

RESEARCH ARTICLE

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**Online Learning in Algerian Higher Education during the Covid-19 Pandemic:
Modes, Challenges, and Teacher Preparedness**

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Abstract

Covid19 pandemic period made governments all over the world to change their policies toward education. In response to this crisis, Algerian ministry of higher education shifted to online mode of learning. This situation has become a call for teachers to adjust their methods according to what on-line learning implies. The current paper is to investigate which mode of online learning has been implemented in Algerian universities during Corona Covid19 pandemic period. Moreover, this study aims to detect if any challenges and difficulties have been faced by teachers during their online sessions. In this sense, different studies from various Algerian universities have been collected, compared and analyzed. Remarkably, these agreed that Algerian universities used the asynchronous mode of online learning during the Corona pandemic period. Moreover, some teachers complained about the technical problems and obstacles of free versions of utilized softwares such as Zoom, GoogleMeet or Moodle platforms. Other teachers were even bothered about the quality of the Internet itself. Some teachers could not even access such platforms because they are not trained to such new literacies nor they had the experience to teach on-line. Then, this study argues that while online learning has the potential to revolutionize education, the key to unlocking its full benefits lies in comprehensive teacher training. Furthermore, it highlights the imperative for the Algerian Ministry of Scientific Research and Higher Education to actively support online learning initiatives and prioritize the provision of robust teacher training programs.

Keywords: Online learning , Covid-19 Pandemic, Algeria Universities ,Teacher Training, Asynchronous Mode.

General introduction

During the Corona Covid19 pandemic period, all universities around the globe were alerted to the lockdown. Face-to-face learning became impossible. Institutions shift to online mode of learning

through e-platforms such as Moodle, blackboard and Teams. Moreover, some utilized informal platforms like Youtube and social networks like Facebook or through the inclusion of some applications like Zoom and Google meet . In response to this situation, online learning has become the only resort. Algeria made no exception. The Algerian ministry of higher education and scientific research responded to this crisis by releasing a ministerial decree in which Chems-Eddine BENCHITTOUR, the former minister explained that this epidemiological situation has obliged us to adopt on-line learning. He then asked all university staff, namely presidents, deans, teachers and administrators, to supply on-line courses on universities' platforms. (Correspondence number 288/dated on February 29th 2020). This situation has become a call for teachers to adjust their methods according to what online learning implies. Yet, there were limited attempts to meet this demand. Reshaping the teaching process to an online mode of learning raised several issues. Online learning is still in its infancy in some countries. Remarkably, Algeria is one of these countries since teaching online faced many difficulties at the time of the pandemic. Some Algerian teachers and learners suffer *Technophobia* from e-learning settings. In the Corona Covid19 pandemic, some Algerian university teachers uploaded some teaching videos and handouts for their students. However, this is not what is meant by e-learning. In this asynchronous online mode, learning is passive. The learner is not interactively involved in this learning process. Few of them used online softwares such as Zoom or Google meet to teach live sessions. This is a synchronous mode of online learning. It is active learning where learners are communicating with their teacher and with their peers. The teacher is to use e-learning keeping the principles of learner-centered pedagogy.

This paper compares, analyzes and investigates three conducted studies about the topic of online learning in Algerian universities at the time of Corona Covid19 pandemic period. Through comparison and analysis, this paper seeks to answer the following questions:

- 01- Which mode of online learning has been implemented in the Algerian universities during the Corona Covid19 Pandemic period?
- 02- What are the challenges and difficulties faced by teachers during their online sessions?

03- What are the potential solutions for effective online learning?

The current paper uses secondary data from previous conducted studies. The aim is to shed light on the impact of the sudden decision making of shifting to online mode of learning. Moreover, it clarifies how the ministry rushed into solutions and then how teachers learned from the trial-error process. Moreover, the study recommends implications for efficient online learning.

Review of literature

Online learning

Online learning refers to education delivered via the Internet. Online learning is a form of distance education and web-based learning, e-learning, and digital learning. It is offered over the Internet and uses web-based materials and activities. In this regard, Saul Carliner (2004) defines online learning as anywhere, any-time instruction delivered over the internet or a corporate Intranet to browser-equipped learners. He further explains that, according to Carliner, e-learning allows individuals such as students, employees in training, and casual learners to participate in organized learning experiences regardless of their physical location. This definition emphasizes the contrast between e-learning and traditional learning methods.

Types of Online learning

There are two primary kinds of online learning: synchronous and asynchronous. Basically, synchronous e-learning requires all the participants to be present at the same time. Whereas, asynchronous e-learning does not.

Synchronous e-learning:

Karen Hyder(2007) discussed that synchronous learning is live, real-time and usually scheduled, facilitated instruction and learning-oriented interaction. Learners meet their teacher in a live session using one of the web-based softwares such as Google classroom. The teacher has already arranged the time of the session with his/her students. The teacher in this mode of learning can allow

discussions with learners. There is communication between the teacher and learners and among learners as well. Synchronous e-learning can be in the form of virtual classrooms, Web conferences, Webinars, Teleconferencing, Videoconferencing, Audio Conferencing and online presentations.

Asynchronous e-learning:

Matthew Murray (2010) claimed that asynchronous learning is a general term used to describe forms of education, instruction, and learning that do not occur in the same place or at the same time. Asynchronous e-learning refers to different types of digital and online learning, where students engage in self-paced instruction that is not delivered in person or in real time. This can include learning from prerecorded video lessons or completing game-based learning tasks independently. However, the concept of asynchronous learning extends beyond these methods and encompasses various instructional interactions. Examples include email exchanges between teachers, participation in online discussion boards, and the utilization of course-management systems that organize instructional materials and facilitate correspondence., among many other possible variations.

Synchronous VS Asynchronous learning

	Distinctive features	Examples
Synchronous learning	• Real-time • Live • Usually scheduled and time-specific • Collective and often collaborative • Simultaneous virtual presence (with other learners and facilitators or instructors) • Concurrent learning with others	• Instant messaging • Online chat • Live Webcasting • Audio Conferencing • Videoconferencing • Web conferencing
Asynchronous learning	• Intermittent access or interaction • Self-paced • Individual, or intermittently collaborative • Independent learning	• E-mail • Threaded discussion • Boards • Web-based training • Podcasting

	• Usually available any time • Recorded or pre-produced	• DVD • Computer-based training
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Table 1 . Synchronous Vs asynchronous learning

Adopted from The eLearning Guild's Handbook on Synchronous e-Learning, Bill Brandon (2010)

Methodology

This paper study uses the systematic review approach to analyze the previous researches and journal articles on online learning in Algerian universities during Covid19 pandemic period. A systematic review is a scientific study that asks research questions and then answers them by collecting, comparing and summarizing the evidence that meets a set of pre-specified criteria. Wright et al. (2016) explained that the systematic review refers to the process of examining the evidence related to a well-defined question using systematic and explicit methods. These methods involve identifying and selecting relevant primary research, critically appraising the selected studies, and extracting and analyzing data from them. The specific procedures for conducting this systematic review are presented step by step. Moreover, the inclusion of data follows a specific criteria which is represented in table 2.

Criterion	Inclusion Criteria
Focus	Mode of online learning Difficulties of online learning
Level of education	Algerian Higher education
Language	Published in English
Design	Quantitative, Qualitative
Period of primary research	During Covid19 pandemic

Table 2. Inclusion criteria.

This study analyzes three previous studies which were conducted from September 2020 until December 2021. Studies were collected via Google Scholar, Academia and ERIC platforms. The chosen studies are described in table 3 along with their research tools, samples and case studies.

Description of the reviewed studies:

Study	Targeted population	Sample	Research tools	Author
The Emerging of Online Education in Teaching English as a Foreign Language in Response to COVID-19	EFL teachers and their students at Chlef University	Not mentioned	Survey	Ibtissam Bentaleb
The Covid-19 Pandemic and Education: Big Changes ahead for Teaching in Algeria	Algerian university teachers	387 university teachers of different disciplines	online questionnaire	Ahlem CHELGHOUM1 Hanane CHELGHOUM2
Learning in the Algerian Context during the Pandemic: Is it online or offline?	Tlemcen, Saida, Ouargla, and Batna university EFL teachers and their students	51 teachers 23 teachers Moodle platform	online questionnaire Interview Observation	Nadia Ghounane

Table 3. Description of the reviewed studies

Findings of the reviewed studies

Findings of the first reviewed study:

I Bentaleb (2021) conducted a survey to EFL teachers and students of Hassib BenBouali Chlef university investigating online learning in Covid19 pandemic period. She found out that both teachers and students had no previous experience with online education before Covid19 pandemic lockdown. She expressed that online education was a challenging experience for both teachers and students who argued that they faced difficulty accessing the Internet due to the slow debit.

Moreover, some teachers and students couldn't afford necessary hardware, particularly teachers with temporary contracts. There were technical issues in Moodle (Modular Object-Oriented Dynamic Learning Environment) and Progress which are official e-learning platforms used by the Algerian ministry of scientific research and higher education. These platforms witnessed occasional glitches. Then, teachers are often hindered from uploading their video courses and handouts for their students. Furthermore, Teachers faced ethical problems to detect cheating and plagiarism in online evaluation. Additionally, learners exploited resistance to use official platforms. 60% of students prefer social network websites such as Facebook because they are familiar with it in their daily lives. Whereas 40% said they prefer Moodle because they feel secure using an official platform. 90% of students found Moodle difficult. They encountered deficiencies downloading video courses and they suffered continuous glitches of Moodle platform.

Findings of the second reviewed study:

N Ghounane (2021) investigated online learning in the period of Covid19 pandemic in the context of four Algerian universities namely Tlemcen, Saida, Ouargla and Batna universities. She utilized three research tools: a questionnaire for EFL teachers and students, an interview with teachers and she exploited observation for three weeks via the Moodle platform. When she asked teachers about the mode of learning utilized during Covid19 pandemic, 61% said that it was online while 39% said it was offline. 73% of informant teachers claimed that the mode of learning was asynchronous. 20% of teachers said that the mode of learning was synchronous. Only 7% answered that learning was hybrid. The researcher argued that interviewed teachers explained that learning was asynchronous. They added that they posted video courses and handouts for their students. The researcher concluded that there was no communication between teachers and their students which developed a negative attitude from the part of learners. She added that teachers are not trained to deliver an effective online session.

The researcher discussed that there was not enough readiness neither from the part of teachers nor students. Old teachers could not cope with technological needs because of the generation gap. They are considered as digital immigrants as she uttered. Moreover, she explained that students developed an informal negative attitude in using official platforms because they are influenced by the attitude of social network websites.

When teachers were asked about their perception about online learning, 86% claimed that online learning is essential. However, face-to-face learning is irreplaceable. 73% developed a negative perception about the sudden shift to online learning. During observation sessions, the researcher concluded that 91% of lectures followed the asynchronous mode of online learning. There was a lack of communication between teachers and their students. The researcher observed that access to Moodle platform is very limited in comparison with social network websites like Facebook. She noticed that students like receiving feedback about their assignments via email, not via Moodle platform. She summed up that both teachers and students lack E-readiness which was clear through the number of visitors who accessed official platforms.

Findings of the third reviewed study:

Ahlem CHELGHOUM¹, Hanane CHELGHOUM² (2020) conducted their study by using an online close-ended questionnaire containing six short questions about challenges met during Covid19 pandemic about online learning. They targeted Algerian university teachers of different disciplines, not only EFL teachers. Results are shown in table 4.

Table 4 . Algerian Teachers' Online Teaching Challenges

Challenge	Yes (%)	No (%)
Accessibility	289 (74.68%)	98 (25.32%)
Engagement	315 (81.40%)	72 (18.60%)
Content	87 (22.48%)	300 (77.52%)
Experience	180 (46.51%)	207 (53.49%)
Material	129 (33.33%)	258 (66.66%)
Timing and Scheduling	190 (49.10%)	197 (50.90%)

This study revealed that teachers faced many challenges when delivering their online sessions. Mainly, access to the internet and using different platforms was difficult since 74% of the informant teachers expressed that. Moreover, keeping students engaged and motivated was difficult for teachers. Teachers can't engage learners unless they master technology. Relatively, 50% of the informant teachers expressed that they don't have experience teaching online. The same percentage goes for

time management and scheduling online sessions. Sudden technical problems delay online sessions. Therefore, teachers need professional development in online learning.

Major findings

Comparing the previous three studies' findings leads to answering the research questions of the current systematic reviewing study.

The first research question is: Which mode of online learning has been implemented in the Algerian universities during Covid19 pandemic period?

According to the three reviewed studies, their informants, whether teachers or students, agree that the mode used during Covid19 pandemic was asynchronous online learning. This study is limited to the sampling of the reviewed studies. Therefore, it is not to generalize the findings for the whole Algerian universities. Asynchronous learning provokes learners to interact and communicate. It is there to complete synchronous online learning. Therefore, when face-to-face learning becomes impossible, online learning should be used with its two modes: the synchronous as well as the asynchronous. Synchronous learning gives room for bilateral communication with the teacher and peers. It is an active online learning. Whereas, asynchronous learning allows teachers to deliver mono-lateral lectures, presentations and lessons where they are not interrupted.

As for the second research question: What are the challenges and difficulties faced by teachers during their online sessions?

The three reviewed studies remarkably state that there are many problems encountered in online learning during Covid19 pandemic. Reviewing the three studies shows that these problems can be fit into five major factors namely: economic factors, technological factors, personal factors, social factors and instructional factors. The first factor is economical which contains two dimensions, one for the Algerian government and the other one is for the personal economical reason. There are teachers and students who live in places where there is no internet or the internet debit is slow. Others don't afford to possess enough hardware. The second factor is technological, which means the lack of

ICT skills (Information and Communication Technology) They display incompetence in using online tools. The third factor is personal, i.e. e-learning readiness or perceptions about online learning. The fourth factor is social, which is the result of asynchronous learning. Learners feel isolated from peers and teachers. There is no place for social interaction neither among teachers nor among students. The fifth factor is instructional, which is due to the lack of knowledge about online lesson planning and the lack of professional teacher development.

The third research question is: What are the potential solutions for effective online learning? Answering this question practically needs the collaboration of policy-makers and practitioners in the field. Concerning the economic challenges, it needs a governmental decision to better the internet debit and to cover all areas with a network. As for the technological challenges, the Algerian ministry of scientific research and higher education should set a plan to train teachers for using different instruments of technology. The social challenge was due to the fact that learners were interacting during face-to-face learning. The sudden shift to online learning and the lockdown caused that isolation and boredom which could be minimized by the synchronous mode of online learning such as using Google Classroom or Zoom softwares. The personal challenge should be resolved by blended-learning. If there were occasions for online learning before the Covid19 pandemic, there would be a positive attitude toward online learning afterwards. Simply, because learners and teachers are acquainted with online learning settings. The instructional challenge is to be overcome by training teachers to plan their online lessons according to what online parameters advocate keeping the pedagogical principles such as learner-centeredness.

Conclusion

This systematic reviewing study is conducted mainly to assist Algerian university teachers and policy-makers to develop a framework for effective usage of online learning in Algerian higher education. According to the results of this systematic review, the most dominant mode of learning used during Covid19 pandemic is asynchronous mode on online learning. Moreover, the challenges and difficulties met by teachers during Covid19 pandemic are access to internet, the lack of ICT

knowledge, no e-readiness or a negative attitude toward online learning, isolation and passivity of learners and the lack of professional development of teachers to cope with the different digital instruments for effective e-teaching.

The findings of this study underscore the undeniable importance of teacher training as the path towards effective online learning practices in Algerian higher education. While online learning has provided a temporary solution to the educational challenges posed by the pandemic, it is the investment in comprehensive teacher training that will pave the way for sustainable and impactful online education. The Algerian Ministry of Scientific Research and Higher Education should seize this opportunity to champion online learning and prioritize the development and implementation of teacher training programs. By doing so, they can foster an educational ecosystem that embraces technology, enhances pedagogical skills, and ensures quality learning experiences for students. Teachers and policymakers should recognize teacher training as one of the key solutions and advocate for its integration into the core of online education in Algerian universities.

Finally, this study aims to minimize the drawbacks of the implemented online learning in Algerian higher education. It opts for accelerating the benefits of online learning for teachers and students.

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