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E-learning as a mechanism to ensure quality higher education in Algeria

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Abstract

Scientific and technological advances, as well as the widespread use of the Internet, have led to the emergence of a new form of education known as e-learning. E-learning is an educational approach that uses technology in all its forms to deliver information to learners in the shortest time, with minimal effort and maximum benefit. Algerian universities, like others, are required to keep pace with technological developments by effectively using information technology and offering new options in teaching and learning methods to ensure quality higher education. It is therefore imperative that professors and students in particular embrace these advances, discover their talents, develop them and adapt to the rapid and astonishing changes of the information revolution

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Introduction

Algeria, like other countries around the world, is trying to reform its education system to keep up with technological advances and adapt to the needs of the times. E-learning has played an important role in the Algerian government's plans, as the educational model has shifted from relying solely on books as a source of knowledge to using information and communication technology resources to increase the efficiency of the educational process. The Ministry of Higher Education has adopted this approach in order to truly develop e-learning, which is now being implemented by the majority of universities. As a result, a gradual transition has begun towards e-learning as a concept that represents speed, real-time interaction, borderless education and the use of modern communication mechanisms to ensure the quality of higher education

***2. Problem Statement*:** What is the role of e-learning as a mechanism to ensure quality higher education in Algerian universities?

***3. Objectives of the study*:**

This study aims to introduce e-learning and explore Algeria's experience in using it to ensure quality higher education, while highlighting the main challenges.

***4. Significance of the study*:**

The significance of this study lies in demonstrating the role of e-learning in ensuring quality higher education in Algerian universities by examining its applications and the obstacles it faces.

***5. Research methodology*:**

This study adopts a descriptive methodology, starting with an introduction to e-learning and its characteristics. It then highlights Algeria's experience with e-learning for quality assurance in higher education and identifies the main challenges that hinder the achievement of the desired results.

6. *Quality of e-learning*:

Algeria has sought to establish new systems in the field of higher education that are in line with the requirements of the times and the aspirations of society, through the implementation of e-learning to ensure quality and to meet the creative needs of students and the practical needs of society.

6.1- Definition of e-learning:

E-learning is seen as an alternative to traditional education due to population growth and the inability of universities to accommodate the massive number of students. Studies carried out on this type of system have shown that it is as effective or even more effective than the traditional system if all technologies are used efficiently. It should be noted that the use of the Internet in learning has led to a remarkable and rapid development in the educational process, affecting teaching and learning methods (Shlali Abdelkader and Qashi Alal, E-government: Building Factors and Obstacles in Algeria, p. 11).

The nature, dimensions and content of e-learning mean: "The process of transforming traditional education (face-to-face) into a digital form for remote use" (Bashir Abbas Mahmoud Al-Alaq, Investing in Information and Communication Technology Methods and Techniques in the E-Learning Environment, p. 8).

E-learning, as a form of distance learning or also known as non-attended education, is a method of education and training that uses modern communication mechanisms such as computers, networks and multimedia. It can help to solve some problems, as the emergence of the Internet has brought about significant changes in the field of distance education. The concept of distance education has gone from being a less important and outdated field to a necessary approach for development and change in many universities around the world (Nasreddine Graff, E-Learning and the

Future of Reforms in Algerian Universities, p. 66).

Electronic learning, also known as e-learning, is considered one of the learning methods that places the learner at the centre of the learning process. In e-learning, learners work together to acquire and exchange information and share ideas to solve problems without being confined to a specific place or time to receive the learning process (Edward Al-Hamdani, 2006, p. 47).
In general, e-learning refers to the use of electronic and computer-based media to transmit and deliver information to learners. The extent of this use can vary, ranging from the simple use of electronic tools to present information or deliver instruction, to the maximum use of electronic and computer-based media in the construction of virtual classrooms through the Internet and interactive television technologies.
An ideal definition of e-learning can be described as follows: "Extending the concept of the teaching and learning process beyond the boundaries of the traditional classroom and venturing into a rich, multi-source environment in which remote interactive teaching techniques play a fundamental role. This leads to a redefinition of the roles of both teacher and learner, with computer technology playing a supporting, selecting and managing role in the teaching and learning process. Moreover, e-learning is not a substitute for teachers, but rather enhances their role as supervisors, guides and organisers of the educational process, while remaining compatible with the advances of the modern era" (Fares Ibrahim Al-Rashid, E-Learning: Reality and Aspiration).
Based on the above, it is clear that there is no specific and universally agreed definition of e-learning.
The previous definitions share some common features and the best definition can be derived by highlighting these common features. Therefore, e-learning can be defined as the delivery of lectures and lessons through various electronic media without being restricted by a specific time or place.

6.2 Characteristics of e-learning:
E-learning differs from traditional learning methods in that it has several characteristics that result in different advantages and disadvantages. These characteristics include:
- **Digital culture:** E-learning provides a new culture, known as "digital culture", which is different from the traditional culture or what is known as "print culture". This new culture focuses on knowledge processing, allowing learners to control their learning by constructing their own world through interaction with the available electronic environments. This is the basis of constructivist learning theory, where the learner becomes the centre of gravity, whereas the teacher is the centre of gravity in traditional teaching methods.
Developing thinking and enriching the learning process: E-learning contributes to the development of thinking skills and enriches the learning process.
Multimedia design: E-learning materials are designed using interactive multimedia or hypermedia (audio, images, animation), allowing students to enjoy, interact, engage and be motivated in the learning process.
Increased efficiency: E-learning improves the efficiency and effectiveness of education and training by increasing success rates and meeting the training needs of learners without them having to leave their workplace.
Universality: E-learning can be accessed anytime, anywhere, without barriers through its connection to the World Wide Web.
Interactivity: E-learning involves interaction between the content of the educational material and the beneficiaries, including students, teachers and other

users. It allows direct movement from one part to another.

Universality: E-learning is not limited to a specific group of individuals, but can be accessed and interacted with by multiple learners in multiple locations at the same time.

Individualisation: E-learning adapts to the needs, desires and academic level of each learner, allowing progress in the programme or learning according to each individual's pace of learning (Nader Saeed Chemi, p. 239).

E-learning may be the most suitable method to accustom students to continuous learning, to enable them to educate themselves and enrich their knowledge. It also has special features such as time flexibility and ease of use (Costandi Choumali, Ensuring Quality Education and

Academic Accreditation, p. 6).

- Disadvantages of e-learning: Despite the above advantages, e-learning is not without its disadvantages, which can be summarised as follows:

- Reduced interaction and social engagement between students and teachers.
- Difficulty in recognising the human aspects of the teacher's experience and behaviour, which form the basis of a positive role model for the learner.
- E-learning is described as boring because it involves the interaction of the teacher with the computer and the programme designed for it.
- Negative impact on the national culture of young people and their commitment to prevailing social values.
- Increased cost of education for students, as they may have to pay additional fees compared to the traditional system.
- Emphasis on the cognitive aspect of the educational process (Abdul Sattar Ali et al., cited above, p. 317).
- Emphasis on the auditory and visual senses at the expense of other senses such as touch and smell, resulting in severe limitations in practical and applied studies (Tarek Abdel Raouf Amer, Distance Education and Open Education, p. 177).
- E-learning does not eliminate the role of the teacher, but rather changes and supports it, allowing the teacher to assist the learner at any time (Nasr El-Din Graaf, cited above, p. 66).

Based on the above, we can conclude that e-learning complements traditional university teaching methods based on lectures, as information technology is not an end in itself,

but a means to develop critical and creative thinking skills in students and a method of generating knowledge.

7. The concept of quality in e-learning:

The concept of quality in e-learning is crucial given the attention that the Ministry of Higher Education is giving to this area. It is therefore necessary to define it, highlight its requirements and understand its objectives.

7.1 Defining quality in e-learning:

Defining quality in higher education is challenging because of the multiple interpretations and perspectives based on experience and practice. Some definitions include:

- "A multidimensional concept that should encompass all functions and activities of education, such as curricula, educational programmes, scientific research, students, buildings, facilities and tools, provision of services to the local community, and the establishment of internationally recognised standards for comparing quality".
- "Quality in education includes the development of all elements of the educational process, including university management and its relationship with the environment, regulations and legislation, transfer and marketing methods, academic materials, laboratories, references, teaching methods, learning environment, learning time, and the evaluation of all elements and their criteria and procedures." (Ajal, 2018)
- Quality in e-learning focuses on collaborative learning, where courses are

more interactive and facilitate changes in student behaviour. (Qureshi, p. 227)

Based on the aforementioned definitions, it is clear that quality in higher education is an incentive to enhance the educational process. E-learning is one of the methods adopted by the Ministry of Higher Education, especially during the COVID-19 pandemic, to ensure quality in higher education.

E-learning is the industry of the modern era, as it represents a qualitative leap in education and an effective solution to many accumulated and complex problems, such as the high number of students seeking university admission and the inability to physically attend due to various considerations.

E-learning is emerging as a viable solution to enable all students and professors in universities to benefit from it. Information systems form the basis of this technology, as they combine three main components: computers, software and communication networks, and directly contribute to the development of an advanced society based on information services related to communication, production and education, and bring about a qualitative and quantitative leap in teaching.(Nargis Zakari and Shahrazad Nawar, Using E-Courses in Distance Education in the University System, pp. 312-313).

7.2/ Requirements for quality in e-learning:

At the level of the student, the student should go beyond the perception of e-learning as a mere reception tool and instead actively participate in the design of the course, engage in scientific discourse, express their points of view and develop an independent scientific personality capable of expressing opinions and engaging with others.

At the faculty level, it is essential to keep up with the rapidly changing scientific variables and to improve performance at both academic and technical levels. In this regard, the University plays a role in evaluating the performance of faculty members and classifying them according to the following criteria:

- Development of faculty members in their academic performance.
- Use of modern methods in the teaching process.
- Publication of peer-reviewed scientific research.
- Participation in academic seminars and conferences.

At the curriculum level, specialised committees review the curriculum with the aim of developing or modifying it in line with rapid scientific advancements. (Hussein, 2013)

7.3/ Quality objectives in e-learning:

E-learning aims to achieve the following goals (Dalal Malhasan Astiyyah, Omar Musa Sarhan, the previous reference, p. 286):

- To create an interactive learning environment using new electronic technologies and diversifying sources of information and experience.
- Encouraging interaction between students, teachers and assistants through the exchange of educational experiences, opinions, discussions and purposeful dialogues using various communication channels.
- To equip teachers with the technical skills to use modern educational technologies.
- To equip students with the necessary skills to use communication and information technologies.
- To optimise the use of audiovisual and related multimedia technologies.
- To develop the role of the teacher in the educational process in order to keep pace with the continuous and successive scientific and technological advances.
- Expanding students' communication networks through global and local communication networks, and not limiting sources of knowledge to teachers alone, by linking educational websites with other

educational sites to enhance students' knowledge.
- Creating educational networks to organise the work of educational institutions and their administrations.
- Providing education that is appropriate for different age groups, taking into account their individual differences.
However, a clear educational philosophy to promote this type of education has not emerged in higher education institutions until recent years. This was evident in the absence of this aspect in university development policies and the lack of encouragement from academic officials to consider these new teaching methods.
Based on the above, it is clear that e-learning is the starting point for the development and implementation of the strategies and models employed therein. Due to the objectives and effectiveness of e-learning in all areas of the educational system, most national universities are adopting some form of e-learning tools, taking advantage of modern technology and opening doors for national academic competencies and students to develop their scientific and practical skills, share their experiences and ideas, and overcome bureaucratic constraints and traditional systems that still hinder the progress of our universities. In doing so, they are working towards achieving quality in this field.

8/ The reality of e-learning in Algerian universities as a quality assurance mechanism

The higher education sector plays a strategic role and is a fundamental pillar for progress, development and progress in all countries seeking progress and development. This is because scientific research is the mainstay of knowledge-based economies and one of the most important sources of knowledge production and graduate training. Accordingly, advanced countries have recognised the importance of scientific research in helping to build a strong scientific and economic arsenal in a rapidly changing world full of
emerging crises. As a result, the importance of the quality of education has increased and has been included among the main priorities of the Dakar Conference of 2000, which formed the international education strategy for the 21st century (Nadia, Volume 11, Issue 2, December 2000).

8.1/ The Algerian experience of e-learning to ensure quality in higher education

The Algerian experience began early with the attempt to experiment with the EEPAD institution and the experience of the National Centre for Distance Education (CNEPD), which was the first experience in the field of virtual education and is still ongoing.
- The video lecture network and the e-learning
system of the Ministry of Higher Education and Scientific Research.In the short term, the aim is to rationalise the use of human and material resources by.
- Setting up a network of video lectures involving all the institutions. Although this network allows the recording and non-live broadcasting of lectures, it is mainly used in a synchronous form, which requires the presence of the accompanying teacher and the student.
Since the 2009/2010 academic year, the network has been extended to include virtual laboratories and multimedia classrooms connected to a dedicated network for video lectures.
The e-learning system is based on a client-server model and allows for online preparation and access to resources in an asynchronous format. Learners can access the system anytime and anywhere, with or without facilities.
This platform allows teachers to use various online methods such as lessons, exercises, practical demonstrations, training activities and more. It provides

learners with a rich, varied and continuous pedagogical medium.

The platform also provides tools for exchange and collaboration between teachers/facilitators and learners, such as email, forums, chat, storage and download areas.

The ultimate goal is to create real online learning paths, tailored to the needs of the learner and based on a pedagogy that focuses on the learner. These courses are developed according to a specific pedagogical framework,

taking into account the new educational technologies resulting from the introduction of information and communication technologies (collaborative training, constructivist approaches, scenario-based learning, etc.), while respecting standards.

At present, universities have distance learning cells made up of pedagogical experts, engineers and technicians with specialised and varied training. This is done within the framework of various cooperation projects, in particular the Ibn Sina project (UNESCO and the European Commission), the CoseLearn project in cooperation with Switzerland and the Digital University (AUF) based at the Houari Boumediene University of Science and Technology in Bab Ezzouar.

The e-learning system is further strengthened by the national library network, which is being extended to all institutions in the country.

The Ministry of Higher Education and Scientific Research has also launched the National Distance Education Project to address shortcomings in supervision and to improve the quality of education in line with quality assurance requirements.

This project aims to integrate new methods of education and training in three stages: the use of technology, such as video lectures, to accommodate the increasing number of learners while improving the level of education and training.

The phase of adoption of modern pedagogical technologies, especially "web-based" technologies, which refers to online learning or e-learning, is aimed at ensuring quality.

The integration stage involves the approval of the distance learning system and its dissemination through "distant" educational channels, such as the Knowledge Channel. This channel is not only used in the university context, but also targets a wide audience of learners, including individuals wishing to broaden their knowledge, those in need of specialised information, hospitalised patients during their recovery period, and other segments of society interested in further intellectual gains.

Currently, distance learning in Algeria is based on a network platform for video lectures and e-learning, which is implemented in the majority of higher education institutions.

Algeria has also endeavoured to set up a project known as the Academic and Research Network, a network specifically dedicated to universities and research centres throughout the country. The aim of this network is to improve communication and the exchange of information between these institutions and

research centres. The network provides the necessary technological means for those working in the higher education and scientific research sector, facilitating and supporting distance learning. In addition, this project aims to establish a permanent virtual university to promote distance learning without the need to be physically present in a particular location. This will facilitate the exchange of expertise, enhance the knowledge skills of both students and teachers, and enable the exchange of ideas, scientific opinions and discussions on current developments (Naïm Ben Mohamed, Higher Education in Algeria: Challenges and Prospects, Methods of Development).

8.1.1 The experience of the University of Continuing Education (UFC) in distance e-learning

The experience of the University of Continuing Education is very significant and pioneering in Algeria in the field of distance e-learning at national level.The first steps were taken in 1999 after the signing of several international agreements with organisations such as the Arab Organisation for Education, Culture and Science and foreign universities (French and Swiss). The aim of these agreements was to train professors and staff in distance learning in order to keep up with global developments in this field (UFC.dz).

University of Continuing Education - Continuing education development in collaboration with user institutions and sectors. Improvement and renewal circles are organised for the benefit of the user sectors, using all the curricula and methods deemed appropriate, especially in the field of distance learning and audiovisual communication.

Recently, the University of Continuing Education has acquired modern equipment and technological tools that allow students, professors, trainees and technical administrators to access various distance learning platforms

using personal usernames and passwords. This allows them to engage in pedagogical and scientific training and to access different pedagogical and scientific content in different disciplines offered by the University.

To give a clearer picture in this regard, it is worth mentioning some of the remote specialisations (e-learning) available at the University since the 2021/2022 academic year, namely (UFC.dz)

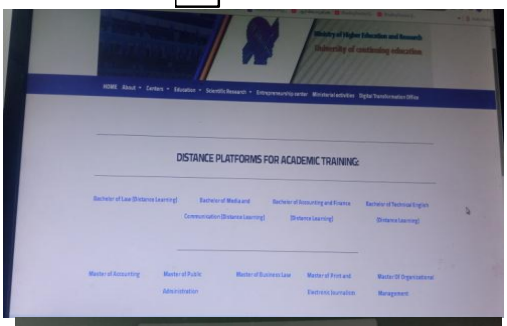
- Accounting and Finance (distance bachelor's degree) System: LMD
- Technical English (distance bachelor's degree) System: LMD
- Law (General and Private Law) (Distance learning bachelor's degree) System: LMD
- Media and Communication (Bachelor's distance learning) System: LMD
- Business Law (Master distance learning) System: LMD
- Accounting (Distance Master) System: LMD
- Public Administration (Distance Master) System: LMD
- Organisational Management (Masters distance learning) System: LMD
- Written and Electronic Journalism (Distance Masters) System: LMD

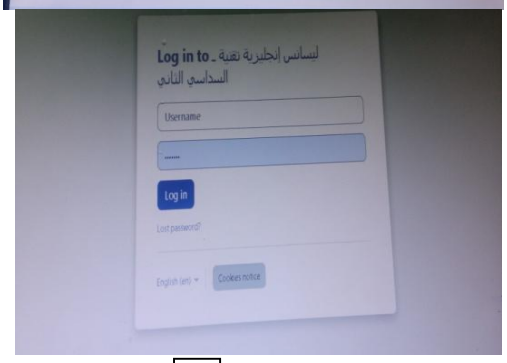
Here are some examples of the educational platforms offered by the University of Continuing Education.

Below are some examples of educational platforms at the University of Continuing Education:

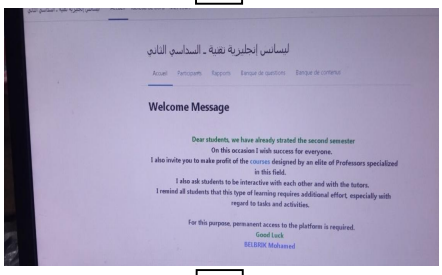
Source: **University of Continuing Education website**

01





02



03

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Figure 01 represents the distance learning academic platforms.
Figure 02 represents a login window for entering the username and password for the English specialisation bachelor's platform.
Figure 03 represents the content of the first page after logging in to the distance learning platform for the second semester. It contains a
welcome message and instructions for students from the supervising professor of this platform
In addition, the "University Knowledge Channel" has been launched to establish a flexible learning system that goes beyond the boundaries of the university. The focus of guidance will remain within the university community and will benefit a wider audience of learners seeking social advancement and knowledge enhancement. (Qurashi, page 234)
The Ministry of Higher Education and Scientific Research has allocated significant resources to ensure the success of e-learning by activating various electronic platforms such as ASJP-SNDL. These platforms provide access to lectures and research in all scientific disciplines as an alternative that guarantees the minimum completion of academic seasons under the exceptional circumstances imposed by the COVID-19 pandemic. The educational platforms, including Moodle, linked to Algerian universities, contain lessons and lectures prepared by professors from different institutions.
It is noteworthy that the Ministry shows a strong commitment to improvement and development, ensuring quality by evaluating the e-learning process. At the end of June 2021, the Ministry launched an electronic questionnaire to gather the opinions of students and professors from different disciplines, with the aim of strengthening and improving the process in the future. This strategy, based on collaboration, will be accompanied by regular meetings with social partners, training teams, scientific bodies and administrative councils to ensure the stability of the academic environment and enable them to contribute their suggestions and participate in achieving the goals set to build a quality-based university of the future following the reforms of the LMD system (Nadia, Volume 11, Issue 2, December 2021).

8.2 The implementation of e-learning in Algerian universities faces several challenges and obstacles, which can be summarised as follows:

Weak Internet infrastructure: The availability of high-speed Internet is crucial for successful e-learning, but Algeria's Internet speed is
considered one of the lowest in the world.
Lack of regular updating and organisation of university websites: University websites may not be regularly updated or properly organised, which can hinder the smooth delivery of e-learning materials.
Limited student interest: Some students may prefer traditional lectures and may be reluctant to engage in e-learning as it requires more effort and self-discipline compared to passive learning methods.
Increased effort and financial cost for lecturers: The preparation of electronic learning materials may require more time and financial resources compared to traditional teaching methods. In addition, certain topics that require high technical skills may be difficult to present effectively through e-learning.
Limited access to diverse information centres: Students may face difficulties in accessing different information centres or research networks due to lack of necessary resources or unavailability of content in Arabic, which may hinder their understanding and interaction.
Inadequate resources for curriculum development: Teachers may lack the necessary resources and technical support to develop innovative teaching methods. Technical services provided by

information technology centres may be inadequate, and the cost of some Arabic software programs may be prohibitive.

Limited prioritisation and support for e-learning:E-learning may not be a high priority in the university's overall policy, especially if there is a lack of financial support from donor countries. This can hinder the acquisition of the necessary resources and technologies for effective e-learning implementation (Constanti Schumli, Quality Assurance in Education and Academic Accreditation, p. 14).

The production of high quality e-learning content for courses is one of the major challenges facing distance education through e-learning. (Narges Zakri and Shahrazad Nawar, "Using e-Courses in Distance Education in the University System", pp. 312-313).

8.3/ To meet this challenge, several solutions should be considered for the implementation of e-learning:

Set standards: It is essential to establish standards that ensure the quality of e-learning courses, taking into account the expectations and requirements of students. This includes focusing on their needs for e-learning programmes and courses. E-learning can help meet the increasing demand for higher education as it allows programmes to be delivered using information and communication technology (Hussein, 2013, p. 126).

Curriculum redesign: There is a need to revise the curriculum taught in universities to adapt it to the technology and information age. This requires the establishment of a technology-based curriculum design centre staffed by a team of specialists. The centre should develop multimedia e-courses in various disciplines, as reliance on textbooks alone is insufficient in the current technological explosion.

Academic regulations: It is important to review academic regulations related to teaching methods, assessment and examination procedures and other regulations governing student activities in universities.

Infrastructure development: Expanding the use of information and communication networks, providing the necessary communication lines and setting up appropriate classrooms for e-learning are crucial. This includes training the necessary human resources through the implementation of training programmes for students, teachers and administrators.

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Conclusion.

Addressing the issue of e-learning as a mechanism to ensure the quality of higher education in Algeria has led to several key findings:

E-learning is an essential solution for developing and raising higher education to a higher level, keeping up with technological advances and achieving quality education as a contemporary technological challenge.

- The Ministry of Higher Education in Algeria has shown interest in e-learning to improve the quality of education and to meet quality assurance requirements by finding optimal ways to integrate it with traditional methods of university education.
- E-learning is being used at different levels of higher education and in different disciplines, including hybrid learning (combining face-to-face and online components), which provides flexibility in the educational process for all parties involved.
- The aim of e-learning is to address shortcomings in the guidance process and to integrate new methods of education and training to improve their quality in line with global quality assurance requirements.
- Teachers need continuous training in the use of modern technologies in the e-learning process, including the design and online publication of educational materials.
- The implementation of e-learning in Algerian universities faces several technological and human challenges.

Recommendations:

- Review and improve electronic learning platforms in Algerian universities, particularly from a technical perspective, to allow easy access for all stakeholders (students, teachers, administrators).
- Coordinate efforts between universities and relevant sectors (such as Algerie Telecom) to increase high-speed Internet connectivity.
- Develop short and medium term programmes and plans for the training of teachers, students and technical staff in the field of e-learning.
- Review and update the scientific content of courses in various disciplines, linking them to the socio-economic context and bringing them into line with international quality standards in higher education and scientific research.
- Allocate additional substantial resources within the higher education and scientific research sector to acquire state-of-the-art equipment to raise the quality of e-learning beyond current standards.

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