ELICITING THE CHALLENGES AND THE BENEFITS OF ONLINE EDUCATION UNDER COVID19
(ENSAS: A CASE STUDY)

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Abstract:
Due to COVID 19, Distance Education has suddenly and forcefully replaced face-to-face education in many parts of the world. This sudden transition not only has constituted a global phenomenon but also has brought with it some challenges and benefits. The latter have now become new realities in the educational sector of many countries. The present study reports the results of a case study in which over 134 engineer students of the ENSA Safi were surveyed through a questionnaire to investigate their perceptions about the benefits and challenges of online learning during the pandemic period. The findings of this study indicated that students showed a level of satisfaction with online learning since it provided them with the flexibility in learning. They also indicated that the virtual teaming experiences in the online courses were beneficial for them to develop virtual team skills. Yet, some of the students also indicated that online education displays some challenges; students found it difficult to communicate with their teachers and their classmates freely as they used to do in face-to-face education. Transition to distance learning as a result of covid-19 has exposed some challenges as well as provided some benefits. Further studies and research are still needed not only to prove the utility of online education but also to provide the necessary data and findings on how effective this sudden change could be beneficial to students, staff, and the entire university system.

Keywords: online learning, distance education, challenges, benefits, COVID19

Introduction:
With the declaration of COVID-19 as a pandemic on 30 January 2020 by the World Health Organization, the Moroccan Government, like other governments all over the world, declared health emergency in the country, and took a set of strict measures aimed at preventing the spread of the novel Coronavirus\(^1\). On 13 March, the government decided to shut down all schools until further notice. Classes were to be continued either online or through TV, with the use of the SNRT channels. This pandemic has many effects on different sectors and the educational sector was greatly affected. One of the policies or measures adopted the Moroccan Government to prevent the spread of coronavirus is a complete closure of schools as well as universities on March 17\(^{th}\) 2020.

Like other universal countries, universities across Morocco were closed and classes suspended, while teachers have to face this sudden change from face-to-face classes to online classes. “While it is easier for tertiary institutions in the developed countries to migrate to online and virtual teachings (Langford and Damsa, 2000), the COVID-19 has made it compulsory for tutors/lecturers in developing nations to rapidly adopt, consolidate and/or embrace the use of technology for survival at this challenging time.”\(^2\)

Most university institutions have confronted a sudden and unprepared shift to online

\(^1\) https://mipa.institute/7486
\(^2\) https://www.sciencedirect.com/science/article/pii/S2590051X20300186?via%3Dihub
teaching in order to maintain learning activities and motivate students when social distancing measures are taking place. This transition can be decomposed into several interconnected dimensions that affect the feasibility and the quality of the distance learning provided, namely: Technical infrastructure and distance learning competences and pedagogies. In fact, technical infrastructure accessibility and online access are obligatory prerequisites for shifting to distance teaching and learning. Some Moroccan universities of open access were unable to shift to online teaching for many reasons. The huge number of students and digital inequalities among the majority of students are among the challenges because most of their students simply do not have access to the Internet. In these cases, teaching and learning is fully disrupted and it seems unrealistic for those students to complete the academic year. Other universities of limited access manage to some extent to work with certain platforms like Moodle and E-campus. In these institutions, they already invested on technical infrastructure and technical tools that were required to optimize distance learning. The main difficulty that those universities faced and still suffer from is the unequal opportunity among the students’ access to the internet.

With the transition to distance learning, a different pedagogy is required in Moroccan universities for distance teaching and learning and this represents a benefit as well as a challenge for students and teachers. It is interesting to remember that the teaching process in Moroccan universities is mainly based on face-to-face learning in classes or Amphi-theatres equipped with a board, a video projector and a computer. there are many isolated attempts and initiatives aiming to integrate digital education into the system of current teaching. Anyway, there is no clear strategy to make this type of learning a separate component in the Moroccan university educational system. Consequently, the suspension of face-to-face lessons is experienced by Moroccan university as a crisis. The post COVID situation is considered as an exception that pushed the government to think urgently and immediately about what to do and how to do it while taking new procedures for managing the current situation;

The main purpose of this study is to elicit an evaluation of the benefits and the challenges of distance learning. It is a quantitative field study on the novel Coronavirus, with the aim to provide statistical data on the perceptions of ENSAS students on this new pedagogy during the pandemic, and to measure the extent of their awareness and their satisfaction with online teaching. The article is structured in three section. The next section is an introduction. The first section is the methodology which describes the research questions of this study, explains who are our target participants and finally presents which procedures were followed and which instruments were used. The third section is the results section which presents the findings, categorization and analysis of results. Finally, the discussion, limitations and conclusion sections discuss the findings, implications, research gaps and offers key recommendations for future research.

1. Methodology:

1.1. Objectives and Research Questions:

This study is based on two main research questions: “What are benefits and opportunities online education at ENSAS?” and “What are challenges of online education at ENSAS?” The results of the survey yielded several answers to the above questions. The questionnaire consists of 17 questions that were classified into different themes. Several themes emerged from the analysis of the data such as: availability of electronic materials the flexibility of online learning, the interaction with teachers, development of virtual teaming skills, increase in the use of available resources and other platforms, absence of real-time feedback, technological problems, lack of adequate prior training, poor of national infrastructure. It should be that some thematic benefits may also represent some challenges for engineer students.
1.2. Participants:
The population for the study was selected from the engineer students of the ENSAS school. The sample consists of 134 participants from different years as shown in figure (1).

![Figure (1)](image)

1.3. Data Collection Method
Data was collected online. The questionnaire was sent as a link on Gmail group of each level of study through the free application Google Forms. The questionnaire was opened in April 2021 and was closed on the 10th May 2021. At first, the ENSAS students received information about the purpose of the survey in a group of What’s Up of each class. The e-mail addresses were not collected in order to respect anonymity and confidentiality. The average time needed to answer the questionnaire was 20 min.

2. Findings of the Study:
Findings from the analysis of qualitative and quantitative data gathered from the present study are presented as follows:

2.1. Students Overall Satisfaction of Online Learning Experience
In general, students exhibited different attitudes towards their online learning. Students’ satisfaction of online education had different indicators as shown in the graph below. The bridging evaluation ranged from 6.9% (not at all satisfied) to 33.1% (fairly satisfied). What was interesting about their satisfaction was that the percentage of total satisfaction was very low compared the percentage of no satisfaction which reached 24.6%. About 23.8% of the students responded in a different way. Their answers showed neither their satisfaction nor their satisfaction.
2.2. Benefits of Online Distance on ENSAS Students:

Several themes have emerged from the analysis of students’ data which are described below:

2.2.1. Educational efficiency of online learning

Educational efficiency is rendered among the benefits of online learning. The question was related to the availability of materials on the E-campus platforms as exemplified in figure (2)

Were the following means (Audio conference, Videoconference and Documents: Word, Pdf, PPT) available for teaching online courses/seminars on the E-campus platform?

In figure (3), the answers ranged from 45% (frequently) to 6.9% (not at all) while other answers varied from 28.2% (not frequently) to 14%(rarely). Only 9.2% answered with very frequently. Many of the students in this study noted the materials were frequently available on E-campus platform.
2.2.2. Development of Virtual Skills

Distance education is a real opportunity of learning virtual skills (see figure 4):

To what extent do you consider the online teaching was an opportunity to learn any virtual skills?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>31.5%</td>
<td>In a small extent</td>
</tr>
<tr>
<td>22.3%</td>
<td>Nor in small, nor in great extent</td>
</tr>
<tr>
<td>16.2%</td>
<td>In great extent</td>
</tr>
<tr>
<td>30%</td>
<td>On very great extent</td>
</tr>
</tbody>
</table>

Figure (4)

Only 31.5% of the students see online learning environment was beneficial for them to develop virtual skills, while 22.3% found it a great opportunity. However, 30% did not consider it an opportunity. The last category of the answers (16.2) sees it as a small opportunity.

2.2.3. Flexibility of Time in Online Learning

Many of ENSAS students surveyed, in this study, noted the flexibility of time as the most important benefit of online learning. The results are as follows in figure (5)

Taking into account the course schedule, did you manage to follow the course on ecampus if you did not attend on the right time?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>48.4%</td>
<td>Yes</td>
</tr>
<tr>
<td>30.2%</td>
<td>No</td>
</tr>
<tr>
<td>21.4%</td>
<td>not frequently</td>
</tr>
</tbody>
</table>

Figure (5)

About 61 students among 126 ones who answered this question answered with yes. About 48.4% manage easily to follow their courses. Only 27 students did not manage to follow, yet 38 students answered with no. If we compare this question with the following question about the time respect on the beginning of online courses, we nearly find the same answers
2.2.4 Opportunity of Interaction with Teachers in Online Courses

Online learning had a benefit of allowing the students to interact with their instructors more closely especially when the course is delivered lively in video conference. Other students responded by writing an answer in the chat room.

From the perspective of student-teacher interaction, when you are in a position to provide an answer to the teacher's questions, you prefer to:

50.8% answered with yes while 24.2% answered with no. 25% of the students prefer to answer this question with (I do not know).

2.3. Challenges of Online Learning at ENSAS

Although some students were to some extent satisfied with the quality of their online education at ENSAS, they also pointed out in some open questions out that there were some
difficulties in online learning. About 60% of students responded that distance learning was probably more challenging than face-to-face education. Several issues regarding challenges emerged from the analysis of student survey. These themes are described below.

2.3.1. Difficulty in Students/Teachers Interaction

In an open question about the teachers/student’s interaction «do you find that online classes are more interactive than face-to-face classes?” Some students perceived online learning as a challenge not allowing them to interact with their teachers more closely than they could in traditional classroom settings. There was a great disparity in the students’ answers. Most students prefer claimed that more interaction is found in face-to-face classes. Some students expressed their point of views as follows:

No for sure, face-to-face classes more interaction is more interactive than online one, in online classes: 50% of student are absent, 30% are in meet but slept, 10% are present to avoid absent & absent stuff, 5% follow and want to interact but connection problem, and the other 5% are the ones who interact.

No, the face-to-face classes are more interactive because the teacher can see the whole face of student so he can do the deference if he understood the meaning of some thing or not also, he can see if the student took his course on serious way or not.

No amount of virtual learning can match the environment that we get in the classrooms. We learn better through face-to-face interaction and a group study also helps in developing the communication skills. In a classroom, we have the opportunity to clear out our doubts almost immediately. This requires us to come out our comfort zone and verbally communicate a question. In the virtual world, this process mainly involves typing in a comment, which may not improve your communication skills.

2.3.2 Technological Complexity Challenges:

Technological problems represent the main challenges that ENSAS students faced in online teaching and learning. The data generated in relation to this difficulty focused on the loss of signals, poor internet connection and sudden breakdown of the internet. This made it relevant to look at the proportion of challenges that exist in online education. The most important challenges rely exclusively on the internet connection. Poor infrastructures and loss of signals deprive the students from following their courses effectively. Figure (7-8-9) declare that about 45% of the ENSAS students suffer from these technological problems.
Was it difficult to connect to ecampus while the courses/seminar were developed online?
128 réponses

- Very frequently: 63.3%
- Frequently: 35.9%
- Rarely: 0.8%

Figure (7)

Was it difficult to lose signal in e-campus while you were working online?
130 réponses

- Very frequently: 49.2%
- Frequently: 40.8%
- Rarely: 10%

Figure (8)

Do you handle to follow your courses online without any breakdown?
130 réponses

- Very frequently: 30.8%
- Frequently: 51.6%
- Rarely: 17.7%

Figure (9)
2.3.3. Students ‘Assimilation of Information Challenges

About 70% of students responded that courses are easily assimilated when they are held via video and audio and only 21% claim that is assimilated when it is in the form of audio. Taking into account the acquisition and assimilation of the information transmitted by the teacher in Ecampus it is easier for you to process the information when: 129 réponses

Figure (10)

The lack of prior training for teachers made the latter to put their courses in the form of pdf in E-campus platform, which pushed most students to download the courses. in figure (10), a minority of student (7) prefer courses to be held in PPT. These kinds of student most of the time are not present when courses are held lively.

2.3.4. Lack of Communication in Online Settings

Several students noted that communicating with other students online was challenging. Some students expressed the difficulty of communication with an online team as follow:

Yes, because it is not habitual for us to attend a course being alone. A face-to-face course is not only a good way to understand a lesson but it helps us to interact with the classmates. We feel during a face-to-face course that we are with people and we need to be around people.

Yes, in class students share their concept of understanding so you can collect more information, also share yours.

Another concern brought up by the students who responded was the absence of emotional connection while attending online course. The Following answers showed that students suffer from loneliness and depression:

Sometimes online lessons make us feel isolated, especially when there’s no interaction with the classmates or the teacher. And that’s sad to me because a good online component for a class should help students feel included.

I feel as if I am dealing with a robot, there is no interaction with the professor or even your colleagues, you feel that you are alone behind the screen, and this almost drives me to depression.
3. Summary of Findings and Discussion

The results of this study have resurfaced not only several benefits but also several challenges. The major themes regarding the benefits and challenges of online education that were identified in this study would give insights on the practical priorities that would be reconsidered for future research perspectives. Additionally, they also imply that there is still a long road ahead for higher education to be able to fully embark on without forgetting to benefit from the opportunities that online teaching has offered for the students as well as for the teacher.

The study has uncovered a number of related benefits with the use online teaching for the students. Among the findings, it is understood that nearly half of the surveyed students have positive attitude about using E-campus platform for studying. The availability of online resources has made easy for students to search “for information and materials through online blogs, papers, websites, and other related resources” (T.D. Oyedotun.2020:2) Another benefit of the transition to online teaching is the opportunity to learn new visual skills; the students acquire the competency to use Moodle and other platforms. These were under-utilized before COVID-19; however, they became intensely utilized and widely-used during this period. It is of significance that online facilities, which were already in place in the university but were in minimal use prior to COVID-19 by both lecturers and students, proved to be extremely useful tools during the pandemic.

The benefit of working remotely allows students with flexibility of time. The surveyed students also responded that flexibility of time was the key strength of the online teaching. With the confinement, students sometimes feel stressed to follow live courses; they schedule to learn their courses in another time, which make it easy with them to revise, to download and to do their exercises in free time. The last benefit of this study was the opportunity to interact with the teacher easily. Yet, this interaction was limited only when courses are in the form of live videos. Students felt that they were engaged in their learning when they interacted with their online course instructors actively. The taxonomy of the benefits and challenges of online education is presented in figure (11)
As long as this study has uncovered a number of related benefits, it has also uncovered a number of related challenges. It has highlighted that the difficulty of students/teachers’ interaction resides in the absence of real feedback. Social distancing, during the pandemic, affected greatly the psychology of students. The way the courses were given at ENSAS school deprived the students from real interaction, when they worked with a team in the online learning environment; these students mentioned that lack of emotional connection was a key barrier to effective communication. As a result, students’ motivation to learn decreases and their emotions got troubled in these environments. To alleviate this difficulty, some research studies suggested having phone conversations in addition to online communications in virtual teaming.

Additionally, the second challenge related to technological complexity reveals the poor national infrastructure existing in all Moroccan universities. Not only poor infrastructure but also digital inequalities among students are the main causes for this challenge; many students suffer from the absence of internet accessibility. Lack of sufficient technological competency and literacy on using technology from teachers are related to the lack of effective training support from the university institutions. Similarly, “students’ ability to self-regulate their behavior as well as the motivation and zeal to learn and use online technology for studying
largely depends on the technological infrastructure and services provided by their institutions” (R.A. Rasheed, et al., 2020:11). Therefore, the educational institutions should provide effective training to teachers and students, which would support teachers as well as students with online component activities that enhance the use of online technology.

In the meantime, a majority of the students also indicated that online learning could probably be more challenging than learning in traditional face-to-face classes in relation of the assimilation of information. Students pointed out that it was difficult to understand all the courses in online settings; they found that the delayed feedback from the teacher not to put the courses in terms ppt or pdf in due time was challenging; too much time would be devoted for the revision and they consider it time consuming.

Conclusions:
The present study was a case study in which 134 ENSAS students were surveyed to provide perceptions and their suggestions about the benefits and the challenges on online education. Studies of students in different Moroccan universities are warranted to generalize the findings of the present study. Additionally, this paper reports the initial results of a one-year experience of online learning during COVID 19. We intend to gather and analyze faculty survey data in year two. It is recommended that the issues in online learning be explored from the faculty’s perspective as well in order to obtain a more in-depth theoretical understanding and also to determine key implications for practice to improve the quality of online courses in other institutions.

Suggestions and recommendations are provided to show these benefits and challenges by the online pedagogy that can be mitigated in order to improve higher education. Indeed, offering comfort for students, in times of crisis, should be the priority of any educational system and this should be the core of responsibility any teaching philosophy. For this reason, the collection of more data from future research papers should be continued in order to enhance the validity and reliability of the results. The objective behind continuing future research is to identify the changes over time. Consequently, the next steps in future research are aimed to uncover the mechanisms, factors and variables that influence the benefits and challenges and for distance learning in different Moroccan university context.

References: