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E-Learning in Algerian Universities: Reality and Challenges

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Abstract:

Through their use of Internet, Algerians discovered the fragility of the systems which hinder them from keeping pace with the developments of the digital age. This is exactly what made the "distance educational system" remain confined to its traditional scope (printed lessons sent to the participants by regular mail). Unfortunately, the possibility of online registration in this type of education wasn't announced until 2009. This proves that the ambition to achieve a practical step in the field of e-learning remains unreachable, even though many categories of Algerian society desperately need to benefit from learning opportunities that may be offered by virtual schools, if any, especially housewives, workers, employees, residents of remote areas and those who could not pursue their education, due to social, political or economic reasons. The e-learning space that Algerians can benefit from online is a reflection of the "the general educational scene" in our country, which is described as being miserable. [1]

The Algerian Ministry of Higher Education has spent considerable money on the success of e-learning. It has

[1] Boutkhil GUEMIDE, Chellali BENACHAIBA, Op. Cit ,P42.

encountered several failures, but the recent results indicate that there are real signs of e-learning on the ground.

Introduction:

Almost everything today has gone electronic, e-government, e-shopping, e-business, e-commerce, e-health, e-books, e-libraries, e-learning and so on. E-Learning enables the learners to learn anytime and anywhere.

E learning has a well-established role in higher education, and it has been found to have a great influence on increasing the effectiveness of learning, It is a new asset in this modern era, and it's getting popular day by day among high education students in Algeria, because of the increasing availability of Various means and technologies of communication devices.

While the phenomenon took off overseas in the early-1990s and has all but exploded internationally since (a recent survey indicated that Total enrolment in US distance learning programs reached 6.36 million as of fall 2016, an increase of nearly 6% over the year before [2]), it was only in around 2006 that it began to take hold locally and only now that we're starting to see its proliferation.

In Algeria and most of developing countries, the application of electronic learning (E-learning) in the higher educational system is yet struggling to gain much ground.

The purpose of this paper is to highlight the reasons for the delay of the success of e-learning in Algeria and to clarify the great efforts exerted by the Ministry of Higher Education to ensure the

[2] ICEF Monitor, The continuing expansion of online learning in the US, available at http://monitor.icef.com/2018/05/continuing-expansion-online-learning-us/, Retrieved on 02.02.2019.

success of e-learning in the belief that e-learning is the future model of education.

Defining E-learning:

E-learning is defined by many people, in many ways, since the term e-learning is used inconsistently, in order to gain a clear understanding of what e-learning is, here are a few definitions of e-learning. The letter "e" in e-learning stands for the word "electronic", e-learning would incorporate all educational activities that are carried out by individuals or groups working online or offline via networked or standalone computers and other electronic devices.[3]

E-learning or electronic learning according to the definition of Rosenberg it refers to the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance. It is based on three fundamental criteria: [4]

1- E-Learning is networked, which makes it capable of instant updating, storage/retrieval, distribution and sharing of instruction or information…

2- It is delivered to the end-user via a computer using standard Internet technology…

3- It focuses on the broadest view of learning solutions that go beyond the traditional paradigms of training …" .

In other words, E-Learning refers to instructional environments supported by the Internet. Online learning comprises a wide variety of programs that use the Internet within and beyond school walls to provide access to instructional materials as well as

[3] Development of blended learning course on critical Understanding of ICT for B.Ed. Student Teachers of Karnataka, State Open University, Available at: https://www.riemysore.ac.in/ict/index.html Retrieved on 02.02.2019.

[4] ROSENBERG, Marc Jeffrey, E-learning: Strategies for Delivering Knowledge in the Digital Age. USA: McGrow-Hill Professional.2001, Pp28-29.

facilitate interaction among teachers and students. Online learning can be fully online or blended with face-to-face interactions.".[5]

Meanwhile, Koohang & Harman state: "E-learning is the delivery of education (all activities relevant to instructing, teaching, and learning) through various electronic media"[6]

From previous definitions, it can be said that e-learning is the appropriate application of the Internet to support the delivery of learning, skills and knowledge

Types of E-learning:

According to the Broadbent Brooke there are four types of e-learning namely: Informal, self-paced, leader-led and through performance support tools. In informal e-learning, a learner could access a web site or join an online discussion group to find relevant information. Self-paced e-learning on the other hand refers to the process whereby learners' access computer based or web –based training materials at their own pace. Leader led e-learning as the name suggests refers to an instructor, tutor or facilitator leading the process. This type of learning can further be divided into two categories (1) Learners accessing real-time learning materials (Synchronous). In addition (2) learners accessing delayed learning materials (asynchronous). The fourth and last type of e-learning described is through the use of performance support tools which refers to materials that learners can use to help perform a task (normally in software) such as using a wizard.[7]

Launching e-learning in Algeria

[5] BAKIA, Marianne,et al, Understanding the Implications of Online Learning for Educational Productivity. Department of Education, Washington, D. C., US.2012, P2.

[6] Koohang, A. & Harman, K., Open source: A metaphor for e-learning. Informing Science: The International Journal of an Emerging Transdiscipline, 8,2005, 75-86.

[7] Broadbent Brooke, ABCs of A-learning. Reaping the Benefits and Avoiding the Pitfalls, Jossey-Bass / Pfeiffer, San Francisco, US,2002, P10

Algeria has already launched an e-learning system in 2006 in collaboration with both "Thomson" and "Microsoft" corporations. This section service provides 4.000 courses and lectures basically designed to teach ICTs and communication skills.[8]

According to Boutkhil GUEMIDE and Chellali BENACHAIBA, The first comment about the e-learning strategy, launched by Djaweb, is that there are no specific programs devoted for teachers to benefit from ICTs and e-learning for better professional development. Teacher professional development is absolutely essential if technology provided to schools is to be used effectively. Simply put, spending scarce resources on informational technology hardware and software without financing teacher professional development as well is wasteful. That is, designing and implementing successful teacher professional development programs in the application of technology is neither easy nor inexpensive.[9]

Key to successful teacher professional development programs is a modular structure, corresponding to different levels of teacher experience and expertise using technology. Adapting materials to teachers' comfort level and starting points is essential. In this way, teachers new to technology can be exposed to the full series of professional development modules, while those further along on the learning curve can enter where their knowledge and skills stop, and help their less technology-savvy colleagues along. For a mentioned reason, exploiting e-learning is a necessity for better teacher professional development in Algeria. The e-learning strategy should be basically developed by Algerian universities and financed by the ministry of higher education.[10]

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[8] Boutkhil GUEMIDE, Chellali BENACHAIBA, EXPLOITING ICT AND E-LEARNING IN TEACHER'S PROFESSIONAL DEVELOPMENT IN ALGERIA: The Case of English Secondary School Teachers, Turkish Online Journal of Distance Education-TOJDE July 2012 , Vol.13 N° 03, P41. Available at: https://eric.ed.gov/?id=EJ997805. Retrieved on 02.02.2019.

[9] Ibid. P41.

[10] Ibid, Pp 43 - 44.

Within the "Priorities and Planning Report for 2007", which was prepared in September 2006, the Ministry of Higher Education and Scientific Research, in the form of "Strategic Objectives 2007-2008-2009", recorded two strategic goals in relation to information and communication technologies:
1. Control the integrated information system for the sector.
2. Establish a system of distance education as a support for civilizational formation.

This report deals with the second objective of establishing a distance education system as a pillar of civic training. In the world of distance learning, the various technologies available in the market are similar in general. In this sense, the Ministry of Higher Education and Scientific Research, like others, has since 2003 started to equip all institutions with specialized distance learning equipment at a total cost of 716,152,000 DA.

What distinguishes the process in particular is the strategic choice regarding the use of such equipment, which takes into account their compatibility with the global academic needs while at the same time conforming to our national peculiarities. It was this thinking that determined the choice of our distance learning strategy.

Our distance education is a bond of educative education, which supports and strengthens it. While in other countries (advanced or progressing) it is a choice of options given distinctly to the learner.

This approach allows our country to raise the great challenge of achieving the following objectives:

1. Absorbing the ever-increasing numbers of learners while at the same time gradually overcoming the effects of the inverted pyramid that currently characterizes the teachers (quantitative criterion).
2.

2. Improve the quality of the configuration and quickly

approach international standards regarding quality assurance.

In order to achieve this objective, an agenda has been set in the short, medium and long term that reflects the immediate, medium and far-reaching concerns, as follows:

1-Network of visual lectures and e-learning system of the Ministry of Higher Education and Scientific Research:

-In the short term, it first involves rationalizing the use of human and material resources, through:

-Establishing a network for video lectures, integrating all university institutions, including 13 sites and 46 sites in the future.

Although this network allows for the indirect recording and transmission of lessons, it is used mainly concurrently, requiring attendees accompanying the teacher, facilities and student.

The network can now be used as a "point by point". Once equipment and capacity building is completed (process is under way), the system can collect 18 visual lectures simultaneously, with a central node and six multi-site modules placed in the Scientific and Technical Research Center.

The network was expanded from university entrance 2009-2010 to preparatory schools, which were also equipped with virtual laboratories and multimedia classrooms connected to a private network for video lectures.

A parallel phase, or at least slightly delayed, is the development of an e-learning system.

An e-learning system based on a distance learning base in the form of a client-serveur that allows the preparation and access of resources across the line in an asynchronous form. The learner can access this system at any time and place, with or without facilities. This rule allows teachers to use various methods across the line (lessons, exercises, applied lessons, activities, training, etc.), and

provides the learner with a rich, diverse and lasting pedagogical mode.

Al Qaeda also provides tools that allow for exchange and collaboration between teachers / attendants, learners and / or learners (mail, forums, chat, deposit and loading spaces).

The final objective is to develop real study tracks across the line, which are based on taking into account the needs of the learners and based on a focused pedagogy, which is developed according to a specific pedagogic charter according to the new educational techniques resulting from the introduction of information and communication technologies (participatory, Sequencing, scenario development, etc.) and within the framework of respect for standards (SCORM, IMS, LOM, etc.).

To achieve this goal, a program of work has been outlined since mid-November 2006, which clearly defines the responsibilities of all concerned parties (the National Committee for Virtual Education, the Regional Evaluation Committees, the Higher Education Directorate, the Research Center for Scientific and Technical Information, the University of Continuing Education and the Ministry of Labor).

At present, there are tele-education centers in the university institutions that include pedagogic experts, engineers and technicians who have benefited from a specialized and diverse training program under the various projects of cooperation, especially within the framework of the UNESCO project and the European Commission, the cooperation program with CoseLearn, (AUF), which is based at the University of Science and Technology Hawari Boumediene .

The e-learning system will be strengthened through the national network between the libraries, which is the expansion space to include all institutions of the country.

Algerian Distance learning system:

In the medium term, a distance learning system will be set up to allow the integration of e-learning and television facilities into a vision that goes beyond the boundaries of the university that is already in its favor.

Therefore, it will remain a priority for the university family, but it can be useful to a wider audience than to those seeking social promotion and raise their perceptions, or simply thirst for more knowledge (institutional staff in continuous training, literate learners, hospital patients, people Within rehabilitation centers, persons in the third decade etc.)

Algerian Research Network (ARN):[11]

- The Algerian Research Network, which in particular supports the distance education system through good consolidation, has experienced a fluctuating and fragmented development, to meet the precise needs that are often urgent, especially with regard to Internet access.
- The ARBAC, designed and built on the pillars and lines of Algeria's transport, seems unable to withstand the future Enterprise Resource Planning because of its inadequate capabilities, namely, the widely integrated information system of the sector, which includes the education system (Including teaching and pedagogical processes, as well as the management of university services, heritage management, etc.), decision-making, statistics and others.
- The amounts paid to Algeria Telecom for the rental of props and lines (about 2 billion Algerian dinars per year) necessitate thinking of other solutions in anticipation of a more suitable network adapted to the dimensions of l'ERP, as described above.

[11]Algerian Research Network , Available at: http://www.arn.dz/ Retrieved on 02.01.2019.

The rehabilitation of the Algerian research network through its evaluation and revitalization within the framework of the next five-year plan is the two possible ways.

Algerian Network for Education and Research:

In the long term, a sectoral network, similar to other education and research networks, must have a separate structure independent of those of commercial operators. It must:

The sector was granted an appropriate infrastructure pot, consisting of a bottleneck, inter-institutional linkages, a national data center and three regional centers. Allows the current baccabion to be increased from 155 Mbps to 2.5 Gbps and up to 10 Gbps, and the connectivity capacity of organizations that currently does not exceed 100 Mbps to 1 Gbps.

The establishment of a system of information, higher education and scientific research through the establishment of a new set of integrated services (G2G et G2C) in the service of students, professors, researchers, employees and citizens. These services come to support the services currently provided by the following software:

Services across the line addressed to the citizen G2C:

* Online registration for baccalaureate holders.

* Reading through the line on the pedagogic assessment.

* Requesting equations across the line for documents and certificates.

Line-oriented services for G2G management:

* Successful students in the baccalaureate.

* Management of DMD.

* Follow-up training abroad.

* Conducting research projects - training (CNEPRU).

* Put on-line services in a platform on cooperation and exchange with institutions: a directory of higher education, an

investigation on indicators of human development, a statistical achievement that includes the final outcome of university entry, the needs of institutions with regard to automated media equipment, the filing of various files.

* Evaluation of research projects and follow-up of disbursements FN / RSDT.

* National service file management.

The development of other craft applications allows for enhancement of existing ones or in the way of development, such as applications: human resources management, financial monitoring of investment operations, electronic document management and the conduct of university services.

In addition to day-to-day management, the system also provides decision makers with a set of indicators that help them take real time decisions.

Researchers have developed a platform for research and innovation, similar to the platforms offered by the national research and education networks of technology-producing countries, and meet the expectations of the sector for education and research for development through:

* Improve existing services.

* Develop new services such as:

A. Using new educational approaches.

B. Immediate access to digital and virtual libraries.

C. Retrieve more important amounts of data.

D. Establishing virtual libraries (drafting and experimentation).

And. Visualization of virtual organization (networks of cooperation).

E. Security, QoS, services, mobility ..

Wide distance education system. For the sector, distance education with its network of visual lectures and e-learning platforms is a bond of civic training, complementing and supporting it.

Through the establishment of the future education and research network, distance education will contribute more to the modernization of teaching tools and methods, especially by building a digital space - open to citizens - that integrates unified communication, information exchange and participatory action among all actors.

The project, which is estimated to last four years during the first six months of 2010, has been registered.

Moodle: LCMS platform, for online courses and distance learning:[12]

Moodle is an online learning platform for creating learner communities around content and educational activities. To a content management system (CMS), Moodle adds pedagogical or communicative functions to create an online learning environment: it is an application to create, through the network, interactions between pedagogues, learners and educational resources.

The lateral blocks give access to the various tools and links of the course, for example:

- People: list of participants enrolled in the course
- Course: the list of courses in which the user is registered
- Search forums: search tool in the course forums
- Administration: record of the notes of the user ...
- Latest news: the last news published on the forum

[12] Moodle: LCMS platform, for online courses and distance learning, Cerist , 22 juin 2016, Available at: http://cerinux.cerist.dz/?p=223 ,Retrieved on 02.01.2019.

- Upcoming events: activities listed in the calendar of its course

- Calendar: activities classified according to the calendar

- Online users: the list of participants, teachers and users, connected to the course

- RSS feeds, HTML block ...

Course members have access to the following activities if the teacher has selected them:

- Chat: "chat" or chat room (possibility to open a certain day, at a specific time, weekly, etc.).

- Forum: different types of forums (subjects imposed by the teacher, subjects proposed by the students, evaluation or commentary possible, etc.).

- Assignment: assignment of work with evaluation of the teacher (of different types: online text, file deposit, advanced filing of files, offline activity).

- Test: suite of QCU, QCM, questions true / false, numerical questions, pairings, texts with holes, etc.

- Lesson: document containing questions and referrals to different courses depending on the answers (possible evaluation).

- Workshop: submission of works with evaluation by the students.

- Glossary: collective production of a document organized alphabetically (comment, validation and evaluation possible).

- Wiki: collective production of a hypertext document (possible comments from the teacher).

- Database: creation of records with custom fields, and search by criteria in the database.

- Survey: asked question with a series of options to choose from.

- Dialogues: internal messaging between course members.

- Groups / groups: Course members can be separated into groups (and have access to reserved forum sections, for example) or group

groupings (which completely restrict access to resources / activities).

The main new features of versions 2.x are:

- the "drag and drop" of files in the course space, which avoids the X steps that were necessary before,

- the personal file space which offers the opportunity not to duplicate a support on all its courses, but on the contrary to use its own storage space from which we create links in its courses,

- the completion of the activities which proposes to the learners to tag the activities which they carried out, or which marks them automatically when the requested operation was carried out (rendering of duty, quiz ...),

- sequencing of activities that can structure a learning path by requiring the learner to go through such a step, or obtain such a note, before going on such resource or activity,

- Cohorts, which are groups of learners at the platform level, and no longer at the level of a course.

All activities are configurable by the teacher.

Other features

It is possible to integrate an external questionnaire, that is to say created with software that is not integrated into the platform such as: Hot Potatoes, Netquiz, CourseBuilder.

The teacher (or tutor) who wishes to have detailed information about a student's connections can use the "Reports" command. It obtains the general history of the activity of the course and can ask the history of the activity for a group, for a student, by date, for a given activity.

The teacher has the possibility to make a backup of his lessons with or without data and student productions. Restoring a backup makes it possible to create or complete a course extremely quickly. It can also reset the course to keep its structure without resources, users and information exchange.

A course can be defined as a "meta-course" of a main course, each student who enrolls in the main course is automatically enrolled in the pre-defined related meta-courses.

Specific filters make it possible to include in educational resources: sound in mp3, flash files and algebraic expressions.

Moodle is one of the first platforms to integrate the IMS- events for any type of user, the jobs to be rendered appear automatically in the calendar) but no personal calendar even if it is possible to insert private events

Communication in synchronous mode: chat but no videoconference mode (if not by adding a Dim-Dim module).

Services of the tel-teaching:

The use of technology to maximize the student learning experience is a vibrant area of interest across all tiers of global education. Technology-enhanced learning (TEL) is often used as a synonym for e-learning[13]

The system allows the broadcast of multipoint interactive video conferences (sites sent to Receiver sites. [14]

The central point has six units (6) Multi-site:

Each unit may distribute seventeen (17) participants over three (3) conferences.

In total, eighteen (18) conferences can be held simultaneously, with the possibility of registering ten of them (10).

During a visual conference, the professor can modify the content of the presentation at the level of the receiving sites in order to

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Higher Education Academy,Technology enhanced learning, [13]

Available at:

https://www.heacademy.ac.uk/individuals/strategic-priorities/technology-enhanced-learning#section-1 Retrieved on 02.02.2019.

[14] Services of the tel-teaching, Avalable at : https://www.univ-msila.dz/ Retrieved on 05.02.2019.

1-Display the contents of the first page of your own computer.

2-Send the next image from the recording device.

Sixteen (16) sites can be displayed on the same screen.

Conclusion:

Through their use of Internet, Algerians discovered the fragility of the systems which hinder them from keeping pace with the developments of the digital age. This is exactly what made the "distance educational system" remain confined to its traditional scope (printed lessons sent to the participants by regular mail). Unfortunately, the possibility of online registration in this type of education wasn't announced until 2009. This proves that the ambition to achieve a practical step in the field of e-learning remains unreachable, even though many categories of Algerian society desperately need to benefit from learning opportunities that may be offered by virtual schools, if any, especially housewives, workers, employees, residents of remote areas and those who could not pursue their education, due to social, political or economic reasons. The e-learning space that Algerians can benefit from online is a reflection of the "the general educational scene" in our country, which is described as being miserable. [15]

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[15] Boutkhil GUEMIDE, Chellali BENACHAIBA, Op. Cit ,P42.

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