Journal home page: http://journals.lagh-univ.dz/index.php/ssj
ASJP: https://www.asjp.cerist.dz/en/PresentationRevue/305
Social Sciences Journal
Vol 18 / Issue 02 / September 2024 / pp 34 - 43

Distance Education in Algeria: The "Moodle" Platform as a Model

التعليم عن بعد في الجزائر: منصة "Moodle" نموذجا

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Received: 10/03/2024 Accepted: 30/09/2024 Published: 30/09/2024

ABSTRACT:

This study aims to explore Algeria's experience with distance education through the use of the Moodle platform. It seeks to identify the main challenges facing the educational process. The results indicate a shift towards the use of the Moodle platform by teachers and students, especially in the last two years, due to the COVID-19 pandemic. This has made distance education via the Moodle platform a necessity despite the lack of experience and limited resources.

Therefore, it is imperative that Algerian universities are equipped with the necessary tools for implementing distance education and that specialists and technicians are trained in using the Moodle platform.
Keywords: Education, Distance Education, Educational Platforms, E-learning, Moodle Platform.

الملخص:

تهدف هذه الدراسة الى التعرف على تجربة الجزائر في التعليم عن بعد باستخدام منصة موودل، بالإضافة الى معرفة أهم الصعوبات التي تواجه العملية التعليمية، وأسفرت النتائج على اتجاه الاساتذة والطلبة الى استخدام منصة موودل خاصة في العاميين الاخيرين بسبب انتشار فيروس كورونا، مما جعل التعليم عن بعد باستخدام منصة موودل ضرورة لابد منها، رغم نقص التجربة وقلة الامكانيات، لذا يجب تجهيز الجامعات الجزائرية بالمعدات لازمة لتطبيق تعليم عن بعد، وكذا تكوين اختصاصين وتقنيين في استعمال منصة موودل.
كلمات مفتاحية: تعليم، تعليم عن بعد.، منصات تعليمية، تعليم الكتروني، منصة موودل .

1- Introduction:

In recent years, there has been a rapid educational shift and a continuous increase in the number of countries adopting distance education, sometimes as an alternative and sometimes as a complement to traditional study (Mohammed, 2004, p. 29).

Hence, the concept of distance education has become clear to everyone and widely used in our era. It began in Britain and then spread globally, establishing distance education as a new mode of education. It has become a necessity for keeping up with and developing the education system.

Distance education delivers information to learners in the shortest possible time, with minimal effort and maximum benefit. It is considered one of the most important modern learning methods that help solve the knowledge explosion problem and alleviate the congestion in lecture halls (Ben Dumi and Al-Shanq, 2010).

The advantages of distance learning are evident in many aspects, including new concepts in education such as autonomy in scheduling, time and cost savings for those with electronic devices,

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doi: 10.34118/ssj.v18i2.3979
http://journals.lagh-univ.dz/index.php/ssj/article/view/3979
ISSN: 1112 - 6752 | Legal Deposit Number: 66 - 2006 | EISSN: 2602 - 6090

which allows learners more time for other pursuits. Additionally, it offers flexibility in the workplace and plays an effective role in raising cultural, scientific, and social levels among individuals.

This significantly addresses the significant shortage of teaching staff and trained personnel in various fields (Battla, 2021, p. 12). Distance education utilizes visual media, computer screens, satellites, and electronic communication networks to create connections not only between universities in different countries but also between individuals participating in this system as an unconventional means of education and knowledge transfer. It is also important to consider that distance education is not a replacement for traditional education but rather parallel to it (Al-Harathi, 2016, p. 111).

Distance education in Algeria represents an experience that the Algerian university has undergone in recent years. The Ministry of Higher Education and Scientific Research in Algeria has relied on several educational platforms, including the Moodle platform. This platform is considered one of the modern technological modes with unique advantages that require specific skills. It aims to develop and improve education (Ben Amor and Blahaj, 2021, p. 73).

The Moodle distance learning platform is among the most used platforms in Algerian universities, especially in recent years due to the COVID-19 pandemic, which forced the closure of all institutions, including universities. Thus, distance education became necessary to continue lessons.

This study aims to explore Algeria's experience with distance education using the Moodle platform and to identify the main challenges facing the educational process by answering the following question:

- What has been Algeria's experience with distance education using the Moodle platform?

This research paper aims to:

- Understand distance education in Algeria.
- Explore some countries' experiences with distance education.
- Highlight Algeria's experience with distance education through the Moodle platform.

2- Concepts:

2-1- Distance Education:

Moore defines it as an educational system where the instructional behavior and learning behavior are separated by geographical distance, with communication between the teacher and learner facilitated through one or more intermediaries such as mail, television, telephone, and radio (Abduljawad, 2000, p. 162).

It is also described as a teaching system where students are remote from their instructor for most of the time they are learning, attempting to deliver educational services to those who cannot attend educational institutions and centers. This is achieved through televised education and web sites, utilizing various technologies and the internet to enhance the quality of learning and facilitate access to learning resources (Ahmeid, 2018, p. 68).

Furthermore, it is identified as "interactive learning where the learning content is available online, offering automatic feedback for student learning activities" (Bezhovski, 2016, p. 55).

2-2- Moodle Platform:

An interactive online service that offers learners access to information, tools, and resources to facilitate and manage learning over the internet, creating a virtual learning environment. It is an open, free, and widely used platform (Ahmeid, 2018, p. 68).

Moodle is also known as a course management system or a virtual learning environment aimed at providing educators with a tool to create electronic courses with the possibility of interaction. The role of the component (facilitator or teacher) is to create a pedagogical environment that allows the learner (recipient) to build their knowledge through experiences and qualifications.

Moodle was developed by Martin Dougiamas from Curtin University in Perth, Australia, in 2002 and supports more than 70 languages in over 196 countries, with more than 7 million users (Bassou, 2017, p. 327).

3- Distance Education:

Distance education holds significance in the educational process due to the means it uses and the innovative methods it employs to allow the delivery of scientific material through various means without the need for students to attend lecture halls. It is an educational mode that relies on the use of information and communication technologies to offer lectures and electronic lectures within a directed system framework (Ben Amour & Blahaji, 2021, p. 73).

Distance education delivers information to learners in the shortest possible time, with minimal effort and maximum benefit, and is considered one of the most important modern learning methods that help solve the problem of knowledge explosion and alleviate the congestion in lecture halls (Ben Dumi & Al-Shanq, 2010, p. 260).

Distance education is not a product of the modern era but has its roots in a much earlier time, "dating back more than two hundred years. It began in 1729 by Caleb Philips, who offered weekly lessons through the 'Boston Gazette' as a correspondence class. Radio was used for this purpose in 1922, when the prestigious University of Pennsylvania began offering a number of courses via radio. Then, television devices, as Stanford University launched the Stanford Instructional Television Network in 1968 to offer engineering courses via a television channel.

In 1982, computers entered the educational field (Computer Assisted Instruction), and the wider spread followed in 1992 with the advent of the internet, where learning management systems like Blackboard and Canvas appeared in 1999. However, these systems were closed and did not serve all learners.

In 2002, the Massachusetts Institute of Technology launched the MIT Open Course Ware initiative (2000 free courses benefiting 65 million people from 215 countries), followed by Khan Academy in 2008 with 71 million users (UNESCO, 2020, p. 15).

3-1- Experiences of Some Countries in Distance Education:

The rapid advancement of information and communication technology has invaded all fields, including education, where teachers and students in universities of some countries utilize the internet,

classrooms, and labs with multimedia educational resources in the learning process (Al-Naas & Abduldaem, 2020, p. 7).

The first non-traditional university to adopt open and distance education was the Open University in England, serving as a model. Approximately 48% of traditional universities had used distance learning technologies by 1989, which increased to 71% by 2001.

In contrast, universities that only offer their educational services and courses through the international information network, such as Dutch, French, and most American universities, reflect the global trend towards digital transformation in higher education sectors for considerations that emphasize the importance of educational technology (Salman, 2021, p. 379).

Several developed and developing countries have embarked on pioneering experiments in applying various systems of distance education. We will attempt to mention some of these countries' experiences:

3-1-1- Japan's Experience:

Japan's experience in e-learning began in 1994 with a project that broadcast educational content through video tapes to schools on demand via cable as a first step towards distance education. In 1995, a special educational policy committee in Japan submitted a report to the Ministry of Education, proposing that the ministry provide an information system, a center for educational software, and a national information center.

In 1996/1997, the Japanese government approved the establishment of software centers for educational libraries in every prefecture and supported research and development in the field of educational software and new educational technologies (Bakhoula, 2017, p. 277).

3-1-2- The U.S. Experience:

A practical study conducted in 1993 revealed that 98% of primary and secondary schools in the United States had one computer for every nine students. Currently, computers are available in all American schools without exception at a rate of 100%. Information technology is considered by American policymakers as one of the top six issues in American education.

By 1995, all U.S. states had completed their plans for computer applications in education and began a race against time to implement distance education methodologies in their schools. There was a focus on training teachers to assist their colleagues and students, providing the infrastructure required for the process from computers to networks connecting schools, in addition to effective educational software to integrate it into the curriculum (Salami et al., 2016, p. 25).

3-1-3- The Syrian Experience:

The Syrian experience in e-learning in higher education is represented by the Syrian Virtual University (SVU), where the Ministry of Higher Education in Syria announced the launch of the first virtual university in the Arab region in 2000. It is the only university in the Arab region to receive government support and relied on e-teaching through four virtual e-learning centers.

Within the first two years of its opening, it had 26,000 registered students and signed partnership agreements with 16 international universities, all recognized by international

accreditation associations and the Syrian Ministry of Higher Education (Abdulfattah Kalab, 2017, p. 313).

3-1-4- The Lebanese Experience:

One of the most significant Arab experiences in this field is Beirut University, which is considered the first academic institution to offer e-learning at a distance in the Middle East. It takes on the task of providing quality education to students in the Arab world, Turkey, and Iran.

It is a private university established in 1994, adopting electronic university education systems in 1998, and includes four faculties on the network: Business Administration and Administrative Sciences, Public Health and Health Sciences and Nursing, Environmental Sciences, and Engineering (Al-Naas & Abduldaim, 2020, p. 15).

3-2- Algeria's Experience in Distance Education:

Algeria has given importance to education after gaining independence, working on building educational institutions and adopting education democracy and its free provision. From this starting point came the idea of establishing a center to generalize education through correspondence, aimed at all interested parties.

Thus, the National Center for General and Supplementary Education by Correspondence was established in 1969. In keeping with developments in information and communication technologies, the center was transformed into the National Office for Education and Training at a Distance in 2001 (Bakhula, 2017, p. 278).

E-learning is one of the Algerian state's priorities through "the launch of the national project for e-learning at the university within the priorities and planning report for the year 2007, prepared in September 2006.

However, the lack of proper planning, seriousness, and a unified information policy led Algerian universities to adopt different platforms. Despite the purchase of the e-charlemagne platform by the Ministry of Higher Education and Scientific Research, the project was halted due to weak infrastructure and human resources.

Among the important platforms available, we find e-charlemagne and GANESHA, with GANESHA and Moodle being implemented in reality. The Ministry registered strategic goals for 2007-2009 to control the integrated information system of the sector; establishing a distance education system as a support for face-to-face training (Bougazi, 2021, p. 234).

The experience of the National Center for Vocational Education at a Distance (CNEPD), which is still ongoing and supervised by the University of Continuing Education, is one of the Algerian experiences in this field, including:

- COSELEARN: Training educational specialists and technicians in using the platform.
- LILEARNINGQUA: The Ministry of Higher Education and Scientific Research and the Swiss Directorate for Development and Cooperation are responsible for this task.
- Equipping Algerian universities with the necessary equipment for distance education: This process was undertaken by the Ministry of Higher Education and Scientific Research, which allocated a considerable budget (one billion and three hundred and fifty million Algerian dinars).

- FORTIF: Training specialists and trainers in distance education, with participants in this project including the Algerian University of Continuing Education, UNESCO, CNAD, CANM France, and the A6 team.
- Preparing lessons on the internet using the SERPOLET virtual learning platform for distance learning: With the University of Continuing Education responsible for this project.
- FPD - CARO project: An initiative by the University of Bejaia representing the idea of introducing new educational practices based on autonomy, social learning, cognitive dissonance, self-learning, and knowledge construction through educational activities.

To achieve this goal, a work program has been outlined since mid-November 2006, clearly defining the responsibilities of all involved parties:

- The National Committee for Virtual Education.
- The Regional Evaluation Committees, Directorate of Higher Education for Graduation.
- The Research Center in Scientific and Technical Information.
- The University of Continuing Education.
- Providers of work equipment.

Currently, in university institutions, there are distance education cells comprising pedagogical experts, engineers, and technicians who have benefited from specialized and diverse training within the framework of various cooperation projects, especially within the Ibn Sina (AUF) project, the UNESCO Digital University, the European Commission, and the Swiss cooperation program co zillearn located at the Houari Boumediene University of Science and Technology in Bab Ezzouar (Al-Naas & Abduldaim, 2020, p. 17).

4- Distance Education in Algeria Using the Moodle Platform:

Distance education utilizing the Moodle platform (the open virtual space) facilitates the gathering of groups of teachers and students. The lesson space is divided into content animated by the teacher for students who have been registered on the platform in groups.

The lesson consists of segments organized thematically or weekly, and resources in various digital documents are distributed in HTML format. Additionally, the lesson includes activities that allow for interaction, sharing, or assessment (Ahmeid, 2018, p. 66).

Evaluating the effectiveness of the training process is done on three levels, the first of which concerns the assessment of acquisitions, meaning whether the trainees have acquired the competencies set by the training objectives (Bougandoura, 2020, p. 309).

Setting precise, realistic objectives allows for the monitoring of content and the choice of method, where often the formulation of objectives can be a difficult exercise (Leroux, 2009, p. 15). Operational objectives are also defined, "precisely determined with an emphasis on training based on active learning and active strategies, carried out in a digital environment blended between theory and practice using an e-learning platform" (Bougandoura, 2020, p. 320).

Setif University-2, in Eastern Algeria, employs e-learning through Moodle (Moodl) platforms, which are web-based distance education platforms. They serve as arenas where works and all aspects

of e-learning, including courses and activities, can be displayed, facilitating the learning process using various communication and interaction tools within an organized learning environment.

Groups of students with varying abilities perform educational tasks, seek assistance from each other, and make consensus decisions. This learning method, where students are divided into small, heterogeneous groups (comprising different knowledge levels), cooperates within each group to achieve a common goal or objectives, somewhat contributing to solving problems existing in the traditional environment (Boualia et al., 2018, p. 66).

In a study conducted by researcher Hisham Maezouz and others on e-learning platforms, 56.52% were found to use the Moodle "Moodle" platform due to its ease of use through uploading lessons in PDF or Word format, with minimal effort, especially by teachers who prefer not to use video or direct interaction. This method was considered the optimal study method by the respondents, with percentages ranging from 37% to 68%.

This program is an open-source Learning Management System designed on educational foundations to help instructors provide an electronic environment and can be used individually at the personal level as well as at a capacity of 40,000 trained units. The system's website includes 75,000 registered users speaking 70 different languages from 138 countries. Technically, the system is designed using PHP language and MySQL databases (Fateh, 2020, p. 89).

4-1- Features of the Moodle Platform:

- A suitable tool for building e-curriculums (compilation, classification, presentation).
- Includes a forum where the teacher discusses topics related to the educational process.
- Focuses on the lesson unit to create several pages displaying the content or a part of it, with the possibility of adding a question or a link to the next, previous, or another page at the end of each page.
- Provides a good opportunity for the learner to submit assignments and tasks assigned by the teacher and upload them to the site in different formats for presentation to the teacher (PowerPoint, Word).
- Contains various assessment tools (tasks, activities, tests, questionnaires).
- The system has chat rooms and forums for educational dialogue.
- The teacher can create discussion groups by task and educational level, or the system can form them automatically (Zayed, 2020, p. 500).

4-2- Challenges of Using the Moodle Distance Education Platform:

Distance education faces a set of obstacles that prevent the effective achievement of its objectives. Despite the Moodle platform being one of the most important platforms used by Algerian universities, it has encountered several difficulties in implementing this system, including:

- The absence of internet access in some students' homes, and even when available, the low bandwidth makes it difficult to access the platform, coupled with the lack of dedicated computer labs for students at the university and students not owning personal computers (Ben Amour & Blahaji, 2021, p. 81).

- The lack of sufficient distance education supplies, a shortage of technical staff, and a lack of training courses on educational systems.
- The absence of detailed explanations for lessons by teachers, difficulty in communicating with them, and difficulties in understanding and comprehending all lessons, whether in scientific or literary specialties.
- The educational platforms that were adopted were not designed in a way that allows teachers to monitor and assess students effectively.

Despite these challenges, distance education has advantages such as "easy access to educational content, the ability to support the assimilation process, saving time, and reducing costs, not to mention its positive environmental returns. Since distance education is a paperless learning method, it protects the environment by not using and consuming a large number of papers compared to traditional education forms.

Moreover, according to a study conducted on e-learning courses, it was found that distance education programs consume less energy compared to traditional education courses that require attendance at universities or educational institutions. Thus, distance education is an environmentally friendly method compared to traditional education modes" (Battla, 2021, p. 14).

5- Conclusion:

Distance education has become one of the most important developments in the higher education sector, resulting from technological advancements and globalization. Various forms have emerged, such as e-learning, open education, and distance education, making distance education an essential and indispensable necessity.

The Algerian experience in the distance education process is in its early stages, where the Ministry of Higher Education has incorporated electronic platforms for distance education, allowing students and teachers access.

The Moodle platform is among the platforms relied upon by the Algerian university, especially in the last two seasons due to the spread of COVID-19, to make up for missed lessons and ensure the continuity of the educational process. The distance education process has faced several obstacles, such as the need for technical and technical staff and the need to train learners and administrators on mastering educational technology.

Also, distance education has several advantages and benefits, as it liberates the student from many constraints such as distance and time commitment. On the other hand, there are obstacles to distance education.

6- Recommendations:

- Develop an effective strategy to study the distance education system and evaluate the educational process based on the opinions of students, teachers, and administration, to identify the positives and negatives of this process.

- Establish a permanent educational body to monitor, follow up, and evaluate the distance education process through national seminars.
- To succeed in the educational process, Algerian universities must be equipped with the necessary equipment for implementing distance education and training specialists and technicians in using the Moodle platform.

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