What is Not in line with Moroccan Online Education? Attitudes and Future Prospects

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***Abstract*— The COVID-19 pandemic has caused the biggest disruption of education systems in the history of the modern world, affecting around 1.6 billion learners in more than 190 countries and all continents (United Nations, 2020). Eventually, schools all over the world closed their doors. The Moroccan government, like the rest of the world, has decided to declare a national health emergency. Thus, schools were shut down and the Ministry of Education has decided on a shift from on-site education to distance education. A set of measures were applied such as broadcasting classes on TV and encouraging public and private schools to use platforms such as Microsoft Team, Zoom, and Google Meet for the purpose of sustaining the school year and promoting equal opportunities between students all over the country. Nevertheless, many teachers have lack expertise in using ICT tools to maintain their classes online. Consequently, the exceptional situation brought about by the measures to prevent the spread of the COVID-19 virus has become a nightmare for both teachers, who were not ready for the shift, and students, who are required to demonstrate a sense of responsibility and to become self-directed and autonomous learners in order to get through the school year with very good result. The present study aims at investigating teacher's and students' attitudes towards distance learning during the COVID-19 pandemic in Morocco. It also attempts to investigate its weaknesses in order to come up with recommendations capable of improving the online teaching/learning experience. For these inquiries to be fulfilled, two questionnaires (students' questionnaires and teachers' questionnaires) were administered to 14 high school teachers, and 32 high school students from two high schools in Casablanca. The findings show that the vast majority of teachers believe they have not got the ICT skills necessary to lead online classes which could be as successful as their on-site counterparts. Most students, on the other hand, have shown their dissatisfaction with distance learning and believe that this shift has had a negative effect on their overall academic achievement. The results lead us to the realization that a tremendous reform has to be made to the educational system including the introduction of ICT skills in order to equip the prospective teachers with the necessary skills to be ready for teaching no matter what form it might take in the future.**

Keywords— Distance Education, Online learning, studying online, On-site learning, Covid-19, Pandemic

I. INTRODUCTION

Due to the present circumstances compelled by the sudden outbreak of the COVID-19, life has known tremendous changes in almost all of its aspects. One of the aspects that have undergone unprecedented changes in Morocco is the sector of education. After the World Health Organization had announced a public health emergency at the international level, Moroccan authorities took a set of emergency measures to face the COVID-19 crisis. Online learning was soon thought of as a means of managing critical situations. Eventually, on March 16th, 2020, The Moroccan Ministry of Education decided to shift from on-site teaching/learning to online learning. This decision had its share of controversy among teachers, students, and parents. In fact, the public opinion was divided into those who adopt a cautious approach to crises, who naturally seem to welcome the decision, and those who thought that shifting from on-site to distant teaching is an exaggerated reaction from the authorities, which put the students' academic achievement at stake. Soon after the execution of the plan, it was crystal clear that neither students nor the teachers were ready to build the learning and teaching process properly. To illustrate this, many teachers- especially those who have not been used to ICT- showed a lack of mastery of ICT tools. Similarly, even those who were familiar with ICT did not feel that they were previously equipped with training to conduct their classes online. Therefore, a number of teaching/learning-related issues emerged. These challenges manifest themselves in (1) lack of command of ICT tools and online platforms such as Zoom, Google Classroom, Microsoft Teams, (2) lack of previous teacher training of using ICT in

classrooms, (3) the lack of school resources and facilities to facilitate the process of online teaching, and finally (4) the challenge of maintaining the equal-opportunity principle in education. Indeed, among other challenges, the aforementioned challenges constitute the heart of an educational dilemma of the post-modern world. However, the latter issue has posed an ethical issue that clearly questions one of the tenets of education worldwide and one of the central values that the Moroccan school has been fighting for through past educational reforms since the independence.

II. REVIEW OF THE LITERATURE

Recently, there has been an increasing call for the integration of Information and Communication Technology (ICT) into teaching and learning. ICT covers a wide range of technologies. It refers to all technological tools and resources used for communication, creation, storage, management, and retrieval of information (Nordin, Embi & Yunus, 2010; Thierer, 2001). These technologies include computers, mobile phones, television, radio, and internet, and so on. According to Wernet, Olliges, and Delicatch (2000), ICT empowers education as it is seen as media that offer learners a wide range of information, which the teacher may not have control over. In other words, the learner does not necessarily need to be in the classroom as learning can occur anywhere with the use of these technologies. These technologies also offer the learner the opportunity to control their learning process. ICT is a valuable tool to enhance teaching and learning. For teachers, ICT is a professional resource, a mode of classroom delivery, and a source of valid and valuable text types (Nordin et al., 2010). For students, ICT provides opportunities to communicate more effectively and to develop literacy skills including skills in critical literacy. It is a valuable tool for researching, composition, and dependence (ibid).

Many studies have been done to investigate the advantages and disadvantages of integrating ICT in teaching/learning languages. However, most of the studies' findings on the pros outnumbered the cons.

A. Arguments for using ICT in teaching

According to a study in Malaysia by Melor Md Yunus et al. (2013), one of the popular tools which is commonly adapted in the teaching of language skills is ICT. As a matter of fact, in a research conducted on the teachers' attitudes towards the use of ICT in teaching, 23 teachers were interviewed and asked about the practicality of ICT in reading. The findings indicated that the use of ICT was believed to be beneficial in terms of attracting students' attention. Students were thought to be more interested in the lesson when ICT was used. Additionally, it is reported that ICT use could help meet the teacher's teaching objectives as ICT supports the teaching process. The third advantage was that ICT could help students improve their vocabulary and enable them to find out the meaning of the words immediately. (Melor et al. 2013).

Lastly, research findings suggested that when ICT was integrated in teaching, the lesson appeared to be more interesting. Students were reported to be able to relate to what they learn more easily. Moreover, ICT use could help make the learning process more meaningful. Finally, Melor et al. explained that ICT is not viewed as a conventional method but a new and creative method of teaching. He believes that the integration of ICT in writing encourages students to be autonomous learners. (Melor et al, 2013).

B. Arguments against using ICT in teaching

Despite the many advantages that the use of the new technology has in teaching, Melor et.al (2013) have shown that the use of ICT in the classroom does not go off without a hitch. One of the problems that their study reports are that the use of ICT in teaching makes it harder for teachers to manage the class. In this respect, one of the interviewed teachers clearly stated that: "students might be distracted to see other websites. When the students have computers in front of them, they tend to visit other websites and not do the tasks you have assigned for them." Furthermore, students are believed to get too excited when ICT was used and this had caused problems for teachers in terms of class control. In the same vein, a teacher declared that students are used to a traditional way of learning with a board and markers. However, when you start to use ICT, students will get very excited and they get distracted especially when they are engaged with ICT. He maintains that when they get to use the computers and internet themselves. Another thing is that they tend to focus less on the lesson. Besides that, most interviewed teachers drew attention to distraction as the main drawback of ICT integration in teaching/learning. In other words, they explained that students might be distracted by other elements in the websites when they use the internet. As a result, they deviate from using the internet for educational purposes to entertainment purposes.

Finally, some teachers went further to refer to the poor internet connectivity as well as the lack of ICT tools in unequipped classrooms, as two main disadvantages of ICT use in the classrooms. In this respect, one of the teachers reported that the poor connectivity of the internet in schools poses a crucial problem when it comes to distance teaching

and learning. He also referred to the lack of facilities like which makes extra problems.

Apart from the debate of whether the use of ICT is beneficial or not, it is obvious that the pros outnumber the cons in terms of practicality. Also, if used carefully, ICT will be optimal and will have no/limited disadvantages.

III. METHODOLOGY DESCRIPTION

A. Study Hypothesis

It is hypothesized that many students and teachers have not been completely satisfied with their experience with online learning. However, it is also believed that some students have managed to accomplish more academic success, and comfort studying online than they could study on-site. Furthermore, it is assumed that teachers regard the obligation of shifting to online learning as a challenge that taught them a 21st-century skill, which they were supposed to learn during their pre-service training.

B. Study Objectives

Given all these aforementioned assumptions, the present paper aims at investigating the attitudes of Moroccan teachers and students towards online learning/teaching as experienced during the COVID-19 lockdown. The paper also aims at evaluating the extent to which online teaching has been effective, and the extent to which students have been satisfied with their academic achievement bringing to the fore their sense of well-being and comfort.

C. Research Questions

1) *What attitudes do Moroccan students have towards online learning? And why?*
2) *What attitudes do Moroccan teachers have towards online teaching? And why?*
3) *What are some of the advantages and limitations of distance education in Morocco? And Why?*
4) *How effective has online teaching/learning been so far?*
5) *What can be done to improve the teaching/learning online experience?*

D. Data Collection Procedure

a. Research Approach

There are, in fact, two basic approaches to research, viz. The quantitative approach and the qualitative approach. The former involves the generation of data in a quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion whereas the latter "is concerned with subjective assessment of attitudes, opinions, and behavior. Research in such a situation is a function of researcher's insights and impressions" (Kothari, 2004).

In order to find answers to the research questions and to verify the research assumptions, both the qualitative and the quantitative approaches are used in this study. The quantitative approach is used primarily to investigate the extent to which teachers and students are satisfied with distance education. The quantitative approach will enable the researcher to get statistical results in a numeric form, from which one can reach generalizable conclusions. On the other hand, the qualitative approach is also used in order to compensate for the weaknesses of the quantitative study by providing justifications behind answers given by participants.

b. Data Collection Instrument

First and foremost, the questionnaire is probably the best method to collect information, compared to the other methods like interview or observation, when the sample population is spread over a large territory. It permits nationwide or even international coverage. According to Munn and Eric (1990), "questionnaires are a popular way of gathering information. It is easy to understand why. In large scale surveys, questionnaires are by far the cheapest way of gathering information from hundreds or thousands of people." (Munn & Eric, 1990). Furthermore, the questionnaire according to Kothari (2004) consists of: "*a number of questions printed or typed in a definite order on a form or set of forms. The questionnaire is mailed to respondents who are expected to read and understand the questions and write down the reply in the space meant for the purpose in the questionnaire itself. The respondents have to answer the questions on their own. (p. 100)."*

As one of the most commonly used data collection instruments in the quantitative approach, the questionnaire ensures quick access to a large group of people in a short period of time and with relatively little effort compared with other instruments. According to Kothari (2004) the questionnaire is: (1) free from the bias of the interviewer; answers are in respondents' own words; (2) respondents have adequate time to give well thought out answers; and (3) respondents, who are not easily approachable, can also be reached conveniently (ibid, p. 101).

Since the paper's aim is primarily investigating attitudes, this endeavor puts the research under the obligation of adopting a mixed approach using two questionnaires; one shall be administered to Moroccan teachers and another to Moroccan students. The questionnaires do not only include close-ended questions but also open-ended questions that

allow the respondents to express their attitudes more freely. This recourse will eventually support the statistical data with arguments, justifications, and explanations that go beyond the numbers. The questionnaires include a number of statements to which respondents have to react using an attitudinal scale ranging from "strongly agree" to "strongly disagree". It also allows the respondents to write their own reflections with regard to their experience with online teaching. The purpose is to investigate their attitudes more accurately and study their reactions more closely.

In fact, questionnaires make it possible to contact many people who could not otherwise be reached. They can cover a large group at the same time. Goode and Hatt (1952) stated that when the researcher has to cover the group of respondents who are widely scattered, then he/she can use the questionnaires in order to minimize the cost and time. Therefore, opting for a questionnaire seems to be the optimal option as it is time and labor-saving.

c. Sample Population

The target population of the present study is Moroccan High School teachers and students in Casablanca. The population consists of 14 high school teachers of different school subjects, and 32 high school students from Common Core, First Year Baccalaureate and Second Year Baccalaureate classes. A detailed description of the teachers' and students' profiles is provided in the next section. For the sake of objectivity and reliability, the sampling technique by which the population is selected to conduct the survey is random sampling. According to Kothari (2004), under this probability sampling or 'chance sampling', every item of the universe has an equal chance of inclusion in the sample (Kothari, 2004).

d. Data Analysis Techniques

As far the quantitative data analysis is concerned, two statistical programs will be used, namely the Statistical Package for Social Sciences (SPSS) and the Microsoft Office Excel. The former is used to compute the frequencies and percentages of the collected data whereas the latter is used for the purpose of combining and generating the graphs.

IV. Results and Analysis

A. The Respondents' Background Information

Prior to embarking on the analysis and interpretation of the graphs corresponding to the research questions and objectives, it is of paramount importance to provide information about the target population of the study. The respondents in the present study were randomly chosen for the purpose of approaching more validity and credibility. The following graphs display the background information of both teachers and students to whom the questionnaires were administered. The students' graph below (figure 1) includes two items corresponding to the students participating in the study namely, their gender and level, whereas the graph to follow gives an overview of the profile of the teachers' taking part in the study. The latter includes three main items namely, gender, age, and the type of degree they hold. (See figure 2 on the next page).

Bearing in mind that the sampling technique by which the respondents were selected is a random one, the SPSS analysis of the students' sample (see figure 1 below) revealed that there is no huge gap between the two genders as it consists of 44.4% male students' and 55.6% female students. Furthermore, figure 1 illustrates that second-year baccalaureate students make up 43.8% of the whole population, first-year baccalaureate students form 37.5% whereas common core students make up 18.5%.

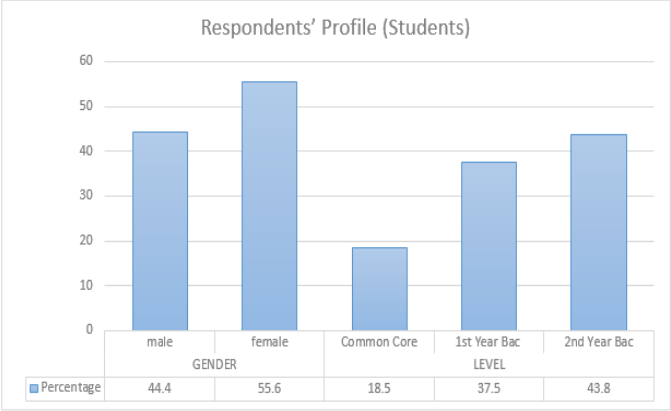

Figure 1: Students' background information

As far as teachers are concerned, the sample (see figure 2 below) consists of more or less the same number of male and female teachers as male teachers made up 53% of the whole teachers' population, while females formed 46%. In addition to this, it is remarkable that the majority of teachers are aged over 45 years old forming approximately 47% of the teachers' population while 40% were aged between 25 and 35 years old and only 13% were between 35 and 45 years old. The last item including the teachers' educational background revealed that most teachers held university degrees (86%), whereas the rest – a rough estimate of 13% - held high school degrees.

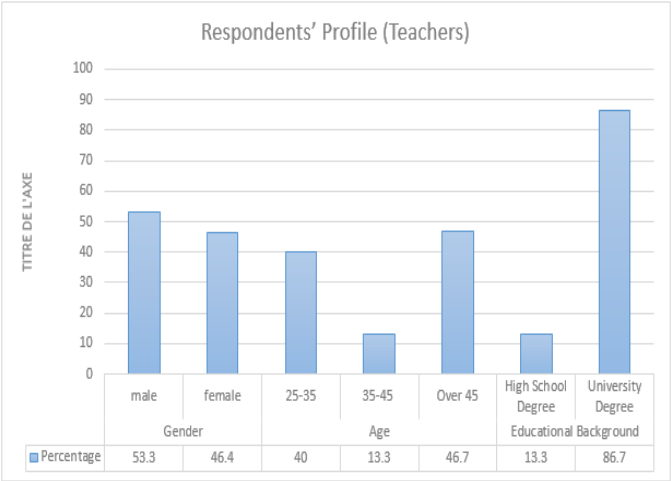

Figure 2: Teachers' background information

Having described the background information of both the teachers and students, the following section contains an analysis of the students' attitudes towards distance learning.

B. Students' Attitudes towards Distance Learning

The present section attempts to investigate Moroccan high school students' attitudes towards distance learning, i.e., the extent to which they have been satisfied with online learning and how this latter affects their academic achievements compared to on-site learning. In this respect, 32 high schools students from two different high schools were asked different questions, which are closely associated with their attitudes towards distance learning. Students were not asked close-ended questions only as they were, sometimes, required to provide justifications and personal comments. The rationale behind this recourse was to reinforce and complement their quantitative answers and approach an understanding of their own reactions to the questions.

Overall, according to the findings, students do not seem to be satisfied with their learning experience online. Results are shown in figures 3 and 4 reinforce the research hypothesis that students have not been fully satisfied with their online learning experience. Figure 3 below indicates that approximately 70% of high school students were dissatisfied with their experience online since March 2020, whereas Figure 4 on the right demonstrates that students' would rather come to school to study in actual classrooms than attend through an online platform. In this regard, respondent 4 explained that: "*if you don't have a perfect internet connection, you won't be able to follow with the teacher*".

Respondent 3, a Second Year Baccalaureate student, however, justified her dissatisfaction by saying: "*personally and taking into account the requirement this year, I think distance learning is such a bad idea as I can't follow especially when it comes to scientific subjects*".

Figure 3: Students' satisfaction with online learning

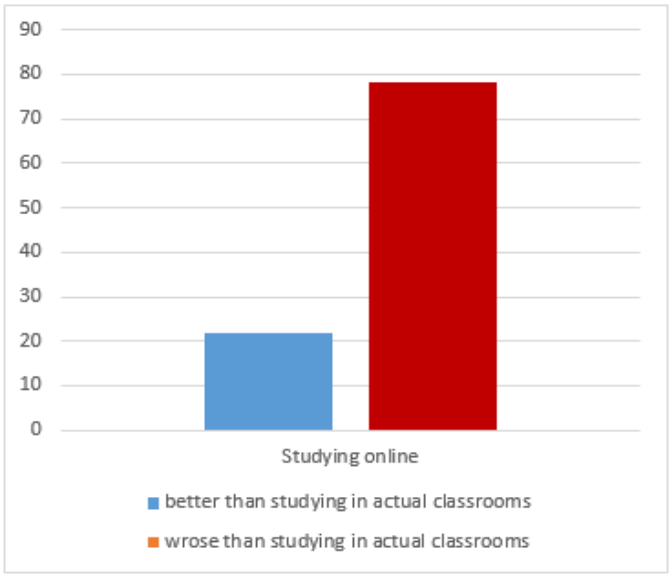

Figure 4: Students' preference of the type of learning

In the same vein, the following graph on the next page shows the distribution of the students' evaluation of their online experience.

Figure 5 below represents the students' evaluation of their online experience. A marked tendency to be against distance learning is clear in the distribution of the students' answers as 31% of them see it as "very bad" while 47% for some reasons as fair and acceptable. On the other hand, a mere 19% and 3% of high school students thought of it as "good" and "excellent" respectively. A close look at the students' testimonies revealed that many of those who have opted for "good" and "excellent" were driven by the fact that distance learning allows them more time to relax, sleep, eat and spend the day as if they are not studying. In

this respect, respondent 16 admitted that: "*staying at home gives me the feeling of security, take a break whenever I want, and even play games as nobody's looking*". Similarly, respondent 10 confessed that: "*sometimes I don't feel in the mood to do anything, so I mute my mic* [sic] and listen to the teacher and my classmates"

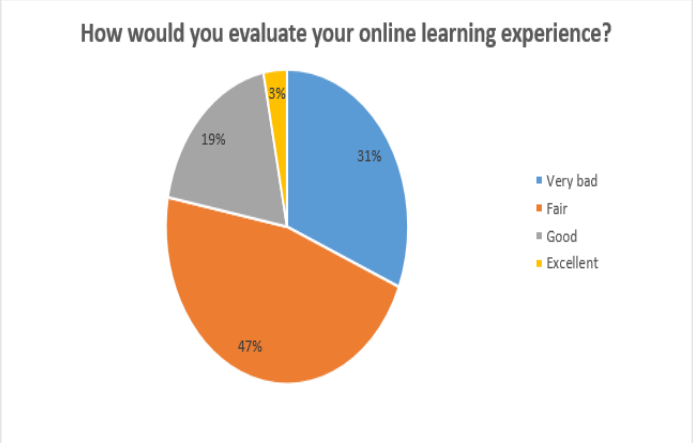

Figure 5: Students' evaluation of their online experience

A question that has been raised recently among educators, teachers and parents is: "**did this shift to distance education have a bad impact on the students' overall achievement or is it just a matter of preference?"** In order to answer this question, students were asked whether the shift to online learning had had any effects on their academic success. Thus, the following pie chart shows the distribution of their answers.

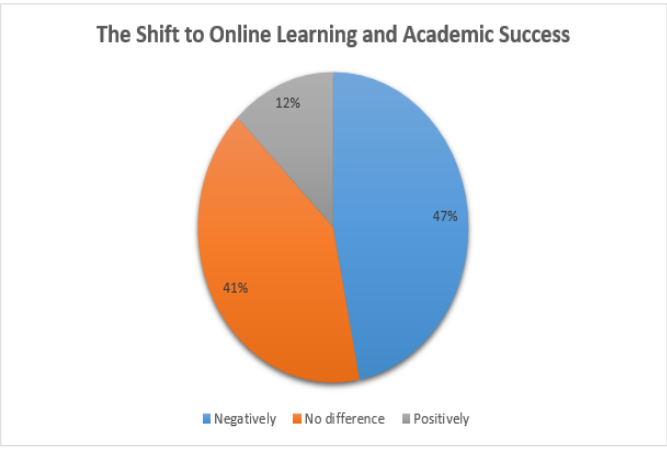

Figure 6: The impact of the shift to online learning on the students' academic success

As demonstrated above, figure 6 indicates that only 12% of the asked students considered this shift to have positive outcomes. On the contrary, 47% of students thought that the shift has negatively affected their academic achievement. In the same line, respondent 9 pointed out the fact that he used to get higher marks last year during on-site learning.

In addition to this, the following graph demonstrates how distance learning affected the students' understanding of the school subject as well as their interaction with the teacher and their peers. Figure 7 below shows that 62.5% of respondents agreed that distance learning affected their understanding of the subject negatively. In this regard, respondent 30 declared that: *"My parents are taking me to private classes in order to consolidate my understanding of scientific lessons because we have only two months left before the national exam and I don't think I can be ready if I rely on distance learning only"*

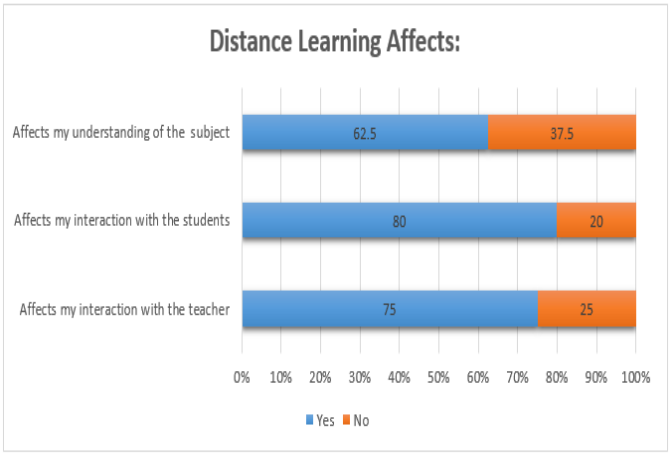

Figure 7: What did distance learning affect?

Similarly, 80% and 75% of students respectively argued that distance learning affected their interaction with each other negatively as they were used to interact with each other in pair or group work, which fostered learning and made it enjoyable. Respondent 22 in this respect complained that: "*At first I was excited to study online because it was something new, but with time I realized how much I missed school, my classmates and my interaction inside the class and I missed participating in the real classroom*"

A thorough qualitative analysis of the testimonies provided by students and teachers revealed that the main problem behind the failure to achieve a successful online learning/teaching experience is not distance education per se, but the circumstances that coincided with its use, the way we use it, the lack of parental involvement, the pressure of the syllabus and the skeptical and confusing condition that surrounds it. To illustrate these points, respondent 6 who is a Geography teacher sadly related that: "*Indeed, it is a new experience and we could have reacted better if we had been more ready for it. The decision came all of a sudden and neither teachers, students nor parents were ready to welcome it that's why we won't harvest 100% of the outcomes given the absence of parents' involvement, the weak technology literacy teachers have,*

and the lack of sense of responsibility in the majority of students." In the same line, respondent 11 who is a student admittedly said that: "*we should be honest, we are not helping the teachers in what they are doing. We sometimes consider distance learning a day off to relax. I think if we took it more seriously, we would have felt differently about it now*".

Taking these comments into account, figure 8 below shows the distribution of the answers of students who thought that their experience studying online was not successful.

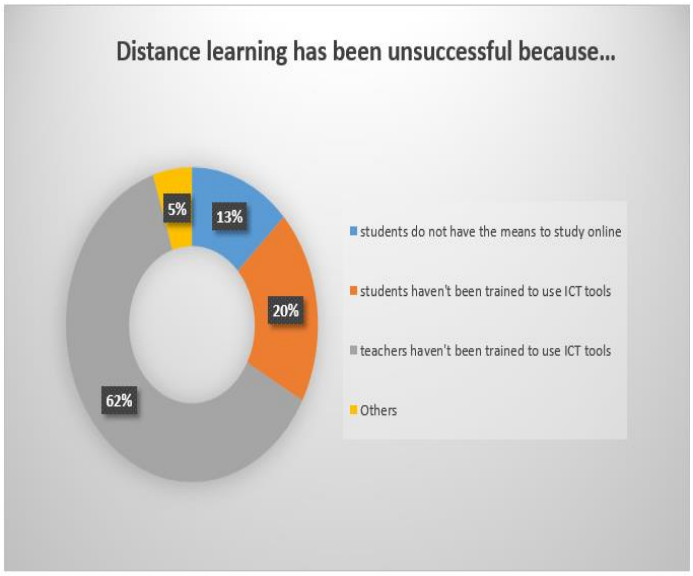

Figure 8: Reasons why DL hasn't been successful

As illustrated below, 62% believed that the reason behind the unpleasant experience with studying online is in the first place the teachers' lack of training to use ICT tools. Students seem to agree that teachers do not master ICT tools well as respondents, 12, 14, and 31 expressed that teachers often encountered technical problems and were not ready to solve them immediately until the IT technician did. They also described situations where teachers did not know how to share their links, and documents, connect their microphones or cameras, etc.. Furthermore, 20% and 13% of students referred the unsuccessful experience to the students' unfamiliarity with ICT tools and/or the lack of the means to attend regularly online, e.g. weak internet connection, absence of technology gadgets to name only a few.

Last but not least, students were given a number of statements closely related to their experience with distance education. The reason behind this recourse was reinforcing the research assumptions. Respondents were asked to react to the given statement using an attitude scale to measure their attitudes more accurately.

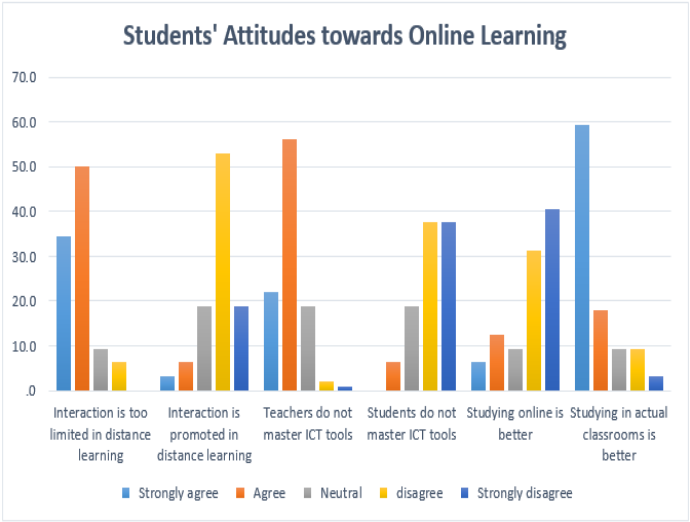

Figure 9: Students' attitudes towards online learning

Figure 9 above represents the students' attitudes in clearer and a more concise way. As shown above, respondents tend to strongly agree and agree (85% for both) that the interaction in distance learning has been reduced as opposed to on-site learning. On the contrary, 52% of them showed their disagreement that interaction is promoted in distance learning. As aforementioned in the previous testimonies, students emphasized that studying online deprived them of pair and group work activities making the lesson mainly conducted by the teacher as a lecture instead of participating in building the lesson. Furthermore, more than 55% of students agreed that one of the issues is that teachers do not have a good mastery of ICT tools, which on many occasions, wasted a lot of time. Finally, it is crystal clear that students seem to prefer on-site learning to studying online as approximately 77% of their answers ranged between strongly agree and agree with the statement that studying in actual classrooms is better than studying online.

C. Teachers' Attitudes towards Distance Teaching

Prior to embarking on the teachers' attitudes towards their experience teaching online during the COVID-19 pandemic, it is necessary to consider the course components taught in the Moroccan pre-service teacher training programs in order to see the place of ICT in the educational realm. In a previous study on Post-method Pedagogy by Sbai (2016), teacher trainers at the CRMEF centers in Fez and Meknes and at the ENS school in Rabat were required to provide the course components taught at their teacher training programs. A close glimpse at the programs provided seemed to vary slightly from one center to another whereas they all appear to teach planning, managing, and evaluating skills as the most important

teaching competencies teachers must acquire. However, and surprisingly though, the schools do not seem to give much recognition to the utility of distance teaching. Table 1 below illustrates the course components taught to prospective teachers in the CRMEF centers and ENS schools in different Moroccan cities.

	Course Components Taught to the Prospective Teachers
CRMEF Fez	Planning teaching and learning Managing teaching and learning Evaluating teaching and learning Educational research Teaching theories, approaches and methods Language awareness Teacher development and reflective teaching Educational sciences (In Arabic) School legislation
CRMEF Meknes	ELT Methods and Approaches Action Research Classroom Management Research Methods The Teaching of language skills Teaching Grammar Teaching Vocabulary
ENS Rabat	ELT Approaches Methods and Assessment Learning theories Lesson-planning and teaching language skills Competencies and standards in the EFL Curriculum Educational Psychology Learning technologies for EFL classrooms Multiple Intelligences in TEFL

Table 1: Summary of courses taught to teacher-trainees in teacher training programs in Morocco (as cited in Sbai, 2016)

With that in mind, it comes as no surprise to learn that the vast majority of Moroccan teachers have not had their best experience teaching online. Figure 10 below represents the distribution of the asked teachers' answers to the question: "How would you evaluate your online teaching experience so far?" Accordingly, more than 73% of teachers described their experience as bad (53%) and very bad (20%). On the other hand, only 27% regard it as a good experience. In this regard, respondent 4, a Mathematics teacher, admittedly stated: "*I feel that I really need to improve*" in the same vein, respondent 8 maintained that: "*nobody expected this to happen until we felt under the obligation of coping with the situation with the least ICT skills we possess*" On the contrary, respondent 13, who opted for "good" as an answer the question, had an optimistic view of the situation by saying: "*It is indeed a new experience for all of us and I'm doing the best I can*." He kept up: "*It is an eye-opening experience which reminded us that life is a never-ending learning journey*."

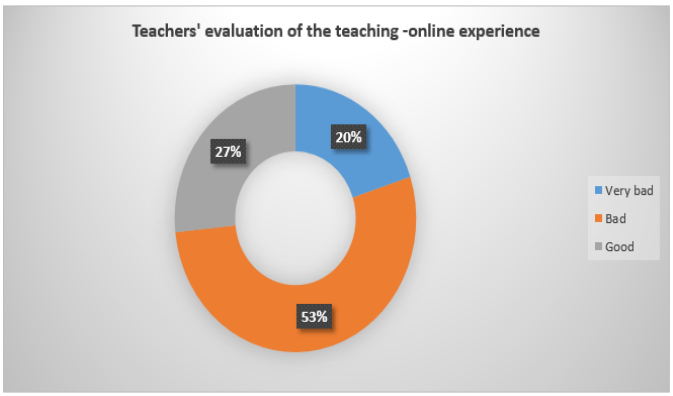

Figure 10: Teachers' evaluation of their teaching online experience.

As implied in the aforementioned testimonies, teachers do really feel that they lack the necessary skills to lead a lesson online. The results in the following pie chart reinforce the assumption that the shift towards distance education affected the teachers' performances negatively. Figure 11 below illustrates that 93% of teachers thought that online learning affected their teaching performances negatively, whereas a mere 7% of them believed that it had a positive impact on their teaching. Based on the testimonies, some teachers blame students for not being serious as respondent 7 explains: "*There is an obvious carelessness on the part of students as they tend to use their phones and laptops for entertainment instead of learning purposes*." The same respondent expressed his regret that students are not helping in the success of the teaching/learning online experience. Additionally, respondent 5 concluded that: "*this experience will only succeed if the student is interested and self-disciplined*."

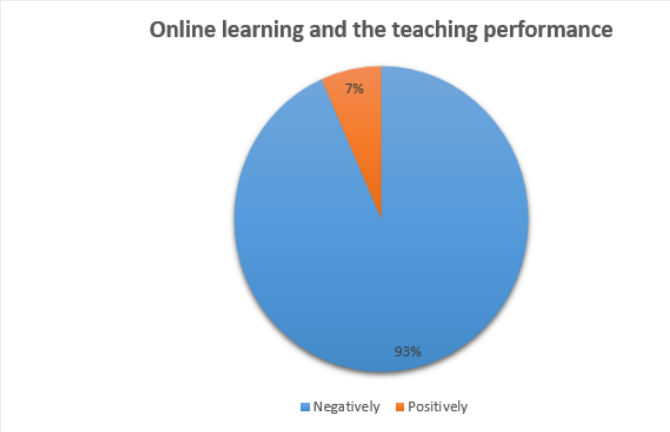

Figure: 11: Did distance learning affect your teaching performance?

A final attempt to investigate the teachers' attitudes towards online learning was to provide them with a set of statements to which they were required to react using an attitude scale of 1 to 5 ranging from "strongly agree" to "strongly disagree".

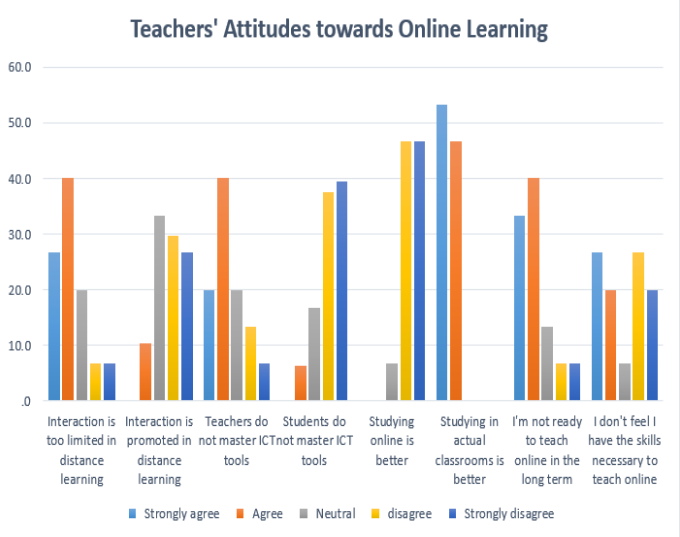

Figure 12: Attitudes' scale (Teachers' attitudes towards online learning)

Just like students in the previous chapter, teachers seem to join the agreement that interaction is close to being a myth in distance learning as 67% of teachers admitted it whereas 20% preferred to take a neutral position. In this, respondent 12, a teacher of French, points out: "as a language teacher, you can feel the gap between a class that is on-site and another that is online; a lack of interaction and classroom dynamism." Similarly, only 10% of teachers believed that distance teaching promotes interaction. In addition, 60% and a rough estimate of 80% share the opinions that ICT mastery is an issue that concerns teachers more than students as teachers seem to have a weak command of ICT tools whereas students, accordingly, are masters of technological gadgets. Respondent 5, in this regard, called for the importance of training teachers to be able to use different learning platforms such as Google Classroom, Google Meet, Microsoft Teams, and Zoom. The teachers' reaction to the statements that "online teaching is better than on-site teaching" and "teaching in actual classrooms is better than teaching online" were somewhere between 95% and 100% in favor of on-site teaching. Finally, around 70% of teachers admitted that they are not ready to teach online in the long term. However, their views on "having the skills necessary to use ICT in teaching" varied widely as 47% agreed whereas another 47% disagreed with the statement leaving 6% to take a neutral position.

V. Summary and Recommendations

In a nutshell, the aim of this study was to investigate the extent to which Moroccan high school teachers and students have been satisfied with distance teaching and learning respectively. The study was also an attempt to quantify and qualify the reasons behind these attitudes. In addition to these two endeavors, a further study was carried out in order to disclose what could be done to improve the teaching/learning online experience.

From the data analysis, the findings revealed that most Moroccan high school students are not fully satisfied with their distance learning experience during the COVID-19 pandemic. In other words, an estimate of 80% of high school students seems to prefer on-site education because of many reasons. According to the participants, the main reasons behind favoring on-site education stem from the issues experienced by the implementation of online education such as the teachers' lack of mastery of ICT tools and the lack of interaction and classroom dynamism. These two issues were also agreed upon by the teachers who take part in the study. This reality pushes us to consider a few recommendations and implications which can be classified into two parts; short-term and long-term solutions. The short-term solutions are suggestions that can be taken into account instantly in order to manage the present situation where teachers still have to keep on teaching online. For instance, providing teachers with ongoing training either at the school level or at the academy level. To put it differently, it would be a good idea if the Ministry of Education could launch a set of training and workshops to equip the Moroccan teachers with the necessary ICT skills to lead classes that can be as successful as on-site ones. By long-term solutions, we mean those suggestions whose results might not prove fruitful by the following month or year, but they are solutions that will result in a generation of teachers who are not only prepared to teach in actual classrooms but also online. In other terms, The Ministry of

Education should consider introducing ICT skills in pre-service teacher training programs as a mandatory module in order to equip the prospective teachers with a 21st century that is extremely essential in order to maintain a decent level of education that lives up to the expectation of the country of Morocco.

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