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E-learning Realities and Challenges – A Case of Ghardaia University in Algeria

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In the wake of the COVID-19 pandemic, Algerian universities embraced e-learning as a new educational model. The study aimed to uncover the reality of university professors' engagement with e-learning technologies and the factors influencing the consolidation of that teaching approach. A quantitative field study was conducted at the University of Ghardaia, utilising a questionnaire to survey a sample of faculty members. The findings underscored the critical need for comprehensive training programs to equip professors with the requisite skills for effective e-learning delivery. Moreover, the research highlighted the pivotal role of university administrations in encouraging faculty participation, providing guidance, and establishing a supportive infrastructure conducive to the successful implementation of e-learning initiatives. These insights offer valuable perspectives for optimising the integration of digital learning modalities within the Algerian higher education landscape.

Keywords: distance learning, university, professor, university student

INTRODUCTION

The COVID-19 pandemic has caused widespread disruption and challenges across the globe. It is not only a global health crisis, but also affects all aspects of human life, including economic and social aspects. The severity and rapid spread of the pandemic have had a significant impact on the global economy, politics, education, social and cultural relations, and religious practices. One of the most severely affected sectors by the COVID-19 pandemic is the education sector, which has forced many countries around the world to close schools and universities completely. In March 2020, according to data from UNESCO, 73 countries announced the complete closure of universities, depriving more than 421 million learners of face-to-face education. That number increased to 180 countries by the end of March, preventing more than 1.5 billion students worldwide from attending school, representing 87.4% of the total student population worldwide.

Within this framework, Algeria implemented a gradual strategy in 2008 known as 'e.Algeria2013'. One of its main objectives was to accelerate the use of information and communication technologies in the public administration, economic institutions, and among individuals. Algeria also launched several projects to promote digitisation, including the 'Assemtk' project, the 'Smart City Sidi Abdellah' project and the e-learning project for university students.

The state has made digitisation a cornerstone for the success of the 'Algeria Vision 2035' strategy, which aims to develop and diversify the national economy through seven sectors: tourism, food industries, chemicals, building materials, vehicles, renewable energy and textiles (Bshari 2020: 587).

Digitisation is used in the areas of health, education, industry, trade, and public administration. In 2019, Algeria ranked 98th out of 121 countries in the Network Readiness Index, and 102nd and 130th globally in 2017 in terms of ICT development and e-government development, respectively (Soumitra, Bruno 2020: 24).

Given this lag, on the one hand, and considering that digitisation is one of the most important ways to combat the effects of the COVID-19 pandemic and a necessary imperative for the revival of the Algerian national economy.

The Algerian government has made significant investments in infrastructure in recent years, which has improved the country's connectivity and laid the foundation for digitisation.

There is a growing awareness of the importance of digitisation among both the public and private sectors in Algeria.

The COVID-19 pandemic has accelerated the adoption of digital technologies in Algeria, as businesses and individuals have been forced to find new ways to operate and communicate.

In this context, and with the closure of schools and universities and the persistent efforts of many countries to overcome this crisis, these countries have resorted to utilising technology and distance learning mechanisms. That was done through digital learning platforms, virtual lessons delivered via social media and the internet, and other e-learning and distance learning tools to create communication between teachers and students through those platforms. However, that type of education faced several challenges, as it came unexpectedly to those countries, despite being discussed and advocated for some time. This study aims to identify the most significant challenges and shed light on the reality of distance learning during the pandemic.

In light of this, it is imperative for the education sector in general, and higher education in particular, to be at the forefront of embracing these rapid changes and utilising information technology and information systems of various kinds optimally. This is necessary to confront current developments and keep pace with scientific advancements in the contemporary world. Arab countries, including Algeria, have recognised the importance of this technology in higher education, as evidenced by their adoption of e-learning, which primarily relies on modern technologies as a fundamental tool in the education system at all levels.

The importance of e-learning in the educational process and the increasing interest in it recently prompted us to research its prevalence in Algerian universities and its acceptance by the teaching staff. We also aimed to uncover the real reality practiced among all elements of the educational process in the university environment through a field study of the teaching staff at Ghardaia University.

We also shed light on the dimensions of e-learning in terms of its concept, importance, and obstacles to its application. We compared it to traditional education, which it does not ultimately eliminate but rather seeks to complement and improve in a modern way that keeps pace with current technological developments.

E-learning offers control over the educational process and achieves quality in the educational process by using a variety of educational methods and programs in teaching tools. It has also contributed to the training of teaching staff in the field of e-learning and distance education and the most important applications that contribute to the development of the interactive process.

However, despite these available resources, Algerian universities still suffer from a significant shortage in the application of e-learning. Through our field surveys at Ghardaia University, we noticed that the teaching staff still relies heavily on traditional education. This is in addition to students who prefer the traditional method of education, despite most of them acquiring some technological techniques that qualify them to integrate quickly into e-learning and use technological media.

We noticed a lack of desire from students to engage electronically with the elements of the lesson. Some others stated that they did not find any response or encouragement from their professors, despite the availability of electronic resources to some extent at Ghardaia University.

In this paper, we will try to reveal the nature and reality of e-learning at Ghardaia University as a model by answering the following questions that puzzled the researcher:

1. What is the reality of the teaching staff's practice of e-learning in the educational process at Ghardaia University?

2. What are the obstacles that prevent the teaching staff from using e-learning?

In light of some studies that have contributed to revealing the reality of e-learning, we have tried to formulate the following research hypotheses:

1. The formative process contributes to professors' awareness of the importance of e-learning.

2. The more incentives are available, the more professors will be interested in e-learning.

DISTANCE LEARNING AND OBSTACLES TO IT IN THE UNIVERSITY ENVIRONMENT

The coronavirus (COVID-19) pandemic spread in Algeria starting on 25 February 2020, and on 12 March 2020, President Abdelmadjid Tebboune ordered the advancement of the spring break and the closure of all schools.

Holmberg defined distance education as that type of education that covers various forms of study at all educational levels in which the educational process is not subject to continuous and direct supervision by teachers or instructors in different classrooms, but rather is subject to an organisation that determines the position of technical means in the educational process, from printed materials and mechanical and electronic media, and achieves communication between the teacher and the learner without face-to-face meeting (as cited in Mami, Dramchi 2020: 188).

In light of these definitions, we can formulate an operational definition of e-learning relevant to our study:

The practice of using various electronic communication mechanisms in education by both faculty and students, such as computers, multimedia, electronic libraries, CDs, educational software, internet portals, email, electronic chat rooms, and channels. This aims to ensure physical distancing between the student and the teacher to reduce the spread of the coronavirus.

Analysis of scholarship on obstacles to distance learning in the university environment shows that universities confront a large diversity of barriers to implementing e-learning:

– Some universities lack the necessary technological infrastructure to provide effective e-learning, such as computer hardware, internet connectivity, and educational software platforms (Abdifatah et al. 2024: 447–448);

– Inadequate technological skills among teacher (Selçuk et al. 2021: 1316–1317);

– Lack of experience among teachers in designing and implementing e-learning programs (Ruba et al. 2021: 50);

– Challenges in assessing online learning: Educators may encounter difficulties in effectively evaluating student learning within an e-learning environment, potentially compromising the quality of assessment and the learning process itself (Beleulmi 2022: 52);

– Diminished student–teacher interaction in e-learning environments may adversely affect student motivation and engagement (Sultana et al. 2023: 445);

– Concerns about copyright and intellectual property (Louar 2023: 28);

– Resistance to change from traditional to e-learning by some teachers and students may impede the adoption of new technologies (Reid 2014: 394);

– Low motivation for participation in e-learning (Qubilat 2021: 6);

– Difficulties with focus and attention in an online learning environment (Almomani 2022: 94).

METHODOLOGY

Through the study and its nature, we used the quantitative analytical method, which relies on studying events or phenomena as they exist in reality and is concerned with describing them accurately through qualitative expression (Nawfal 2010: 2019).

Time and Space Limits of the Study

The study started through field observations starting from March 2023, where we collected data and recorded the most important observations that framed the topic of our research. At the same time, we conducted some interviews with some professors and engineers specialised in the field of communication technology who supervise communication technologies at Ghardaia University. When we determined the tool used, which is the questionnaire, we tested it on a sample of professors in order to correct the errors and have it judged by experts. Thus, we distributed it finally in the period from 1 May 2023 to 1 June 2023, where the questionnaires were collected, tabulated and classified using the statistical program SPSS23.

Regarding the choice of a questionnaire as a data collection tool, it is worth noting that it is considered one of the most commonly used and popular methods in scientific research, owing to its numerous advantages. The questionnaire allows respondents sufficient time to understand the questions and provide well-thought-out answers, ensuring the quality of the collected data.

The questionnaire questions were designed in a diverse manner, incorporating closed-ended, semi-closed and open-ended questions. This variety in question formatting aims to strike a balance between ease of statistical analysis and preserving respondents' freedom to express their views in greater detail.

The distribution of the questionnaires was carried out through multiple channels; they were distributed directly to respondents, as well as electronically via email. That diversity in distribution methods was intended to reach a broader segment of the target population and ensure a better representation of the community under study.

The data collection process involved two modes of survey distribution: electronic and paper-based. Through email, 13 electronic survey forms were received and verified utilising the professional email addresses assigned to faculty members by the institution. Concurrently, 93 paper-based surveys were collected. However, 14 paper surveys were deemed invalid and excluded from the analysis due to various reasons, including instances where respondents

failed to answer specific questions or crossed out certain items. Ultimately, the final dataset comprised responses from 13 electronic surveys and 93 valid paper-based surveys, which formed the basis for subsequent analysis.

Community of Study and Sample Control

The sample plays a significant role in the success of field research. Therefore, the research community must be representative and homogeneous and serve the purposes and objectives of the research (Angers 2006: 103), and in our research, the study community is all the professors of Ghardaia University, which number 435 professors according to the statistics of the university vice-chancellery. That sample was selected on a random stratified basis, and the minimum was observed. 120 questionnaires were distributed to the study sample, and only 106 questionnaires were returned. The rest were either cancelled due to the respondents not completing the answers or not returning the questionnaire. Despite the refusal of a significant number of potential participants to engage in the study due to various reasons, including time constraints, scientific objections, or privacy concerns, we considered the sample to be largely representative of the study population. We believe that the sample size and diversity are sufficient to ensure the validity of the findings. Nevertheless, we acknowledge that the non-response rate could have some impact on the sample's representativeness, and we suggest conducting further research to better understand the motivations of those who declined to participate.

Sample Characteristics

The majority of the sample consists of male professors at a rate of 75.5%, compared to 24.5% of female professors who did not want to receive the questionnaire (Table 1).

Table 1. **Distribution of respondents by gender and faculty**

Variables	Categories	Frequency	Percentage, %
Gender	Male	80	75.5
	Female	26	24.5
Faculties	Economics, Business Administration and Management	38	36
	Science and Technology	9	8.5
	Law and Political Science	16	15
	Social Sciences and Humanities	40	37.7
	Arts and Languages	3	2.8
Total		106	100

Source: Calculations of the author.

In addition, most of the rejected questionnaires for methodological reasons were from female researchers. This matter may need to be studied.

THE PROFESSOR'S KNOWLEDGE BASE AND E-LEARNING: WHAT IS THE IMPACT?

The majority of professors, representing 61.3%, have published advertisements and information on multiple websites (Table 2). However, 38.7% of them have never published anything online. Of those who had never published scientific material on websites or social networks, 60.5% said they had received no training at university or beyond. 26.5% of those who have never published scientific content for students reported participating in the training. 39.5% of the survey participants managed to publish the learning content to students despite not participating in the training.

Table 2. **Faculty Training and Provision of Scientific Content to Students**

Faculty participation in training	Publish scientific content or an advertisement for students on websites		Total
	YES	NO	
YES	73.5%	26.5%	100%
NO	39.5%	60.5%	100%
Total	61.3%	38.7%	100%

Source: Calculations of the author.

More than half of the sample, 56.6%, have never visited the distance learning website (Table 3). This is followed by 20.7% who visit it occasionally on a weekly basis. Of these, 60% have not visited the site in a while. However, those who have taken more than one course visit the site and interact with its posts on a weekly basis. This is the highest percentage, 47.4%.

Table 3. **Training Courses, E-learning Website Visits, and Interactions**

Number of training courses attended by teaching staff	Frequency of visits and interactions of teaching staff with the E-learning website				Total
	Daily	Weekly	Monthly	No visits	
1 course	5.7%	14.3%	20%	60%	100%
2 courses	11.1 %	25.9 %	14.8%	48.1%	100%
More than three courses	10.5%	**47.4%**	15.8%	26.3%	100%
No courses attended	0%	4%	12%	**84%**	100%
Total	6.6 %	20.7%	16.0%	**56.6%**	100%

Source: Calculations of the author.

A closer look at the percentages in Table 3, which show the correlation between the two variables, reveals a general trend: the more training professors receive, the more likely they are to accept distance learning and visit the distance learning website on a weekly basis. The percentage of professors who have taken more than one course and visit the site weekly is

47.4%, while the percentage of professors who have not taken any of the courses organised by the Media Unit of Ghardaia University is 84%, the highest percentage in this category.

Our research data show the actual practice of the teaching staff of Ghardaia University: 57.5% of them have not done any activity during their professional career on the distance learning website. Only 42.4% of the respondents, professors, have actually done scientific activity on the site. That led us to verify our hypothesis: Does the variable of training and education of the university professor play a role in the reluctance to carry out such educational activities? Or are there other factors that intervene in determining the cause of this problem? Therefore, we added the following question immediately after this question: If you have not published scientific content, what are your justifications? We obtained the following table.

Table 4 confirms the importance of training, as the largest percentage (37.7%) of those who justified not engaging in any scientific activity on the site attributed it to their lack of control over technology or, in other words, their weakness in training and practice to engage in such scientific activities on the distance learning platform. One third (32.8%) of research participants stated that they do not have time for it, which is a kind of escape if we know that professors have a minimum teaching limit of 9 h, which is an average of two days a week. The rest of the days, they are exempt from any professional obligations. Therefore, the issue of lack of time is not raised. We also find a significant percentage of professors who are not e-learning users, estimated at 19.7%, who stated that the obstacle is technology itself, as it is constantly disrupted.

Table 4. **Justifications of Teaching Staff for Not Engaging in Scholarly Activities on E-learning Platform**

Categories	Frequency	Percent, %
Lack of Time	20	32.8
Environmental constraints	6	9.8
There are many technical problems with the website	12	19.7
I am not familiar with how to conduct scientific activities on the site	23	37.7
Total	61	100.0

Source: Calculations of the author.

PROFESSORS' ACTIVITY ON E-LEARNING PLATFORM AND ADMINISTRATION ENCOURAGEMENT

A little more than half (51.9%) of the respondents have published their scientific work on multiple platforms, both official and social media (Table 5). In contrast, a little less than half (48.1%) have not published any of their work.

Table 5 also shows a positive correlation between the professors' feeling of encouragement from the university administration and their publication of their work electronically. 58.6% of professors who feel appreciated by the administration publish their work, while 41.4% of professors who do not feel appreciated refuse to publish their work on Google Scholar, ResearchGate, LinkedIn, and other similar platforms.

Table 5. **Professor Training and Scientific Content Provision**

The administration encourages me to embrace e-learning in my teaching	I publish scholarly works for students, including articles, lectures and studies		Total
	YES	NO	
YES	58.6%	41.4 %	100%
NO	43.8%	56.2%	100%
Total	51.9%	48.1%	100%

Source: Calculations of the author.

Motivation is also of great importance. Frederick Taylor, in his study of scientific management, confirmed that material incentives of all kinds play a role in activating the employee's performance and increasing their productivity within the institution (as cited in Goyal 2015: 76).

DISCUSSION

It is clear from the data (Table 2) that the more training and qualification a professor has, the more aware they are of the importance of e-learning. This may explain their resistance to changing their pedagogical approach towards the student and their preference for the traditional method based on lecturing, guidance and centralisation.

According to interviews conducted with professors, there are multiple reasons for their reluctance to publish online. Some believe that traditional teaching is more likely to motivate students to work harder, as opposed to the internet, which can lead to laziness and a lack of motivation to seek out information.

1. In addition, their lack of acceptance of e-learning is due to their lack of training, despite all the administrative and pedagogical facilities that university professors have access to. Perhaps the most prominent of these facilities is the creation of the E-learning website, which is one of the most important electronic means of communication between the elements of the educational process: professors and students.

2. The survey also found that several reasons prevent professors from enrolling in distance learning training, including lack of time and the fact that students do not have accounts on the site, which hinders interaction between all elements of the educational process. This was confirmed by the interview that we conducted with the engineer in charge of managing the Media Unit of Ghardaia University, who supervises the training of more than 400 professors and doctoral students. This makes it difficult for her to train all of them, especially since some professors do not have basic computer skills. In addition, this type of training does not exceed 2 h, which makes it very difficult for professors to acquire this technology.

3. The weakness of the internet network and the inability of those responsible for the site to enter student information, which disrupted such activities in light of the administration's procrastination in providing a work environment suitable for the educational process.

4. The data (Table 4) indicate that individuals tend to value self-esteem regardless of their ideology or ethnicity. This is consistent with Abraham Maslow's hierarchy of needs, which suggests that an individual's performance increases when they feel appreciated by their supervisor (as cited in Goyal 2015: 73).

5. The factor of encouragement is important within any organisation. When an employee notices that there is no difference between someone who is innovative and creative in their

work and someone who does not perform at a level equivalent to what they are paid, the hard-working employee may tend to become lazy and apathetic. The university institution must be keen to provide incentives and encouragements in order to consolidate this national electronic project, which aims to establish it to improve Algerian universities. Despite the decisions and instructions that urge reaching zero paper and translating all work from its traditional form to an electronic form, and the importance of creating social media sites to communicate with students, the turnout of professors to e-learning is low. This is due to several factors, including the lack of incentives, as seen by the professors, and the fact that this group tries to maintain the students' representation of the professor, who enjoys a sense of respect and appreciation. They never want to narrow the gap between them and their students. Therefore, they tend to prefer traditional education and avoid entering the virtual field, which could undermine the professor's position with students and society as a whole.

CONCLUSIONS

The scientific and technological development taking place in the world on all levels has put developing countries in a state of mobilisation to keep pace with it and benefit from it. Perhaps the most important sector that needs updating and advancement is higher education, especially in Algeria, which suffers from a terrible decline in the level of education. This is confirmed by the latest world rankings, in which Algerian universities rank last or are out of the rankings in the worst cases. That prompted the Algerian state to adopt a strategy aimed at developing technology in the Algerian university. One of the most prominent areas that are expected to be developed is education, especially e-learning, which has proven its effectiveness and efficiency in developing the efficiency of students and professors alike. Within that framework, we tried through this study to reveal the reality of the Algerian university professor's practice of this type of education and the factors that encourage him to be convinced of e-learning as a new mechanism for graduating students with high quality. Through that field study of the professors of Ghardaia University, we obtained the following results:

– Lack of training for professors in the field of information technology in general and distance education in particular. This leads to a lack of desire on the part of professors to move from traditional to electronic education.

– The small number of training courses organised by the university administration regarding e-learning. This pushes professors not to risk publishing any scientific content for students because they do not master the electronic process of distance education well.

– The administration's consideration of e-learning as a secondary matter. This hinders the establishment of a culture of e-learning among professors.

– Lack of encouragement and incentives from the administration for the professor in case he uses e-learning. This leads him to a state of dissatisfaction with what he is doing to establish this modern type of education.

– The frequent breakdown of the distance learning website, E-learning, in addition to the presence of only one engineer. Supervising the training and guidance process led the professors not to publish any activity or scientific test on the site.

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KAMEL AOUISSI

Nuotolinio mokymo realybė ir iššūkiai – Gardajos universiteto Alžyre atvejis

Santrauka

Patyrus COVID-19 pandemijos apribojimus Alžyro universitetai ėmė naudotis nauju švietimo modeliu – nuotoliniu mokymu (e. mokymu). Šiuo tyrimu buvo siekiama atskleisti universiteto dėstytojų įsitraukimo į e. mokymo technologijas realybę ir šio mokymo metodui įtvirtinti svarbius veiksnius. Gardajos universitete buvo atliktas pedagoginio personalo kiekybinis tyrimas, naudojant klausimyną. Išvados išryškino esminį poreikį visa apimančių mokymo programų, suteikiančių universiteto dėstytojams įgūdžių, reikiamų efektyviam bendradarbiavimui su studentais e. mokymo(-si) platformose. Be to, tyrimo rezultatai leido akcentuoti kertinį universiteto administracijos vaidmenį skatinant dėstytojų įsitraukimą į e. mokymo platformas, teikiant gaires ir kuriant palankią infrastruktūrą, padedančią sėkmingai įgyvendinti e. mokymo(-si) iniciatyvas. Šios įžvalgos suteikia vertingų perspektyvų siekiant optimizuoti e. mokymo(-si) būdus Alžyro aukštojo mokslo srityje.

Raktažodžiai: nuotolinis mokymas, universitetas, dėstytojas, universiteto studentas