

Strategy for Implementing Distance Learning in Algerian Universities – The Case of Bordj Bou Arreridj University

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Abstract

The world has witnessed a major technological revolution that has significantly enhanced digital communication across various fields, including education. This sector has experienced rapid and remarkable development in its knowledge domains, contributing to the reduction of effort and time required by learners through multiple communication channels. Distance learning has emerged as an advanced mechanism for reforming and modernizing education, in line with the requirements of digital transformation and the global changes brought about by the COVID-19 pandemic. Many countries have adopted this approach to address the logistical challenges facing the education sector in general and hindering its progress.

This article aims to examine the reality of implementing the distance learning strategy in Algerian universities. The Case of Bordj Bou Arreridj University

Keywords: Strategy; Distance Learning; E-learning- higher education-digital transformation

المخلص:

شهد العالم ثورة تكنولوجية اختصرت عملية التواصل بين أفرادها عبد العالم الرقمي - في كل المجالات ، بما في ذلك قطاع التعليم الذي شهد تسارعا وتطورا ملحوظا على مستوى حقوله المعرفية حيث أسهم بشكل كبير في اختزال الجهد والوقت لدى المتعلمين عن مختلف قنوات التواصل عبر عالم التعليم عن بعد الذي ظهر كآلية متطورة لإصلاح التعليم وتجديده بما يواكب مقتضيات العصرنة - والتغيرات التي حدثت في العالم كوباء كوفيد 19 ، حيث اتخذ من طرف العديد من الدول لمعالجة الازمات اللوجيستكية التي تواجه قطاع التعليم عامة وتقف حاجزا امامه ، وقد عمدنا في مقالنا هذا الى تسليط الضوء على واقع تطبيق استراتيجية التعليم عن بعد في الجامعة الجزائرية برج بوعريش نموذجا الكلمات المفتاحية: استراتيجية - التعليم عن بعد - التعليم الالكتروني - التعليم العالي -التحول الرقمي

Introduction (Problem Statement of the Study)

Amid the rapid digital transformations that have recently affected all sectors worldwide, including education, Algerian universities—much like their global counterparts—found themselves compelled to enter the digital sphere. Distance learning emerged as a strategic

response to the crises that the education sector faced during the COVID-19 pandemic. Over time, it evolved into an effective alternative to face-to-face instruction by reducing effort, time, and even financial cost. As a result, the shift toward e-learning through various digital platforms has become an urgent necessity for all stakeholders in higher education, including students, professors, and administrators.

Today, however, an important question arises: To what extent is distance learning effective in Algerian universities? In other words, can distance education be considered a sustainable strategic alternative to traditional in-person learning, or will its role remain limited to temporary solutions during crises?

This article seeks to analyze the key factors that have supported the implementation of distance learning and contributed to establishing its foundations in Algerian universities as a strategic option aligned with global technological development

The importance of the study:

Distance education in Algerian universities plays a crucial role in enhancing access to higher education, particularly for students living in remote or underserved regions. It provides significant flexibility in learning, allowing students to organize their study schedules and review academic materials at their own pace. Moreover, it encourages the development of digital infrastructure and the integration of modern technologies into the educational process, ensuring continuity of learning during emergencies or disruptions. In addition, distance education fosters essential skills such as independence, time management, and digital literacy, while also reducing financial and logistical challenges for both students and institutions, contributing to a more inclusive and effective higher education system.

Section One: Concepts and Terms Related to the Topic

1 – The Concept of Education

According to Ta‘ima Roshdi Ahmed, education is defined as “the process of reconstructing experience through which the learner acquires knowledge, skills, attitudes, and values. It is an intentional and organized process carried out by the teacher with the aim of transmitting the information and experiences stored in their mind to learners across all educational levels, by providing the necessary conditions for the learning process to occur.”

(Soumia Bouhafs & Abdallah Ben Abdessalam, 2022, p. 68)

Education is therefore not a self-directed activity in most cases but an interactive process through which knowledge, ideas, and experiences are deliberately transmitted from the teacher to the learner. It is a purposeful, structured, and institutionally grounded practice.

Operational Definition:

Education refers to the teacher’s ability to manage instructional and assessment content flexibly and effectively, in a manner that facilitates learner understanding and is reflected in their academic performance.

2 – Traditional Education

Traditional education refers to an instructional approach based on conventional methods that rely primarily on rote delivery of content. It typically utilizes traditional tools such as textbooks, blackboards, and chalk. In this model, the teacher's role is largely limited to presenting information and knowledge without sufficient consideration of learners' individual differences in age, cognitive level, or abilities. This type of education is built upon three essential pillars: the teacher, the learner, and the information.

(Marwan Abdullah Al-Awaisheh, 2021, p. 22)

Operational Definition:

Traditional education denotes face-to-face instruction conducted within the physical classroom environment, relying on paper-based, non-digital tools and resources.

3 – Distance Learning

Distance learning is an educational system that does not rely on direct and continuous teacher supervision. Instead, the teacher and learner are geographically separated while maintaining reciprocal, two-way communication through multiple channels such as printed materials, audiovisual resources, and various educational media. This approach has been reinforced by technological advancements such as information networks, satellites, and computers, which facilitate communication between learners, academic supervisors, and educational centers.

(Ramzi Ahmed Abdel-Hay, 2005, p. 186)

Another definition views distance learning as “the delivery of instructional or training materials through effective electronic educational media, including satellites, video and audio recordings, computers, or available multimedia technologies used to transmit information.”

(Tarek Amer, 2020, p. 20)

A third perspective considers distance learning as “a method that relies on modern, non-traditional educational tools—primarily technologies such as the Internet, computerized curricula, and communication techniques—designed to deliver information more clearly and effectively, stimulating critical thinking and creativity.”

(Marwan Abdullah, p. 23)

Operational Definition:

Distance learning refers to educational processes conducted within digital and virtual environments through specialized platforms. In its early stages, students and professors faced challenges due to limited training in digital tools and hesitation toward non-traditional virtual practices.

This study aims to address the following objectives:

- To define the concept of distance learning.
- To identify the main advantages of distance learning as an alternative to traditional education in Algerian universities.
- To examine the major obstacles that may hinder the implementation of distance learning within the Algerian higher education system.

4 – E-Learning (Edited Academic Version)

E-learning is defined as the use of modern electronic tools in education to store, organize, and transmit information related to various academic subjects in a manner that enhances the efficiency and effectiveness of the learning system.

(Abdeljawad Bakr, 2001)

Hassan Hussein Zaytoun defines e-learning as “the delivery of electronic educational content through computer-based media and networks, enabling active interaction between the learner, the content, the teacher, and peers—whether synchronously or asynchronously. It allows learners to engage at a time, place, and pace suited to their circumstances while enabling the management of the learning process through digital media.”

(Arar Bahia, 2021)

According to Khan, e-learning is “an innovative method of delivering flexible learning environments characterized by sound design, interactivity, and learner-centeredness, accessible to individuals at any time and place through multiple digital technologies.”

(Mohamed Atta Madani, 2007)

Operational Definition:

E-learning relies on technological tools such as computers, smartphones, and intranet systems. The learning process may occur either synchronously or asynchronously and is considered a component or form of distance education

The Origins of Distance Learning

Distance learning is considered one of the most significant modern educational strategies, grounded in the use of electronic means to maintain communication between students and teachers and ensure access to learning materials. Its application began in the 19th century under what was known as correspondence education. The University of Chicago established the first independent department for correspondence education in 1892, becoming the first university worldwide to formally adopt this model. At that time, students submitted assignments by mail, which were graded and returned with comments, and examinations were likewise administered remotely.

(Marwan Abdullah Mustafa Al-Awaisheh, p. 17)

According to Sami Khafaji (2015), early distance learning relied entirely on postal correspondence as the medium for transferring printed or handwritten educational materials between teacher and learner. Over time, however, it expanded to include a wide variety of computer applications and communication technologies. Historically, the origins of distance learning can be traced to the University of London in 1858 through the “External Student System.” Shortly afterward, the University of Chicago adopted it in 1891, followed by Unesco University in 1906 and Queen’s University in Canada in 1911. In 1969, the United Kingdom established the first university entirely dedicated to distance education—a model that continued until the early 1990s.

Currently, 39 universities in the United States formally adopt this system, including the University of Michigan, Singapore, Delaware, and the University of Maryland, which specializes in distance and open education.

Spain adopted the system in 1972, followed by Iran (1973), Pakistan (1978), Japan (1981), and Nigeria (1983).

In the Arab world, it began in Palestine (1985), followed by Egypt (Alexandria University, 1990), Sudan (1991), and the Arab Open University established in Kuwait in 2000.

With the rapid technological revolution—particularly in digital communication—teaching and learning methodologies have transformed dramatically. Modern distance learning now relies on tools such as email, radio broadcasts, educational television, audiovisual satellite transmissions, personal computers, and laptops. (Khafaji, 2015, p. 7)- Distance learning has thus become an urgent necessity due to technological advancements and the need for flexible access to education. It has been adopted widely in higher education because of its advantages in saving effort, time, and cost.

Distance learning has evolved into a foundational pillar of contemporary education, largely due to its capacity to transcend the physical boundaries and rigid structures traditionally associated with face-to-face instruction. As educational systems increasingly confront diverse learner needs, fluctuating global conditions, and rapid technological advancements, distance learning offers a flexible framework that accommodates varied learning paces, contexts, and preferences. Its development reflects broader transformations in society—particularly the growing reliance on digital communication networks and information technologies—which have redefined how knowledge is produced, delivered, and accessed.

The early emergence of correspondence-based instruction in the nineteenth century illustrates the initial attempts to democratize education by reaching individuals who were geographically distant, professionally occupied, or otherwise unable to attend conventional institutions. While this system relied on relatively slow and one-directional forms of communication, it nevertheless set an important precedent by demonstrating that meaningful learning could occur beyond the traditional classroom. The University of Chicago's establishment of a dedicated correspondence department in 1892 formalized this practice and signaled a recognition that distance learning required its own pedagogical methods, administrative structures, and assessment procedures. This institutional acknowledgement laid the groundwork for considering remote education as an academically legitimate and strategically valuable mode of instruction.

The COVID-19 pandemic brought unprecedented urgency to the adoption of digital learning environments. Educational institutions across the world were compelled to transition to virtual systems almost instantaneously, prompting extensive re-evaluation of teaching methodologies, technological readiness, and student support mechanisms. This abrupt shift highlighted both the potential and the limitations of distance learning. On one hand, digital platforms enabled instructional continuity, facilitated access to multimedia resources, and expanded the possibilities for collaborative and individualized learning. On the other hand, disparities in technological access, variations in digital literacy, and challenges related to student engagement underscored the importance of equitable design and robust institutional planning. The pandemic thus served as

a catalyst, accelerating innovations in virtual pedagogy and prompting long-term reforms in educational policy and practice.

From a historical perspective, the transition from postal correspondence to digital platforms represents a profound transformation in the nature of remote education. Whereas early learners worked largely in isolation with limited opportunities for interaction, contemporary distance learning systems integrate interactive modules, real-time communication tools, adaptive learning technologies, and sophisticated learning management systems. These developments have reshaped the roles of both teacher and learner. Educators are now tasked with designing digitally rich learning experiences that promote critical thinking, collaboration, and continuous engagement, while students are expected to take greater responsibility for self-directed learning and time management. Consequently, distance education has shifted from a model centered on content transmission to one focused on cultivating active and dynamic learning processes.

Moreover, the expansion of distance learning has significant implications for the future of higher education. As institutions incorporate hybrid and fully online programs, they are increasingly adopting global perspectives, accommodating diverse learner demographics, and reimagining assessment, accreditation, and quality assurance practices. Distance learning is no longer viewed merely as an alternative for exceptional circumstances; rather, it has become a strategic component of educational systems seeking to enhance accessibility, resilience

Requirements of Distance Learning

Distance learning requires the provision of several key elements and standards to ensure its effectiveness. These requirements fall into two categories:

1. Human Requirements

These represent the human actors involved in the distance learning process: the teacher, the learner, and the administrator.

a. The Teacher

The teacher must possess competencies necessary for navigating the digital environment, including proficiency with technological tools and the ability to manage virtual classes. This includes using microphones, organizing online discussions, and uploading lectures on platforms such as Moodle, supported by applications like Google Meet or Zoom.

b. The Learner

As the central element in the educational process, the learner must demonstrate the ability to interact with digital environments, access and download learning materials, and follow academic progress through systems such as Progress.

c. The Administrator

Responsible for managing the technological infrastructure, ensuring the proper functioning of digital platforms, and addressing any technical difficulties encountered by teachers and students.

2. Material Requirements

These include the technological resources needed to support digital learning, such as:

- Computers and smart devices

- High-speed Internet connections
- Digitalization tools
- A stable technological infrastructure to ensure effective operation of platforms

Study Objectives – Academic Edited Version

The Utilization of Information Technology in the University

According to the UNESCO (2002) report, Information and Communication Technology (ICT) in higher education consists of a combination of information technologies and communication technologies, along with various ICT products used in educational contexts. These include teleconferencing, email, audio conferences, televised lessons, radio broadcasts, interactive voice response systems, audio tapes, CDs, and more.

(Manichander, 2016, p. 207)

Despite the substantial reforms undertaken by Algerian universities in the third millennium, the higher education system still struggles to keep pace with technological developments due to limited resources. This is especially critical given the global communication and information revolution, which necessitates reconsidering educational content and increasing the research budget—currently estimated at less than 1% of the GDP. Available data indicate that the Algerian IT market is valued at approximately 10–12 billion dinars, with 99% allocated to equipment and only 1% to research. Internet penetration remains low, with only about 1% of the population having reliable access.

A field study by - the University of Annaba, conducted jointly with the University of Strasbourg, surveyed professors and students in the Faculties of Arts and Social and Human Sciences at the Universities of Annaba and Algiers. The study revealed:

- Only 6% of professors use distance education
- 87% rely on outdated information systems
- Only 50% have home Internet access
- 17% rely on Internet cafés
- 60% do not have personal forums or websites

(Fatima Zahra Talhi, 2016, p. 49)

These findings illustrate the gap between the rapid global evolution in technology and the relatively slow adoption of ICT in Algerian higher education.

Algerian Universities Between Traditional and Distance Education

Before the emergence of distance learning, Algerian universities relied entirely on traditional education, which was simple in structure and based on three core actors: the professor, the student, and the administration. Interaction among these actors occurred primarily through paper-based systems and administrative documents. Student attendance in classrooms was essential to directly receive educational material delivered under the supervision of professors.

Administrative communication was similarly paper-based, relying on announcements posted on faculty notice boards. This made access to information difficult for students, especially those living far from campus and unable to visit the university frequently.

With the advent of the digital era, communication shifted from face-to-face interactions to digital and virtual formats, significantly facilitating the exchange of academic and administrative information and reducing material and logistical barriers.

To support this transition, universities introduced institutional digital accounts (emails) for students, professors, and administrative staff. These accounts provided access to university platforms that enabled knowledge exchange within an open digital environment. Using computers and smartphones, students gained the ability to pursue academic learning with greater ease and autonomy.

Platforms such as Moodle and Progress became widely used in Algerian universities due to their efficiency in reducing time and effort—factors previously considered major obstacles to learning and progress.

Before the emergence of distance learning, Algerian universities primarily relied on traditional, face-to-face modes of instruction. This system was relatively simple in structure and revolved around three main actors: the professor, the student, and the administration. Interaction among these actors was conducted mainly through paper-based procedures and official documents. Students were required to attend classes in person to receive the educational material that had been prepared and delivered under the direct supervision of their instructors.

Communication between students and the administration also depended heavily on physical presence. Important announcements were usually posted on faculty or institute notice boards, which often created difficulties for students who lived far from campus or were unable to visit regularly. As a result, accessing academic or administrative information required significant time and effort.

With the advent of digital technologies, however, these traditional mechanisms began to change. Communication gradually shifted from face-to-face interactions and printed notices to virtual and digital formats. This transformation facilitated easier and faster access to academic resources, institutional updates, and administrative procedures. Furthermore, the move toward digitalization helped reduce many of the logistical obstacles associated with material distribution, thereby enhancing the overall efficiency and accessibility of higher education in Algeria.

The Experience of Mohamed El Bachir El Ibrahimi University in Distance Education:

Mohamed El Bachir El Ibrahimi University, similar to other leading Algerian universities in the field of distance education, has systematically adopted the distance learning approach through a carefully selected set of digital platforms that have proven their efficiency and effectiveness among faculty members, students, and the university administration. The most prominent platforms are Moodle and Progress, which have become central tools for delivering, managing, and monitoring educational content in the digital environment. These platforms enable seamless interaction between instructors and students, ensuring continuity of the learning process even when traditional classroom teaching is not possible.

To achieve these positive outcomes, the university implemented a series of structured, regular, and continuous initiatives aimed at strengthening and supporting distance education at all levels. Among these initiatives was the organization of systematic training sessions targeting both newly recruited professors and experienced faculty members. These sessions were designed to provide in-depth, comprehensive, and practical training on the use of the Moodle platform, covering all necessary aspects such as platform access, uploading and organizing online courses, scheduling and conducting remote examinations, opening and managing course modules, and delivering live and recorded lectures remotely. The goal was to ensure that every faculty member could efficiently navigate the digital platforms and provide high-quality education in an online environment.

Students were fully included in this educational enhancement process. The university organized a series of seminars, workshops, and dedicated training days specifically tailored for students, during which digital platform specialists conducted interactive educational sessions and explanatory lectures on both the Progress and Moodle platforms. These sessions were carefully designed to address the common challenges and obstacles students faced when accessing and using the digital learning tools. They provided step-by-step guidance on navigating the platforms, submitting assignments, participating in online discussions, and accessing course materials. These sessions witnessed notable engagement and active participation from students and were met with appreciation from the professors, as they significantly facilitated faculty interaction with students in the digital environment. This included tasks such as entering and reviewing grades, checking corrected assignments, providing timely feedback, and maintaining constant communication with students, all of which enhanced the overall teaching and learning experience.

At the administrative level, the implementation and widespread adoption of the Progress and Moodle platforms by both students and faculty led to a significant reduction in effort, time, and operational pressures traditionally associated with in-person teaching. This was particularly evident during examination periods, which previously required heightened vigilance and extensive preparation to manage grade entry, announcement of results, and follow-up procedures in order to rectify any deficiencies. By utilizing digital platforms, the university streamlined administrative processes, reduced errors, and increased overall efficiency while maintaining high standards of academic integrity.

The strategic adoption of distance education as an alternative to traditional in-person teaching, initially implemented to manage crisis situations such as the recent COVID-19 pandemic, has demonstrated clear and measurable positive outcomes for faculty, students, and university administration alike. These results are reflected in the elimination of many communication barriers, the reduction of logistical difficulties, and the enhancement of digital competencies among all participants. The experience of Mohamed El Bachir El Ibrahimi University exemplifies a successful transition to a more flexible, resilient, and effective digital learning environment, highlighting the university's commitment to innovation and excellence in higher education.

A – Distance Learning Platform (Moodle)

This platform is available on the university's official website and serves as the primary

environment for distance learning. Professors upload lectures and course materials in written or audio-visual form, and these resources are accessible to students for study and course preparation. (Massaad Fathallah, Vol. 21, No. 04)

The term Moodle originally stands for Modular Object-Oriented Dynamic Learning Environment. It is an open-source digital platform designed to facilitate communication between students and professors by creating a virtual environment for teaching and learning.

The platform allows students to:

- access lectures and downloadable course materials
- participate in academic activities
- submit assignments
- engage in discussions through chat rooms and forums
- take online exams graded electronically

One of Moodle's significant advantages is its ability to integrate with platforms such as Zoom and Google Meet, which allow synchronous virtual sessions, fostering real-time interaction between students and professors.

The Progress Digital Platform

The Progress platform is a digital system designed to enhance communication and interaction between students and professors in Algerian universities. It was launched in 2017 to serve as a central hub for e-learning management and academic interaction, enabling users to create personal profiles and engage with institutional content.

(Khaled Lebnagriya & Aisha Refad, 2022–2023, p. 14)

Before its introduction, students obtained exam results through printed lists displayed on faculty notice boards—a process that required physical presence and posed challenges for students living far from campus. This illustrates the limitations of the pre-digital academic environment.

Progress simplified the academic experience by allowing students to:

- follow their academic progress online
- access grades and results
- manage administrative procedures
- complete university registration digitally
- participate in competitive examinations efficiently

The platform strengthened institutional performance by aligning university operations with global technological developments.

Importance of Distance Learning

Distance learning plays a pivotal role in the development and progress of society by investing in human capital. Its importance is reflected in its ability to:

- enable individuals to acquire essential skills, behaviors, and competencies
- promote awareness of personal rights and responsibilities
- enhance life skills and self-development

- broaden educational opportunities beyond physical limitations

Additional Benefits of Distance Learning

Distance learning provides numerous advantages, including:

- reducing the time, effort, and financial resources required by traditional face-to-face education
- enhancing communication among the key actors of the university: students, professors, and administrators
- offering flexible access to learning materials anytime and anywhere
- facilitating immediate feedback, digital assessment, and content updates

Challenges of Distance Learning

1. Cognitive Challenges

- Reduced concentration due to the absence of direct supervision
- Potential difficulties in information delivery, leading to misunderstanding or gaps in comprehension
- Lower student motivation resulting from virtual interaction
- Limited opportunities for intellectual exchange in the digital environment

2. Material and Technical Challenges

- Weak or unstable Internet connectivity
- Lack of adequate digital devices among some students
- Insufficient digital training for both students and professors
- Weak technological infrastructure, especially in remote regions

Conclusion

Distance learning is one of the most effective modern strategies adopted in many global and Arab universities, including Algerian institutions that have embraced it in response to the significant success and progress it has achieved worldwide. Despite the various obstacles it still faces, distance learning has begun to establish itself as a distinctive feature within Algerian universities. This is being realized through the reinforcement of the necessary infrastructure to ensure its success, as well as by encouraging all educational stakeholders to engage with it. This includes offering training programs and workshops dedicated to its platforms, in order to overcome the challenges that might otherwise hinder its presence and sustainability in the academic field.

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