

## University E-learning during COVID-19 Pandemic, Perceived by Teachers and Students

التعليم العالي الإلكتروني خلال جائحة كوفيد-19، من منظور الأساتذة والطلاب

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### Abstract

Algerian Higher education knew a transition to online courses caused by COVID-19 spread. Without prior familiarity with this type of education, such a transition may negatively impact the teaching/learning process. This study analyzes teachers' and students' perspectives about online education and suggests implications for its improvement. Therefore, an online survey and Likert scale questionnaire were administered to university teachers and students, respectively. Results revealed that university e-learning suffers from basic issues, including a shortage of internet and communication technologies. Among study proposing, we find that online education should be gradually blended alongside conventional education considering some important factors such as affordability and accessibility of information and communication technologies as well as training teachers and students to use learning platforms like Moodle.

**Keywords:** Higher education; Online education; COVID-19; Moodle.

ملخص البحث

عرف التعليم العالي الجزائري الانتقال إلى التعليم الإلكتروني بسبب انتشار فيروس كوفيد-19. من دون الإلمام المسبق بهذا النوع من التعليم، فقد يؤثر هذا الانتقال سلبيًا على عملية التعليم/التعلم. جاءت هاته الدراسة لتحليل آراء الأساتذة والطلاب

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حول التعليم عبر الإنترنت، وتقتصر توصيات لتحسينه. لذلك، تم إجراء مسح واستبيان مقياس ليكرت عبر الإنترنت لأساتذة وطلاب مختلف الجامعات. وكشفت النتائج أن التعليم الإلكتروني الجامعي يعاني من مشكلات أساسية، بما في ذلك نقص تكنولوجيات الإنترنت والاتصالات. خلص البحث إلى مجموعة من المقترحات منها أن يتم مزج التعليم عبر الإنترنت تدريجياً جنباً إلى جنب مع التعليم التقليدي، مع مراعاة بعض العوامل المهمة مثل القدرة على تحمل التكاليف، وإمكانية الوصول إلى تقنيات المعلومات والاتصالات، بالإضافة إلى تدريب الأساتذة والطلاب على استخدام منصات التعلم مثل موودل Moodle.

الكلمات المفتاحية: التعليم العالي؛ التعليم عبر الإنترنت؛ كوفيد-19؛ موودل.



## 1. Introduction

The global higher education sector as the other sectors has been affected by the COVID-19 pandemic which has been proclaimed to be a global pandemic on March 11, 2020 (European Centre for Disease Prevention and Control, 2020). Consequently, severe social distancing measures and a lockdown strategy have been applied. When searching for innovative solutions in a relatively short period of time, governments have taken decisive measures to limit the development of infectious pathogens of COVID-19. These efforts affected the way learners are taught.

In Algeria, the closure of universities and academic educational institutions has affected the usual progression of the educational process and tested the readiness of this stream to cope with a crisis requiring the help of advanced technology. Algerian policymakers had to quickly implement plans to shift millions of learners from a traditional education system to a completely e-Learning-based education system. According to Miller, Meg, Bruce, Lawrence, Raymond, Wayne, and Karen (2014), e-learning includes features that provide productive ways to achieve learning goals. Before the crisis, distance learning was not a common notion in Algeria. There has been limited use and application of technology in education (Guemide & Benachaiba, 2012). Since the integration of technology in education, attempts have been made to educate Algerian instructors and learners who were not well informed about this new technology of distance learning. Thus, they have to quickly adapt to the new educational conditions that the epidemic has generated. Universities have adopted low-priced e-learning platforms such as LMSs developed on Moodle, as they have not been able to purchase an e-learning platform produced by one of the major global players in this field

(Guemide & Benachaiba, 2012). Since Algeria's rapid shift to online learning is an emergency, views on the effectiveness of online higher education teaching and learning are mixed. Some researchers point out that online education can be at least as effective as traditional classrooms (Tucker, 2001). Some believe outcomes would be less satisfactory without preparation, training, and support, (Keengwe & Kidd, 2010). Moreover, some think that students or even teachers in rural areas may not have the network capacity, thereby leading to a loss in educational opportunities (Nkonge & Gueldenzoph, 2006).

In Algeria, e-learning has been seen as the most appropriate way to proceed with the teaching and learning process during the pandemic. Now it is necessary to highlight the efficacy of e-learning in teaching and learning from the viewpoints of stakeholders. The key issue is that the transition to online education was urgent despite the fact that teachers and students lacked familiarity with this form of education, which may harm the effectiveness of the learning and teaching process, and therefore learning outcomes in general. The current research work attempts to provide an ankle-eye into the status of online learning in Algerian higher education during the COVID-19 pandemic, taking EFL classes as a case study. This study aims to examine and evaluate university teachers' and students' views during the lockdown, extracting their attitudes towards online education experience, and provide implications for this education in general. The findings will help determine the improvements required on a priority basis to make online education more practical and worthwhile in Algerian universities.

### 1.1. Online education

Before discussing online education, the integrated use of computer hardware, software, and educational theory and experience to promote learning is educational technology (EdTech) (Mangal & Mangal, 2009). EdTech can help enhance the academic performance of users by designing, utilizing, and managing technical processes and educational tools (Mangal & Mangal, 2009). Through the spread of the internet and the World Wide Web in the early 1990s, the literature on online delivery in the field of education flourished. EdTech goes by several names and comes in different forms, thus, its initial aim is to provide learners who are unable to take part in a conventional classroom course and assist learners who need to work at their own speed and on their own time (Mangal & Mangal, 2009).

In the same vein, Urda and Weggen (2000) assert that online education takes the form of full courses with any time and anywhere access to content. They added that online education is a flexible method of instructional delivery covering all electronic platforms, including the Internet, satellite broadcasts, audio/videotapes, interactive TVs, and CD-ROMs, etc. With that said, online education enables learners to experience accessibility, convenience, and engagement by making the material of the course available at any time and from any place.

For educational reasons, technology endeavored to develop language learning by creating platforms known as Learning Management Systems (LMS). The latter is a software program used to deliver, monitor, track, and manage education. On the one hand, instructors can publish activities, tests, announcements, grade assignments, track course activity, and engage in class discussions. Learners, on the other hand, can get access to courses through handouts or videos, submit their work, take tests, and respond to discussion questions (Courts & Tucker, 2012). Academic institutions are exploring different platforms for online teaching and learning. Since it is free, Moodle has become a standard virtual learning management platform for almost two-thirds of the universities worldwide. Moodle can be used synchronously or asynchronously from small classrooms to international institutions covering millions of online courses. It can be customized to meet the standards of each university and fulfill their educational goals (Jeong, 2017).

### **1.2. Features of online education**

Several indicators explain why online learning in today's education is a revolution. It has made concrete changes in the educational system and brought new possibilities for learning. Its flexibility is what defines online education most in terms of time, schedule, and speed of learning. First, online education makes it possible to teach and learn at any time from any location in the world (Keengwe & Kidd, 2010). Because everything is accessible online, it is simple to view class resources, complete assignments, and upload work. Second, not every online program is designed the same which means that Learners can arrange a learning schedule to suit their individual needs and create a work-study balance if necessary (Urda & Weggen, 2000). It may also enable learners to embrace and develop autonomy by giving them new responsibilities (Nkonge & Gueldenzoph, 2006). Finally, online education appears to be more affordable than traditional education because it

allows for less budget spending to provide better outcomes than other alternatives (Bartley & Golek, 2004).

### **1.3. Challenges of online education**

According to Mangal and Mangal (2009), it is not necessary that technology guarantees efficient learning, as the misuse of technology can impede it. In fact, technology is inherently interesting because it provides ample education opportunities, however, this assumption based on Daniel Willingham's research (2010) is invalid. He asserts that the technological medium is not as important as the efficacy of the content in properly using the medium (Willingham, 2010). Thus, the list of challenges in online education is due, first, to the lack of support, assistance, and training that institutions and governmental authorities may offer to the stakeholders (Keengwe & Kidd, 2010). Since online education is a different learning environment, instructors need to take time to consider their various responsibilities in the new learning/teaching environment; they have to adapt their teaching styles used within the traditional classrooms and embrace new skills that suit the online environment (Keengwe & Kidd, 2010). Moreover, time, workload, cost, course quality, student interaction, and equipment issues were described by Nelson and Thompson (2005) as obstacles to online teaching practices. For instance, if instructors do not understand learners' workload, a negative attitude toward online education can occur. Furthermore, Nkongwe and Gueldenzoph (2006) listed inadequate hardware and software, slow internet connections, learners' procrastination, insufficient orientation for learners, and a lack of release time for instructors as barriers to the success of online education

## **2. Methodology**

This segment covers the research methodology, research significance, participants, and data collection and analysis procedures.

### **2.1. Research methodology**

This study falls within the exploratory research design. Robson (2002) defines exploratory research as a means to discover "what is happening" and "to seek new insights" (p.59). The current exploratory research embodies a quantitative and qualitative approach through the use of a student questionnaire and teacher survey to collect data.

### **2.2. Research significance**

By identifying teachers' and students' viewpoints on online education, the findings would help in determining the improvements required on a

priority basis to make online education more effective and meaningful in Algerian universities. To this end, the study seeks to answer the following questions:

- What are EFL teachers' perceptions of online education during the COVID-19 pandemic ?
- What are EFL students' perceptions of online education during the COVID-19 pandemic ?

### 2.3. Research community

The target community in this research is permanent EFL teachers and students from several Algerian universities. 29 teachers who specialize in English language didactics volunteered to participate in this study. The inability to target only one university is due to the COVID-19 lockdown . The study involved 46 EFL students of various levels. The disparity of students' level was intended to obtain a more comprehensive view on the situation.

### 2.4. Data collection and analysis procedures

Data were collected by distributing two research tools. The researchers developed a questionnaire and survey with an intentional focus on pre-defined research questions. The questionnaire comprised three main parts including a combination of multiple-choice, close-ended, and open-ended questions. Part one deals with the background information of the participants. Part two examines how students view online learning experience. The last part seeks suggestions from students for the betterment of online education. The survey on the other side aims to elicit university teachers' views and attitudes towards the status of online education in Algeria as well as to providing their recommendations to enhance this form of education.

Due to the COVID-19 pandemic, questionnaire and interview links were sent to both students and teachers via emails to fill out their answers in google forms. The used instruments allowed for the collection of quantitative data that were analyzed by EXCEL alongside qualitative data in which themes and patterns were identified.

## 3. Results

This section provides a descriptive distribution of the data obtained from the research tools administration.

### 3.1. Students' questionnaire

*Table 1: Students' demographic information*

Description	Freq	%	Description	Freq	%
<b>1.What is the academic year you are currently enrolled in?</b>			<b>4. Do you have internet access?</b>		
• First-year licence	6	13.1%	• Yes	44	95.7%
• Second-year licence	2	4.3%	• No	2	4.3%
	35	76.1%	<b>4.1. If yes, is the internet available to you....?</b>		
• Third-year licence	3	6.5%	• Always	17	37%
• Master One			• Very Often	15	32.6%
			• Sometimes	11	23.9%
			• Rarely	2	4.3%
			• Never	1	2.2%
<b>2.Do you have a computer?</b>			<b>5. How many hours do you spend online on a daily basis?</b>		
• Yes	34	73.9%	• Less than 2 hours	9	19.6%
• No	12	26.1%	• 2-4 hours	10	21.7%
<b>3.Do you have a smart-phone?</b>			• 4-6 hours	14	30.4%
• Yes	36	77.8%	• More than 6 hours	13	28.3%
• No	10	2.2%			

The table shows the demographic details of the students who answered the questionnaire. The majority of students 76.1% are enrolled in their third year of licence degree. Followed by 13.1 % of first-year licence students then master-one students represented in 6.5% and finally 4.3% of second-year licence students. Most respondents 73.0% claimed to have a computer while 26.1% of the students did not have a computer. Similarly, 77.8% of the students claimed to own smartphones whereas only 2.2 % claimed the opposite. Regarding internet connectivity, 95.7% informed to have internet access. Only 4.3% said they had no internet connection. The students claimed that internet access is always 37%, Very often 32.6%, and sometimes 23.9%. Only 6.5% of students claimed that they rarely/never have internet access. The majority of students claimed that they spend 4-6 hours a day connected to the internet while 28.3 % claimed to spend more than 6 hours a day online. 21.7% of students spend 2-4 hours online while 19.6% use the net for less than 2 hours a day. These data show that for most students, the affordability of materials (computers, smartphones) and internet connectivity is typically not a concern.

*Table 2: Students' responses to the Likert questionnaire*

Items	Disagree		Uncertain		Agree	
	Fre q	%	Fre q	%	Fre q	%
1. I agree with the Ministry's decision to switch to online education under the current circumstances.	22	47.8 %	14	30.4 %	10	21.7 %
2. I have a previous idea about the Moodle platform.	22	47.8 %	17	37%	7	15.2 %
3. I have received training on how to use Moodle.	29	63%	9	19.6 %	8	17.4 %
4. I have acquired some basic knowledge on the use of the Moodle platform to access lessons.	26	56.5 %	11	23.9 %	9	19.6 %
5. I have enjoyed this online learning experience.	30	65.2 %	10	21.7 %	6	13 %
6. I prefer other alternatives available online instead of using the Moodle platform.	10	21.7 %	15	32.6 %	21	45.7 %
7. I prefer the classic way of learning inside the classroom.	3	6.5%	10	21.7 %	33	71.7 %
8. I can study online if better conditions are available.	6	13.1 %	14	30.4 %	26	56.5 %
9. I think it is hard for me to study online even if the required conditions are available.	10	21.7 %	12	26.1 %	24	52.2 %
10. I think this online education experience will succeed and bring about the desired results.	20	43.5 %	18	39.1 %	8	17.4 %
11. I think teachers are positive about this kind of education.	16	34.8 %	19	41.3 %	11	23.9 %

On a three-point Likert scale (disagree, uncertain, agree), students have demonstrated various opinions about their experience of online learning on the Moodle platform. The majority of students 47.8% disagreed with the Ministry of Higher Education and Scientific Research's decision to switch to online education during the pandemic of the COVID-19. Unfortunately, 47.8% of them claimed to have no previous idea concerning the Moodle platform. Alike, 63% of the students received no training on the use of this platform and they do not have at least the basic knowledge to use it to access lessons (56.5%). When asked if the online learning experience was enjoyable, 65.2% of students disagreed. 21.7% were unsure while only 13% agreed to enjoy learning online. Instead, students claimed to prefer other alternatives rather than using Moodle (45.7%). Interestingly, the majority of students 71.7% showed a great preference for learning inside the classroom. Students seem to have contradicting views concerning online education because, on the one hand, they claimed that they can study online if better conditions are available (56.5%). But, on the other hand, 52.2% indicated that it's hard for them to study online even if the required conditions are fulfilled. The majority of students (43.5%) were not optimistic that this learning experience would



bring about the desired results While 41.3% were uncertain that teachers are positive regarding this type of education. The statistics above indicate that students are not yet ready for online education because they lack training in using the Moodle platform and have not been gradually prepared to take online education. This may affect the effectiveness of this process and students' learning outcomes.

12. What obstacles did you encounter while trying to study online using the Moodle platform on the university's website?

- **Internet-related factors:** Most students claimed to have a slow internet flow, finding it difficult to load the web page(s) on which the lessons are uploaded.
- **Input related factors:** Students find that the lectures presented on the platform are lengthy, lack explanations, and are not presented interactively.

One student reported the following:

*“The lectures teachers provide are so long and vast, they didn't provide us with summaries and further explanations; only long unclear lectures!”*

- **Students related factors:** Learners' beliefs about learning seem to influence their attitudes about online education. Students' responses revealed their preferences for learning in the classroom where a real interaction is established. They believe that teachers' explanation is the key to their understanding, i.e., the teacher is the primary source of information.

One student said:

*“There are many modules, in each module, there is a huge number of lessons that I cannot learn alone, and I am used to a teacher who explains lessons in details.”*

- **Platform-related factors:** Since students had no prior training in using Moodle, they were confused about how to study via this platform. Although Moodle is equipped with various options for immersive learning, it has been primarily used to display PDF files and word documents. It was by no means an interactive tool for learning.

13. How do you describe your online learning experience in general?

Most students reported that this experience was *“boring, uncomfortable, impractical, bad, not motivating, disaster, not effective,*

*unhelpful, acceptable but not interesting*". One student, however, claimed that it was good but he/she prefers the classroom. While two other students claimed it to be a good experience.

14. What solutions do you suggest to cope with the current situation?

Students have suggested the following:

- Provide students with the required ICT materials and internet access with adequate connection flow.
- Teachers should be present live or via recorded videos for explanations and answering students' questions.
- Use an easier platform such as Zoom.
- Integrate the online lessons in the curriculum after going back to studies so that students get used to this type of learning.

15. What is your attitude (positive, negative, optimistic, do not expect much ... etc.) towards the future of online education in Algeria?

Students claimed various opinions. Some of them were negative and do not expect much out of it. Others were optimistic and positive that online education in Algeria could be improved in the future since being obliged to learn online under the COVID-19 virus should be a point of departure.

### 3.2. Teachers' survey

*Table 3: Teachers' responses to the close-ended questions*

Items	Yes		No	
	Fre q	%	Fre q	%
1. Do you agree/disagree with this decision of the Ministry to switch to online education under the current circumstance?	36	79.3 %	10	20.7 %
2. Some teachers were asked to submit their lessons on the Moodle integrated platform. Have you received any training on using Moodle?	17	37.9 %	29	62.1 %
3. Regardless of the training, do you have any basic knowledge of how to use it?	31	69 %	15	31 %
4. Do you prefer other alternatives instead of using Moodle?	25	55.2 %	21	44.8 %

Teachers who participated in this study have answered some close-ended questions of the interview. Unlike the response students, 79.3% of the teachers agreed with the MHESR's decision to switch to online education. When asked about the Moodle platform, 62.1% claimed to receive no

previous training on its use. Fortunately, 69% of the teachers claimed to have basic knowledge of using Moodle. When asked about their preference for other alternatives instead of using Moodle, teachers' responses between yes and no were close. 55.2% claimed to prefer other alternatives, while 44.8% claimed that using Moodle is not an issue. Teachers suggested the following: Facebook forums, YouTube, Sanako platform, Zoom, Google Classrooms, Skype, Email, Online conferencing as alternatives.

5. Do you think this online teaching/ learning experience is going to be efficient and bring about the desired results? And why?

Most responses were “No” for the following reasons:

- **Internet-related issues:** the slow internet.
- **The nature of online education:** It cannot replace inside-the-classroom teaching. Therefore, online education should be used as a supportive tool and not as the main tool for education.
- **Students related factors:** they were not prepared for e-learning, they need training, are passive, and not autonomous. This impacts their motivation to undergo the online education experience. One teacher put it as follows:

*“No, I do not think so. In my opinion, such a venture requires that 1) the students are autonomous and self-regulated in their learning 2) they have reasonably effective ICT skills 3) they are logistically equipped to that effect 4) they feel seriously invested in their studies and can self-motivate. Be that as it may, I personally doubt that these requirements can be found in most Algerian students”.*

- **The integration of online education was not well organized:** the fact that the present situation has not been analyzed and whether or not the reasons leading to the success of this experience are available. Teachers agree that online education should be introduced and encouraged even before COVID-19.

6. From your perception, what are the factors that are likely to contribute to the success/ failure of this process?

**Emerging themes were:**

- Availability of internet and ICTs for all learners along with adequate training.
- Learners' motivation and autonomy.

One teacher reported that:

*“...online education in Algeria does not sustain enough policy-making and monetary support, and the fragile attempts at implementing it often lack precision and clarity.”*

7. What do you think of learners' attitudes towards this type of learning?

The vast majority of teachers claimed that students would: refuse it, don't like it, are demotivated, and are negative about it. While some teachers claimed that students can cope with the presence of materials and appropriate training.

**8. Do you think there is a suitable “quick fix” to cope with the current circumstances in education?**

*Table 4: Teachers' responses about a quick fix for the situation*

Items	Yes		No	
	Fre q	%	Fre q	%
8. Do you think there is a suitable “quick fix” to cope with the current circumstances in education?	33	72.4 %	13	27.6 %

Teachers (72.4%) believe that there is no quick fix to cope with the current circumstance while only 27.6% claimed that there is no quick solution.

9. For the success of the online teaching/learning experience in Algeria, what is the first step to take?

Suggestions of teachers were as follows:

- Ensure materials and internet availability for teachers and students.
- Raise Teachers' and students' awareness of the importance of online education.
- Train both teachers and students on the use of the target platform (s) and online materials.
- Integrate online education in ordinary sessions after the COVID-19.

10. Overall, what is your attitude towards the future of online education in Algeria?

Most teachers are optimistic about the future of online education in Algeria. One teacher put forward:

*“I am optimistic about it. After all, maybe the era of the pandemics may enhance our political as well academic will to integrate E-learning in our education system because we have no other choice.”*

#### **4. Results discussion**

The discussion section is twofold; from the students' point of view and the teachers' point of view. In addition to a final section presenting the main recommendations of the study.

##### **4.1. Students' perspectives**

The effectiveness of the learning process depends largely on keeping students at the heart of the education process, which stresses the involvement of students in the language class. Learner-centeredness has been deemed fruitful in its ability to achieve learning outcomes (Barr & Tagg, 1995). During their experience, Algerian students claimed several reasons that contributed to dissatisfaction with the overall learning experience and thus negatively affected the efficiency of this process. First, the lack of ICT materials (internet, computers, smartphones, ... etc); because not all students are equipped with the various tools and devices necessary for online learning. While the Algerian government is attempting to provide the universities with the requisite ICT facilities, it is still essentially constrained when it comes to e-learning. According to Gilbert (2001), ICTs should be regarded as the prerequisites for online courses. However, having the necessary hardware and software does not guarantee students' ability to use them. Therefore, computer literacy is equally important. This leads to the next idea which is students' readiness.

The effectiveness of online education depends not only on the availability of tools but also on students' readiness to study online. Most students lacked training in using Moodle, as well as the fact that they were not psychologically prepared for this kind of education. Since online learning is a type of learning in which learners and teachers are both spatially and temporally isolated from one another, students should be trained to develop specific online learning skills and become aware of the challenges they will encounter as online students. Borges (2008) exemplified some skills such as the ability to use ICTs to conduct research, information storage, analysis, and sharing.

Another important factor affecting students' experience with online learning is their attitudes. According to Aixia and Wang (2011), the attitudes and perceptions of learners about online learning are a significant factor in

their learning success. Students' attitudes are influenced by excellence, ease of use of online learning, accessibility to online learning, and students' degree and experience of computers. This can be seen from two angles. First, students' positive attitudes towards online learning are critical to their preparedness and inclusion in the distance learning form. This indicates that if learners have positive expectations about e-learning, it is likely that this will help them overcome any difficulties during the e-learning integration process as they are mentally trained and have the knowledge required for this form of learning. Negative attitudes, on the other hand, may result in students being discouraged and reluctant to study online. This is in line with the findings reported by Rosenberg (2001), who demonstrated that students' negative attitudes towards online learning were identified by low-level computer skills, technological anxiety, and computer hardware problems, as well as poor study skills, low motivation, and an inability to work independently. As far as the Algerian students' experience is concerned, it has been noted that students' aspirations for this experience were very limited. Accordingly, approaching online learning in this way does not reinforce optimistic assumptions about their learning outcomes.

Another downside associated with students' online experience is the lack of personal interaction with the teacher and peers. There was a great emphasis on the importance of interaction in learning in general and distance learning in particular (Swan, 2002). Algerian students have been placed in a state of deprivation in terms of direct contact with the teacher. They felt isolated facing a machine and downloading written documents to revise. Gruenert and Whitaker (2015) suggested that educators need a flexible belief that building interactions is essential for motivating learners. This is highly important because if students are motivated to learn, they will become engaged and thus the learning process will bring about the desired outcome which is why students are studying in the first place.

Students' ability to study online independently is another important factor. Lynch and Dembo (2004) highlighted this segment stressing that learner autonomy is a critical factor in the success of online distance learning. They identified five dimensions of learner autonomy that are particularly important for the performance of distance learners. These elements include motivation (self-efficiency and goal orientation), Internet self-efficiency, time management, environmental research management, and learning assistance management. This means that online education requires learners to have a

certain degree of autonomy that goes beyond traditional classroom settings. Therefore, students should not only be trained in the use of technology and the use of a specific platform for online learning, but teachers' practices should also seek to build students' independent study skills.

The above-mentioned factors, i.e., the availability of tools, students' readiness, attitudes, and interaction along the process, are important factors influencing students' motivation for learning, which is a key factor in the success of the entire learning operation. Therefore, considering students' voice regarding their needs and issues they have in relation to online learning is crucial in shaping content materials and requirements that cover these needs.

#### **4.2. Teachers' perspectives**

Like students, teachers reported a lack of ICT facilities and a lack of financial support as major restrictions on integrating online education. Additionally, the teachers agreed that training both teachers and students is unquestionable. This was emphasized by Stavredes (2011) who indicated that it is imperative to train teachers in online education so that they can explore the factors affecting this type of teaching because the development of online education has been a rapid and constantly changing process. This means that educators should be trained to explore the most effective practices of online education rather than just being trained in the use of technology.

Teachers' opinions on this shift represent an important consideration. Teachers agreed that integrating online education has not been an informed decision and that online education should be gradually incorporated along with keeping the traditional way of teaching. Garrison and Kanuka (2004) explained this type of blended learning as "the thoughtful integration of classroom face to face learning experiences with online learning" (p.96). This would encourage students to increasingly learn online without flooding them with a complete online curriculum at once which was the case of Algerian students. In conclusion, the issues raised by the teachers ought to be firmly considered because they speak out of expertise and actual experience, and thus their views will offer practical solutions to current problems.

#### **5. Recommendations**

Building on the issues related to online education that were highlighted in this study from educators and students alike, the study recommends the following:

- The MHESR ought to ensure that students and teachers who are required to enroll in online education have all the requisite ICT facilities and appropriate internet access.
- Training both teachers and students in using the platform, the skills required for independent learning (for learners), and the skills required for effective online teaching (for teachers).
- Online education at the university should be gradually integrated into specific modules only while maintaining traditional face-to-face teaching as the predominant type of education.
- Create an online educational training course tailored to the learners' needs.
- Create and deliver an online educational training course specifically designed to meet the professional needs of educators as part of pre-service teacher training.
- The government should reconsider its policy with such education so that more investments and decisions are made to promote online education, especially with private stream investors.
- The MHESR should cooperate with other government ministries to promote and accredit online education certificates and allow them to be present in the market on par with the certificates obtained from enrollment in traditional courses.

## 6. Conclusion

The results obtained from this study indicate that online learning in Algeria is far from meeting the normal standards of e-learning. According to teachers and students, the lack of internet and communication infrastructure services, lack of training, and negative attitudes of participants toward this type of learning, are among the key issues that impede the efficiency of e-learning. The study's findings can be seen as a stepping stone for e-learning development in Algerian universities. Overall, the COVID-19 lockdown experience can serve as a turning point for a stronger emphasis on blended and online learning.

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