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Digitalization in Higher Education in Algeria: Trajectories and Outcomes

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Abstract
The university represents one of the social institutions with a profound impact on all other sectors within society. It has structural relationships with them and plays significant and highly impactful roles, making it a driving force for both social and economic development. It is a central actor and an active contributor to the advancement and prosperity of society. Furthermore, it is a vital cultural and intellectual hub, as it is closely linked to the societal context and to a key demographic—youth. The university also drives social dynamics, positioning it as a system that does not function in isolation from other social entities, but rather operates in an interconnected and interactive manner. Given the importance of its tasks, the university seeks to make the most of available resources and, even more, strives to innovate and create strategies that help it carry out its tasks effectively, contributing to the improvement of social life and making it more adaptable and practical. Among the bold steps taken in pursuit of this goal was the digitization of the sector in all its branches, structures, and devices. It launched dozens of electronic platforms and digital applications to manage the sector and improve the services it provides. The question driving this paper is: What are the requirements for the digitization of higher education, what challenges did the process face, and what were its impacts?

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Introduction

For years, Algerian universities have been working on providing high-quality education and enhancing the outcomes of their programs. To achieve this, significant human and material resources have been allocated, alongside reforms followed by successive updates in line with both international and local transformations and developments across all levels—social, political, cultural, and technological. The latter has witnessed a massive revolution that directly impacted individuals, societies, and the world as a whole. This scientific technological revolution has affected all categories and fields.

Among the areas influenced by the technological revolution is education. On one hand, the technological revolution is the product of educational actions and the result of studies and research conducted by educational institutions, as well as the outcome of human minds that have worked within these institutions. Educational institutions have developed and refined it through their pedagogical discourses, various educational tools, methods, and approaches, aligned with scientific and technological orientations. In this context, scientific and technological training is both a goal of educational practices and an integral part of their philosophy. On the other hand, technological systems contribute to enhancing the educational process.

In its pursuit of achieving its objectives, the Algerian university has worked to keep pace with technological developments and utilize them in delivering educational content. This is clearly evident in the introduction of numerous disciplines, scientific branches, and even national schools that focus specifically on technological advancements, such as the National School of Artificial Intelligence. Additionally, efforts have been made to ensure that computer science is a core subject taught across all scientific, human, and social disciplines.

1. Concept of Digitization

The transformations experienced by societies, particularly democratic changes, have led to the addition of new tasks for educational systems. These tasks required the educational structures to expand in the range of services provided, ensuring that all service seekers are treated equally. As a result, one of the primary objectives of education has become the preparation and provision of conditions that allow every individual to access the level of education they are capable of reaching based on their abilities, readiness, and resources, through various means and for as long as possible. This necessitates working to provide equal educational opportunities for individuals who wish to pursue their education, regardless of age, geographic location, or social status. It also requires the society's ability to respond and adapt to new developments and challenges (Amer, E-Learning and E-Teaching, 2015, p. 24).

Education has become an essential and primary means for the advancement and progress of societies, particularly in the context of technological development, coinciding with the global economic shift towards a knowledge-based economy. In the face of the technological revolution, the advancement and development of communication, information, and educational media have played a significant role. The continuity of civilizations is now dependent on their response to changes and transformations across various fields. As a result, societies and countries have undergone transformations in their higher education systems, with the pace of change varying from one country to another (Ahmed, 2010, p. 09).

Modern technological tools have imposed themselves across all aspects of life, including education, by contributing to the emergence of new techniques, methods, and approaches that primarily rely on the use of modern technologies such as computers, satellites, even satellite television, and the internet. These tools aim to provide continuous education, regardless of time or location, and offer educational content in various forms—written, spoken, and visual—through diverse formats that make the learning process more enjoyable, efficient, and less time-consuming, with higher quality and less effort (Amer, E-Learning and Virtual Education: Contemporary Global Trends, 2015, pp. 19-20).

Before delving into the topic of digitization in education, it is important to address some related concepts, including technology. The earliest emergence of this term dates back to 1770 in Germany, where it referred to the systematic production of knowledge in the arts of industry or applied science. Hamelton defined it as "the means by which humans can expand their control over their surroundings." On the other hand, Ruby defines information technology as "all types of software, hardware, and equipment related to computing and communication, whether it be a personal computer, phone, or through management information systems." Digital technology refers to that branch of scientific or engineering knowledge that deals with the innovation and scientific use of digital systems, devices, and computers, along with the applications of these processes in communications, the internet, and social networking. Among the characteristics of the digital space are interactivity, dynamism, internationality, asynchrony, transformation, connectivity, and dissemination. Related concepts to technology include cyberspace, information society, artificial intelligence, communication technology, and biotechnology (Denden, 2021, pp. 13-20).

Digitalization in education, according to "Horton," refers to the use of information technology and computers to create learning experiences, while "Mank" defined it as that form of education which uses multimedia and information networks in teaching (Bouhamida, 2017, p. 81).

2. Steps of Digitalization in University Education in Algeria

Throughout the centuries, universities around the world have adapted to the significant and profound changes that human societies have undergone. The resilience, continuity, and survival of universities have been dependent on their ability to maintain their functions and tasks, as well as their capacity to adapt to changes. They have had to manage knowledge, and in recent years, new pressures have been placed on universities. These pressures include the need to strengthen changes in ideology and values, as well as the relationship between higher education institutions, the state, and society. The emergence of the knowledge society has made knowledge an indispensable part of the economic market and a driving force behind the new economy. As a result, universities have become producers of new knowledge and sources of creativity and innovation, closely linked to the economy. This has led to a redefinition of their functions as tools for generating and producing knowledge, with the economy becoming a driving force for higher education. Consequently, this has necessitated a reconsideration of university governance and management through strengthening executive leadership and weakening collective governance (Alberto Amaral, 2023, pp. 1-3).

On this basis, we can discuss the various measures undertaken by the Algerian university to employ digitization in its various departments and branches at both the pedagogical and administrative levels. This includes the transition from traditional management practices to electronic management, primarily relying on the use of artificial intelligence systems to manage the higher education sector, as well as moving from traditional education to e-learning and distance education, which depend on modern and advanced technologies to achieve the goals of educational and learning activities. This required implementing several measures and passing through various stages, starting with the training of users, including administrators and professors, to the creation of platforms and electronic applications for teaching.

Distance education had been a direction sought by the Algerian university for some time. However, one of the significant factors that acted as a strong motivator toward it was the widespread outbreak of the COVID-19 virus. This was confirmed by Mohamed Hadi, Assistant Director for Studies, Continuing Education, and Diplomas at the University Center of Tipaza (Jow Plus, 2025).

2.1 Training University Professors in the Use of Educational Media

The training of newly hired professors, offered by the University of Constantine through distance learning for several years, is a true reflection of the goals and objectives of Algerian universities to improve output levels. The importance of this training lies particularly in its focus on the technological aspect, as it emphasizes various educational platforms and media that make the educational process easier and more effective. This training is based on active and direct communication between the learner and the professor, making the learning experience more engaging. What makes this training even more significant is the wide range of information sources and the rapid flow of knowledge from numerous sources, both specialized and general, in multiple languages and formats. This poses a challenge for professors, as they are required to present content that may be provided by others around the world, in different languages, and accessible to learners at any time. This necessitates the development of their intellectual and practical abilities to deliver the same content but in a unique, engaging, and persuasive manner. The challenge here lies in maintaining the importance and quality of the information in a scientific and precise language. Therefore, training assists professors in familiarizing themselves with various technological educational tools, enabling them to deliver blended learning that preserves the value of information while presenting it in an engaging way that captures the learner's attention and encourages their active participation and assessment.

The training was divided into five workshops that are characterized by their interconnection, coordination, and integration. One of these is the third workshop, titled "Creating a Lesson on the Moodle Platform." After the previous workshop addressed the criteria for lesson design through the completed evaluation grid, this workshop focuses on designing a lesson to be placed on the Moodle platform. The lesson plan includes several elements, such as an introduction to the course and instructor, the course content, prior knowledge requirements, course objectives, evaluation methods, learning activities, and the course flow. Afterward, the lesson is designed and uploaded to the platform, with the inclusion of evaluation activities such as formative and diagnostic tests during the lesson, as well as a final test afterward. Mechanisms for interaction with learners and engaging them in the teaching-learning process are also established.

To ensure the presence of scientific and pedagogical standards in the lessons designed and placed on the platform, they should be evaluated by examiners who specialize in the field and have experience in information technology, as well as by students. Communication should be established with them, and they should be provided with a username and password that allows them to access and evaluate the content on the platform. The evaluation should rely on a unified assessment grid that covers all the lesson's contents and elements, offering a clear picture of what should be included in these lessons. In a subsequent stage, the lesson should be redesigned according to the feedback and guidance provided by the examination committee, which will help improve the content and allow the trainee to acquire experiences that will help them address mistakes and shortcomings in the future. This

process also provides an opportunity to benefit from the expertise of the examiners and to better understand the needs and comprehension levels of the students.

As for the stages of designing a lesson and uploading it to the Moodle platform, the first step is for the university administration, specifically those responsible for e-learning, to provide the professor with an account on the platform. Afterward, the professor can make changes to this account, such as changing the password and adding a personal photo. Then, the professor can upload their lessons to the platform, with many options available, such as uploading all lectures together or each lecture separately. Additionally, the lessons can be uploaded in various formats, such as Word, PDF, or video, or a combination of these formats. The professor can modify and add content at any time.

The platform also provides a space for chatting, messaging, and interactive communication with students. This enables the professor to conduct live lessons, exams, or even provide evaluation activities or discussions related to the pedagogical content being presented. Furthermore, any supplementary materials such as illustrations, diagrams, tables, charts, maps, documentaries, educational programs, or educational video clips can be added to enhance the learning experience.

One of the most notable features of the Moodle platform, in addition to the interactive nature between the student and the professor, as well as among students, is the ability to track the progress of lessons and make updates and adjustments periodically. It also offers several options that provide comfort for both the professor and the student. Moodle can support all types of e-learning, including synchronous and asynchronous learning, as well as blended learning, self-directed e-learning, and live-streamed e-learning. Furthermore, in addition to designing and uploading lessons, it allows professors to guide and advise learners, share evaluation and exam results, and interact using various available media such as chat platforms and forums. What gives this platform particular significance and makes it effective in the teaching and learning process is its availability in multiple languages, the opportunity for effective communication between training teams and learners, the continuous monitoring of the learning process, the possibility of ongoing assessment, the availability of feedback, and the ability to continuously modify and update the educational content. Additionally, it stands out for its ease of access for both the teacher and the learner.

This was followed by the fourth workshop titled "Designing an Open Source Electronic Course (MOOC)." Before discussing the details of the workshop, it is important to address the origin of the concept of "MOOC" (Massive Open Online Courses), which dates back to 2008 and is based in California. In terms of meaning, this term refers to a range of open and widely accessible online courses across various scientific and knowledge disciplines. The concept is derived from the communication theory of learning, with pioneers such as "Downes" and "Siemens" being prominent figures. One of its key principles is the emphasis on the constant and rapid change of information, the importance of linking various areas of knowledge, diversifying learning methods, and utilizing available electronic networks and social platforms. It also stresses the need to combine both cognitive and emotional aspects of learning (Al-Harthi, 2016, pp. 107-110).

The importance of this workshop lies in its practical application on how to use open-source resources for education. During the workshop, participants register on the educational platform edX, which provides a learning space where both instructors and students can interact to achieve the main objectives of the lessons. This is a global, international platform that offers open-source online courses, which can be accessed easily at any time, allowing for lessons to be presented in various formats, including educational videos.

In addition to this platform, we can also mention Coursera, which has agreements and contracts with over 62 major universities worldwide, such as the University of Pennsylvania, the University of Philadelphia, and Stanford University. It is also free and non-profit, offering courses in various scientific fields and in different languages. Another platform to note is Udacity, founded by Sebastian Thrun, Mike Sokolsky, and David Stavens, which offers educational courses for learners as well as professional courses for those wishing to specialize in a particular field.

At the Arab level, three platforms can be highlighted as pioneers in this field: Edraak, Rwaq, and Zadi. The Edraak platform was founded by the Queen Rania Foundation for Education and Development, with the participation of Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of the Emirate of Abu Dhabi, in an effort to develop Arab education and improve education in Arab societies. This is achieved through the platform's offering of high-quality educational courses supervised by experts and specialists from both Arab and non-Arab countries. The platform presents educational content at various levels, and upon completing the courses, learners can obtain qualifications. It also provides users with the opportunity to suggest ideas for developing the platform and the courses it offers.

Rwaq, which is managed by specialists from various countries around the world, is one of the oldest e-learning platforms. It offers many free educational contents in Arabic, targeting different social groups, including students,

teachers, or anyone interested in developing their cognitive abilities. Users of the platform receive a certificate after successfully completing a course.

As for the Zadi platform, which is managed by Mohamed Saleh Al-Munjid and was established in 2015, it specializes in Islamic studies. One of its goals is to bring religious knowledge closer to people by organizing periodic training courses.

2.2 Digital Applications Used in Algerian Higher Education

One of the most prominent characteristics of the current era is the significant scientific and technological advancement, which has led to numerous transformations and changes across various aspects of life—socially, culturally, economically, and educationally. This era is now recognized as the age of digitization. As a result, one of the main goals of education has become development, modernization, and keeping pace with the progress of modern technology, with the aim of creating an interactive learning environment to capture learners' attention and facilitate the exchange of ideas and experiences among them. Information technology is one of the most important and effective means of providing such an environment. These technologies allow professors to access knowledge, experiences, and skills, as well as to learn from educational practices (Ahmed, 2010, pp. 42-44).

2.2.1 Business Incubators Monitoring Platform

Business incubators are defined as physical spaces that provide a range of services for individuals and small businesses. These may also include the provision of office spaces that companies need to start their operations, under flexible rental conditions, in addition to providing the necessary financial and technical support, legal and financial facilities, as well as human resources and various services that allow companies to continue operating. The Technology Center in Jordan, "ipark," defines it as a dynamic process for developing business projects that focuses on young companies, supporting them to achieve survival and growth during the startup phase, which is when they are most vulnerable (Fatima Maamri, 2023, pp. 22-23).

In pursuit of achieving the goals of Algerian universities, which include opening up to the economic environment to provide job opportunities for university graduates, the Algerian Ministry of Higher Education and Scientific Research adopted a policy to support innovative projects in order to make significant contributions to economic development. This was done by establishing a support unit for university business incubators at various university institutions across the country. The initiative began at Mohamed Boudiaf University in M'sila, which became the first incubator to receive the "Label" certification. It was then included in the guide of business incubators by the ministry responsible for emerging businesses and the knowledge economy, to spread the concept and establish many incubators at Algerian universities (Fatima Maamri, 2023, p. 29).

It is noteworthy that initiatives aimed at achieving sustainability in higher education gained significant momentum since 2019, particularly after the election of Abdelmadjid Tebboune as President of Algeria following the political movement that occurred in the same year. During this political transition, special focus and attention were placed on the higher education and scientific research sector, with a clear and direct call for its improvement and development. This focus reflects and reinforces the strong relationship between the educational system in general, and university education in particular, and the economic structure.

In 2020, efforts intensified to link higher education with sustainable economic plans, in line with the goals of diversifying the economy. One manifestation of this connection was the establishment of university business incubators, which aim to support students in innovating and developing business models and creating startups. These incubators serve as mechanisms for integrating academic knowledge and expertise with practical skills, while promoting a culture of innovation and sustainability.

In 2022, Ministerial Decree No. 1244 was issued, establishing a national coordination committee to monitor innovation and university business incubators. The committee's duties include overseeing the development and innovation of projects within universities and ensuring that innovative projects align with national sustainability goals. This committee serves as a central body coordinating efforts, tracking progress, and providing necessary guidance to enhance innovation and entrepreneurship in higher education. Furthermore, Ministerial Law No. 1275, dated September 27, 2022, outlines the framework for higher education strategy and the process of student-driven startup creation, specifying all the steps and stages involved, as well as the parties participating. These decisions affirm Algeria's commitment, through its universities, to driving economic growth and diversification, with sustainability as a central goal, while also emphasizing creativity and innovation (Salim Bouherar, 2025, pp. 01-03).

- Electronic Clearance Portal: This platform facilitates the clearance process and reduces the burdens on those responsible for clearance within university institutions and services.
- Statistics and Performance Indicators Platform: This platform contains data on the needs of university administrations, which is obtained through precise statistics based on artificial intelligence systems. The

data is presented in tables and graphical curves to measure performance indicators and their requirements.

- Chatbot: Aimed at students, this tool is available on the official website of the Ministry of Higher Education and Scientific Research. Its main tasks include answering students' inquiries and concerns regarding registration, orientation, and various administrative procedures.
- Thesis Portal: Established by decision No. 153 issued on May 14, 2012, concerning the creation of a central file for storing theses and how to benefit from this process. It is considered an important and necessary tool to support research, production, and scientific work.
- Platform for Detecting Academic Plagiarism and Citation Percentage: This platform uses a dedicated program to detect the percentage of plagiarism in theses and dissertations, as well as to identify instances of academic dishonesty.
- Platform for Managing and Monitoring Student Movements: This platform aims to address students' inquiries related to monitoring and supervision.
- Platform for Managing and Monitoring Joint Supervision of Doctoral Theses: This platform is designated for theses that involve joint supervision. It allows for providing necessary feedback, offering guidance to facilitate smooth progress, and exchanging expertise in this field.
- Platform for Monitoring Administrative and Technical Users: This platform enables the monitoring of employees' activities, focusing on the performance delivered, competencies, and positions held.
- Platform for Managing and Monitoring International Students: The primary purpose of this platform is to streamline the processes and procedures related to the studies of international students in Algeria.
- Platform for Managing and Monitoring Training and Internships Abroad: This platform includes a set of procedures that allows both professors and students wishing to pursue internships and training abroad to enhance their academic level.
- Digital Platform for Renewing University Scholarships Abroad: This platform is designed for students, enabling them to renew their university scholarships for studying abroad.
- Platform for Managing University Research Training Projects (PPRFU): This platform is dedicated to professors and is supervised by the General Directorate of Education and Training. Through this platform, research project proposals and various works completed in research laboratories are submitted for monitoring and evaluation.
- University Cinema Platform: This platform showcases purposeful artistic works created by students and approved for presentation at university festivals for short and feature films.
- Certification Documentation Platform: This platform is designated for graduates, aiming to simplify the process of certifying the degrees earned, whether a bachelor's, master's, or doctoral degree, and it helps improve the quality of services provided.
- University Transport Platform: This platform includes a database that allows students and even the Directorate of University Services to monitor the movement of university transport buses in terms of time and destination.
- Catering Platform: This platform serves as a means to monitor and measure the catering process by establishing a database.
- University Dormitory Access Monitoring Platform: This pertains to the organization and monitoring of student access to university dormitories. These platforms have been supported by mobile applications, including the following:
    - E-services Application: A mobile application designed for smartphones that serves as a gateway to all services and digital platforms for users within the sector.
    - Web Etu Application: A mobile application for the integrated information system "Progres," which enables students to register, re-register, track their academic progress, and obtain necessary documents.

The following table outlines the main digital platforms that have been discussed:

Table 1. Some Digital Applications in the Higher Education and Scientific Research Sector

Digital Platforms	Link	Usage	Target Audience
dual Platform	http://dual.mesrs.dz	Teaching and learning English remotely for students and faculty	Students and Faculty

		members	
padoc Platform	http://padoc.mesrs.dz	Teaching English to first-year doctoral students	Doctoral Students
Student Platform (ask-me)	http://ask.mesrs.dz	Students submit questions and receive responses from pedagogical staff	Students
PubMed – Algerian Medical Publications Platform	http://pubmed.mesrs.dz	Institutional repository for researchers in the health sector across all specialties	Medical Students and Clinical Professors
ASJP – Institutional Publications Platform	http://www.asjp.cerist.dz	Electronic publishing platform for all accredited and peer-reviewed Algerian scientific journals	Faculty and Students
PSGI – Innovative Project Management System	http://sgpi.mesrs.dz	Digital system for managing innovative projects	Faculty and Students
Platform for Monitoring and Managing International Students	http://progres.mesrs.dz/international-students	Managing and monitoring international student files in accordance with Algerian regulations	Students and Institutions
Platform for Managing and Defending Doctoral Theses	http://progres.mesrs.dz/	Management and defense of doctoral theses and tracking evaluation processes	Doctoral Students
webfve	-	-	-
Business Incubator Monitoring Platform	http://www.anvredet.org.dz/	A center under the National Agency for Research Results Evaluation and Technological Development	Sector Users
Chatbot for Dialogue	https://www.mesrs.dz/	AI-based chatbot that answers various student questions; contains responses to over 1,500 questions related to registration, orientation, and pedagogy	Students
Thesis Portal	https://www.pnst.cerist.dzpestARABE/index.php	Notification of thesis submissions	Sector Institutions
Plagiarism and Citation Rate Detection Platform	https://progres.mesrs.dz/webfve	Aims to detect plagiarism and citation rates in dissertations	Sector Institutions

Source: (University of Algiers 3, 2023).

3. Results of the Digitization of Higher Education

One of the advantages of e-learning is its ability to transcend time and space, as it is accessible anytime and anywhere. It also reduces the cost of education, increases the return on investment, and contributes to breaking psychological barriers between the teacher and the learner. Furthermore, it satisfies the characteristics and aspirations of learners by considering their specific needs. It also allows for immediate and automatic assessment of

learners, as well as direct access to knowledge and expertise from primary sources. Additionally, it fosters interactivity between learners and teachers and reduces the burdens of travel for learners (Tariq Abdel-Raouf Amer, 2015, p. 27).

Kamal Badaari, Minister of Higher Education, confirmed that the goal of digitization is simplification and efficiency through organization and reorganization. The process followed a master plan consisting of seven major axes and 102 operational programs, which will be implemented before the end of 2024. He emphasized that the higher education sector is the only one that possesses an integrated information system. This was also confirmed by Yassine Belkhouja, Deputy Director of Information Systems at the Ministry of Higher Education. The aim of designing and developing digital programs is to facilitate and simplify access to information for the sector's users, in order to reduce the burden on students, who would otherwise need to travel to universities to complete various processes, including registration and obtaining a student ID (Ennahar TV, 2025). The key impacts of digitization can be summarized as follows:

- Simplifying and facilitating access to services for users in the sector.
- Reducing the travel burden for students.
- Saving time, effort, and money.
- Addressing all the questions and concerns raised by students.
- Reducing costs for both service providers and service seekers.

Economically, "Kherchi Iskak," Director of the Higher School of Commerce, confirmed that the electronic applications used in the higher education sector have helped rationalize expenditures and reduce pressure. The "my bus" app, for example, saved 62 million Algerian dinars within two months (Dr. Ishak Kherchi, 2025).

The importance and outcomes of this on the educational process are reflected in the effort to increase the effectiveness of the educational process by actively contributing to the use of information and communication technologies in teaching and learning. This contributes to improving the quality of the educational process and the quality of outcomes. It also helps in providing a high-quality learning environment and enriching the fields of human knowledge to keep pace with global transformations, adapt to innovations in technology, encourage self-directed and lifelong learning, and develop critical thinking. Additionally, it plays a role in achieving the goals of higher education by assisting universities in performing their functions, whether related to providing quality education, developing management, and shifting towards electronic administration, or enhancing transparency in administrative dealings, while establishing principles of democracy and equal opportunities among learners and various university stakeholders. It also allows for expanding the scope of the educational process by enabling everyone to access various sources of knowledge (Bouzaïb, 2022, p. 72).

On the level of scientific research, digitization has contributed to facilitating the research process by providing high-quality scientific material and enabling students to access the references and sources they need with minimal effort and in less time. It has also played a crucial role in benefiting from global experiences in the field of scientific research. This is evident from the mechanisms that allowed for the organization of scientific events through distance learning technologies, facilitating the research process, accessing references from abroad, interacting with researchers from different countries, exchanging knowledge and experiences, and benefiting from research results and studies (Bloul, 2023, pp. 497-499).

Conclusion

The university constitutes an intellectual, scientific, social, and cultural system that can only be understood within the framework of its relationships with the social structure, cultural conditions, and historical context of its existence. It is made up of a set of sub-systems that interact to achieve the major objectives for which it was established. Digitization has become an important strategic choice adopted by the Algerian university to keep up with the digital transformation that has characterized the world in this millennium. Digitization is considered a tool and means, not an end in itself; a tool to facilitate the work of higher education sector users and assist them in fulfilling their professional duties by utilizing the benefits of technology, as well as to improve the quality of services provided by this sector to the individual, society, and nation.

The adoption of digitalization in the management of the higher education sector has occurred in stages, with various levels of implementation. This began with platforms for registration in recruitment competitions organized by the sector, platforms for registering successful candidates in the baccalaureate exams, and the subsequent processes of orientation, selection of scientific fields, appeals, and transfers from one specialty to another and from one university to another. It also includes the registration processes for university services such as accommodation, transportation, and scholarships, as well as platforms for viewing exam results. The Moodle platform, which is an

educational platform that allows university students to access the knowledge and information they need, is also part of this digital transition. There are many other platforms, including those for submitting complaints or addressing questions and concerns.

Believing in its central role in the economy, Algerian universities have not only focused on training the executives and skills needed by economic institutions, but have also gone further by creating job opportunities through business incubators. These incubators foster the development of start-ups that contribute to job creation and provide products needed by the national market to meet the needs of individuals.

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