

The Potential of Distance Education and E-Learning in Addressing the COVID-19 Pandemic

Terki Ahmed Abdenacer

Social Development and Community Service Laboratory, University of Hamma Lakhdar,
El Oued – Algeria

Email: Terki-a.abdelnacer@univ-cloued.dz

Abstract:

Higher education has undergone rapid transformations in recent years as a result of digital development and the widespread diffusion of information and communication technologies, making distance education one of the educational modes that has received increasing attention. This mode has contributed to reshaping the relationship between professors and students by providing digital learning environments that enable access to academic content and academic interaction with greater flexibility, without requiring physical attendance at the university. Following the emergence and rapid global spread of COVID-19, the move toward distance education became increasingly prominent, owing to its capacity to restore communication between students and professors after the pandemic had prevented direct interaction. Accordingly, this study seeks to examine the nature of distance education and to identify its constraints and effectiveness, particularly following the statement by the Minister of Higher Education, Abdelbaki Benziane, that the distance-education system had produced positive results at an early stage during the COVID-19 pandemic.

On the basis of this statement, the study raises several questions: Does distance education ensure effective learning without qualification? Can distance education replace traditional face-to-face education during the spread of COVID-19? Or is distance education merely a supportive educational measure for overcoming the health crisis? Does distance education ensure the quality of higher education?

¹ Received: March 07, 2026; Accepted: August 03, 2026; Published: September 02, 2026

© 2026 The Author. Published by AVADA. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, adaptation, and reproduction in any medium, provided that the original author and source are properly credited.

<https://creativecommons.org/licenses/by/4.0/>



The study adopts a descriptive approach based on analysis and induction. Its significance lies in examining the flexibility of the measures adopted by the Algerian Ministry of Higher Education to confront COVID-19 and in highlighting the rapid development affecting the distance-education system in the contemporary university environment. However, its success remains dependent on providing an appropriate digital infrastructure, training the actors involved in the educational process, and adopting pedagogical approaches that ensure interaction, quality, and continuous assessment.

Keywords: distance education; COVID-19 pandemic; traditional education; e-learning; potential; constraints.

Introduction:

In one of its forms, distance education constitutes an academic educational strategy that states have adopted since ancient times in order to broaden the scope of knowledge and disseminate it among the largest possible segment of society. In recent years, distance education has gained considerable popularity because of the highly satisfactory results it has achieved in the educational process, reducing many material and psychological burdens on learners. Moreover, the need for distance education increased with the spread of the coronavirus pandemic, which restricted gatherings and direct contact. States consequently found in distance education an alternative solution capable of limiting the spread of the virus while ensuring the continuity of education and fulfilling the world's "promise to make education available as a fundamental human right" (Policy Brief, Education during the COVID-19 Pandemic and Beyond, 2020).

At the outset, it is necessary to clarify the fundamental difference between distance education under normal circumstances and distance education during the spread of the coronavirus. The two situations are not identical. Distance education during the COVID-19 crisis does not dispense entirely with physical presence, nor does it necessarily require monthly or annual fees and subscriptions. In other words, it does not exclude the possibilities of traditional education but rather serves as a supportive intermediary for overcoming the current health crisis.

The COVID-19 pandemic also strengthened states' intentions, including Algeria's, to generalize distance education in order to reduce economic burdens such as university construction, job creation, catering, and transportation costs. This is supported by the statement of the Minister of Higher Education, Abdelbaki Benziane, that distance education had achieved notably positive results.

Accordingly, the study seeks to conceptualize the COVID-19 pandemic and distance education and to examine the constraints and effectiveness of distance education amid the COVID-19 pandemic.

Research Problem

Can distance education ensure the success of the educational process envisaged under the traditional face-to-face system? Is the distance education implemented during the spread of the coronavirus the same as the distance education known for many years? Can distance education replace traditional face-

to-face education during the COVID-19 pandemic, or is it merely a supportive educational measure for overcoming the health crisis?

Section One: The COVID-19 Pandemic Crisis

The world has experienced a health, psychological, economic, and educational crisis as a result of the widespread transmission of the coronavirus, known as COVID-19. Regardless of the course of events associated with this infectious virus, which threatened the world with paralysis, institutions of different types adopted carefully designed strategies to limit its spread as much as possible.

Among the serious and deliberate measures adopted by the Algerian higher-education sector was the move toward distance education. The question, therefore, is whether this system was able to achieve the expected objectives, even partially.

Section Two: The Concept of Distance Education

Definitions of distance education have multiplied and varied according to the capacities and circumstances of each country. One apparent paradox is that distance education implies the existence of a certain distance, while its purpose is precisely to shorten and reduce distances by bringing information closer to the learner.

In its simplest sense, distance education is “the process of transferring knowledge to the learner at his or her place of residence or work” (Ben Youssef Al-Hammami & Hegazy, 2020, p. 14). In this sense, “students can learn according to the time available to them and in the place they choose, whether at home or at the workplace” (Tony, 2007, p. 30), instead of having to make considerable efforts to access knowledge, endure the difficulties of travel, and comply with a fixed timetable.

A related definition describes distance education as “any model, form, or educational system in which students are away from their university for most of the period during which they study” (Habib Faiqa, 1988, p. 22).

Distance education eliminates the system of compulsory daily attendance, thereby helping reduce the spread of COVID-19. Since this study examines the role of distance education in confronting the pandemic, it is necessary to identify the overlap and complementarity between distance education and e-learning. The latter includes strategies and technologies that facilitate communication between students and professors, such as video conferencing, publishing lectures, and conducting examinations through an electronic platform. The platform presents questions to students, records their answers, and forwards them to the supervising professor. This technology was recently implemented by Algerian universities pursuant to Ministry of Higher Education Decision No. 288 dated 29 February 2020, which provided for the possibility of conducting assessments of practical sessions remotely and required lectures to be published on the institution’s Moodle platform.

Distance education has accompanied rapid technological development and, as a result, has introduced communication technologies that go beyond the traditional correspondence model. It has also converged with e-learning to such an extent that distinguishing between them can be difficult,

especially under the current circumstances in which every possible means is being used to contain COVID-19. Nevertheless, a distinction can be observed in terms of financing: within distance education, university institutions bear the costs of electronic courses and programs, whereas in e-learning students bear the costs of electronic courses and programs (Tony, 2007, pp. 215–216). For example, Algerian universities adopted distance education to confront COVID-19 by providing students with lectures and educational programs free of charge and allowing students and professors to use video-conferencing technology free of charge, whereas students enrolled in e-learning bear the costs of the technologies and educational programs.

The distance-education system adopted by Algeria to contain the COVID-19 pandemic can therefore be understood as based on “integration among different educational systems” (Ben Youssef Al-Hammami & Hegazy, 2020, p. 4), commonly referred to as blended learning (Mufid Ahmed & Al-Sous, 2012, pp. 11–13). It thus combines the long-established distance-education system, e-learning, and traditional face-to-face education.

Section Three: Effectiveness of Distance Education

- Distance education reduces temporal and geographical distances.
- Distance education integrates learners into communication technologies by requiring them to acquire communication skills and become familiar with the various methods of obtaining information and knowledge from websites. Accordingly, the COVID-19 pandemic acted as a major stimulus for strengthening skills in computer use and social-media technologies. It also contributed to consolidating and promoting a culture of remote learning.
- Distance education constitutes a necessary educational strategy for modernizing higher education, which urgently requires keeping pace with technological developments within the framework of cultural globalization, which has transformed the world into a small village. University students have also reached a level of awareness that makes them less dependent on routine direct instruction.
- The COVID-19 pandemic revealed gaps and weaknesses within the Algerian higher-education system, as demonstrated by the complete paralysis that affected Algerian universities following the spread of COVID-19. This made it necessary to develop a flexible educational system capable of ensuring continuity during the pandemic. Distance education was consequently one of the systems adopted in the hope of moving higher education toward a safer educational environment.
- COVID-19 plunged the world into “the deepest global recession in living memory, with lasting effects on economies and public finances” (Policy Brief, Education during the COVID-19 Pandemic and Beyond, 2020). Accordingly, states, including Algeria, adopted distance education because it is less costly, particularly by reducing transportation and catering expenses.
- The contemporary era has witnessed an information explosion and remarkable technological development across all fields, reinforcing the idea of modernizing public services and sectors, including higher education, as a producer and user of technology. Distance education was therefore

one of the strategies that higher education sought to adopt, adapt, and develop. This strategy achieved considerable success and attracted substantial interest, particularly in continuing-education universities offering distance-based Bachelor's and Master's programs.

- The distance-education system adopted by Algeria can therefore be considered “the best that has been achieved in this field, benefiting from technological development and employing it in education so that learning opportunities become available to everyone through new methods and approaches that meet growing needs rapidly” (Ben Youssef Al-Hammami & Hegazy, 2020, p. 11).
- The Algerian Ministry of Higher Education recognized that moving toward distance education could help prevent the spread of COVID-19. Moreover, distance education contributes to developing an ideal student who is “responsible for his or her own learning” (Al-Zahi, 2011/2012, p. 154), enabling students to interact with and respond to “the new digital culture that focuses on processing knowledge in accordance with constructivist learning theory” (Zayed, 2020, p. 493).
- Distance education creates spaces for communication among students through Facebook and Instagram groups, facilitating the exchange and enrichment of information and the proposal of alternative solutions to various obstacles and crises.
- Overall, distance education succeeded in containing the COVID-19 crisis and adapting to current economic and scientific conditions. This has led to greater attention to the system through the strengthening of its mechanisms and procedures and its integration with the latest technological developments.

Section Four: Constraints of Distance Education

- Regular university students were not sufficiently familiar with distance education because its strategies and mechanisms were new to them. Consequently, changing the mode of instruction from face-to-face to remote learning requires a certain period of time before students can fully understand and adapt to this type of education.
- Assessment in practical sessions is difficult, particularly when evaluating students' presentation, dialogue, and discussion skills. Such sessions cannot always be effectively conducted remotely, and video-conferencing technology capable of meeting the required purpose is not available to all students.
- The academic material delivered to students through face-to-face education differs from material delivered remotely. For example, university professors prepare printed materials and lectures according to strategies involving condensation, economy, encoding, and coding, while also enriching the academic material during lecture delivery. The transition from face-to-face education to distance education therefore requires professors to revise their academic materials within a very short period. The difficulty becomes greater when university administrations assign professors courses they have not previously taught and then require them, within a short period, to publish lectures on the electronic platform under the justification of transitioning to distance education to prevent the spread of

COVID-19. Consequently, it is difficult for professors to produce four lectures for each course every month, creating conditions in which improvisation may prevail at the expense of quality.

- Distance education also raised concerns about the dilution of the value of university degrees, particularly the Master's degree, on the grounds that a very large number of pedagogical places became available under distance education. In addition, the Bachelor's dissertation was cancelled and replaced by an explanatory appendix that does not fully serve the same purpose, while Master's dissertations came to accommodate three students at some universities, including Abbas Laghrour University of Khenchela, Abderrahmane Mira University of Béjaïa, and Mouloud Mammeri University of Tizi Ouzou. These measures, adopted to contain COVID-19, came at the expense of the quality of higher education.
- Under the prevailing epidemiological circumstances, distance education required the adoption of e-learning strategies, including communication through the electronic platform and interaction through video-conferencing, while retaining face-to-face education to a limited extent. Nevertheless, distance education tends to marginalize some of the justifications for traditional face-to-face education because physical attendance is no longer counted or fully taken into consideration.
- The Algerian Ministry of Higher Education adopted a distance-education policy to limit the spread of COVID-19. The pandemic can be described as the immediate catalyst that accelerated the decision, although the move toward distance education had previously been under discussion. This is supported by the statement of the Minister of Higher Education, Abdelbaki Benziane, that distance education was a positive aspiration that had achieved satisfactory results and would be adopted as a future educational foundation in Algeria.

Conclusion

Following analysis and discussion, the study reached several conclusions.

- Under the prevailing epidemiological circumstances in Algeria, distance education became an alternative academic educational system that restored activity to the higher-education sector after the COVID-19 pandemic had paralyzed its mechanisms and closed its doors. This does not necessarily mean that distance education has become the dominant educational system, since every system has advantages and disadvantages.
- COVID-19 produced constraints that may be described as a “crisis of crisis-thinking.” The first crisis was the coronavirus pandemic, while the second resulted from resorting to distance education without sufficient consideration of its long-term consequences and implications. Current evidence therefore supports the need to reconsider the university education system and to build an integrated educational system that brings together distance education, e-learning, and traditional face-to-face education, while giving greater weight to the latter.
- The COVID-19 pandemic imposed distance education on the Algerian higher-education sector despite its numerous and difficult-to-assess negative effects. Nevertheless, this experiment also had

positive aspects, particularly by enabling students to experience distance education while familiarizing them with remote working, which subsequently witnessed an abundance of employment opportunities.

References

Abu Musa, Mufid Ahmed, & Al-Sous, Samir Abd al-Salam. (2012). Blended learning between traditional education and e-learning (1st ed.). Jordan: Al-Akademiyoun for Publishing and Distribution.

Bates, Tony. (2007). Technology, e-learning and distance education (2nd ed.; Walid Shehadeh, Trans.). Riyadh, Saudi Arabia: Obeikan Library for Printing and Publishing.

Al-Zahi, Halima. (2011/2012). E-learning at the Algerian university: Requirements for implementation and obstacles to application. Faculty of Humanities and Social Sciences, Algeria, p. 154.

Ben Youssef Al-Hammami, Hamad, & Hegazy, Ibrahim. (2020). Distance education: Concept, tools and strategies. Riyadh, Saudi Arabia: King Salman Humanitarian Aid and Relief Centre.

Habib, Faiqa Said. (1988). A proposed administrative system for distance university education in the Kingdom of Saudi Arabia in light of contemporary experiences. Ain Shams University, Cairo, Egypt, p. 22.

Zayed, Mohamed. (2020). The importance of distance education amid the spread of the coronavirus. Al-Ijtihad for Legal Studies, 9(4), p. 493.

Policy Brief. (2020). Education during the COVID-19 pandemic and beyond. United Nations Department of Printing and Publishing.