



Distance Education as A Model For Applying Légale Technologie

التعليم عن بعد كنموذج لتطبيق التكنولوجيا القانونية

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Summary:

The current era is known as the age of technology, having witnessed an information revolution that has impacted all aspects of life, thereby affecting all nations and societies. The significant developments in the field of information technology and communication means have had a profound impact on numerous fields, including higher education, which, in turn, has witnessed a technical and technological revolution. This sector has sought to keep pace with these rapid and immense developments in the field of technology and information exchange.

The widespread use and availability of the Internet have accelerated the educational process, transitioning it from traditional methods of transmitting information and lessons to distance education utilizing various electronic means. However, the distance higher education sector in Algeria continues to face numerous challenges and difficulties. Therefore, it is imperative to evaluate the reality of distance higher education, and to explore the most significant advantages and disadvantages of this type of education. Furthermore, a set of solutions and proposals must be presented to improve the state of distance higher education, especially following the emergence of the Coronavirus (COVID-19) pandemic, which was the reason for resorting to the concept of receiving lessons remotely on the basis of the suspension of studies in Algerian universities in their customary form. This compelled the Ministry of Higher Education and Scientific Research to adopt the distance education system as a means to compensate for this interruption, and to consider its generalization as an alternative to traditional education.

Keywords: Technology - Internet - Distance higher education - University.

الملخص:



يعرف العصر الحالي بعصر التكنولوجيا، حيث شهد ثورة معلوماتية أثرت على جميع جوانب الحياة، مما جعل جميع الدول والمجتمعات تتأثر بها. لقد كان للتطورات الكبيرة في مجال تقنية المعلومات ووسائل الاتصالات تأثير عميق على العديد من المجالات، بما في ذلك التعليم العالي، الذي شهد بدوره ثورة تقنية وتكنولوجية. سعى هذا القطاع إلى مواكبة هذه التطورات السريعة والهائلة في مجال التقنية وتبادل المعلومات.

أدى انتشار استخدام الإنترنت وتوفره إلى تسريع عملية التعليم، حيث انتقل من الأساليب التقليدية في نقل المعلومات والدروس إلى التعليم عن بُعد باستخدام وسائل إلكترونية متنوعة. ومع ذلك، لا يزال قطاع التعليم العالي عن بُعد في الجزائر يواجه العديد من التحديات والصعوبات. لذا، من الضروري تقييم واقع التعليم العالي عن بُعد، واستكشاف أهم إيجابيات وسلبيات هذا النوع من التعليم. كما يجب تقديم مجموعة من الحلول والاقتراحات لتحسين وضع التعليم العالي عن بُعد، خاصة بعد ظهور جائحة فيروس كورونا (كوفيد-19) التي كانت سببا في اللجوء الي فكرة تلقي الدروس عن بعد على اساس توقف الدراسة في الجامعات الجزائرية بشكله المعتاد. مما اجبر وزارة التعليم العالي والبحث العلمي إلى اعتماد نظام التعليم عن بُعد كوسيلة لتعويض هذا الانقطاع، والتفكير في تعميمه كبديل للتعليم التقليدي. الكلمات المفتاحية: التكنولوجيا -الانترنت -التعليم العالي عن بعد – الجامعة.

Introduction

Distance learning is considered a modern means of acquiring knowledge and education, as it does not require a fixed and continuous physical attendance at academic institutions across various educational levels. The emergence of this mode of education is primarily attributed to the exchange of knowledge via the Internet. With the onset of the COVID-19 pandemic in early 2020, the Ministry of Higher Education and Scientific Research adopted the distance learning system with the aim of optimizing academic time, avoiding interruptions, and ensuring the continuity of scheduled academic programs and curricula within the university year. Since then, the Ministry has continued to implement the higher distance education system on a regular basis throughout the current academic year.

In recent years, remote e-learning has witnessed numerous developments at both the global and domestic levels, having transitioned from a theoretical concept to a practical reality that contributes to human development and reinforces the distance education process in numerous countries worldwide. This system has likewise become an established educational practice adopted by hundreds of universities, institutes, and higher education institutions.

The Algerian universities face a greater challenge than ever before in keeping pace with these developments, both with regard to the distance learning system and through the utilization of electronic and technological means and platforms in the implementation of said system. They are further required to address the challenges of ensuring the continuity and quality assurance of higher distance education.

Significance of the Study:

The concept of distance learning has emerged as one of the new and significant dimensions in knowledge acquisition, being regarded as a vital process within the framework of educational and training service delivery, particularly at the higher education and postgraduate levels. It is in this context that the importance of implementing distance learning methods in educational institutions becomes evident — both in academic institutions generally and in university education specifically — as a key instrument for the advancement of higher education. This importance is attributable to the nature of the target populations served by the higher



education system, as well as the quality of services rendered by this distinguished educational model.

At present, the Algerian Ministry of Higher Education and Scientific Research has demonstrated a clear commitment to implementing this new form of education through the enactment of relevant legislation, regulations, and the provision of the necessary resources and administrative frameworks. Nevertheless, this process remains in its early stages and is progressing at a slow pace, being largely confined to isolated individual initiatives and limited applications within certain universities, with considerable disparity in its adoption both across different institutions and within a single university — a reality that precludes any generalization of its application. This state of affairs is attributable to the degree of conviction and motivation among local university administrations, academic staff, and students with respect to this mode of education, as well as the availability of the requisite resources and infrastructure on the part of academic institutions.

Distance learning has become an urgent imperative that demands serious and effective engagement, in order to ensure that higher education remains aligned with contemporary developments — particularly in light of the global health conditions arising from the spread of COVID-19. It is incumbent upon us to ensure the continuity of the educational process and the quality of higher education in its modern form, namely higher distance education. This, in turn, directs our inquiry toward the following central problematic: To what extent is the higher distance education system in Algeria effective? What are the advantages and disadvantages associated with distance learning, and how may this system be more effectively utilized?

The present study relies upon a descriptive account and analytical examination of the current experience with higher distance education during this particular phase, necessitating the adoption of a descriptive-analytical methodology. This is achieved through an examination of the concepts and characteristics of the higher distance education system, an assessment of its merits and shortcomings, and a critical analysis of the actual experience of Algerian universities in the domain of higher distance education.

Study Plan :

In this study, we shall endeavor to explore the concept of distance learning and its distinguishing characteristics. The first section will address the definition of higher distance education, along with its advantages and disadvantages. We shall then proceed to the second section, which examines the requirements for the implementation of the e-learning system and the challenges associated therewith. This section shall be subdivided into two subsections: the first dedicated to the prerequisites for the implementation of the e-learning system and the challenges it faces, and the second addressing the current state of the higher distance education sector in Algeria.

Section One: The Nature and Characteristics of Distance Learning

The advancement and development of information and communication technology, particularly within the educational domain, has given rise to numerous technological



innovations that have become indispensable to their integration into the educational process, thereby contributing to the enhancement of its overall efficiency. Among these innovations, remote e-learning stands out as particularly prominent, as the higher education sector today faces numerous challenges, including the imperative to adapt to the prevailing public health conditions.

Subsection One: The Concept of Distance Learning

Among the systems that have emerged from contemporary trends in educational technology is e-learning, which relies upon the use of computers, the Internet, and various interactive media in the learning process. E-learning refers to the utilization of modern technologies to deliver educational content to students in an effective and efficient manner, capitalizing on its numerous advantages, such as the reduction of time, effort, and financial costs. E-learning further contributes to the enhancement of student learning outcomes and the improvement of academic performance, while providing an engaging and stimulating educational environment for both academic staff and students, enabling them to transcend the constraints of time and place.^{1 1}

The continuous increase in the number of students seeking and enrolling in higher education necessitates the expansion of educational facilities and the provision of additional academic capacity, in addition to accommodating the annually growing student intake. This has posed a significant challenge for governments with regard to the provision of infrastructure and educational facilities. As a response to this challenge, new forms of education have emerged, such as open universities and virtual universities, which rely primarily upon the principle of distance learning and e-learning through the application of information and communication technologies.

Sub-section One: Definition of Distance Learning

Distance learning may be defined as "a learner-centred educational system that is predicated upon the needs of the learner, without requiring direct interaction between the instructor and the learner. Within this system, the educational institution plays a significant role in planning and delivering educational services to learners through the utilization of appropriate technological means."²

Being at the apex of the educational hierarchy across all societies, distance learning seeks to equip students with all the requisite competencies and skills necessary to achieve a higher quality of life in the present and to build a promising professional future. In pursuit of these objectives, traditional methods of lecture-based instruction and rote transmission of knowledge are wholly insufficient.

The integration of technology as an effective instrument and its deployment in the development of the educational process enables the provision of tailored education suited to

Sami Qurashi, Dr. Sharifa Rafa', The Quality of E-Learning in Higher Education as a Requirement of the ¹ Knowledge Age — With Reference to the Efforts of the Algerian University, *Journal of Social and Human Sciences*, Issue Ten, pp. 222–223.

² Ibid.



each individual student. The level of human resources is regarded as a principal indicator of national advancement. It is in this context that e-learning methodologies play a significant role in enhancing the learning experience, particularly within the domain of higher education.¹ E-learning is considered a form of distance learning, representing an innovative means of providing an interactive, learner-centred environment. This environment is designed to be adaptable to any time and place through the utilization of Internet capabilities and digital technologies, in accordance with the instructional design principles applicable to open, flexible, and distributed learning environments.²

Regardless of the various terminologies employed to describe this new form of education, they all converge upon a single fundamental premise: the utilization of information and communication technology in the delivery of educational content, which shall serve to address all deficiencies inherent in the traditional educational system.

A clear distinction exists between e-learning and distance learning, as follows:

First: With respect to the role of the learner — in e-learning, the learner is expected to engage actively in the educational process, with continuous and interactive monitoring. In distance learning, by contrast, the learner's role is confined to the passive reception of information, without any interaction or participation.

Second: With respect to the location of the learner — in e-learning, there may be partial or complete spatial constraints, though learning may occur independently of such constraints. In distance learning, however, the learner must be entirely separated from the instructor.

Third: With respect to educational resources — in e-learning, the content and its mode of delivery are adapted in accordance with the current and prospective capacities of each individual. In distance learning, by contrast, instructional materials remain uniform for all learners, irrespective of their respective specializations.

Fourth: With respect to assessment — in e-learning, evaluation is conducted in an active and continuous manner through the collection of data regarding the impact and effectiveness of the learning process. In distance learning, assessment is confined to the learner's achievements at the conclusion of the programme.

Accordingly, there exists an intrinsic interdependence between the concepts of e-learning and distance learning, insofar as the prevailing form of distance learning today is remote e-learning. E-learning constitutes a modality that underpins a broad range of applications and processes, including file-sharing capabilities, and provides a structured framework for addressing the challenges inherent in the learning process.³

¹ Aicha Al-Aidi; op. cit.; p. 672.

² Naima Ben Dif Allah, Kamal Battoush, Features of E-Learning in Algerian Higher Education Institutions — The National Distance Learning Programme Project, Annals of Guelma University for Social and Human Sciences, Issue 16, June 2016, p. 430.

³ Dr. Qahham Wahiba, Al-Sabti Wassila, The Reality of Distance Learning Across All Educational Cycles in Algeria, Journal of Human Sciences, Mohamed Khider University of Biskra, Issue 40, June 2015, p. 15.



Sub-section Two: Objectives and Instruments of Distance Learning

The objectives of distance learning have become increasingly widespread and expansive, drawing upon the advantages afforded by technology and communication media. Distance learning seeks to achieve a set of objectives, foremost among which is the promotion of the principle of equal opportunity in education and training among members of society, without discrimination on the basis of social or economic status, race, religion, or gender. Distance learning further possesses a range of means and instruments designed to facilitate the transmission of information and its associated activities.

First: Objectives of Distance Learning

- The improvement of the quality of the educational process through the introduction of distance learning, which is regarded as a significant step toward the attainment of standards in higher education and, consequently, toward the enhancement of educational quality.
- The provision of educational services to special categories of individuals whose circumstances constitute a barrier to enrolment in conventional education, including persons with disabilities, incarcerated individuals, certain women, and those employed in remote areas.
- The support and reinforcement of lifelong learning motivations, whereby distance learning contributes to the development and cultivation of learners' capacities for initiative and self-reliance.
- The alleviation of the existing pressure on traditional educational and training institutions.
- The creation of appropriate learning conditions tailored to the diverse needs of learners, given that distance learning is distinguished by its flexibility and adaptability to the educational circumstances of students, rendering it suitable for homemakers, farmers, industrial workers, employees, and teachers alike, thereby addressing their needs regardless of their respective circumstances.
- Rendering education more flexible and liberating it from complex constraints, enabling study to be pursued without temporal or spatial impediments, such as the necessity of travelling to educational and training centres.
- Contributing to societal development and the elevation of the cultural level among individuals through diverse educational programmes.¹

Second: Instruments of Distance Learning

These refer to the technologies employed in e-learning that contribute to the transmission of learning content, information, and associated activities. They further play a role in fostering interaction and communication among learners themselves, as well as between learners, instructors, and the educational institution.

¹ Najeh Makhoulf, Samira Mellouk, The Role of Distance Learning in Advancing Higher Education among Women, Al-Midad Journal, University of Djelfa, pp. 44-45.



- **Synchronous E-Learning Tools:** These encompass radio and television broadcasting, audio and video conferencing, discussion forums, text-based chat, virtual classrooms, and newsgroups.
- **Asynchronous E-Learning Tools:** These include discussion forums, electronic mail, blogs, virtual laboratories, and bulletin boards. ¹

Electronic blogs are regarded as among the most prominent instruments of e-learning, being considered one of the distinguishing applications of the second generation of education. Educators and academics have leveraged these blogs in the service of educational curricula and to strengthen communication with students. Such blogs enable learning independently of temporal and spatial constraints, rendering them more flexible and accessible to all individuals across varying levels of proficiency. They are further distinguished by their learner-centred orientation and their capacity to address the needs of learners, in addition to affording freedom of expression and the sharing of knowledge and ideas. This grants learners a greater opportunity to participate in discussions, submit observations, and raise questions, thereby contributing to the enhancement of their competencies. Furthermore, these blogs encourage learners to engage in interactive, collective, and collaborative work. ²

Sub-section Three: Advantages and Characteristics of Distance Learning

Distance learning is distinguished by a set of advantages and characteristics, the most significant of which are as follows:

First: Separation of the Instructor from the Learner

Distance learning is predicated upon the spatial and temporal separation of the instructor from the learner. Consequently, the role of the instructor and the nature of the interaction between instructor and learner differ fundamentally from those characteristic of traditional educational methods. E-learning further provides an interactive educational environment that brings together the learner and the instructor, in addition to facilitating interaction among learners themselves. This form of education introduces an element of engagement, insofar as learning is no longer confined to a single modality; rather, the diversification of its methods serves to enrich and enhance the educational experience. ³

Second: Utilization of Technological Media

Technological media are employed in the design and transmission of learning content through the use of dual-channel transmission, whereby communication between the instructor and the learner is conducted via technological media in a bidirectional manner.

Provision of Two-Way Communication Channels: Bidirectional communication between the instructor and the learner constitutes a fundamental element, particularly in distance learning programmes that cater to a large number of students. ⁴

¹ Sami Qurashi, Dr. Sharifa Rafa', op. cit., p. 226.

² Dr. Hafsi Houda, Enhancing the Quality of Distance Learning Through E-Learning Blogs, Al-Ibda' Journal, Vol. 09, Issue 01, 2019, p. 160.

³ Dr. Ratiba Tayibi, op. cit., p. 16.

⁴ Bouachour Karima, op. cit., pp. 348–349.



Third: Suitability

Distance learning is suited to all individuals, whether in the capacity of lecturer or student.

Fourth: Flexibility

Flexibility denotes the provision of opportunities and options to learners based upon their willingness to participate. Flexibility is regarded as one of the most prominent attributes of e-learning, insofar as it is not characterised by the rigidity inherent in traditional education; rather, it constitutes a partially open and flexible mode of instruction. Flexibility in this context reflects adaptability, compatibility, and the capacity to accommodate diverse learner needs and individual competencies, in addition to affording learners the ability to select an appropriate time for learning.

Fifth: Impact

Distance learning is distinguished by its capacity to produce a greater effect and efficacy upon the learner in comparison to the traditional educational system, by virtue of its utilisation of modern technologies.

Subsection Two: Advantages and Disadvantages of Distance Learning

The process of distance learning encompasses a set of challenges, as the transition from traditional education to distance learning is by no means a straightforward undertaking.

Nevertheless, this system is capable of yielding numerous benefits and advantages.

Sub-section One: Challenges of Distance Learning

1. **Underdevelopment of Communications Infrastructure:** This results in slow Internet connectivity and weak bandwidth levels, causing difficulties in accessing educational content.
2. **Absence of the Campus Environment:** The lack of physical presence and limited human interaction leads to diminished academic competition among students and the passive reception of information.
3. **Deficiency of an Interactive Learning Environment:** Distance learning lacks the appeal necessary to foster student engagement and responsiveness, constituting a significant shortcoming of this mode of instruction.
4. **Limitation of Educational Content to Theoretical Aspects:** This is frequently the case, resulting in a reduction of practical experiences that would otherwise be of benefit to students.
5. **Fatigue of Both Instructor and Student:** Arising from the extended periods of time spent by each party on smartphones and other devices in order to follow academic coursework.
6. **Restriction of the Instructor's Role:** The instructor's function is generally confined to the instructional dimension, thereby diminishing their pedagogical influence in the formation and development of students.
7. **Difficulty in Performance Assessment:** Students encounter significant difficulty in continuously evaluating their own performance and academic attainment.



Sub-section Two: Advantages of Distance Learning

Distance learning possesses numerous advantages, the most significant of which may be outlined as follows:

First: Elimination of the Need for Physical Commuting

There are numerous circumstances that may prevent individuals from travelling between countries, or indeed from commuting within their own nation. Distance learning is therefore regarded as the optimal alternative for home-based learning. This mode of education is particularly suited to students who are unable to bear the financial costs of travel, as well as to spouses and mothers who wish to pursue their education while remaining with their families. In general terms, distance learning provides an excellent option for those who encounter difficulties in relocating for the purposes of study.

Second: Reduced Financial Cost

Distance learning undoubtedly eliminates a considerable proportion of the expenditure associated with conventional study. Although certain universities offer tuition-free scholarships, additional costs typically include accommodation, transportation, and the procurement of academic materials, along with the requirement to attend lectures on a regular basis. With distance learning, all such requirements are dispensed with, as the sole prerequisites are a computer and an Internet connection in order to maintain engagement with one's studies.

Furthermore, the distance learning system achieves the following:

Third: Time Efficiency

Time management is regarded as one of the most prominent advantages of distance learning. Traditional education requires the expenditure of considerable time in commuting between home and university, in addition to waiting for lectures to commence. Distance learning, by contrast, enables the learner to organise their day in accordance with their personal schedule and the tasks they wish to accomplish, thereby assisting students and all those seeking education in saving time and completing numerous activities simultaneously.

Fourth: Utilisation of Modern Technologies

Distance learning affords the learner the opportunity to engage with a diverse range of technologies that may not be equally accessible in traditional education. The online learner progressively adapts to distance learning tools and, over time, acquires proficiency in their use, thereby distinguishing themselves within their respective field.

Fifth: Enhancement of Self-Directed Learning Skills

Individual competencies vary from one person to another, and some may encounter difficulties in learning within a group setting. Distance learning may therefore prove beneficial to certain individuals in bringing forth their individual skills, while also fostering self-reliance and the ability to seek information from diverse sources.

Furthermore, the distance learning system achieves the following:

1. Distance learning mitigates the deficiency of resources and capacities from which certain universities suffer.



2. It enables learners to benefit from technological advancement and the aspirations it carries for the development of the scientific capacities of students and researchers across various disciplines.
3. It reduces individual disparities among trainees by placing diverse educational resources at the learner's disposal, in addition to providing comprehensive support to training institutions with all the media and educational technologies required to produce effective instruction.
4. It conserves time and effort.
5. It motivates the learner to acquire the greatest possible range of skills and academic attainment, given that the educational process is focused exclusively on academic content without regard to extraneous considerations.
6. It enables the individual to rely entirely upon themselves by independently selecting the sources from which they derive information, free from external influence.
7. It facilitates the education of large numbers of students without constraints of time or place.
8. It enables the instruction of large cohorts within a short period of time.
9. It provides for immediate and rapid assessment, the identification of results, and the correction of errors.
10. It encourages self-directed learning.
11. It offers a multiplicity of knowledge sources and access to thousands of online platforms.
12. It enables the easy and rapid updating of informational content.
13. E-learning overcomes the challenge of ever-increasing student numbers in conjunction with limited classroom capacity and scarce available resources, particularly in faculties and disciplines of a theoretical nature. ¹

In light of the challenges confronting higher education institutions — including the challenge of globalisation, the challenge of investment in human resources, and the challenge posed by the outcomes of the information age and the unprecedented explosion of knowledge, which has given rise to an unparalleled proliferation of modern and advanced teaching methods, approaches, and technologies predicated upon digital innovation — these institutions are required to exert exceptional efforts in order to keep pace with this tremendous development and to harness it in the service of improving the educational process.

The utilisation of e-learning in its integrated form within the learning environment has become an urgent imperative, as the need to develop the scientific content of curricula and educational programmes, along with the requisite instructional means necessary to enrich the educational environment with modern methods and technologies, demands immediate attention. This, in turn, contributes to the attainment of the requisite standards of quality in higher education. ²

¹ Aicha Al-Aidi, Mohamed Boufatah, op. cit., p. 672 et seq.

² Dr. Hafsi Houda, op. cit., p. 160.



Section Two: Requirements for the Implementation of the E-Learning System and Its Associated Challenges

The implementation of the e-learning system necessitates the availability of a set of components and elements that are mutually integrated in order to ensure the success of this system. There are likewise numerous challenges that impede the successful delivery of the electronic educational process or distance learning.

Subsection One: Requirements for the Implementation of the E-Learning System and Its Associated Challenges

The most significant components and elements required by the remote electronic educational process are as follows:

Sub-section One: Inputs of the E-Learning System

The inputs constitute the process of establishing the infrastructure of e-learning, which requires the provision of the following:

1. The provision of computer equipment within the educational institution.
2. The provision of connectivity lines to the global information network — the Internet.
3. The establishment of a website for the educational institution on the Internet or on a local network.
4. The engagement of technicians and specialists to monitor and maintain computer equipment and network systems.
5. The design and development of electronic curricula based upon the principles and standards of instructional design and in accordance with a systemic approach, and their delivery via the global or local network on a continuous, round-the-clock basis.
6. The qualification of specialists in the design of electronic programmes and curricula.
7. The equipping of modern teaching halls and computer laboratories.
8. The training of academic staff members through appropriate training programmes aimed at developing both their technical and pedagogical competencies.
9. The preparation and qualification of students for the transition to the new e-learning system.
10. The designation of the educational institution — whether school or university — as an electronic institution in both its educational and administrative capacities.
11. The precise and sound determination of educational objectives.¹

Sub-section Two: Operational Processes of the E-Learning System

1. Registration for study and selection of electronic courses.
2. Implementation of electronic study.
3. Student engagement with electronic lessons either synchronously while present in the classroom — in accordance with the conventional method — or asynchronously from their place of residence or workplace.
4. Utilisation of various e-learning technologies, such as electronic mail, interactive video, chat rooms, and video conferencing.

¹ Dr. Ratiba Tayibi, op. cit., p. 17.



5. The student's engagement with formative and developmental assessment.¹

Sub-section Three: Challenges of Virtual Education

The principal challenges confronting the implementation of e-learning, along with proposed solutions for addressing them, may be identified as follows:

1. **Insufficiency of Funding and Infrastructure Required for E-Learning:** This is manifested in the absence of adequate budgetary allocation, equipment, and all requisite e-learning resources. These obstacles may be overcome through the engagement of community institutions, the private sector, and individuals by means of their contributions and support for the project, as well as the allocation of a portion of the education budget toward its implementation.
2. **Shortage of Trained Human Resources:** This is reflected in the absence of the technicians, experts, and specialists necessary for the implementation of the e-learning project. This challenge may be addressed through the conduct of intensive training programmes for the requisite human resources and the dispatch of personnel on training missions to technologically advanced countries.
3. **Technological Illiteracy within Society and Insufficient Awareness of E-Learning:** This requires a concerted effort to train and qualify instructors and learners in particular, in preparation for this transition.
4. **The Dependence of E-Learning upon Additional Technological Factors:** Such factors include the efficiency of communication networks, the availability of hardware and software, and the capacity to design and produce educational content of a distinguished quality. This necessitates attention to improving the quality of Internet connectivity, ensuring the availability of all requisite hardware and software, and providing training programmes in design and production skills for high-quality educational content.
5. **Failure to Comprehend the New Role of the Instructor within the E-Learning Framework:** The prevailing misconception that e-learning renders the instructor's role obsolete requires rectification through a clear articulation of the instructor's new roles within e-learning — roles that have become more effective and constructive than before — and an affirmation that the instructor's function remains indispensable.
6. **The Nascent Nature of E-Learning Applications:** Compounded by the fact that many of these educational methodologies have been developed by commercial enterprises that are neither practically nor culturally equipped for such a mission. Overcoming this challenge requires the reinforcement and affirmation of the role of educational institutions in the preparation and planning of e-learning initiatives, so as to prevent numerous such initiatives from failing as a result of the absence of the pedagogical dimension in the planning, preparation, and design process, wherein the technical aspect tends to receive disproportionate emphasis.

¹ Ibid., p. 17.



7. **Information Security:** This pertains to the implementation of security policies designed to protect databases and virtual education platforms from various forms of unauthorised access and use.
8. **Technical Malfunctions:** These are manifested in difficulties in accessing information and sudden network interruptions resulting from poor Internet connectivity.
9. **Insufficient Availability of Devices for Students within Educational Institutions:** Computer use is regarded as costly, and modern education requires high-specification devices compatible with advanced software programmes.
10. **Lack of Expertise among Those Responsible for Educational Programmes:** Including their failure to participate in training courses and conferences held in technologically advanced countries. ¹

Subsection Two: The Current State of the Higher Distance Education Sector in Algeria

The contemporary era is characterised as the age of the information and technological revolution and the explosion of knowledge, wherein the world is witnessing tremendous developments in communications media and information technology. This is attributable to the rapid and successive transformations generated by scientific and technological progress. The expanding utilisation of information and communication technologies — and the Internet in particular — has had considerable impacts across numerous domains, contributing to the development of institutional outputs and influencing the structure of societies.

Among the domains that have benefited significantly and notably from these developments is education in general, and university education in particular. Education has transitioned from the traditional model — centred upon the instructor's efforts in delivering academic material to students through in-person attendance — to an electronically directed distance learning model known as "e-learning." This form of education affords every learner the opportunity to access their right to education and to realise the objectives of lifelong learning, and is regarded as the most appropriate approach for addressing the challenges of the knowledge explosion era. ²

Sub-section One: The National E-Learning Project

E-learning has become one of the priorities of the Algerian State, as the National E-Learning Project in universities was launched within the Priorities and Planning Report for the year 2007, which was prepared in September 2006. Nevertheless, the absence of sound planning and a unified information policy led Algerian universities to adopt multiple platforms. Despite the Ministry of Higher Education and Scientific Research's procurement of the e-Charlemagne platform, the project was suspended due to deficiencies in infrastructure, human resources, and legislative frameworks. By way of illustration, the universities of Constantine

¹ Khaled Rajam, Abdelghani Daden, Assessing the Effectiveness of Virtual Education at Algerian Universities — A Case Study of the Virtual Education Platform at the University of Ouargla, Algerian Journal of Economic Development, Issue 03, December 2015, p. 97.

² Dr. Hafsi Houda, op. cit., p. 160.



alone host a considerable number of platforms, including e-Charlemagne, GANESHA, and Moodle; however, the platforms actually in operational use are confined to e-Charlemagne, GANESHA, and Moodle.¹

Within the aforementioned Priorities and Planning Report, the Ministry of Higher Education and Scientific Research recorded two strategic objectives with respect to information and communication technologies, namely:

1. The regulation of the sector's integrated information system.
2. The establishment of a distance learning system as a complementary pillar to in-person instruction.²

E-learning constitutes a manifestation of the information society and is the product of the integration of modern information and communication technologies into the educational system.¹ E-learning units assume responsibility for the development of e-learning platforms dedicated to students, providing a diverse range of services including courses in their various forms, university theses, and other academic resources. These units further undertake the training of academic staff members in the creation of electronic curricula and the use of such platforms. For this reason, these units have been established across all educational institutions and have been appropriately reinforced with:³

- Experts in pedagogy and technology.
- Engineers specialising in computer science and electronics.

These experts and engineers have benefited from specialised and multidisciplinary training within the framework of various cooperation projects, particularly:

- The Ibn Sina Project (UNESCO and the European Commission).
- The Cooperation Programme with Switzerland.
- The Digital Grouping of the Agence Universitaire de la Francophonie (AUF).

Sub-section Two: The Role of the University in Activating and Developing Higher Distance Education

At the university level, centres for information and communication systems, networks, and televised education have been established under the umbrella of shared services, reporting directly to the university presidency. At present, priority is accorded to the use of video lectures to address the shortfall in academic supervision at newly established and geographically remote institutions, such as those situated in the deep south. With regard to e-learning, the focus is directed toward the qualitative dimension of training. Institutions have been granted the autonomy to determine the path they deem appropriate in accordance with the modality of their choosing, pending the adoption of an educational charter or pedagogical framework that takes into account the Algerian context, realities, and specificities. This

¹ Aicha Al-Aidi, Mohamed Boufatah, op. cit., p. 676.

² Sami Qurashi, Dr. Sharifa Rafa', op. cit., p. 232.

³ Dr. Mukhtar Jellouli, Boutahra Asia, The Feasibility of Implementing E-Learning in Algerian Educational Institutions — A Field Study at the University of Algiers 03, Al-Rased Al-Ilmi Journal, University of Oran 01 Ahmed Ben Bella, Vol. 07, Issue 01, March 2020, p. 21.



charter is currently being prepared, and the competent authorities are working on the elaboration of the requisite regulatory texts governing the production of content.¹

Supplementary Circular No. 635, dated 26 October 2016, concerning the organisation of the distance Master's programme, defined the functions of the University of Continuing Education as follows:

- Ensuring technical support throughout the duration of the training programme.
- Managing and administering the digital platform dedicated to this mode of training.²

Higher education in Algeria relies upon a system known as asynchronous communication, whereby no immediate interaction or real-time participation takes place. In this mode of education, instructional materials are stored on electronic media such as web pages and electronic mail files, in addition to printed documentation. Exchange among the parties to the educational process rarely occurs, and when it does, it is not instantaneous.

Among the most prominent features of asynchronous education is that it enables the exchange of information, albeit not in real time, thereby allowing students to communicate with their instructors or administration to enquire about academic content and receive precise and detailed responses. This system further affords time for reflection and contemplation of lessons, consultation of references, research into information, verification of primary sources, or awaiting responses from instructors through available communication channels.

Distance learning, in its implementation, relies upon the methods and technologies of e-learning, which constitutes an educational system focused on delivering educational content, curricula, and information in all their forms and formats through the use of information technologies, electronic networks, the Internet, and its various multimedia tools. This enables students to access learning resources at any time and from any location, and to engage with educational content together with its accompanying explanations, exercises, interactive elements, monitoring, and assessment within an interactive educational environment. It has accordingly been established that the adoption of supplementary educational mechanisms to support traditional instruction — such as e-learning — possesses the capacity to improve the quality of educational outputs.

The process of quality assurance in higher education is no longer an improvised undertaking reliant upon conjecture and trial and error; rather, it has become a clearly defined process with precisely articulated objectives, given its effective role in rendering higher education institutions open scientific, social, and economic systems that interact with and are influenced by their external environment. The mission of higher education institutions lies in ensuring that their outputs are aligned with the requirements of the economic and social environment.³ Many modern and advanced universities require the expansion of continuing education opportunities for their students at any time, from any location, and at any pace, in order to

¹ Sami Qurashi, Dr. Sharifa Rafa', op. cit., pp. 232–233.

² Bouachour Karima, op. cit., p. 354.

³ Dr. Yidou Mohamed, Requirements for Quality Assurance in Higher Education in Algeria — Between Reality and Prospection, Ma'arif Journal, Department of Economic Sciences, Year Thirteen, Issue 24, June 2018, p. 406.



enhance the effectiveness of the educational process and render it capable of competing at the global level. This has led to a notable increase in the utilisation of e-learning within educational institutions, including universities, over the past few years.¹

Conclusion

In conclusion, it may be established that the higher distance education system in Algeria remains in its nascent stage, having been developed in response to the challenges posed by the COVID-19 pandemic. Notwithstanding certain initiatives undertaken by select faculties — such as law faculties for Master's degree students — this experience remains considerably recent. Despite the advantages it carries, this initiative confronts numerous challenges, the most prominent of which is the inadequacy of infrastructure in the domains of Internet connectivity and telecommunications. It is therefore imperative to:

- Conclude agreements between telecommunications companies and the Ministry of Higher Education and Scientific Research to ensure the provision of high-speed Internet services.
- Endeavour to establish a technical and operational mechanism enabling students to access the Internet with ease from their places of residence, or at the very least at the level of faculties and universities in proximity to their domicile, in order to benefit from connectivity and access to courses delivered through distance learning.
- Regulate assessment standards and examination procedures while respecting the specificities of each academic discipline.
- Rectify technical and logistical deficiencies, particularly with respect to the means of communication between the administration, academic staff, and students.
- Develop remote interaction modalities through which questions may be raised and answered, and discussions opened on subjects requiring extended deliberation.
- Draw upon the experiences of countries that have preceded Algeria in the implementation of this form of education, and which have identified the shortcomings and deficiencies affecting the educational process in Algeria.
- Activate the role of the National E-Learning Project as a significant mechanism in advancing toward a successful and effective higher distance education system, along with activating the role of the committees charged with developing and monitoring this system.
- Work toward ensuring the quality of higher education — and not merely its continuity — by providing all the requisite human, material, and technical resources in their various forms and categories as demanded by the distance learning system.
- Capitalise upon the current public health situation and render the higher distance education system permanent and continuous, rather than a temporary measure confined to a specific circumstance or emergency, in conjunction with in-person instruction.

¹ Dr. Ratiba Tayibi, op. cit., p. 12.



- Convene conferences, seminars, and virtual and remote academic study days on matters of paramount importance within the relevant field of specialisation.

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