

## The Effect of Digitization on the Quality of Teaching in Algerian Universities: A Socio-Cultural Approach

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### Abstract

The current study aimed to highlight the effect of digitization on the quality of teaching in Algerian universities. It also sought to find out the teachers' and students' attitudes and perspectives towards the obligatory use of digitization in their professional activities and to investigate the extent to which university teaching quality is affected in the context of keeping up with digital technologies.

To achieve these objectives, we used a semi-structured interview as a qualitative approach on a sample of teachers at Mostaganem University. They were selected purposively. The findings showed that the university must conduct training courses for both teachers and students, so they can adapt to the digital system and ensure positive outcomes from this technology. Although digitization helps in the development and diversification of teaching skills, many obstacles hinder its implementation, including concerns about information security, lack of qualified competencies and abilities, and insufficient budgets devoted to digital programs.

**Keywords:** Higher Education, Digital Transformation, Digital Competence, University Teaching, Face-to-Face Learning, Distance Learning.

### Introduction

Modern societies are living through a rapid digital transformation, where digital technology is quickly increasing in all domains, especially in education in general and higher education in particular. The shift towards digitization and smart technology has significant impacts on the teaching process which is among the professions highly affected by digital advancements. Teachers need to keep up with these changes and effectively adopt them to maintain the quality and effectiveness of their profession.

In this era, digital development has impacted all life domains, whether economic, social, or other sectors. Digitization is primarily used to manage affairs in different areas, so it is important for teaching to be updated, continually improved, and in line with digital technology developments.

In university teaching, one of the most significant effects of digital technology is on the quality of courses and lectures. It also enhances and optimizes the efficiency and potential of university teachers by saving both time and effort and providing accuracy in its application. Despite these advantages, it has countless negatives, including severe digital threats that endanger individuals, societies, and even nations.

It is worth mentioning that worldwide universities are applying various digital technologies to support distance learning and ensure the continuity of the teaching process. Algerian universities were able to maintain the continuity of teaching, learning, and work during the COVID-19 pandemic. Thanks to digitization, it was truly one of the main tools that enabled this continuity.

### 1- Statement of the Problem

The idea of this field study starts from a real-life experience that we, as university teachers, have lived through. We have experienced both traditional university teaching and the modern system of LMD. We noticed big efforts have been made by the Higher Ministry to integrate digitization, communication and technology tools in university teaching in terms of directives and equipment. However, reality is something else, and this was revealed by the COVID-19 crisis, which forced universities into distance learning. This causes chaos on the Moodle e-learning platform and uncovers the reality of technology use by both teachers and learners.

Abdelhamid Ibn Badis University of Mostaganem is among the Algerian universities that have adopted a policy towards digitization and technology use in all fields and daily practices inside all faculties and administrative departments. They are doing so to promote and upgrade the university. In this context, the

Ministry of Higher Education and Scientific Research has urgently recommended to use of digitization and facilitate all information on the progress platform.

In light of this, our study attempted to sociologically approach the effect of digitization on the quality of teaching in Algerian universities through a field study at Abdelhamid Ibn Badis University of Mostaganem. Accordingly, we asked the following question:

-What is the effect of digitization and its implications on the quality of teaching in Algerian universities?

### **Sub-questions**

1- To what extent do university teachers respond to the digitization process?

2-To what extent does digitization contribute to improving and developing the quality of teaching in Algerian universities?

3-Are the facilities available at Abdelhamid Ibn Badis University sufficient for applying digitization?

4-What are the obstacles faced by Abdelhamid Ibn Badis University teachers in keeping up with digital technologies?

### **2-Hypotheses**

To answer the research question, we have formulated the following hypotheses:

1-University teachers face several challenges when applying digitization, especially the lack of material and financial resources, which negatively affects the quality of university teaching.

2-The lack of digital competence among Algerian university teachers hinders the effective use of digitization for the development of university teaching.

### **3- Objectives of the Study**

This study aims to:

- highlight the effects of digitization on the quality of teaching in Algerian universities.

-know the university teachers' attitudes and perspectives towards the mandatory use of digitization in their professional activities.

-reveal the extent to which the university's traditional system of teaching has changed in light of keeping up with digital technologies.

-identify the advantages and disadvantages of digitization in the profession of higher education.

### **4- Significance of the Study**

The importance of this study is as follows:

-It addresses a real-world issue, which is a relatively new topic with few specialized studies that have analyzed or approached this subject from a sociological perspective.

-It focuses on digitization which is a current and national project that has not yet been fully realized in Algeria.

- It reveals that because of the COVID-19 pandemic, the importance of digitization emerged in Algerian society as a whole and in higher education specifically which has been strongly impacted by the adoption of this process.

### **5-The Methodology Used**

We used a semi-structured interview as part of a qualitative approach with a sample of teachers at Abdelhamid Ibn Badis University. It includes the following questions:

-At present, what is your stance on the digitization project?

-In your opinion, what are the reasons that led to the adoption of digitization in Algerian universities?

-How do you assess the quality of university teaching after the access of digitization?

-Are the technologies and physical facilities provided by the university sufficient to ensure the operation of digitization? Why?

-What are the advantages of digitization technology in terms of developing and improving the quality of university teaching?

-According to your opinion and experience, what are the main challenges faced by university teachers in the light of digitization technology while doing their job?

-What are the solutions suggested for the success of digitization in the accounting department?

-Personal Information: Gender (Male or Female) / Age / Marital Status / Highest Educational Qualification Obtained / Faculty Affiliation / Experience.

## **6- The Study Key Terms**

In our research work, we used the following concepts:

### **6-1 Definition of Digitization**

Linguistically: In Arabic linguistic dictionaries, this word refers to a range of meanings, including encryption, clarification, writing, pen, and script. Ibn Mandhour said that encryption is the writing and numbering. It means to number the book with a foreign number and clarify it. His book is written, implying its letters have been clarified with punctuation marks. In addition, numbering the garment means to number it, and its numbers are its stripes. (Anouni Nadia, 2017, p. 28).

Terminologically: It is a language specifically designed according to certain rules for using it in electronic computers. Through it, texts, speech, music, shapes, laws, and rules are transformed into numbers. Digitization represents the essence of the primary function performed by input units, which convert whatever feeds into the computer, regardless of its origin, into numbers. Meanwhile, output units convert the numbers back into their natural form in texts, shapes, and sounds. (Farouk Maddas, 2003, p. 59).

### **6-2 Definition of Digital Transformation**

It is a term used to describe the process experienced by a society, institution, or country when they adopt digital technology and modern techniques to boost their performance, processes, and adaptability to digital transformations in the modern era.

Linguistically, the concept of "digital transformation" refers to the process that entails converting traditional processes or activities into a digital form or digital communication technology. It is used to describe the changes that occur in all aspects of human life due to digitization technology, including e-commerce, education, healthcare, and digital government, industry, and society.

Terminologically, we can describe digital transformation as the transition from traditional processes and methods to digital technology and advanced techniques use such as computing, artificial intelligence, the internet, big data analytics, and many others. Digital transformation requires a change in the mindset and institutional culture and adopt of new strategies to fully benefit from the advantages of digital technology. It refers "to integrating digital technology into the business world and fundamentally changing how value is shaped and delivered to customers. It is also a cultural change that requires institutions to continuously challenge the current status and experiment with it. (Yahiaoui and Grabsi, 2019, pp. 131-148).

### **6-3 Procedural Concept of Digital Competence**

It is the extent to which individuals or institutions can effectively use digital technology and digital materials to achieve their objectives and meet their needs. It is also a set of skills, knowledge, and potential that individuals need to deal with digital technology confidently and effectively.

Generally, it refers to the ability to use digital technology effectively for attaining specific goals and enhancing productivity, innovation, and communication. Digital competence covers various skills like online research and data analysis, creating digital content, handling emails and electronic calendars, communicating through social media, and managing time and tasks using digital applications and tools.

### **6-4 Definition of Quality**

As a term, quality is derived from the Latin word "Qualité." Terminologically, it means the nature of something and its degree of suitability. It is a relative concept that varies depending on the perspective of the beneficiary, whether it is an institution, supplier, customer, etc. (Ben Aichaoui, 2008)

It is defined by "Rhodes" as: "An administrative process based on a set of values and it derives its force from the information within which it can employ the talents of workers and invest their intellectual potentials at various organizational levels creatively to achieve continuous improvement in the educational institution." (Rhodes, 1992, p. 75)

## **7- Results of the Field Study**

In response to the challenges imposed by the rapid and huge developments of the digital revolution, which have significantly contributed to the economic growth of developed societies, Algeria embarked on the experience of digitalization by launching the "E-ALGERIE" project in 2013. The latter is considered one of the major projects through which Algeria sought to transition towards the digital world, aiming to open up to an economy based on digital technology to enhance its services. This project required

providing all the necessary means and conditions and supporting institutions, administrations, and residents with equipment and facilities to capitalize on human resources, enabling them to keep up with the sector's updates and promote the quality of services.

The E-ALGERIE project's objectives were to improve the quality of services presented to citizens in different life aspects. It also aimed to contribute to realizing social justice and equality principles in order to reach the national neighbourly policy by bringing the administration closer to citizens. Algeria adopted several models of digital transformation in the sector of interior and local communities, social security, banking, justice, post and telecommunication, health, and higher education (Ben Soula Nour El-Din, Mokhtar Khadidja, 2021, pp. 183-199).

Based on what has been explained above, it is clear that Algeria, before the emergence of the corona-virus, was late in achieving a digital environment compared to the Middle Eastern countries. It is because of many reasons related to the weakness in the legal and regulatory aspects which ensure a secure digital environment, and the lack of digital culture that largely contributes to fastening decision-making and others.

Algeria was able to make significant progress when activating digitization in some electronic services through online platforms, applications, and software, making them accessible to customers and citizens by encouraging remote work and learning during the COVID-19 crisis. For Algeria, this pandemic was an opportunity and a test to re-evaluate and rethink its slow-moving project before the outbreak of the virus. It must rapidly set a clear and precise strategy aimed at achieving digitalization objectives to enhance and activate the real use of it in all service and economic sectors. This is realized by applying modern digital technologies to create a digital environment that aims to improve services and increase business through identifying challenges and opportunities arising from digital transformation and benefiting from them to access the new digital economy landscape.

The COVID-19 pandemic serves as a completely new challenge different from globalization and its rapid developments in information and communication technology. This virus showed the importance of digitization in business operations and revitalizing the national economy through the opportunities it provides for simplifying procedures, facilitating difficult decision-making, and bringing citizens closer to administration. Decision-makers in Algeria must profit from digital technologies and fasten the application of a comprehensive digital transformation strategy to encourage remote work by creating electronic platforms that offer administrative, commercial, or other services and promoting distance learning at all stages by providing a solid infrastructure with guaranteed security.

By doing so, they can now and in the future address such unexpected viruses and integrate them into the new economic development to achieve sustainability and bridge the digital gap between them and economically developed countries to attain flexibility in performance, improve their services, and facilitate their efficient and effective access to customers and clients. Thereby, they create added value for their businesses that enable them to compete both locally and internationally and overcome crises.

After we had analyzed the interviews conducted with the teachers, we discussed the results based on the already-stated hypotheses. The respondents' answers were divided into two stages: the COVID-19 stage and the post-COVID-19 stage. This can be presented as follows:

#### **A- The Specificity of Higher Education during the COVID-19 Pandemic Based on the Results of Field Study**

During the COVID-19 pandemic, which imposed social distancing, university teachers continuously sought the best methods and means to provide an interactive educational environment that encourages students to exchange information and experiences. Information and Communication Technology (ICT) is considered one of the most effective means to provide such an educational environment because it greatly assists in integrating theoretical and practical aspects. It also offers opportunities for students to acquire developed thinking and analytical skills. In addition, it helps to design curricula that are linked to the needs and requirements of society.

ICT plays such a crucial role that it facilitates communication and access to information and prepares students for the future. Mastery of the basic skills required to use information technology has thus become essential in research and studies. The lack of proficiency in these contemporary skills limits teachers' interaction with their students.

In light of these exceptional conditions dominated by the corona virus, the concept of distance learning emerged. This allowed students to continue their education, access educational materials, and enrol in universities and faculties without the need for attendance. The concept of e-learning appeared to serve both university teachers and students alike. Technology introduced blended learning, a different type of education that integrates traditional, virtual, and electronic learning.

In Algeria, higher education has evolved to blend both face-to-face and distance learning. Teachers are now asked to insert a series of lectures through the Moodle e-learning platform to maintain the continuity of the teaching process and support face-to-face sessions, which are limited in number and cannot deal with all aspects required by students in their university education.

-The psycho-social effects of the COVID-19 pandemic on teachers have negatively impacted the quality of higher education. Working during the pandemic has been an extremely challenging task, especially since this virus spreads quickly.

-The fear of infection has created work-related pressures, especially among teachers who have had family experiences either within the family environment or the workplace.

-The sudden quarantine imposed by the pandemic hurt teachers because these unplanned vacations created a gap between them and students with the onset of modest work through remote learning methods.

-The frequent interruptions during the COVID-19 pandemic led to delays in courses. Therefore, teachers were under pressure to complete their syllabus.

-The health protocols imposed by the COVID-19 pandemic were so difficult to implement in educational institutions. This is due to the lack of awareness and sensitization among teachers and students.

-The rotational work system during the pandemic divided teachers' opinions into two groups: negative versus positive views.

-Teachers with positive opinions noticed a decrease in classrooms and amphitheatres overcrowding making learners understand the courses in a calm learning environment free from chaos.

-Those who have negative opinions observed that it was a burden and pressure on teachers. It is an extremely exhausting matter.

-During the pandemic, the quality of the lessons was different from one group to another due to the repetition of presenting them, whether in the morning or evening, affecting the vitality and activity in delivering the lessons as both teachers and students are more active and energetic in the early hours.

-Omitting some important lessons during the pandemic made the logical sequencing of lessons and students' comprehension challenging due to time constraints.

-Reducing the weekly course schedule and increasing the number of sessions, meaning more working hours, affected the quality of lessons during the COVID-19 pandemic.

-The actual launch of digital platforms initiated by the Ministry of Higher Education and Scientific Research, especially the Moodle platform.

## **B- The Specificity of Higher Education after the COVID-19 Pandemic Based on the Results of Field Study**

- The beginning of hybrid teaching: face-to-face and Remote via Moodle Platform.

-Teaching is a challenging process that requires digital technology to facilitate teachers' work in terms of time, quality, and efficiency.

-As a main reason for imposing digitalization in Algerian universities was that the Ministry of Higher Education and Scientific Research seeks to keep up with global technological and digital developments.

-Despite the development of technology, teachers cannot teach without handouts, so they rely on both traditional and technical methods at the same time.

-Both material and financial resources have great importance in the success of digitalization in Algerian universities.

-Although Algerian universities have used digital technology for many years, training policies in this field are still deficient. Therefore, the participants emphasized the importance of training courses to make digital technology in Algerian universities successful. Specialized online training courses have become a reality that the ministry should activate and enhance in the future within the academic environment.

-University teachers found it very hard to adapt to rapid changes in digital technology. They were also unable to regularly update their skills and understand the use of modern digital tools and software.

-Teachers lack digital culture because most of the training, information, and skills are individual efforts that are almost isolated.

-Digitalization has many obstacles such as concerns about information security, a lack of qualified competencies and potentials, and insufficient budgets devoted to digital programs.

-In the field of media and communication, modern technology has contributed to the decline in the use of teaching languages: Arabic, French or English, as a colloquial language, is often used in university lectures.

-University teachers lack confidence in their ability to use digitalization and communication technologies in teaching.

- Students are not involved in evaluating university educational performance.

-Lack of equipment, devices, and maintenance of devices and networks.

-Unavailability of high-speed internet, facilities, and training programs that require huge sums of money.

-University classrooms, amphitheatres, teaching spaces' size and the absence of appropriate infrastructure like electrical connections and internet networks constitute an obstacle to using technology in the quality of university teaching.

-Despite its importance in developing scientific research and university teaching, digitalization has negatively affected the relationship between the teacher and the student. It has weakened their relationship, as meetings between them have become online interactions.

-In the teaching process, there is no sense of the importance of the university teacher as it was before technology.

-There is no sense of the importance of face-to-face learning. Students do not attend lectures, so they just rely on what is available on digital platforms. -Technological and educational materials are very costly.

-The use of technology has caused many unethical phenomena like cheating and plagiarism, especially with the development and spread of smart-phones. -The lack of training for university teachers, especially those accustomed to the traditional teaching style, on remote teaching mechanisms and how to deal with the E-learning platform leads to low quality of higher education.

### **Conclusion**

Based on what was already discussed, we can say that focusing on the quality of university teaching and scientific research has become a requirement in Algerian universities. It is an inevitable necessity to face different challenges and keep up with developed universities. This is realized by creating an environment where the teacher's value is emphasized within the university and training teachers on creativity and diversification in the course content. In many specialities, this has been limited to uploading Word and PDF files on the Moodle platform, which has made the teaching process characterized by rigidity.

In Algerian universities, teaching lacks quality in its foundation and interaction in presentation with students, who are considered the centre of the teaching-learning process. Introducing digitization to the university does not come from a political decision or an official document, but it requires full conviction of all educational members, teachers, students, and administration at all levels of its importance and the need to consider it as the real tool for developing the higher education system.

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