Abstract:

The spread of covid19 has affected human behavior, habits and attitudes. The field of education could not remain unaffected by this crisis as it has changed from face-to-face learning to distance learning. The Kingdom of Morocco established and declared a state of health emergency in order to deal with the pandemic which led to the cessation of face-to-face courses. The Moroccan universities rushed to set up a distance learning system to ensure the continuity of education for all courses. Mohammed V University in Rabat uploaded more than 600 courses online in just a few days after the suspension of face-to-face classes. It later on deployed several interaction platforms to allow instant communication with students.

Distance learning has been maintained for the start of the 2020/2021 academic year in all Moroccan universities. The purpose of this article is to study the perception of Mohamed V University students to this mode of education. In this sense, a questionnaire was made available to students. It measures their degree of familiarization with computer tools, their attendance to courses and live sessions, their satisfaction with the teaching materials, among other things. The survey took place over a month. It concerned more particularly the students of the ULESS-Souissi. There were 850 responses. The study shows that 54.3% of the students surveyed declare an average degree of familiarization with computer tools while 83% of the students have followed the distance learning courses for the academic year 2020/2021. Students who have taken practical or tutorial sessions represent more than 60%. More than 50% of students use their smartphones. Moreover, 40% of students are not at all adapted to distance learning for the year 2020/2021.

Key words: DL, HE, Morocco, E-learning, Covid19
Introduction

At present, distance learning is no longer seen as a complementary medium to traditional face-to-face education. This has been endorsed by the COVID19 health crisis. Several countries decided to declare a state of health emergency in order to mitigate the severity of the COVID19 virus. The quick and common response of higher education institutions was to immediately close the institutions and replace face-to-face (in-person) learning, with online (virtual) learning which is considered as the ideal answer to contemporary educational problems by many experts.

However, Morocco suspended face-to-face classes on March 16th, 2020 in order to implement online and distance learning. Moroccan universities did not start from scratch in terms of distance learning. Some have a considerable experience in integrating information and communication technology (henceforth ICT) into the teaching profession.

In this regard, Mohamed V University of Rabat had a first experience of e-learning in 2014 via a MOOC project (Massive, Open, Online Course) on the fundamentals of general accounting. In addition, the use of other tools such as "classroom" was favored by several teachers years ago.

Remarkably, more than 600 teaching materials were put online by the Mohamed V University of Rabat, just a few days after the suspension of classes in order to ensure an educational continuity in all of its institutions.

As a result, through this research, we seek to study the perception of the students of Mohamed V University to the distance learning mode. This research paper will be divided onto three main sections. First of all, it will study the history of distance learning as well as present the main theories of the use of technologies in training. Then, we will present the results of the study conducted with the students of the ULESS- Souissi and analyze them. Finally, we will try to deduce some conclusions.

1. Historical Overview of Distance Education

Distance education is not a new phenomenon, as it has been around for over a century (Schlosser and Anderson, 1994). The history of distance education is marked by three generations: correspondence education, televised education and interactive distance education.
1.1. Correspondence Education:
The first distance learning courses were offered as early as 1728, by "Caleb Philips". This gentleman offered private correspondence courses through classified advertisements published in the Boston Gazette newspaper. Correspondence education remained the standard for distance education for several centuries to the point that the two notions were practically equivalent for a long time.

Furthermore, in Great Britain, Mr. "Isaac Pitman" invented a method of shorthand in 1840. He proposed correspondence courses to popularize his method. In 1858, the University of London was the first to grant diplomas recognizing training obtained by correspondence.

In 1873, Anna Ticknor founded the Encouragement of Home Study Company, a correspondence school aimed specifically at women.

In France, distance learning began with a private institution: the Eryrolles Institute. Industrial development required better trained workers and distance learning provided a much appreciated tool for improvement. Nevertheless, it was not until the Second World War that a national institute of distance learning was created. And even then, it was only temporary, since the country was still at war. It was until 1939 that the correspondence teaching service was born. In 1944, at the end of the war, it became the national center of education by correspondence, whose "high school" status allowed it to provide schooling for sick children and war wounded.

1.2. Televised teaching:

Radio and television had disconnected distance learning from correspondence. In 1948, the American John Wilkinson directed the famous NBC station to offer college-level radio courses.

Five years later, in 1953, the University of Houston offered the first classes based on television broadcasting.

The British authorities understood the imperative of these media therefore they founded Open University in 1969, a real distance university that offers courses in several fields (computer techniques, musicology, chemistry...)

1.3. Distance learning, interactive:
The evolution achieved through the development of educational technologies and the integration of the ICT as a tool has allowed the introduction of unlimited educational potential through interactive courses. Effectively, the first computer-assisted teaching systems appeared in the 1970s. The objective was first of all learning as a transfer of knowledge. In this regard, a multitude of educational programs were developed but were soon abandoned because their content was limited and their use was rigid. The cognitive aspect was totally ignored with little research, diagnosis and adaptation of strategies. Knowledge and decisions were pre-determined without regard for the user's behavior. Nonetheless, despite their limited application, these systems have had a significant impact on education. Medical diagnosis training systems have been widely used in some universities (such as Illinois and Washington) as well as space navigation simulation systems. In addition, the reasoning capabilities offered by artificial intelligence and expert systems have enabled innovations by introducing a higher level of interaction between the learner and the system. This has given rise to computer-assisted intelligent learning systems that overcome many of the drawbacks of previous systems. The research carried out in order to adapt the learning to the learner's level of knowledge led to a new generation of systems called: Intelligent Tutorials. Intelligent tutorial systems are one-to-one learning systems (tutor - learner). These systems aim to reproduce the behavior of an intelligent tutor in order to provide personalized instructions to the user. They also offer the possibility of dynamic generation of exercises, adaptations to the level of difficulty according to the student's performance as well as the analysis of the interpretation of the student's behavior. Indeed, intelligent tutorial systems are able to make inferences on the student's knowledge and can interact intelligently with them by dynamically adapting the topics to be presented according to the results acquired and the learning mode that best suits them.
This third generation of distance learning emerged in a context influenced by "constructivist" conceptions of teaching allowed for the use of interactive technologies for collaborative learning, learner rephrasing of concepts studied, anonymous and instantaneous self-assessments, etc.

2. Description of the learning technologies

Distance learning has evolved through educational technologies that support and manage learning (Roberts, Brindley & Sponk, 1998). These learning technologies are diverse and have specific characteristics. A series of documents designed for educators and learners provides a detailed description of learning technologies; highlighting the benefits and limitations of their use in distance education.
Dauphinais (1998) provided a detailed description of audio conferencing and audiography. Audio conferencing, also known as audio or teleconferencing, involves telephone communication between a teacher and several learners who can talk together simultaneously, regardless of the distance. This is accomplished by connecting the telephone lines together through a telephone bridge service. Audiography also uses audio but adds a visual component such as a graphic tablet and electronic pen connected to a computer so that all learners can see the illustrations or the text on the computer screen. The visual material can be prepared in advance and saved on a diskette, or it can be created as a training session unfolds. Learners can participate using the same mechanism. Audio conferencing and audiography represent synchronous media that allows for real-time live learning. According to Dauphinais (1998), these two media have many advantages. For instance, they allow for wide geographic accessibility without the need for expensive equipment. They provide immediate interaction. They build upon already known skills such as the use of the telephone and the written text. They are flexible and adaptable. They are highly portable. Last but not least, audiography has a high graphic capacity (p. 5-6). The author goes on to point out that, despite the many advantages of using audio conferencing and audiography in distance education, it is important to be aware of the limitations and challenges of these systems. The real-time operation of these media can be a constraint on individual schedules. Long-distance charges can be expensive. Lastly, the lack of eye contact can be a disadvantage for some users (p. 7).

Compressed video technology, known as video-conferencing, is the subject of another paper by Lamy (1998). According to the author, this common learning technology "attempts to recreate, at a distance, the conditions of a real face-to-face meeting" by transmitting "to at least two different geographical locations image, sound and data over the telephone by digitally compressing the video signal" (p. 7). Among the many advantages described by Lamy, with respect to the use of video-conferencing in distance education, are the possibility of "creating a virtual classroom where interaction is complete and in real time; creating a sense of belonging in all sites; allowing for a variety of pedagogical formulas and reducing design and production costs" (p. 4). Like any technological system, video-conferencing also has limitations as an education medium. Lamy points out, among other things, that, firstly, with this technology movements and images are not always clear, which can limit the mobility of trainers. Secondly, it does little to promote individualization of learning. Thirdly, the number of participants must be limited.
Michaud and Thomas (1998) have examined teaching via electronic conference. The authors describe electronic conferencing as "a means of exchange and teaching managed with computer. It exploits the resources of the inforoutes: messages, databases, forums, news, etc." (p.5). In order to achieve this, the learner must have access to a computer connected to a network while the instructor must have conferencing software that permits the usage of resources. Electronic conferencing is used at all levels of education, from elementary to post-secondary, by government agencies and by private companies. Workgroup meetings are increasingly conducted via electronic conferencing. Michaud and Thomas also describe the many advantages of electronic conferencing as a learning tool. According to them, this medium allows for flexible teaching in real or delayed time. It can be used alone or as a complement to other modes of teaching. It allows learners to work independently without having to travel. Finally, it is economical since electronic conferencing is done through equipments that are often already in place. However, the authors do not recommend the use of electronic conferencing in three cases; when learners lack independence, when motivation levels are low or when the course content is not suitable to the learners.

Lebrun and Berthelot (1996), in their book on a multimedia approach to teaching, also present the advantages and limitations of using educational technology in distance learning. Taking as an example the computer as a pedagogical tool, the authors emphasize its ability to individualize teaching:

The first advantage concerns the capacity of individualization of the computer's teaching; the respect for the learner's rhythm, the continuous evaluation, the selection of different levels of difficulty and taking into account various pedagogical needs (p.266).

In addition to the advantage of fostering individuality, the computer allows the application of fundamental pedagogical principles. These principles are the structuring of teaching content, the need for active participation on the part of the learner, the possibility of numerous and varied feedbacks and the encouragement of motivation. Lebrun and Berthelot also raise the limitations of technology in the face of teaching constraints. A lack of understanding of these limitations can lead to disappointment in the pedagogical use of technology for some learners. According to these authors, the computer cannot entirely replace the teacher in his or her task, nor in the production of computerized material.

3. COVID19 and distance learning: Perception of economics’ students, case of ULESS Souissi

3.1. Methodology
In order to meet the objectives of the study, we have taken a quantitative approach which consists of the development and administration of a questionnaire to students of Mohamed V University in Rabat. The questionnaire was sent to students via Microsoft Teams, Google Classrooms, Facebook groups etc at the end of the academic year 2020/2021. In this respect, we collected 850 responses and used Googleforms for the development of the questionnaire as well as the processing of results. And to answer as pertinently as possible to the objectives we used flat sorting in order to highlight the most repetitive modalities to define the level of adaptability and satisfaction of Mohamed V University students in relation to distance learning.

3.2. Presentation of the results

We will present the results obtained by the studied variable in order to measure the satisfaction and the perception of the students towards the distance learning within the ULESS-Souissi.

a. Level of study

![Pie chart showing the distribution of students by level]

30% of the students surveyed are first year college students. Second year students represent 37% while third year students represent 1/3.

b. Level of familiarity with computer tools

![Pie chart showing the distribution of students by level of familiarity]

...
54% of students assert an average level of familiarity with computer tools. 18% have a low level of manipulation of technological tools. Only 8.5% declare a high level of knowledge in computer tools.

c. Student’s attendance in distance learning courses

More than 80% of the students who took part in the survey affirmed their attendance during the live sessions for the 2020/2021 academic year.

d. Equipments used by students to attend distance learning courses

Smartphones represent the most used gadget by the participants in the survey. This brings about the question concerning the adaptability of smartphones for online courses taking.

e. Platforms used by students to take online courses
The institution's website and Moodle represent the least used platforms by the students surveyed whereas Google Classroom, Teams and Google Meet are the most frequented.

**f. Students' opinions on distance education activities**

Over 300 students who took part in the survey report a "somewhat satisfied" level for all distance education activities while the "very satisfied" level is expressed by over 100 students.

**g. Degree of students’ satisfaction with sessions**

Approximately 250 students out of the 850 reported being satisfied with the live sessions. On the other hand, more than 300 the participants declared a "very dissatisfied" level on the live sessions provided. This can be explained by several hypotheses. First of all, technical problems (such as internet connection, computer tools used...) were real concerns for the students. Secondly, this problem also arose for some teachers considering this was their first experience in distance learning. Finally, this level of dissatisfaction can also be justified by the absence of self-training among students.
h. Student attendance at tutorial sessions

More than 60% of the students who participated in the survey said that they had regularly attended tutorials.

i. The degree of students’ satisfaction with the tutorial sessions

For tutorials, more than 300 students reported a "Somewhat satisfied" level of satisfaction with the tutorial activities. While more than 100 students are very satisfied with the tutorial sessions.

j. The level of adaptability of students to distance learning
The degree of adaptability of students to distance learning is extremely varied. 40% of the students questioned are not adapted at all whereas only 9% of the students surveyed say that they are very well adapted to this mode of teaching.

**k. The preferred form of distance learning**

According to 57% of the students surveyed, distance learning is better suited to theoretical courses. 25% said that it is quite suitable for practical work. But only 23% said that the distance mode can be used for evaluations. This validates the choice of Mohamed V University in Rabat, which despite the constraints of the COVID19 has organized face-to-face exams to evaluate students.

**Conclusion**

In this work, we have briefly presented a historical overview of DL. Then we examined the case of the ULESS-Souissi of UM5 in Rabat. The quantitative analysis of the collected data allowed us to make some deductions from the perception of ULESS-Souissi students towards distance education during the academic year 2020/2021.

As a result, it is necessary to specify that the integration of ICTs for pedagogical purposes requires a prior preparation of all stakeholders. The latter was something that could not be achieved given the unpredictable nature of the circumstances.

In addition, it is necessary to improve the quality of the technical means in order to ensure interactivity during the DL. We also believe that it is necessary to exploit the digital in the service of teaching, and this, by proposing to the professors to teach some sessions face-to-face and others at distance (i.e. hybrid mode). Such an experiment was practiced at the ULESS- Souissi in 2014 on the course “General Accounting: the fundamentals”. It consists of teaching a part of the program.

Finally, we also believe that teaching practices in Morocco need to be reviewed so that they allow the learner to adapt and self-train while integrating the digital variable throughout the university
learning process.
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