning (face-to-face and E-learning).

**Table 05: The Effectiveness of E-learning**

| | Frequency | Percentage |
|---|---|---|
| Strictlydisagree | 00 | 00% |
| Disagree | 00 | 00% |
| Neutral | 04 | 9.3% |
| Agree | 18 | 41.9% |
| Strictlyagree | 21 | 48.8% |
| **Total** | 43 | 100% |

**Source: Generated by SPSS software.**

According to the above results, we see that 48.8% of the teachers strongly agree that the implementation of e-learning in all higher education institutions is very effective, while 9.3% said they were neutral and 41.9% agree. Thus, none of the teachers disagree or strongly disagree with the proposition mentioned above.

**Table 06: E- learning motivatesyour students.**

| | Frequency | Percentage |
|---|---|---|
| Strictlydisagree | 0 | 0% |
| Disagree | 14 | 32,6% |
| Neutral | 16 | 37,2% |
| Agree | 6 | 14,0% |
| Strictlyagree | 7 | 16,3% |
| **Total** | 43 | 100,0% |

**Source: Generated by SPSS software.**

We observe that 32.6% of the teachers disagree with the statement that students are motivated when learning online, 37.2% are neutral, while 14% agree and 16.3% strongly agree. Thus, none of the teachers strongly disagree with the proposition mentioned above.

We asked the teachers "How can you motivate students and promote interaction with them during online teaching?" Here are some responses from teachers drawn from the questionnaire:

- ✓ Assess and reward participation during online classes;
- ✓ Simplify course materials and present content clearly;
- ✓ Mandatory online attendance;
- ✓ Take attendance/require reports for future sessions;
- ✓ Students quickly perceive, intuitively, the motivation of the teacher. Thus, they quickly detect whether their teacher primarily sees their profession as merely a job or if they are primarily seeking a good evaluation report from their administration (extrinsic motivational factors), whether they are passionate about their subject or learning approaches, and if they genuinely care about them;
- ✓ Develop effective digital platforms;
- ✓ Encourage students to ask questions and allow them to send messages in case of problems;
- ✓ Use live audio and video online;
- ✓ Encourage acceptance of both online and face-to-face (hybrid) learning cultures;
- ✓ Assign relevant tasks related to their specialties, considering their responses in the final evaluation of the module;
- ✓ Interact with them during class and give exercises for them to respond to during class;
- ✓ Ensure a good internet connection;
- ✓ Share documents that are not too long, explain well, and ask questions.
- ✓ Create a sense of closeness and interest with students despite the distance, Set goals to be achieved at the beginning of the course and conduct quizzes.

This survey of the second questionnaire was carried out with the teachers of the Graduate school of economy of Oran for the same objective mentioned above.

- ❖ Before covid-19, the majority of teachers at the Graduate school of economics benefited from online training but they never taught online and 68.9% of them described their computer skills as being moderate.86,7% of teachers have used educational platforms that find them effective in advancing their online courses during the COVID-19 pandemic.
- ❖ Based on the results obtained, it seems that the majority of teachers agree that the implementation of e-learning in all higher education institutions is very important and, 30.2% of them find that the online teaching method is more flexible than the traditional teaching method.
- ❖ The results reveal a preference of 60% of teachers for the online and face-to-face teaching method (mixed teaching) and this justifies that there are other factors that negatively influence the preference of online teaching, such as the online teaching conditions. From the results obtained before, we find that 67.4% of teachers do not have favourable teaching conditions and this comes down to several causes such as low internet speed, privacy and security issues, technical and environmental issues.

## 7. Conclusion

To conclude, it could be said that the learning / teaching conditions directly impact the effectiveness of E-learning besides its contribution to ensuring successful learning. For this reason, following our investigation, we have listed several recommendations and suggestions for the improvement of this type of educational trend in the Graduate school of economics:

- o Improved internet quality;
- o Use of effective assessment strategy for the learners;
- o Ensure students class attendance policy where the participation in e-learning lessons is compulsory.
- o Provide the absent students with the necessary means so that they can be present regularly.
- o Overreliance on technology can be a major drawback in the distance learning mode, especially when learning takes place in an online environment. Any defective software or hardware can block a class in progress and interrupt the course and thus the learning process. Similarly, if a student is not good at computers and technology, their learning experience may be unsatisfactory and compromised.
- o Allow students to have Internet subscriptions at symbolic/ low prices and with a satisfactory quality.
- o Follow training courses (students and teachers)
- o The availability of the educational material (Android/laptop/headset or earphones, etc.) is provided to anyone (student or teacher)
- o Improve the e-learning platform and make it more interactive

- Raising students' awareness of the importance of online teaching.

**References**:


8. Al Rousan, O. (2004). knowledge Management and E-learning. the fourth annual international scientific conference on knowledge management in the arab word. jordan: Al Zaytoonah university - faculty of economics.
9. Aouaoua, M. (2021). The e-learning experience in algerian universities. 12-14. Oran.
10. Bellatreche, R., & Aloutti, L. (2020, 11 30). E-Learning challenges in Higher Education Institutions Algeria case study. journal of economics and human development, 11(2), pp. 264-276.
11. Ben Herzellah, M. (2021). E-learning at the Algerian University:Reality and challenges. The Journal of Distance Learning and Open Learning, 9(16), pp. 73-91.
12. Bouhezam, R. (2020). E-Learning in the Algerian Universities During Covid-19 pandemic : Is e-learning restricted to the Mere Use of Moodle Platform.
13. Cerist. (2016, 06 22). cerist. Récupéré sur Moodle: LCMS platform, for online courses and distance learning: http://cerinux.cerist.dz/?p=223
14. Deif Allah, n. (2016-2017). ). using information and communication technology improve the quality of the process of an education study of algerian universities. university of Batna, algeria: college of management sciences organized management .
15. Djoudi, M. (2020, 05 27). E- learning in Algeria Experiences On E-Learning in Algerian Universities. (researchgate).
16. ESEO. (2020). Protocole de l'école supérieure d'économie d'oran. Récupéré sur ese-oran.dz: https://ese-oran.dz/wp-content/uploads/2020/12/protocole-version-francais.pdf
17. Ghounane, N. (2020, 9). Moodle or Social Networks: What Alternative Refuge is Appropriate to Algerian EFL students to learn during covid-19 pandemic. Arab World English Journal, 11(3).
18. Guessouri, I. (2023, 06 18). The Algerian University's Experience in E-learning in the Midst of the COVID-19 Pandemic Crisis. Review of Humain Sciences, 23(1), pp. 1174-1192.
19. Hichem, A. (2021, 06 30). Innovative Pedagogies in the Pandemic Era and Beyond. stydies in developement and society SDS, 6(2), pp. 1-13.
20. John, S. (2020, 05 18). BusinessInsider. Récupéré sur www.businessinsider.com/what-is-google-meet
21. Khamra, A., & Khamra, B. (2019). E-education in Algerian higer education and women with disabilities. Social Sciences and Human.
22. Malamed, C. (2021). 10 Definitions of Learning. Consulté le 2023, sur the e learning coch: https://theelearningcoach.com/learning/10-definitions-learning/
23. Manal, A. (2020). L'enseignement à distance pendant le confinement dû au COVID-19.
24. Nouri , m., & Araibi , m. (2009). information and communication technology and its importance in the economics of arab countries to cope with the challenges of the new global economy. (a. u. college of administrative sciences, Éd.) busniss organization management contemporay global technologies.
25. ROSENBERG, & Marc , J. (2001). E-learning: Strategies for Delivering Knowledge in the Digital Age. USA: McGrow-Hill Professional.
26. Rossiter , J. (2009, 07 12). An e-Learning vision: Towards a Pan-Canadian strategy and action plan. Récupéré sur canari: http://www.canarie.ca/funding/elearning/elearningvision.pdf
27. Tavangarian, D., Leypold, M. E., Nölting, K., & Röse. (2004). Is E Learning the solution for individual learning. Electronic Journal of e-Learning, 2(2), pp. 273-280.