PROGRES AND MOODLE PLATFORMS AS UNIVERSITY DIGITAL PLATFORMS



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Submissiondate:18/02/2026 Acceptance date: 31/05/2026 Publication date:10/06/2026

Abstract:

The higher education sector in Algeria is one of the most prominent areas that have witnessed a major digital transformation in recent years, as Algerian universities have sought to adopt modern technology in various aspects of education and academic management.

The digitization of the higher education sector is one of the main pillars on which the Ministry of Higher Education and Scientific Research is betting to achieve a qualitative leap in the quality of the educational process. It is clearthat the main objective is not only limited to the introduction of digital technologies, but goes beyond it to employ them in developing pedagogical performance, improving the learning environment and enhancing the competitiveness of university institutions locally and internationally as well.

Among the manifestations of the digitization of Algerian universities are the new digital platforms, the most important of which are Progres and Moodle, but the implementation of these two platforms has been uneven among universities in terms of the duration of their operation due to several obstacles, including technical, human and pedagogical ones.

***key words**: Progres, Moodle, platform, university.*

ملخص: يعد قطاع التعليم العالي في الجزائر من أبرز المجالات التي شهدت تحولًا رقميًا كبيرًا في السنوات الأخيرة، حيث سعت الجامعات الجزائرية إلى تبني التكنولوجيا الحديثة في مختلف جوانب التعليم والإدارة الأكاديمية و تُعد الرقمنة في قطاع التعليم العالي من بين الركائز الأساسية التي تراهن عليها وزارة التعليم العالي والبحث العلمي لتحقيق نقلة نوعية في جودة العملية التعليمية. ويتضح أن الهدف الأساسي لا يقتصر فقط على إدخال التكنولوجيات الرقمية، بل يتعداه إلى توظيفها في تطوير الأداء البيداغوجي، وتحسين بيئة التعلم، وتعزيز تنافسية المؤسسات الجامعية محليًا ودوليًا.

ومن بين مظاهر رقمنة الجامعات الجزائرية المنصات الرقمية المستحدثة و التي من أهمها منصة بروغرس و منصة مودل ،غير أن تفعيل هاتين المنصتين عرف تفاوتا بين الجامعات من حيث مدة العمل بها و ذلك لعدة عراقيل منها ما هو تقني و منها ما هو بشري و بيداغوجي.

الكلمات المفتاحية: بروغرس،مودل، منصة، جامعة

.Introduction:

Contemporary society is witnessing a new era of progress as a result of scientific and technological developments in the field of information and communication technology (ICT), resulting in the multiplication of knowledge. The challenge for educational institutions is to take advantage of this progress and employ it in providing a variety of educational opportunities for students and providing an advanced and non-traditional learning environment.

Digital platforms are an essential part of the strategy to improve higher education in Algeria. They contribute to a distinctive and convenient learning experience for students and promote improved academic performance and student success in their university career and are defined as online systems specifically designed to support teaching and learning processes by providing tools, resources and interactive environments for students, instructors and administrators.

Within the framework of the implementation of the 2009 Digitalization Master Plan, higher education institutions have started to activate a number of digital applications and platforms that target various pedagogical, administrative and service aspects, especially after the Corona pandemic. These applications represent a practical tool to embody the strategic direction towards digitization, as they contribute to improving university performance and facilitating interaction between the components of the educational system.

The digital platforms represent actual implementation tools for digitization policies, which include pedagogical management, scientific publishing, distance education, and the provision of university services.

The number of digital platforms in the higher education sector as of May 2025 has reached about sixty-nine (69) platforms, including modern platforms developed by local competencies within the framework of the implementation of the master plan for digitization, covering various pedagogical, administrative, and service aspects(AMARI, 2025). The electronic platforms are related to what is digital, virtual, information, computer, simulation, and networking(Al-SUWAIDI, 2020).

Due to the multiplicity of digital platforms, especially since Algeria has adopted a digital transformation strategy for the year 2033, we tried to focus on two of them due to their direct and wide impact on students in Algerian universities: Progres and Moodle platforms for distance education.

Our topic has been addressed based on the following question: What are Progres and Moodle, and to what extent have they been activated in Algerian universities?

This problem is answered according to two axes, first the concept of PROGRES and Moodle, and then the extent of activation of PROGRES and Moodle in Algerian universities.

THE CONCEPT OF PROGRES AND MOODLE PLATFORMS

Despite the absence of a general and comprehensive law regulating digitalization in Algeria[1], the Ministry of Higher Education has embraced digitalization through the creation of digital platforms in universities.

Progres and Moodle are two of the most important platforms created by the Ministry of Higher Education and Scientific Research to improve scientific services, both for the student and the instructor, in the absence of a general law regulating digitalization, while the Ministry of Higher Education has adopted a hybrid education policy, i.e. including both face-to-face and distance education. Therefore, we will discuss the Progres platform and then the Moodle platform.

PROGRES platform:

The PROGRES platform has emerged as a pivotal tool within the digitalization project adopted by the Ministry of Higher Education and Scientific Research. This platform is one of the most important digital projects aimed at modernizing the ways of processing university data and facilitating the interaction of the various stakeholders in the university space. This subsection addresses the definition of this digital platform and then presents the most important areas in which it is used in various university structures.

Definition of PROGRES Platform

Progres is a digital system adopted within the framework of the digitalization of the higher education sector in Algeria, aiming to digitalize pedagogical and administrative services. The platform consists of a set of standards that seek to achieve transparency and improve the management of information related to pedagogy, post-graduate studies, scientific research, human resources, and online authentication of certificates.

PROGRES is an integrated system that includes several subsystems and provides a database covering all activities carried out by university institutions in Algeria. The initial implementation of this platform started at Bab-Ezzouar University in 2016, and then gradually generalized to other Algerian universities(SALEHI & BOUDERHEM , 2022, p. 285). The platform aims to develop the performance of university administration by achieving efficiency in

[1]Directive Law No. 99-05 of 4 April 1999 (Official Gazette No. 24), amended and supplemented by Law 2000-04 of 10 December 2000 (Official Gazette No. 75) is the basic frame of reference that regulates the higher education and scientific research system in Algeria. Although this law does not explicitly mention "'digitalization" in any of its articles, it includes a number of principles and objectives that functionally intersect with what digitalization seeks to achieve, which legally allows an indirect relationship between this legislative text and digital transformation in the sector. The Ministry of Higher Education and Scientific Research also issued several instructions to prepare for digital transformation, including the following: Decision No. 1242 of 22 September 2022, establishing a sectoral committee for the establishment and follow-up of distance education; Decision No. 1243 of 25 September 2022, establishing a national committee for the evaluation and improvement of Internet service, etc.

the use and optimal distribution of resources, in addition to performing educational and administrative activities effectively, especially in light of the complex LMD system characterized by many disciplines and academic graduations.

The PROGRES platform was designed in partnership with the European Union to adapt to the structure of the higher education system in Algeria, and has undergone the following stages of development:

- 2012-2014: Study and collection of jobs within the sector.
- 2014-2016: Design and production of the software.
- 2016: Implementation of the platform in all universities for the registration and orientation of new baccalaureate students.
- 2017: Adding the accommodation request feature.
- 2018: Master's and PhD applications, and university services such as accommodation, food, transport, and university grants.

The main objective of the platform is to simplify access to the public facility and digitize it, in addition to following up the path of students under the LMD system and controlling all the data that manages the university. The platform is characterized by fairness and transparency under the LMD system, where the student can register in any offer of Master's and PhD offers and see the results clearly. Moreover, the platform includes several windows and parts related to the management of material and human resources, and the management of the university library(TOUAHIR, BEN YAHIA, & BEN CHEIKH, 2020).

Areas of Application of the Progres Digital Platform

The Progres platform aims to facilitate administrative processes and improve communication between university administrations and students, in addition to raising the quality of services provided to university family members, including administrative staff, instructors, and students(TICHOUCH & GHARBI, 2022, pp. 87-88).

The areas of application for the Progres digital platform include the following:

- A special space for administrative staff: This space allows following up on new and old student enrollments, issuing certificates, managing student life and services, following the student's academic path, as well as managing the affairs of students and instructors.
- A special space for instructors: It provides university instructors with a special portal that enables them to track their career path, register promotions granted to them, evaluate students, register marks in the platform, and follow the approved curriculum.

- A special space for university students: it includes a student portal that allows them to access their personal account on Progres, which facilitates the process of remote registration in the university services provided, such as pedagogical registrations, transport services, accommodation and food, in addition to following the progress of the study and academic path.

MOODLE Platform for Distance Education:

As part of its digital transformation policy, the Ministry of Higher Education and Scientific Research adopted a distance education system, specifically "hybrid education," which is a newly developed educational system based on linking face-to-face and distance education. This has contributed to reducing student density in universities and maximizing the utilization of faculty expertise and university infrastructure, and transform the student into a lifelong learner(DARAWISH & LEFRAA, 2025, p. 180).

The Progres platform plays a key role in managing various administrative and pedagogical processes within the university, making it a strategic tool in the process of digitalizing higher education in Algeria. Its focus remains directed towards organizational aspects rather than direct pedagogical education. To complement this aspect, Moodle, which deals with the digital educational aspect, especially in the context of distance education (E-learning), emerges as a term that combines the fields of online learning, web-based training and teaching using technology.

Definition of E-learning via MOODLE platform

E-learning may be defined in one of the following ways: providing personalized, comprehensive, and dynamic educational content, contributing to the development of knowledge societies, connecting learners and practitioners with experts, and enabling accountability and providing opportunities for people with special needs, as well as giving individuals and institutions the opportunity to keep pace with the rapidly evolving world of the internet(KAFI, 2009, pp. 12-13). Some define the Moodle platform as: “a software package that allows the instructor to upload the materials he teaches to a website, and allows the learner the opportunity to continue the learning process, allowing learners to interact with each other and communicate with their instructors to do joint work in new and fun ways(FANOUR & CHAHIB, 2023, pp. 255-256).”

E-learning is considered an effective tool that supports the educational process with several advantages, most notably the development of visual thinking and positive attitudes towards learning, and the facilitation of access to information and instructors through modern communication tools such as email and discussion rooms. This mode of education also enhances opportunities for interaction and the exchange of viewpoints among students, and reduces linguistic or psychological barriers, especially for those who suffer from anxiety in traditional classrooms. On the other hand, E-learning allows for the adaptation of

content to each learner's style (visual, auditory, practical), and provides temporal and spatial flexibility, making it suitable for individuals with personal commitments. It also allows for the repetition of lessons, continuous access to course materials, and a reduced reliance on physical attendance, thus contributing to more sustainable education that is better adapted to the demands of the modern age(ZITOUN, 2005, p. 6).

There is a **difference between traditional and E-learning**(HASHEM , 2017, pp. 14-17). E-learning represents a completely different educational model from the traditional one. While traditional education relies on physical attendance in classrooms and on the instructor as the primary source of knowledge, E-learning liberates the learner from the constraints of time and place, placing them at the heart of the educational process. In traditional education, the learner remains a passive recipient, whereas E-learning gives the learner the opportunity to interact, research, and actively participate in constructing their knowledge. Furthermore, interaction in the traditional model is limited, while E-learning is characterized by a variety of communication tools such as forums, discussion rooms, and email. E learning also allows for customization and adaptation to different learning styles and enhances immediate access to information compared to the traditional method, which requires direct intervention from the instructor.

Distance education is characterized by a number of features that make it more flexible and adaptable to the demands of the modern age, the most important of which are(DJALOUB, 2017, pp. 165-167):

- **Temporally and spatially flexible**: Students can access content anytime and anywhere without having to be physically present.
- **Continuous interaction**: Provides an open digital environment for discussion and exchange between learners and instructors.
- **Personalized**: Allows content to be customized for different learning styles.
- **Autonomy**: Supports the learner in organizing their time, pacing their learning, and choosing the right resources for them.
- **Multimodal**: Combines text, audio, video, image, and hands-on activities.
- **Easy assessment**: Provides real-time and automated assessments, helping to monitor performance on a regular basis.
- **Permanent access to content**: Does not depend on library hours or instructor availability.
- **Individualized**: Supports learners who have difficulty concentrating or interacting in class.

Given the fundamental differences between traditional and online education, and the latter's interactive features and advanced educational advantages, the need

arose for specialized educational platforms capable of embodying this new educational paradigm. **Moodle** is one of the most prominent of these tools, providing an integrated digital environment that supports distance learning. It allows both students and instructors to interact and exchange educational resources flexibly and effectively. This open-source educational **platform**, specifically developed to support distance and blended learning, enables universities to create an interactive learning environment between instructors and students through dedicated interfaces for presenting lessons, administering exams, managing forums, uploading resources, and monitoring student assessments. This platform is used globally and has been adopted by many Algerian universities as an official e-learning tool, particularly since the COVID-19 pandemic.

Types of E-Learning

E-learning is primarily divided into three categories: Synchronous Learning, where direct interaction takes place between instructors and students through live sessions such as video conferencing; Asynchronous Learning, which allows learners to access educational content at different times without requiring in-person attendance, such as watching recorded lectures or completing assignments; and Blended Learning, which combines traditional and online learning. The Moodle platform supports all three types, providing tools for creating live interactive sessions, publishing recorded content and assignments for learners, and integrating the use of digital resources with face-to-face education. This makes it a comprehensive and flexible environment suitable for various e-learning styles.

In this context, the technical and pedagogical features of the Moodle platform stand out as key factors in the success of this educational approach, including:

- Each student and instructor has a personal account.
- The interface can be customized according to the faculty or department.
- The platform is multilingual and supports Arabic.

Adaptable and works on various devices (computer, phone, tablet).

PROGRES AND MOODLE'S IMPLEMENTATION IN ALGERIAN UNIVERSITIES

Talking about the effectiveness of the two platforms requires addressing the extent of their implementation in all Algerian universities, as well as the obstacles that may hinder this effectiveness. We will address the disparity between the implementation of Progres and Moodle, then the obstacles to achieving the expected effectiveness of the Progres and Moodle platforms.

Uneven Implementation of the Progres and Moodle Platforms:

Despite the widespread adoption of the Progres and Moodle platforms across higher education institutions, their actual use reveals **significant disparities in implementation and integration** among different universities. For example, the Progres platform, considered one of the most important digitization projects in Algeria, remains **incompletely implemented** in some faculties. At the Faculty of Law at the University of Algiers 1, the actual use of the Webetu application, which allows for the display of grades and the management of university life, only began in the 2023/2024 academic year, while other universities had been using it for years. Furthermore, **poor user training**, both for students and administrators, contributed to the delayed effective adoption of the platform, unlike universities such as Constantine and Ouargla, which provided user guides and targeted training, particularly for PhD students.

The same situation is repeated with the Moodle platform, which was designed as an interactive learning tool connecting students and instructors, enabling the delivery of content, exercises, and interaction within a structured virtual environment. However, its use in some institutions, such as the Faculty of Law at the University of Algiers 1, is limited to uploading PDF files, without activating student accounts or utilizing the platform's full potential. Meanwhile, other universities used it during the COVID-19 pandemic to conduct remote exams, particularly for secondary subjects, adopting it as an effective alternative to face-to-face education. At the Faculty of Law, however, instructors resorted to alternative and haphazard solutions such as Facebook groups or manually submitting questions and answers, reflecting **a lack of digital literacy, the absence of a unified strategy, and a weak culture of digital interaction**. Therefore, it is clear that the challenge of digitalization lies not only in providing tools and platforms, but also in **ensuring their effective implementation, supporting users, and unifying the pedagogical vision** to allow for the efficient and equitable use of available technological resources across various higher education institutions.

Obstacles to Achieving the Expected Effectiveness of the Progres and Moodle Platforms:

The Progres and Moodle platforms face several obstacles that often prevent them from achieving the expected effectiveness, and these obstacles vary, some of which are technical and others are human and pedagogical:

1- Technical obstacles

Technical obstacles are numerous and include the following:

- **Weak technological infrastructure**

The lack of basic equipment is a structural obstacle to any attempt at digital transformation. In many Algerian universities, classrooms still lack the necessary digital tools such as computers, smart screens, projectors, and even high-

efficiency Wi-Fi. This situation is directly reflected in the limited use of digital educational platforms by instructors and students, and imposes a traditional pattern of education that is not in line with the requirements of the digital age(BRIK, 2024, p. 165).

Because digitalization requires continuous, 24/7 system operation, an unstable communication network and inadequate server and database maintenance make the stability of digital platforms a daily challenge. In this context, partial digitalization (only for a portion of students or departments) does not achieve digital equity; rather, it perpetuates the gap between different faculties and geographical areas within the same institution(BRIK, 2024, p. 166).

- **Multiple systems and platforms without actual integration**

Among the prominent organizational challenges is the multiplicity of digital systems without institutional integration. Within a single university, we might find various learning platforms such as Moodle and Google Classroom, alongside pedagogical management platforms like Progres, all operating independently without linking databases or standardizing user logins and digital identities.

This uncoordinated multiplicity confuses students and instructors, leads to the duplication of administrative tasks, and complicates the process of evaluation and comprehensive analysis of pedagogical data(BRIK, 2024, p. 167).

Moreover, the university institution misses the possibility of exploiting digital data to make informed pedagogical decisions, due to the dispersion of information between non-integrated systems.

- **Cybersecurity issues and lack of protection mechanisms**

Digital transformation without a clear cybersecurity policy can become a source of danger rather than a solution. Access to data without adequate protection, unencrypted storage of official documents, and the absence of data recovery plans in case of system failure are all indicators of weak digital governance within many Algerian universities.

Furthermore, the lack of qualified information security units within institutions and the absence of regular vulnerability testing leave systems susceptible to hacking and threaten the privacy of data belonging to students, instructors, and even scientific research(LALLOUCHE, 2021, p. 24). This is pending the protection of personal data that will result fromLaw No. 25-11 of 24 July 2025 amending and supplementing Law No. 18-07 of 10 June 2018 on the protection of natural persons with regard to the processing of personal data[2].

2- Human and pedagogical obstacles

In addition to technical and organizational challenges, human and pedagogical barriers are a crucial element in explaining the slow and uneven pace of

[2]Official Gazette of 24 July 2025, No. 48, p. 14

digitalization in Algeria's higher education sector. Digitalization is not only a matter of systems and equipment, it is also about the willingness of the human element to adapt, interact, and engage in a changing digital learning environment... Field observation and recent studies show that the biggest challenge in digital transformation is "mental" before it is "technical".

- **Lack of digital skills among instructors and students**

The higher education sector suffers from a significant gap in digital skills among a wide segment of instructors and students alike. A large number of instructors lack the necessary training in using educational platforms, managing virtual classrooms, or even producing interactive digital content. Some attribute this to the fact that the university training of instructors did not previously include any digital component, which made them face serious difficulties in adapting to the sudden transformation imposed by the COVID-19 pandemic(CHERABCHA & HACHLAF, 2019, p. 122).

Students, especially in rural areas, also suffer from a lack of proficiency in using digital tools, both in terms of technical skills and understanding of e-learning culture. This deficiency limits their interaction with platforms and negatively impacts the effectiveness of the educational process(SOUMATI, p. 61).

- **Resistance to Change by Educational and Administrative Staff**

Psychological and institutional resistance to change is one of the most serious challenges facing digitalization. Many instructors consider digital platforms an additional burden on their traditional tasks and question their effectiveness compared to face-to-face education. Some refer to digitalization as a "passing fad" imposed by the pandemic that will end with its demise, which indicates a lack of deep conviction in the logic of digital transformation.

This resistance sometimes manifests itself in negative forms, such as refusing to use the platforms, delaying the uploading of content, or offering superficial and non-interactive lessons. At the administrative level, there is a fear of losing control or the complexity of procedures under incomprehensible digital systems. These behaviors weaken public engagement and create an environment that is reluctant and unable to seriously invest in digitalization(AKABI, 2023, p. 202).

- **The gap between theoretical perceptions and actual implementation**

Despite the existence of official documents and plans that talk about the necessity of the digitalization, there is a big gap between these perceptions and the practical reality. In many institutions, digitalization is treated as a complementary or compulsory measure, rather than as an integrated educational model. For example, platforms are used only to publish PDF files without employing tools for interaction, assessment, or effective pedagogical follow-up(SOUMATI, pp. 62-65).

This gap between theory and practice explains part of the failure of many digital projects and indicates the absence of a pedagogical culture based on "digitalization as a philosophy," not merely as a tool. The technological vision must be supported by a profound educational conception that rebuilds the relationship between student, instructor, and content through modern and integrated media.

- **Lack of Continuous Training**

The lack of continuous training in the field of digitalization is one of the most pressing obstacles. University instructors often do not receive any training on using digital systems after being hired, and no structured institutional workshops are organized to develop their skills. The same applies to administrators, who learn in a random or improvised manner, making them prone to frequent technical and organizational errors(LALLOUCHE, 2021, p. 25).

Universities also lack a clear strategy for equipping students with basic digital skills, such as using academic email, online registration, or distance learning tools. This structural weakness means that digitalization lacks the "human foundation" that is supposed to drive the transformation, and makes most initiatives mere superficial projects without a solid base.

- **Weak Participation and Engagement in the Digital Environment**

There is also a lack of engagement of large groups of students and instructors with the digital spaces available to them. For example, many universities record low utilization rates for Moodle, despite it being the official approved platform. The same applies to professional email, which is not used by many students and is not always followed up by instructors.

This lack of engagement is not only due to a lack of skills, but also to a lack of incentives and encouragement. Digital activity is often not linked to any pedagogical assessment. Furthermore, there is no quick technical support available to resolve access or usage issues, which limits and demotivates users[3].

In fact, human and pedagogical obstacles are as important as technical and organizational ones, and may even be more complex because they are linked to psychological, behavioral and cultural factors, without real conviction in the value of digitalization and without the empowerment of all stakeholders

Conclusion:

From the foregoing, it is clear that the digital platforms established by the Ministry of Higher Education are essential components of the digital transformation it seeks to achieve in the sector, particularly the newly developed platforms in

[3]According to the Sub-Director of Infrastructure and Networks at the Directorate of Networks and Digitalization Development at the Ministry of Higher Education, the ministry receives technical contributions from students in the form of suggestions or bug reports, especially from computer science students

universities, such as Progres and Moodle, which are of paramount importance due to their connection with both students and instructors.

The Progres and Moodle platforms play a vital role in improving educational services, as they are related to administrative and pedagogical management, especially since the Ministry of Higher Education and Scientific Research has adopted a hybrid educational system that combines face-to-face and distance education. However, reality has revealed disparities among Algerian universities in the implementation of these two platforms, with some universities demonstrating advanced use of them while others are still relatively new to their adoption.

Based on the above, we propose the following:

- The urgent need to establish a clear and binding legal and legislative framework to regulate digitalization in general, thus enabling the higher education sector to enact its own legislation. This would involve issuing laws that officially recognize e-learning, define the rights to use platforms, protect data, and govern digital resources.
- The necessity of ensuring the smooth operation of the Progres and Moodle platforms by eliminating any obstacles to their functionality, especially during periods of high demand.
- The importance of establishing continuous training programs for instructors and administrators in the use of the Progres and Moodle platforms.
- Integrating digital education into university programs for students from their early years to ensure the development of a digitally proficient generation of university graduates, not just those pursuing master's degrees.
- Launching a periodic national evaluation of the progress of digitalization in all universities, linking funding to digital performance results and project progress.

Ensuring digital equity among students by facilitating access to devices and the internet, especially in remote and isolated areas, so that efforts and funds spent on digital platforms are not wasted without achieving results on the ground, especially the Progres and Moodle platforms, due to the role they play.

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