Sci. Educ. Innov. Context Mod. Probl. P-ISSN: 2790-0169 E-ISSN: 2790-0177
Issue 1, Vol. 8, 2025, IMCRA

Article

Standards of E-Learning Quality: The Case of the University of M'sila

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Received date: 12.01.2025; Accepted date: 14.03.2025; Publication date: 23.04.2025
doi: 10.56334/sei/8.1.64

Abstract

This study examines e-learning at the University of M'sila, Algeria, focusing on its adoption, challenges, and the need for quality standards. As technology advances, e-learning becomes crucial in modern education, offering flexibility and reducing barriers of time and distance. However, Algerian universities face significant challenges in standardizing e-learning practices. The research highlights the growing demand for e-learning and the importance of developing unified standards to ensure its effectiveness. The results show that, while progress is being made, a lack of consistency in standards limits e-learning's full potential. The paper concludes by recommending the establishment of standardized frameworks to enhance e-learning quality.

Keywords: E-learning, quality standards, electronic curriculum, University of M'sila

Citation. Demdoum R. (2025). Standards of E-Learning Quality: The Case of the University of M'sila Rima Demdoum. *Science, Education and Innovations in the Context of Modern Problems*, 8(1), 984-995. doi: 10.56352/sei/8.3.64. https://imcra-az.org/archive/356-science-education-and-innovations-in-the-context-of-modern-problems-issue-1-volviii-2025.html

Introduction:

The 21st century is known for its technological explosion, where the world has become a small village. This is through the services provided by the internet network, including electronic and educational services, libraries, platforms, digital environments, and virtual universities. It has eliminated the mandatory attendance of students and professors, allowing learners to access information and books online. This is what is known as e-learning, which has reduced time and distance.

E-learning and its environments have become a necessity for universities to keep up with technological developments. According to the report titled "The Quest for the Goal: E-Learning" published in the United States in 2008, which surveyed responses from 2,500 universities, the demand for e-learning has doubled over the past five years, with an annual growth rate exceeding 7.19% (Al-Anzi & Khalaf Allah, 2016, p. 4).

A study by Yahiaoui et al. mentioned that the immense technological transformations strongly impose the importance of keeping up with them in the field of education. E-learning and its integration into higher education institutions have become an urgent necessity to keep pace with cognitive development. Additionally, it enhances the quality and nature of education and helps equip students with the skills required in the current information-driven era. It also aids in overcoming the shortcomings faced by educational institutions (Hannawi, 2018, p. 30).

Many studies and research related to e-learning quality agree on the importance of e-learning and quality standards. They also share several justifications, the most significant of which is that educational institutions and universities need standards that enable them to meet the needs of learners, encourage them to join these institutions, and ensure that these services are effective, impactful, and efficient (Al-Anzi & Khalaf Allah, 2016, p. 13).

The quality of e-learning requires continuous evaluation and monitoring of all its components according to the specified standards and criteria. This review and adjustment move step by step with it through each phase, ensuring that procedures comply with the standards (Al-Anzi & Khalaf Allah, 2016, p. 12).

The issue of establishing e-learning quality standards that align with global standards and enable the accreditation of this type of education by universities is one of the challenges facing education in the Arab world. The University of M'sila, like other Algerian universities, adopts this form of education and strives to develop it. As a result, there has been increasing attention recently, and many studies have focused on finding quality standards for e-learning.

1-Defining Concepts: Standards:

These are items or statements that describe or govern the process of designing and producing e-learning curricula to ensure its quality (Afifi, 2016, p. 3).

Definition of Quality:

According to the Quality Assurance Agency for Higher Education (QAA) in the United Kingdom, quality is defined as: "A way of describing all the systems, materials, and standards used by universities and educational institutes to maintain and improve the level of standards and quality. This includes teaching, how students learn, scholarships, and research" (Shanaf & Belkhiri, 2016, p. 2).

Abidin (2008) defines it as: "A comprehensive and continuous method of performance improvement aimed at achieving a qualitative shift in the process of education and raising the level of students in all intellectual, physical, psychological, spiritual, and social aspects. This can only be achieved through mastering tasks and managing them well" (Al-Sarifi & Nima, 2012, p. 568).

Definition of E-Learning: Khan (2005) defined it as: "A learner-centered method in an interactive, creative environment that is well-designed in advance and accessible to anyone, anywhere, anytime, using the features and resources of the internet and digital technologies that align with the principles of instructional design suitable for an open learning environment" (Abu Khodah, 2012, p. 8).

Shamma and Ismail (2008) defined e-learning as: "A technological innovation that provides an interactive learner-centered learning environment, designed in advance based on the principles of instructional design suitable for an open and flexible learning environment, using internet resources and digital technologies, and accessible to everyone, anywhere, and anytime" (Hassamou, 2011, p. 253).

Al-Anzi (2011) defined it as: "A method of education using modern communication tools such as computers, networks, multimedia (audio, video, graphics), search tools, electronic libraries, and internet portals, whether conducted remotely or in the classroom. The key focus is using technology in all its forms to deliver information to the learner in the shortest time, with the least effort, and the greatest benefit" (Jabr & Al-Arnousi, 2014, p. 156).

2- Quality Standards in E-Learning:

These are a set of procedures and established principles through which the e-learning system operates. They aim to ensure that the final educational output meets or exceeds the required technical requirements (Al-Anzi & Khalaf Allah, 2016, p. 7).

2-1.Components of E-Learning:

- Educational Component: Students, instructors, educational materials, administrators, financial staff, library, laboratories, research centers, exams.
- Technological Component: Website, personal computers, network, digital conversion of the educational component.

Administrative Component: Technology-based education goals, philosophy of technology-based education, plans, programs, and budgets for technology-based education, schedules for technology-based education, strategies and goals for both short-term and long-term, preventive and corrective monitoring for deviations in technology-based education programs (Abu Ziqah, 2012, p. 581).

2-2.Forms of E-Learning:

-Open Education: This provides the learner with some freedom in choosing the method, location, pace, and also the educational materials they desire.

-Distance Education: This is a system where the teacher and learner are not present in the same location, whether they are from the same country or from different countries. However, they are connected either through the internet or by postal correspondence.

-E-Learning: This is learning using computers and their various software, whether on closed networks, shared networks, or an open network. It is flexible, open, and remote learning.

-Virtual Education: This is the part of e-learning that relies on open networks, meaning the connection is guaranteed through the internet worldwide (Ben Raihan, 2019, p. 9).

2.3. Requirements for E-Learning: The requirements for implementing an e-learning system revolve around:

First: Inputs of the E-Learning System The inputs are represented in the process of establishing the infrastructure for e-learning, which requires:

− Providing computers within the educational institution.

− Providing internet connectivity.

− Creating a website for the educational institution on the internet or on a local network.

− Hiring technicians and specialists to monitor and maintain the computers and network.

− Designing and building e-courses based on instructional design principles and standards, within the systems approach, and offering them via the global or local network around the clock.

− Training specialists in designing e-programs and e-courses.

− Equipping modern computer classrooms and laboratories.

− Training faculty members through appropriate training courses to develop both technical and pedagogical aspects.

− Preparing and training students for the transition to the new e-learning system.

− -Preparing parents to accept the new system and assist their children.

− Training and preparing school administration.

− Promoting the educational institution as an electronically managed educational and administrative entity.

− Setting clear educational objectives.

Secondly: The processes of the e-learning system include:

− Registration for study and selection of e-courses.

− Implementation of e-learning.

− Monitoring students' progress in e-courses synchronously when they are following the usual method or asynchronously from their homes or workplaces.

− Use of various e-learning technologies such as email, interactive videos, chat rooms, and video conferences.

− The student undergoes formative assessment.

Thirdly: The outputs of the e-learning system and feedback:

− Ensuring the achievement of the previously defined educational objectives through appropriate assessment tools and methods.

− Enhancing students' outcomes and addressing their weaknesses.

− Developing e-courses.

− Developing the educational institution's website based on the results.

− Enhancing the role of faculty members and holding intensive training sessions for them when necessary (Dhaif Allah, 2017, p. 141-142).

2-4 Quality Standards for E-Learning (Presented According to the Researchers):

Al-Najdi identified the global quality standards for e-learning in four main criteria, which included several benchmarks for reference. These main criteria were: the quality of content and course design, the support and assistance from supervisors, the support and assistance for learners, and the quality of administrative services.

Meanwhile, the study by Al-Baddah and Al-Sarayrah aimed to analyze the literature and previous studies in the field of quality management to establish standards for quality management and assurance in universities in light of e-learning technologies. The study concluded by adopting nine main criteria for managing and ensuring quality in light of e-learning technologies, which are: leadership, the vision and mission of the educational institution, organizational culture, the teaching staff, academic programs and curricula, human resources management, scientific research, community service, and students. It also evaluated these criteria and their areas using quality measures to ensure quality assurance.

Al-Barrak explained that the evaluation of e-learning systems according to total quality standards is achieved through several strategic dimensions and controls for e-learning quality, which are:

− Achieving satisfaction by designing services that align with the desires and needs of beneficiaries, catering to their various aspirations, and satisfying the different stakeholders of e-learning, including teachers, learners, the community, and the job market, along with the growth and expansion of e-learning services.

− Increasing effectiveness and flexibility through effective communication, decision-making, and problem-solving.

− Increasing productivity, as continuous improvement in quality is an indicator by which the optimal level of effectiveness and efficiency is achieved.

− E-learning quality controls: these include those related to the overall design of the system, controls related to academic standards and quality standards in the stages of program design, accreditation, and review, controls related to quality management and standards in managing distance learning programs, controls specific to student development and support, as well as controls for student assessment.

The ultimate goal of e-learning quality is to improve and develop the educational product (e-course) in light of standards to ensure its quality. Implementing quality assurance standards requires determining benchmark measures that must be present in all components of the educational product system (e-course), leading to outcomes that satisfy learners and achieve the educational institution's objectives. To ensure quality, continuous monitoring and evaluation must be carried out for each phase and step of the quality process, meaning reviewing the e-course to ensure that procedures meet the specifications and objectives (Hannawi, 2018, p. 31).

2-5 The E-Course:

An e-course is any course that uses computer-based activities and educational materials in its design. There are several types of e-courses:

− E-courses that replace the traditional classroom.

− E-courses that support the traditional classroom and are used alongside it.

− E-courses available on the internet.

− Open-source e-learning management systems that can be downloaded to the university or college server and can be used for free or for a fee (Abou Zaqia, 2012, p. 582).

2-6 Stages of E-Course Production:

The process of producing e-courses is subject to a set of standards, the most important of which is the (ADDIE) model, which has received significant attention in the e-course production process. The production process goes through five stages, which are: A) Analysis, B) Design, C) Development, D) Implementation (Abou Zaqia, 2012, p. 583).

The following table outlines the steps involved in each stage of e-course production:

Table (1). Stages of E-Course Production

Analysis: This phase involves gathering information about the content of the educational material, the target audience, the capabilities of the educational environment, and the educational objectives.	– Working on analyzing the course in general. – Understanding the needs of the designer. – Analyzing the learner and identifying their needs while overcoming learning obstacles. – Determining the teaching method to be followed (blended approach, web-based approach). – Identifying weaknesses and attempting to address them. – Defining the general objectives of the course (cognitive, affective, skill-based). – Breaking down the content into smaller units to facilitate their grouping into modules within a cohesive map. – Analyzing teaching, which depends on content analysis, to identify the types and levels of educational objectives, activities, and the appropriate assessment method for each topic.
Design: In this phase, the actual design of the course begins, and it involves:	– Setting the educational objectives. – Identifying the sources and materials, collecting them, and creating a guide with the available content. – Clarifying the arrangement process to be followed. – Proposing ways to design the course and present the information. – Defining activities. – Determining evaluation methods. – Creating an event board for each screen.

Development: In this phase, the planned content from the design phase is implemented in light of the general objectives of the course:	− Producing the course according to the design for the subject. − Producing each interface according to its specific design. − Collecting and producing images, videos, interactive exercises, and self-exercises, then packaging the content.
Implementation: In this phase, the implementation occurs as follows:	− Collecting all the course contents. − Presenting the course in its final form. − Integrating the content into the university's content management system, which is open-source and free. − Training instructors and trainees on how to use the system. − Monitoring the performance of trainees and providing support to overcome issues (providing technical support).
Evaluation: The effectiveness and quality of the course are assessed in two stages:	− Formative Assessment: Evaluating the course and gathering feedback from the early stages of production and course development. − Summative Assessment: Conducting tests on the course after the implementation phase, as well as distributing surveys and recording feedback from recipients (instructors and trainees).

Source: (Abou Zaqia, 2012, pp. 583–584)

2-7 E-Course Design Standards:

The design of an e-course relies on specific standards, which are: (Abou Zaqia, 2012, p. 584)

− The course should be designed based on objectives, not content.

− State the learning objectives at the beginning of each learning object.

− Include self-assessment quizzes at the end of each learning object.

− Avoid using large-sized audio, video, or images unless necessary.

− The course content should be complete, free of scientific errors, and appropriate to the learner's level.

− The course should include a variety of activities that encourage innovative and critical thinking.

− The number of assignments and tasks in the course should be appropriate.

− To encourage collaboration, suggest topics for discussion in the forum.

3-E-Learning at the University of M'sila:

The Algerian experience in e-learning is still in its early stages. The first signs of using electronic platforms in education appeared in 2007, when Algerian universities began adopting this type of education and integrating various educational platforms through which the e-learning process could be implemented. This was seen as a partial solution to the challenges of the traditional educational environment (Bouanaqa, 2012, p. 432).

The Moodle E-Learning Platform

Moodle stands for Modular Object-Oriented Dynamic Learning Environment. It is an educational platform designed to provide teachers, administrators, and learners with a single, robust, secure, and integrated system to create personalized learning environments. (Source: [https://docs.moodle.org/3x/fr/À_propos_de_Moodle, 02/01/2019])

Nearly all Algerian universities use the Moodle platform for e-learning as a supplement to in-person instruction. Newly hired university lecturers in Algeria undergo remote training supervised by Mentouri University in Constantine.

The University of M'sila has been using Moodle since 2012. It is managed by the Office of Televised and Distance Education. The Moodle platform for the University of M'sila can be accessed at: https://moodle.univ-msila.dz/moodle/

Faculty members at the university receive training from the Office of Televised and Distance Education on how to use Moodle. The platform also includes a collection of instructional videos.

3-1 Standards for Designing an E-Course on the Moodle Platform at the University of M'sila: The University of M'sila designs e-courses on the Moodle platform based on standards derived from the training course templates (canevas) of face-to-face courses. These standards align with global e-course design standards and include: course introduction, prior knowledge, course objectives, lectures, final assessment, references, surveys, and discussion forums. The course structure is organized as follows:

Contact Information and Course Details:

− Faculty

− Department

− Academic level

- Semester
- Credit hours
- Coefficient
- Weekly time load

Instructor's full name:

Email address:

Diagnostic Assessment and Prior Knowledge:

It is preferable to prepare simple multiple-choice questions.

Course Objectives (According to the Curriculum)

Chapters

First Chapter:

- Objectives
- PDF file containing the chapter content
- Forum
- Messages

Second Chapter:

- Objectives
- PDF file containing the chapter content
- Forum
- Messages

Third Chapter:

- Objectives
- PDF file containing the chapter content
- Forum
- Messages

Final Assessment:

- Either multiple-choice questions or a timed written assignment

Sources and References

Feedback Survey on the Course

3-2 Obstacles to E-Learning:

The adoption of e-learning by Algerian universities faces several challenges, including:

- A lack of electronic equipment such as computers and internet networks.

− Weak and frequently interrupted internet connectivity.

− Instructors' lack of knowledge on how to use e-learning platforms.

− The absence of intellectual property rights for e-course authors, which has led to instructors being hesitant to publish their courses online.

− The availability of e-courses may lead to students skipping in-person lectures.

− Students' lack of experience or knowledge in using e-learning tools.

− E-learning requires technical staff, expertise, financial resources, and quality assurance standards.

Conclusion:

Despite the challenges facing e-learning, it has become not only a necessity but also one of the major challenges confronting higher education globally in general, and in Algeria in particular. E-learning offers significant benefits that cannot be overlooked—it makes information accessible anytime and anywhere, saving time and reducing distances. However, it requires standards that enhance its quality and help achieve the goals of teachers, learners, and the entire higher education system. The lack of unified standards among Algerian universities has contributed to the weakness of e-learning and the reluctance to implement it. Therefore, it has become necessary to unify the efforts of Algerian universities to establish e-learning standards that ensure high-quality education and align with international benchmarks.

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