International Workshop on Information Sciences and Advanced Technologies: Edge Big Data - AI-IoT (ISAT 2021)

November 1-4, 2021, Leuven, Belgium

Distance education in the context of the COVID-19 pandemic Case of the Faculty of Sciences Ben M'Sick

SAFEH NISRINE*, NAMIR Abdelwahed

Information Technology and Modeling Laboratory (LTIM)
Faculty of Sciences Ben M'sik, Hassan II University, Casablanca, Morocco

Abstract

In order to escape the spread of the coronavirus (COVID-19), qualified as a pandemic by the OMS, the suspension until further notice of courses in all schools and universities from Monday March 16, 2020. In this context and in order to ensure educational continuity and to diversify the possible alternatives, the Ministry of National Education, Vocational Training, Higher Education and Scientific Research to decide to switch from face-to-face teaching to distance by allowing teachers to communicate directly with their students and to organize distance learning courses (Platforms, Video clips, Live, Classroom, etc.). This article describes the experience of the faculty of sciences Ben M'Sick , in education remotely in the age of pandemic Covid-19. Our interest is to assess the quality of distance education within the Faculty of Sciences Ben M'sick to ensure the continuity of educational activities and the necessary teaching and to complete the academic year. In this context, our contribution aims to show the different approaches adopted by the Faculty of Science Ben M'Sick and know the impressions and the opinions of teacher-researchers on this distance education mode in this pandemic period.

Keywords: distance education, Covid-19, Health crisis,

* Corresponding author. Tel.: +212- 0633743166.
E-mail address: nisrinesafeh2014@gmail.com

1. Introduction

After the state of health emergency declared by the Kingdom of Morocco, the Ministry of National Education, Vocational Training, Higher Education and Scientific Research has taken several preventive measures to ensure the continuity of during the year 2019/2020 and decided to suspend teaching in all schools and universities public and private sectors. The goal is, in fact, to fight against the spread of the Covid-19 pandemic from March 16, until July 10, 2020. This decision, taken on time, according to some experts in the field of education was highly appreciated by the different actors of the Moroccan society. Face-to-face courses have been replaced by distance courses .

In this particular context, the national higher education sector becomes particularly fertile for the application of the decreed measures which oblige universities and educational establishments to switch from presentiel learning to distance education, in order to ensure pedagogical continuity of teaching.

It is now a new unscheduled transitional phase towards the establishment of distance education systems and the beginning of an era of virtual schools. The teachers are major players in this experience, set to work spontaneously, each with their means and skills at their disposal, to digitize these online courses, based on the support and technical assistance offered by the institution to which it belongs.

The problems leading to this research is to assess the quality of distance education and also to know the impressions and opinions of teachers researchers on the remote mode of teaching in this crisis health .

Several questions arise at the time of this pandemic :
- Have the teachers been supported and trained in distance education?
- What tools have we put at their disposal to ensure pedagogical continuity ?
- Did the teachers of the Ben M'sick science faculty encounter any difficulties when using educational tools to ensure the continuity of lessons during this health crisis ?
- Is that they are for the integration of the distance education after Covid - 19 ?

In this article, we will try to provide some answers to these questions. We will first discuss a general observation relating to the integration of digital in the education system in Morocco then we will address the situation and the evaluation of distance education at the Ben M'sick Faculty of Sciences finally we focus on the lessons to be learned from this pandemic.

2. Definition of evaluation

The evaluation concept has undergone several changes in recent decades of years teaching. This is an activity that becomes essential in all teaching / learning situations, whether for the teacher or for the student. First, Ch . Tagliante defines evaluation "on the one hand as an aid to learning and on the other hand as an object of measurement and appreciation of the development of pupils' competence" (Tagliante, 1993) . To this end, evaluation is considered to be a process accompanying the various types of learning and constitutes an object making it possible to monitor the progress of the courses and activities provided during a given period. For his part, L. Porcher considers evaluation as: "the set of processes by which we measure the effects produced by an action organized in order to achieve defined objectives" (Porcher, 1993). It should be noted, following L. Porcher's definition, that evaluation is an activity that serves as a means of verification, a tool that allows the teacher to measure the degree of achievement of the learning objectives that he or she has achieved. has already defined beforehand.

3. Higher education

In Morocco , each university has its own platform. The university student, today, has his institutional account which allows him to access these platforms .

Students are relatively familiar with this kind of platform such as Moodle or Google Classroom.

The majority of teachers of the University Hassan 2 have theirs spaces and deposit their online courses. If we take the Ben M'sick science faculty as an example, almost all teachers have submitted their course content and synchronized sessions are held there .

Students can easily access lessons and interact with their teachers . They also have the possibility of recording their courses in the form of MOOCs (Massive open online courses), or CLOM in French (massive and open online courses). In this sense, a recording studio is available to them to record classes, video clips...

There still there's some way to go in this direction because other teachers are not involved in this new mode of teaching. It should also be noted that among the advantages of this pandemic , it is that a very large number of teachers have mobilized in order to make this distance learning experience a success .

4. Distance education

The integration of information and communication technologies « ICT » in the teaching / learning process has introduced several modes and approaches to deliver the courses. Among which, we will find that distance education currently occupies a very important place in the various educational and university systems.

5. Methodological approach

Our study focused mainly on a documentary analysis, an online questionnaire survey carried out among teachers at the Ben M'sick Faculty of Science . Its primary objective is to assess the quality of distance education in the context of the " COVID-19 " pandemic and to find out whether they are able to use « ICT » during their learning, and whether or not they are involved in it. distance education during this crisis. The number of questionnaires administered is 52 .

We opted for a qualitative approach which consisted in collecting a lot of factual information (questionnaire, interview).

For data processing and analysis, we used descriptive and explanatory statistical techniques.

6. Distance education tools

Blackboard Collaborate, Zoom, BigBlueButton, Edmodo, microsoft teams, Moodle ..., the Ministry of National Education for Vocational Training, Higher Education and Scientific Research has made available to its students, teachers and staff administrative, various tools to facilitate work and maintain daily pedagogical continuity and support distance education.

- Blackboard Collaborate is an online collaborative learning solution that allows employees to take training without time or location constraints. It offers audio, video and webcam support, file sharing, mobile collaboration, an interactive whiteboard, chat functionality, and more.
- Zoom is a scalable, cloud-based videoconferencing and web conferencing platform, enabling online meetings, webinars, file sharing, group messaging, etc.
- Microsoft Teams is an application that is part of the Office 365 suite and allows teams to collaborate in the cloud. It offers, among other things, business messaging, calling, video conferencing and file sharing features. It can be used by businesses of all sizes.
- Edmodo is a secure social network, the goal of which is to unite a class, a group, around a subject. ... It should be noted that Edmodo is 100% Google Doc compatible. This will allow the teacher to create an online content library and distribute them easily on the network.

No distance learning tool is suitable for all teaching situations. You have to choose the tool according to the learning context. Although the functionalities are almost the same in the four tools, the teaching model of the course will almost naturally lead to the choice of one of the tools of this distance education.

7. Results and Discussion

General :
- **63.5%** of the study population are men against **36.5%** are women.
- **64.5%** of teachers who responded to this survey have a seniority of more than 20 years, **15.4%** have a seniority of less than 5 years, **11.5%** have a seniority of 5 to 10 years, and **7.7%** have a seniority of 10 to 20 years .
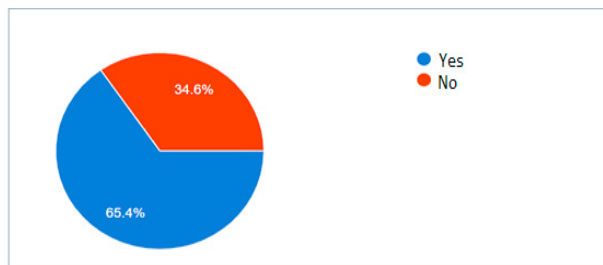
Figure 1: training to distance

- From the results we found that **65.4%** of teachers at the Ben M'sick science faculty have already benefited from distance training against **34.6%** of these teachers who have never done and benefit from distance training.

Most of these teachers have benefited from distance training which has been organized by the Faculty of Science Ben M'sick or by the University of Hassan 2 as well as self-training ...
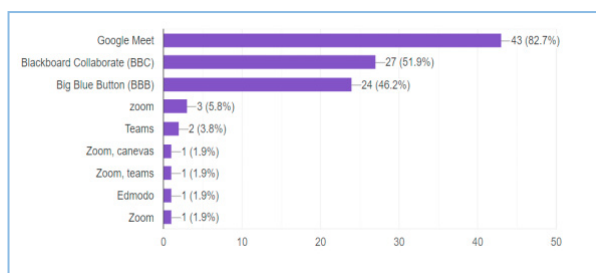

Figure 2 : Distance Training tools using

- Among the means of communication used to provide distance education during this health crisis are platforms and video conferences (Microsoft Teams, Blackbord , Zoom, Big Blue Button, Edmodo) Indeed :
- **82.7 %** of teachers at the Ben M'sick Faculty of Science use " **Google Meet** " videoconferencing service in their distance education.
- **51 . 9 %** of these teachers use " **BlackBoard Collaborate** "
- **46. 2 %** use " **Big Blue Button** ".

The rest of the teachers in our Ben M'sick Faculty of Science use other videoconferencing services like : **ZOOM, MICROSOFT TEAMS, Edmodo , CANVAS ....**
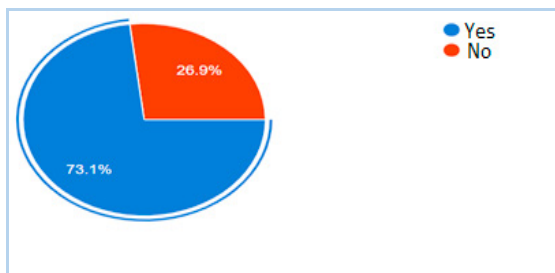

Figure 3 : Training and support on the use of tools commissioned by the Ben M'sick Faculty of Sciences

- From the results of our investigation, we found that a share of **73.1%** were accompanied and trained on the use of educational tools to remotely put into service by the cluster " **development and digitalization** " of the Faculty of science Ben M'sick. And a share of **26.9%** who answered No to the question " Have you been trained or supported on the use of the tools put into service by the Faculty of Sciences Ben M'sick?" .
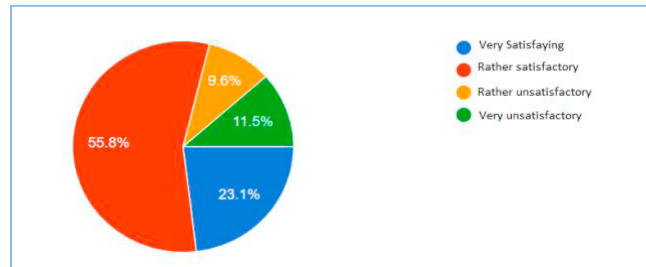
Figure 4: administrative and technical support of the (BMFS) in distance education

- The answers to the question "How do you judge the level of administrative and technical support of your establishment (BMFS) in distance education?" »Show that **55.8%** of teachers are rather satisfied with the administrative and technical support of the establishment, and **23.1%** who are so satisfied with this support, a share of **9.6%** who are rather dissatisfied **and 11.5%** who are very dissatisfied with the administrative and technical support for the faculty.
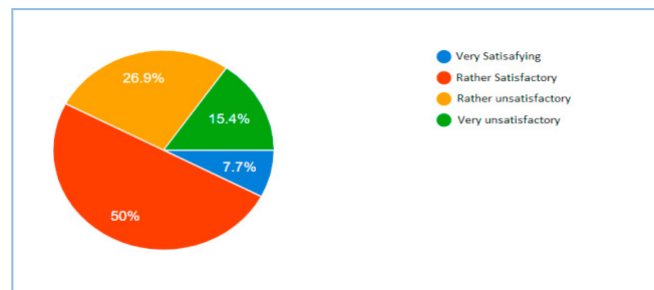

Figure 5: The level of quality of the equipment provided to provide distance training

- Half of the teachers at the Ben M'sick Faculty of Science are very satisfied with the quality of th equipment provided (Cameras, Videos, Smart Board, etc.) in order to ensure distance education.
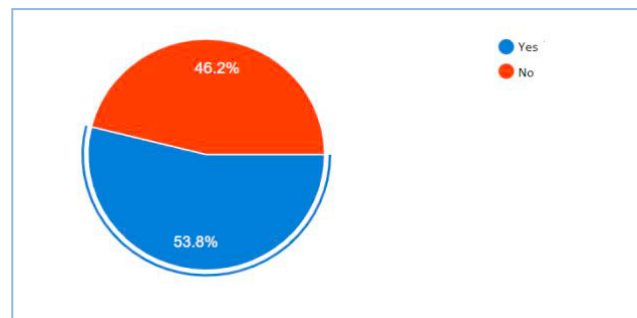

Figure 6: Difficulties encountered when using the digital workspace

- To note, More than half of the teachers at the Ben M'sick Faculty of Science find the digital Workplace is easy to access and use.
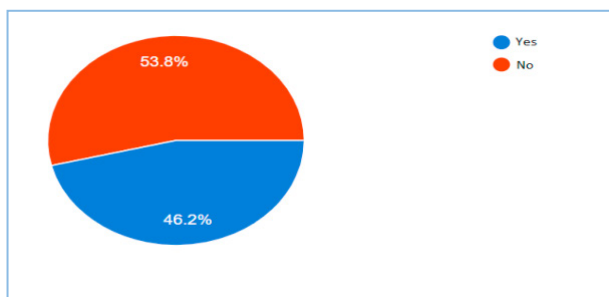
Figure 7: The continuity of online and distance education to be part of university practices after the Covid -19

- We found that a share of **53.8%** of teachers in the faculty are against the continuity of distance education to be part of university practices after the Covid-19 and the other share of **46.2%** are for the integration of this distance education after this health crisis .
- The various results that we have cited show that despite the efforts made by the Ben M'sick Faculty of Science and by teachers in putting devices and tools in order to facilitate learning during this health crisis, many problems have been detected by the teacher s of BMFS for distance education: availability and commitment of students, learning environment.

8. Conclusion

Many efforts have been made by the Faculty of Sciences Ben M'sick order to overcome this health crisis Covid-19.

Several initiatives and strategies have been adopted in this direction to help teachers to offer to their students a good distance education seen as a new way of teaching and LEARNING age :

- An educational platform has been set up.
- The installation of a recording studio equipped with Audio- Visual equipment and dedicated to all teachers of the Faculty of Sciences Ben M'sick in order to film lessons, video clips , scientific debates ...
- Equipment and layout of 12 rooms for distance education … .
- Training and support for teachers on the use of digital tools.

Among the difficulties observed in distance higher education within the « BMFS » during this " COVID 19 " health crisis, it is the commitment of teaching and the integration of " **ICT** " in their distance learning courses . Finally, the Faculty of Sciences Ben M'Sick must show teachers how to use information and communications technology in the core teaching and provide a favorable environment for its exploitation.

References

[1] PERAYA, D (2005). Distance learning: a training and mediated communication system. An approach to mediatization and mediation processes, ICT and development, N ° 1.

[2] 1.Porcher, L., (1993), "Le Temps, éclectisme ,aluation" in Evaluation and certifications in a foreign language / Le Français dans le monde, Special issue, August-September 1993, pp. 186-191

[3] DRISSI, M., TALBI, M., KABBAJ, M (2006). Distance education: a complex and complicated system.

[4] Loisier , J. (2011). Do the new learning tools really encourage the performance and success of ADF students ? : http: //archives.refad.ca/recherche/TIC/TIC_et_reussite_des_etudiants.pdf

[5] Arnal, Philippune (JDNet) - E-learning solutions: journey through the platform jungle - November 2003.

[6] Cigref - E-learning and e-training

[7] PERRIAULT, J (1996). Distance learning and scientific and technical culture, Alliage, n ° 29-30.

[8] Bates, AW (2015). Teaching in the Digital Age : Beacons for Teaching and Learning. Vancouver BC: Tony Bates Associates Ltd. https://open.bccampus.ca/find-open-textbooks/?uuid=da50f5f1-bbc6-481ea359-e73007c66932&contributor=&keyword=&subject=

[9] Alem Noureddine et al (2012), Plates-formes d'enseignement à distance dans l'enseignement supérieur, modes d'appropriation et standardisation des usages, frantice.net, numéro 5.

[10] Sener, J. (2015). Updated E-Learning Definitions. Récupéré le 16 avril 2018 de: https://onlinelearningconsortium.org/updated-e-learning-definitions-2/