

***Covid-19 and Higher Education: An Analytical Study of the  
Contribution of Media and Communication Technology  
at Biskra University***

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***Abstract:***

This research paper aims to provide a comprehensive view on the implications of the Covid-19 crisis on higher education, as it Analyzes the evaluation of a facilitated sample of Biskra University professors about the contribution of information and communication technology to distance education.

And we concluded that despite the privileges that distance education provides in providing lessons, it remains an alternative and does not substitute us for urban education.

**Key words:** Information and Communication Technology, Covid 19, Online teaching, Biskra University.

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## **1. INTRODUCTION**

There is no doubt that the Covid-19 crisis has caused a major transformation in the global economy, as most countries in the world have tended to adopt information and communication technologies to provide various administrative services, including education and scientific research. to the emergence of the digital economy based on data and information, and has also enabled the continuation of studies at the university level and work remotely, and thus played an important role in the process of managing the Covid 19 crisis through various networks and media. UNESCO has calculated that more than 1.5 billion students from 165 countries have been forced to stop attending schools and universities due to the emergence of the Corona virus.(UNESCO, 2020).

Faced with the worsening repercussions of the pandemic that have affected universities around the world, and the Algerian University is one of them, having experienced difficult and exceptional circumstances, especially after the Algerian government took precautionary measures to prevent the spread of the epidemic, Algeria was one of the few countries to have adopted a state of health emergency since the beginning of the pandemic (Covid-19), calling for the implementation of precautionary and preventive measures to limit the spread of corona virus infection on campuses and university residences. These exceptional circumstances required the suspension of studies, since an instruction was issued by the Minister of Higher Education and Scientific Research on February 29, 2020 to use the available capacities of technologies (Moodle platform) to avoid delays in the conduct of courses with the suspension of studies on March 15, and in the face of the worsening repercussions of the pandemic, a press release was issued.

Second, on April 19, 2020, extending the closure of university establishments (Ministry of Higher Education and Scientific Research, 2020) This is what made the use of distance learning the only

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alternative available to ensure the continuation of the 2019/2020 academic year and eliminate the specter of a blank academic year.

These decisions, instructions and measures taken by the Algerian Ministry of Education and Scientific Research in order to carry out distance learning in the context of the Corona pandemic, were preceded by many decisions, and measures taken by the State and respected by the ministry before the outbreak of the pandemic. Its desire for all this was to digitize the sector, and this, within the framework of the project "Algeria Electronics 2013". (Ministry of Posts, Information and Communication Technologies, "Algeria Electronics Strategy 2013", Paradis Electronique, Algeria Electronics - December Summary, 2008) This strategy has several objectives, and perhaps the two most important objectives of this research paper are: the development of human skills and the strengthening of research and development of information and communication technologies. Based on the fact that efficient human resources represent the foundation of any economic system, especially when it comes to using and exploiting information and communication technologies. To serve the sector of higher education and scientific research, the higher education sector has complied and begun to introduce technology that serves its purposes. Distance learning services may be the first, followed by the training and education of engineers and technologists, then administrators and professors, which gave rise to the creation of the Directorate of Networks and Media and Communication Systems in universities, whose missions include ensuring... Ensuring and integrating infrastructures, information systems and networks within university structures, in addition to introducing open source programs into teaching and training courses and ensuring the creation of electronic educational content on them, while supporting and training all stakeholders, including professors and administrators. (Ahmedatou, 2020) The University of Biskra is one of the universities that have complied with all these decisions and measures: in 2014, it created the

Moodle platform as an open source system, which was adopted by the supervising ministry and installed on the university website. (University of Biskra, 2014) Who will then schedule training and initiation days on the e-learning platform (Moodle) for the benefit of professors. All these efforts have borne fruit for the university in the face of the pandemic, since this platform has been used in e-learning, which has demonstrated the effectiveness of training in properly carrying out the professor's tasks. Therefore, the question of this study arises

**How effective is the experience of using information and communication technologies in distance learning from the point of view of a sample of professors at the University of Biskra?**

This main question includes a group of sub-questions:

1-To what extent do information and communication technologies contribute to distance learning?

2 - From the point of view of professors at the University of Biskra, what are the advantages and disadvantages of using ICT in distance learning?

This research work aims to evaluate the positive points that have been obtained through information and communication technologies, but also to identify the negative points, and this from the point of view of a sample of professors from the University of Biskra after their distance learning experience. When evaluating the second semester of the academic year (2019/2020), the main objective is to correct the negative points and shortcomings of the following academic year, in which pandemic data suggest that it will be very similar to the previous one.

The importance of this study lies in the importance of its objectives and efforts, as it is limited to the fact that it is an attempt to value and benefit from the evaluation of the experience of distance education, after its use last year, and the aspiration to continue using it in light of the current circumstances with the number

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high rate of infections and deaths from the new Corona virus. (WHO Coronavirus Disease (COVID-19) Dashboard, 2020) It was therefore necessary for universities to continue the academic year using distance learning, while trying to benefit from the positives and improve the negatives that their experience contained in recent years.

***2. Implications of the use of information and communication technologies in higher education.***

At the end of 2019, in the Chinese city of Wuhan, a virus emerged and spread rapidly in the city. The World Health Organization called it Covid-19. The speed of its spread and the severity of the symptoms made it a dangerous virus. It invaded all countries in the world. This is due to the difficulty of detecting it and controlling its spread. This is what prompted countries to close their borders, declare a state of emergency and prepare to face this virus, taken by countries closed the doors of universities and sent students on vacation for an indefinite period. Algeria, in turn, also adopted a state of health emergency at the beginning of this pandemic and sent students on vacation with a decision issued on March 15, in order to limit the spread of the Corona virus infection at the level of university campuses, thus interrupting studies.

As the repercussions of the pandemic worsened and a communiqué dated April 19, 2020 extended the closure of university institutions, and to avoid any delays, the university resorted to distance learning to complete the program teaching facing a blank year.

Distance education is known as one of the modern methods of teaching, as its basic concept depends on the presence of the learner in a place other than where the teacher is present. It is also an educational program or courses that rely on the Internet, providing courses wherever the student is (Zaytoun, 2002). Among them, distance education is a type of education that provides opportunities at

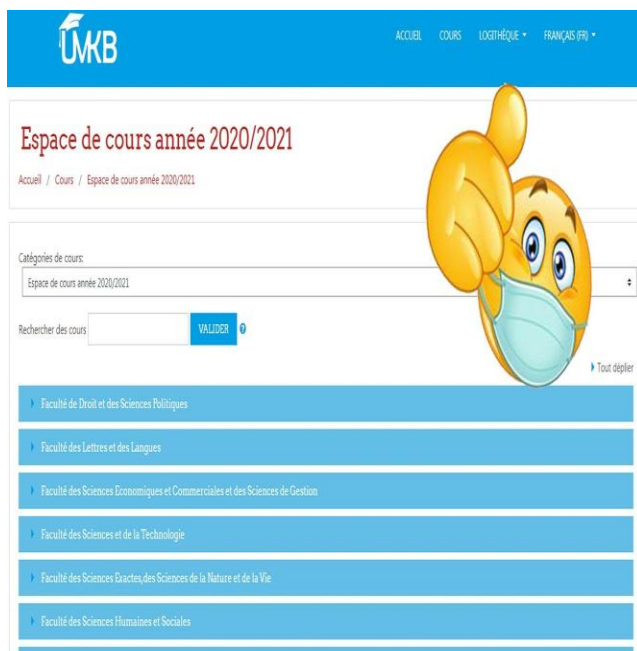
all levels to continue their studies and takes into account the circumstances of all stakeholders in the learning process (teachers and students). It is also a solution in times of crisis, as This is the case in the circumstances we are experiencing, so the Algerian university's use of one of its systems (the Moodle platform), as it was installed on its websites in 2014, and some of them had experience in using it

### **3. *Plateforme Moodle et ses fonctionnalités les plus importantes (moodle, 2023)***

It is one of the learning management systems. It is an open source system that provides all educational institutions of all levels with remote workspaces. It was designed to help the professor, teacher or work team leader provide an electronic educational environment in which he can work. can create and design his own space to manage his educational subject is delivered in electronic form. It also offers the ability to display lessons, exercises and exams, assign preparation or assessment by teachers to students enrolled in it and allow conversation between them. the student and a teacher ... In short, it is essentially a system that contains the requirements of the virtual school. It is fully analyzed and available on the website [www.moodle.com](http://www.moodle.com) To use it, it is placed on the university server (the university website) and is managed by a special cell specialized in the network, where each user is assigned a (). Username, password), and users can access and benefit from it according to the authority of each user, which is determined by the system administrator, who determines the scope of use of the system, and usually gives each professor who wishes to use it.

#### **Moodle account.**

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Source : (univ-biskr)

**Features of the Moodle program:** The most important feature of the Moodle system is the presence of feedback and student monitoring as well as quarterly activities. This confirms to us the high level of the Moodle system, the amount of useful tools, ease of use and rapid updating, compatible with the e-learning developments of the developers of this system. Among the general specifications, it supports the system. The global standard for electronic course design (SCORM) gives the teacher the opportunity to choose the appropriate teaching method for students. (moodle, 2023).

**The educational tools of the Moodle platform and its contribution to the improvement of distance learning:** The most important thing that the educational process has benefited from is its use of technology, through the Moodle program, enjoying the privileges of the educational tools that the latter contains, and the works with which contribute to the improvement of university teaching, and they are many and many. We will discuss the most

important of them and how they contribute, which are the following: (moodle, 2023)

**Forums:** The teacher can create forums that aim to open the doors to discussion on educational topics, which are often current topics.

**Evaluation:** Thanks to it, the teacher can continuously evaluate learners, control the grades of tests, assignments and activities with the possibility of sending these evaluations to students. It also allows the administration to evaluate the evolution of educational processes, which facilitates the process of measuring the quality of courses. academic results.

**Correspondence:** It is provided to students, teachers and all those who are present (registered) in the learning system and in the instant messaging process.

**Calendar:** This system offers an important functionality represented by the educational calendar, which allows listing all educational activities by date. This allows students to be fully aware of everything new during the learning process. It also allows the administration to monitor course progress and determine the extent of success in the university's mission of providing more content for the greatest benefit to students, which is reflected in the improvement in student achievement and the overall level of academic teaching at the university.

**Announcements:** This allows the professor to send a group of alerts to students about a specific activity, whether it is educational or an announcement among the university's announcements about its scientific demonstrations, such as forums, seminars and events that it organizes to benefit more from those who are specialized in solving problems, transfer this knowledge and share it with all students for their benefit.

**Blogs:** Once registered in this system, any student and teacher can create their own blog on this system through which they share

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their ideas and achievements. This allows them to identify successful models, benefit from their successes and try to follow their plan for success. Success.

**Surveys:** Opinion surveys are one of the very important tools for the professor and the current administration, so that if they need to know the opinion of the beneficiaries on a specific topic, a survey is created and collects opinions quickly and accurately.

**Tests:** Perhaps one of the most important features, since there is the possibility of easily carrying out tests electronically, which can be an interval or final test, and we can also make short tests, and from these tests, the learner can take the test from anywhere (outside) the educational environment and according to his situation. This can be done via the phone or computer. This is what motivates students in particular to take the tests and take them. This makes the teacher's job easier because he does not have to. Candidates have to retake the exam, which also saves money for the administration and reduces exam preparation procedures

**Question bank:** thanks to the information bank of this system, we can store the data that students will benefit from in the learning process, which saves us time and effort in repetition. We can also simply store all the questions created during the tests, and this makes it easier for students in particular, as it allows them to review by familiarizing themselves with the types of questions and how to answer them correctly, and benefit from them in their future tests.

**Assignments:** Through the system, the teacher can also ask for an assignment or homework from the students. He can also limit these assignments to a specific period in the process of appearing to the learners and receiving them from them.

#### ***4. The effectiveness of the use of information and communication technologies (Moodle platform) in activating distance learning at the University of Biskra***

To assess the experience of using the Moodle platform, interviews were conducted with a facilitated sample of professors from the University of Biskra, estimated at 20 professors, over the period (November 13 to November 30, 2023). The main objective of conducting these interviews was to assess and express the point of view of university professors on the reality of e-learning and its efforts.

The listening and guidance cell that accompanied them and the students, in addition to their evaluation of their performance and the performance of the students after taking the exams on the standards that were presented to them entirely electronically.

#### ***4.1 Distance (electronic) teaching via the Moodle platform***

All teachers interviewed consider that "distance (electronic) teaching is the only alternative solution to traditional (face-to-face) teaching that existed before them in light of the Corona crisis". They also confirmed that they "are committed to providing online services". Courses on the Moodle platform" after students left the classroom. The decision to extend the closure of universities was made, and this is evident from the content available on the platform on the university website.

Some of them even expressed psychological satisfaction with the availability of the Moodle platform, which allowed them to continue their courses interrupted due to the Corona crisis. The platform's features also helped to facilitate the task of professors: "It is easy to make changes by adding, deleting or modifying courses" with ease. All professors confirmed that "the university provided all the capabilities to the professor, including training courses on the use of the platform at some point in the past (before the pandemic)", and also provided "a cell that works to listen and guide and stays with him to transfer all his courses to students and add deadlines"

#### ***4.2 Efforts of the listening and orientation cell***

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After the university was closed, a cell was created whose tasks were to listen and direct the concerns of professors and students. The professors made the study sample public. "The cell contributed to a very large extent to activating communication between the professor and the university. student through its electronic pages, as it contributed to conveying its concerns and transferring each new arrival to all students by placing electronic announcements, the majority of which came from the professor to the student, where I played the role of coordinator of the educational process, as well as the evaluation process, where some work was done and requested from the students.

### ***4.3 The professor's efforts in distance learning using various electronic media***

During the previous period, we noticed that many professors not only placed their courses for students on the Moodle platform of the university website, but also delivered them through many interactive media, out of conviction and in an effort to convey information in an appropriate way, by creating groups on Facebook, and offered interactive courses on Facebook, a Zoom application, Google Meet ... etc. All these media contributed to transmitting information and enriching dialogue and discussion during the educational process. They also reduced the misunderstanding and clarified the ambiguity that the students had.

### ***4.4 Evaluating the level of teacher performance (teaching and supervision)***

The teachers in the sample of respondents stated that they practiced teaching and supervision and that teaching was better due to several privileges, perhaps the availability of many media, while supervision was not as good to some extent due to the specificity of the activity that requires greater interactions and discussions, and teaching too, although it seems good now it has some shortcomings,

perhaps the most important of which are the problems of internet outages, its unavailability for all students and the lack of climate, appropriate atmosphere, and calm to study or give a lesson from home. All these negative points require finding solutions for them with the entry of a new academic year, which the teachers said they hope for. It should include even some basic standards in a live/interactive course, so that they are at least forgotten, which ensures that the standard has been well understood, especially in the later years (Bachelor/Master 02)

## **5. CONCLUSION**

There is no doubt that the field of information technology is constantly witnessing continuous changes in its various programs, methods and tools, and that it enters into all aspects of economic, social, cultural and educational life..., and its effects are evident in the modernization of the educational sector and the improvement of the performance of all elements of the educational process, and this even affects its future, as new variables in the environment, and therefore educational institutions, especially universities, must keep pace with these changes and adapt to them, and try to benefit from the applications of information and communication technologies in the different professions, activities, departments and services they offer. Perhaps the most important processes that have benefited from this technology and exploited it are educational institutions to facilitate and ensure the achievement of their goals and activities and improve their performance of the educational process, as they have benefited from it to perform their various functions effectively and efficiently and at the lowest costs, especially in terms of the degree of student understanding of academic programs and the increased possibility of making them available to them and disseminating them and the ability to communicate with them and discuss. To solve every problem. This is positively reflected in the improvement of the level of

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understanding and understanding of students, which translates into an improvement in the level of education throughout the university.

**Recommandations et suggestions:** Pour améliorer l'expérience antérieure de l'enseignement à distance, les points suivants doivent être pris en compte:

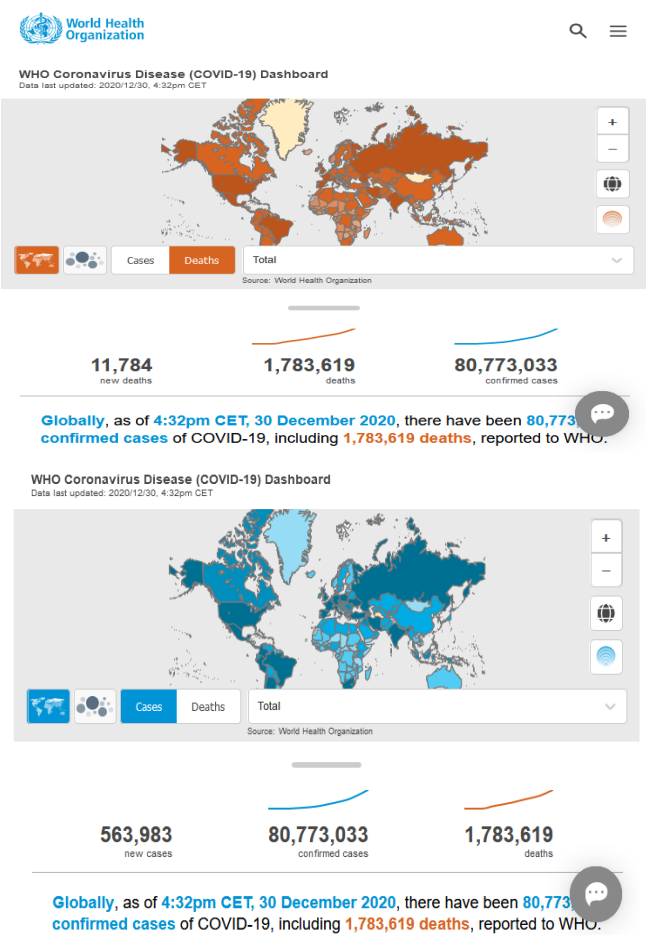
1. Modifier la politique éducative au niveau universitaire afin que les cours deviennent un outil d'accompagnement dans le processus éducatif à tous les niveaux d'obtention du diplôme (licence, maîtrise et doctorat), et programmer des cours en présentiel et interactifs dans les programmes d'enseignement pour tous les niveaux.
2. Soutenir et encourager l'administration universitaire à intégrer les cours électroniques dans l'enseignement et à ce que les professeurs les utilisent.
3. Renforcer l'enseignement à distance en proposant des cours en personne sur les normes de base grâce à l'innovation.
4. Déterminer un délai pour mettre en œuvre le plan d'intégration dans l'enseignement des différents cours et étapes. Le processus d'intégration se déroule par étapes, commençant d'abord par la formation de l'enseignant à l'utilisation du programme, puis par des journées de formation au profit des étudiants pour comprendre comment utiliser le programme.
5. Valoriser les efforts de la Cellule d'Écoute et orienter et augmenter le nombre de ses membres afin qu'elle puisse répondre à toutes les préoccupations des étudiants.
6. Fournir des bourses et une assistance aux étudiants en leur fournissant des appareils et des abonnements Internet.

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7. Appendices



Source: World Health Organization; WHO Coronavirus Disease (COVID-19) Dashboard, Data last updated: 2020/12/30, 4:32pm CET: sit on: <https://covid19.who.int>