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Abstract
The COVID-19 pandemic has led to a full closure of institutions in Morocco, resulting in the adoption of distance learning. However, the experience has been laden with challenges. The current paper examines the extent to which teachers adopted distance teaching in tertiary education during COVID-19 pandemic. It specifically discusses the challenges encountered by university teachers during online education in Morocco. It also investigates teachers’ attitudes towards their distance teaching experience. 156 Chouaib Doukkali University teachers, (male=85 and female=71) were administered a questionnaire. 20 (male=12 and females=8) informants were interviewed. Findings showed that although the vast majority of the respondents used online teaching, many failed to cover all the main objectives of their courses. Both technical and logistical barriers were reported to be an impediment to good delivery of lessons. In light of these results, some implications are discussed with the hope to improve mechanisms for online delivery in tertiary education.

Keywords: COVID-19 pandemic, higher education, distance learning, university teachers, challenges

0. Introduction
On March 11th, 2020, the WHO characterized COVID-19 a global pandemic as more than 118,000 cases were identified in 114 countries, and 4,291 people
lost their lives (WHO, 2020). To contain its spread among people, save lives and minimize COVID-19 impact, governments worldwide resorted to precautionous measures. The lockdowns have, therefore, seriously affected educational systems. Both public and private institutions all over the globe were closed and teachers were forced to adopt distance learning. Thus, universities have resorted to virtual modes of delivery as an alternative to classroom classes. Different online platforms have been employed as new means of delivering lessons to students. However, this abrupt decision to use distance teaching has been accompanied by several barriers and challenges.

Being a part of the global landscape, Moroccan educational system was no exception as all institutions closed when the state declared a complete lockdown in March 2019 to minimize the rapid transmission of Covid-19 in the country. As a result, Moroccan university teachers resorted to different online platforms as new means of delivery to deliver lessons. Nevertheless, having been unprecedented, this unique experience of online teaching has been loaded with numerous obstacles.

The present paper investigated university teachers’ attitudes towards distance learning during COVID-19 pandemic. It specifically explored the main hurdles and challenges Moroccan teachers encountered during the lockdown. Identifying the key barriers Moroccan university teachers faced during online teaching may provide us with some pedagogical insights about what should be done to boost the productivity of online education. The paper also discussed the main modes of delivery used by teachers to address their students during the lockdown and examined the motives behind the choice of a certain platform over another. Understanding such motives may help us understand the type of online interaction most teachers feel at ease with when delivering their lessons. Finally, the current paper evaluated teachers’ experience with and perception of distance learning. Understanding teachers’ attitudes towards e-learning may highlight the prospects of distance learning in tertiary education in Morocco. Based on these aims, the following research questions were formulated:

1- To what extent did Moroccan university teachers use distance learning during COVID-19 pandemic?
2- What were the main hurdles Moroccan university teachers encountered while delivering their online classes during COVID-19 pandemic?
3- What was teachers’ perception and evaluation of the online teaching experience?

1. Literature review

Technology Acceptance Model (TAM)

In the literature, many technology-based theoretical models have been suggested to explain users’ perception and adoption of new information technologies. Technology Acceptance Model (TAM), developed by Davis (1989) and Bagozzi et al. (1992), is one of the prominent technology-based models suggested as an information systems theory. The model has been the most widely used theoretical framework applied to demonstrate users’ acceptance and use of technology (Venkatesh & Davis, 2000).

TAM comprises five major constructs: perceived usefulness, perceived ease of use, attitude, behavioral intention and actual use. Davis (1989) highlights two determinant factors that influence users’ decisions (not) to use a new technology when introduced to them, namely perceived usefulness and perceived ease-of-use. Davis defines perceived usefulness as the extent to which individuals perceive that using a certain technology is useful and would boost their job productivity. The ease of use is described as “the degree to which the prospective user expects the target system to be free of effort” (Davis, 1989, p. 320). This concept is believed to influence the construct of usefulness, which is described as a user’s attitudes towards the profits to be gained from the use of a certain technology. A user’s perception of the ease of use of a given technology and its usefulness are two determinant factors that influence users’ acceptance of a certain technology. That is, if users of a particular technology believe it to be easy to employ and have a positive attitude towards it, they eventually adopt it. Davis states that a user’s attitude towards the usage of a given technology has a great impact on their behavioural intention to employ that technology. In other words, the more positive perception of a given technology an individual has, the more likely they tend to use that technology.

Due to the dissemination of digital technology and the internet, TAM has been subjected to modification and refinement. Venkatesh and Davis
(2000) extended TAM1 to TAM2, which includes two other comprehensive constructs: (a) social influence processes, which comprises subjective norm, voluntariness and image, and (b) cognitive instrumental processes, which includes job relevance, output quality, result demonstrability, perceived ease of use.

Social influence processes comprise subjective norm, voluntariness and image. Subjective norm refers to social affiliation in that individuals usually strive to belong to a valued group. That is, when a user sees a particular information system is utilized by highly esteemed people, they may be motivated to use it too. Voluntariness assumes that technology usage is either voluntary or mandatory depending on the context. Once use of a particular information system is mandatory, perceived usefulness and ease of use as determining variables to the use of technology become less significant. The desire to keep a good image within a reference group can be another motive behind the use of technology. All these factors influence a user’s acceptance and use of a certain technology. Figure 1 below demonstrates all the constructs suggested in TAM 2.

*Figure 1: Technology acceptance model 2 (Venkatesh & Davis, 2000, p. 188)*

Further external factors crucial to the use and adoption of technology have been discussed. Yeou (2016) cites a number of studies that proposed diverse external factors that influence the acceptance of a certain technology. While studies like (van Raaij & Schepers, 2008) highlighted social norms and
computer anxiety as important determinants to the acceptance of technology, others stressed variables like technical support (Lee, 2008; Ngai et al., 2007; Sa´ nchez & Hueros, 2010), computer self-efficacy (Liaw, 2008; Pituch & Lee, 2006), instructor characteristics (Lee, Yoon, & Lee, 2009), computing accessibility (Lee, 2008), and convenience of use (Chang, Yan, & Tseng, 2012; Hsu & Chang, 2013)(cited in Yeou, 2016).

Many empirical studies have lent support to TAM, suggesting that the model is vigorous and can be applied to investigate technology usage in diverse settings. Recent research highlights that TAM has been found to be a solid theoretical framework still relevant to the investigation of today’s Information and Communication Technology (ICT) (Yeou, 2016; Ziyad, 2016).

The implementation of ICT in learning / teaching before COVID-19

Plenty of studies conducted on the implementation of ICT and e-learning before COVID-19 were student-oriented as they either explored students’ attitudes towards the integration of new technology in learning or examined their behaviour in a virtual learning environment. Findings reveal that integrating ICT plays a crucial role in learners’ progress and academic success (Liu et al., 2002; Macaruso & Rodman, 2011), and the use of technology in teaching has a good influence on learners’ performance and attendance (Muir-Herzig, 2004). These findings highlight the significance of e-learning in education.

Other results suggested that the adequate use and implementation of ICT is mainly associated with teachers’ attitudes and their level of proficiency to deal with new technology (Gialamas & Nikolopoulou, 2010). Nevertheless, teachers’ personal barriers like techno-phobia and computer anxiety were also reported to hinder the use of ICT in teaching (Warschauer, 2000; Ziyad, 2016). Lack of time, support and resources were also found to be an impediment to the implementation of technology in teaching (Egbert et al., 2002). Thus, getting a deeper insight into teachers’ level of anxiety and proficiency with technology can help ameliorate our approach to effective implementation of distance learning/teaching in tertiary education.

Research has also investigated the attitudes of students towards the use of online platforms in a blended learning environment. Yeou (2016), for example, found that computer self-efficacy, perceived usefulness, perceived
ease of use, attitude, intention to use, and usage of Moodle in the context of blended learning in higher education were influential factors to the adoption of Moodle among the participants. In a similar study, Ziyad (2016) reported that nearly all the participants regarded Moodle as a beneficial tool to share and learn material and collaborate with colleagues. However, these studies focused online learning in a blended environment, where students engage both in-class and online classes.

**Online learning/teaching during COVID-19**

However, little research has investigated online teaching as the only way of delivering lessons. For instance, Arifiati et al. (2020) analysed the advantages, constraints and solutions of distance learning among Indonesian university students during COVID-19 pandemic. The researchers found that the students were not constrained by space and time since they could access their classes from home at any time. However, the study reported several hurdles to online education such as unstable network connection, asynchronicity of instructors’ voice and the lessons, inability to attend classes due to lack of access to the internet and lack of concentration. Based on these studies, it appears that the main issues associated with e-learning are practically technical challenges.

Other researchers examined students’ attitudes toward online education. Amir et al. (2020), for instance, highlighted that although a significant number of first-year university students in Indonesia preferred online education as it provided them with more time to revise, many preferred classrooms lessons which allowed for more face-to-face interaction. Breaking internet connection, cost of the internet and difficulty to concentrate on online lessons for a long period of time were found to be hindrances to online education.

Sari & Nayir (2020) examined the attitudes of the instructors and administrators towards distance learning during COVID-19 pandemic as well as the problems they faced and the strategies to overcome those problems. Findings revealed that teachers encountered several obstacles, namely lack of constant internet access and digital infrastructure and disciplinary issues. In another study, Abuhammad (2020) studied the content posted on Facebook groups in Jordan with the aim to examine parents’ perceptions concerning the online learning challenges encountered by their children during the lockdown in Jordan. The study identified four types of barriers students faced during
online learning: (1) personal (2) technical (3) logistical and (4) financial. The researcher also found that many parents faced several barriers in their attempts to help their children with online education during the pandemic.

Although it has some drawbacks, it seems that distance learning is a promising mode of delivery. Ali (2020) investigated how teaching and learning can still continue after the COVID-19 confinement. Results showed that universities worldwide were shifting towards distance learning. The study also revealed that student accessibility and motivation played a crucial role in the integration of ICT in learning. While the above-discussed studies highlighted several challenges associated with online education, they mainly focused on the barriers faced by students rather than those encountered by teachers.

2. Methods

Participants

The participants were 156 Moroccan university teachers working at different faculties belonging to the University of Chouaib Doukkali in El Jadida, Morocco, namely the Faculty of Science, the Faculty of Letters and Human Sciences, the Polydisciplinary Faculty, Ecole Nationale de Commerce et de Gestion (ENCG), Ecole Nationale des Science Appliquées (ENSA), Faculté des Science Techniques (FST). 46.1 % female (n=71) and 53.9 % male (n=83) were selected randomly from the population. Their age ranged between 25 and 64 years: 42.7% (n=38) aged between 25 to 34, 32.5% (n=50) between 35 to 44, 29.9% (n=46) between 45 to 50 and 13% (n=20) between 55 to 64 and they have been teaching at the aforementioned faculties from 1 to over 30 years: 48.1% (n=74) from 1 to seven years, 20.8% (n=32) from 8 to 14, 9.1% (n=14) from 15 to 21 and 15.6 % (n=24) from 22 to 29 and 6.5 (n=10) 30 and over.

Instruments for Data Collection

The present paper adopted a mixed-method approach. Both qualitative and quantitative data collection tools were utilized to evaluate university teachers’ experience with online teaching during COVID-19 lockdown. Thus, a digital questionnaire via google forms and face-to-face semi-structured interviews were used as the main data collection instruments.
The questionnaire was sent to different teachers at the aforementioned faculties via their professional email addresses. The questionnaire is divided into five sections. The first section was devoted for the collection of demographic information such as gender, age, place of work and years of experience. The second section aimed to identify the type of platforms used, syllabus coverage and students’ attendance to online courses. The third section examined the main hurdles the participants faced before starting online teaching. Section four determined the problems the cohorts encountered while delivering their online lessons. The last section dealt with the participants’ perception and evaluation of the online teaching experience. The participants were invited to fill out the questionnaire within a period of two weeks.

Semi-structured interviews were also utilized to elicit data on the issues raised in the questionnaire for triangulation purposes, with the aim to alleviate any possible weaknesses that can stem from the use of one single data collection technique, and thus give more validity to the research outcomes (Flick, 2014). The purpose of these ethnographic interviews was to obtain in-depth data from respondents through rendering them reflect on their experience with the online teaching during the COVID-19 lockdown in Morocco to get deeper insights into the obstacles they faced and how to overcome future challenges. Therefore, the participants were sent an email requesting them to participate in the interview. After getting their approval, twenty informants, including twelve males and eight females, were contacted via mobile and invited to inform us about their e-teaching experience. The interview was conducted in Arabic. Interviewees were asked about their computer skills, the hurdles and challenges they faced during their online teaching and students’ attendance and interaction. Questions also focused on teachers’ motives behind the adoption of certain online platforms, their coverage of the syllabus and evaluation of the online teaching experience. The respondents were also asked questions about how they felt while delivering their lessons and about the type of teaching they preferred.

Data analysis

For quantitative data obtained from the questionnaire, descriptive statistics were utilized to measure the frequencies of the variables. Therefore, graphs, tables and percentages were used to demonstrate the findings. The present study also employed thematic analysis to analyze some qualitative data
obtained from the questionnaire and interviews (Braun & Clarke, 2006). Thematic analysis was used to classify qualitative data into themes with the purpose of identifying the main hurdles and difficulties faced by Moroccan university teachers during their online experience.

3. Results

The participants’ use of online teaching during COVID-19 pandemic

Our first research question examined the extent to which Moroccan university teachers used distance learning during the COVID-19 pandemic. To answer this question, the respondents were asked to identify the platforms they used in delivering their online classes. They were also asked about the number of students attending their classes and the rate of their coverage of the syllabus.

The vast majority of the participants used Microsoft Teams to other e-learning platforms. 80.5% (n=125) mentioned that they resorted to this platform to deliver their lessons, while 33.6% (n=51), 24.6% (n=36) and 22.1% (n=34) used Google Meet, Zoom and WhatsApp, respectively. However, Moodle, YouTube and Facebook were reported to be used only by 16.9% (n=26), 11.7% (n=18) and 11.6% (n=17) respectively. 9.1% (n=15) claimed that they used other tools as fig.1 illustrates.

Fig.1: Frequency of using different online platforms in online teaching during COVID-19 pandemic

Concerning lesson coverage, the results in Table.1 below show that 51.1% (n=81) of the respondents asserted that they managed to cover all the
syllabus, and 24.4% (n=38) reported covering the majority of the sessions. 6.6% (n=9) said they covered half of the classes and 12.8% (n=20) stated that they taught a few sessions, while only 5.1% (n=8) admitted not teaching any lessons at all.

<table>
<thead>
<tr>
<th>Syllabus coverage</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>81</td>
<td>51.1%</td>
</tr>
<tr>
<td>Most</td>
<td>38</td>
<td>24.4%</td>
</tr>
<tr>
<td>Half</td>
<td>9</td>
<td>6.6%</td>
</tr>
<tr>
<td>Some</td>
<td>20</td>
<td>12.8%</td>
</tr>
<tr>
<td>None</td>
<td>8</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

The qualitative data obtained from the interviews lends support the findings from the questionnaire. It was found that the vast majority of the informants (14 out 20) said they used Microsoft Teams to deliver their online lessons. About a third of our interviewees (6 respondents) asserted that their institutions imposed using Microsoft Teams as the only mode of delivery as one informant said, “I used Microsoft Teams because it is the institutional platform.” However, six of the informants working in different faculties said they just uploaded lessons to their students and sent them short videos to highlight the main ideas of the lessons. Some respondents reported using more than one platform for test and trial. For example, one informant said: “I used Moodle and Microsoft Teams. Moodle includes everything I needed. I was able to give assignments, evaluate them and offer feedback to my students. Microsoft Teams helped me with videoconferencing.” Another said, “I used Google Meet as it was the official platform for the school. Imposed by the administration.” Overall, it was found out that different platforms were used for various reasons.

Our findings also revealed that students’ attendance to online platforms was rather average (see Table 2). Only 1.3% (n=2) claimed that all their
students attended their e-classes, 40.5% (n=63) mentioned that the majority of students were able to attend. About a quarter of the cohorts 24.3 (n=38) reported that only half of their students marked their presence, while 29.1% (n=47) asserted that only some of the students managed to assist to the courses. However, only 3.8% (n=6) claimed that none of their students benefited from distance learning classes.

Table 2: Frequency of students’ attendance

<table>
<thead>
<tr>
<th>students’ attendance</th>
<th>Number of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>2</td>
<td>1.3%</td>
</tr>
<tr>
<td>Majority</td>
<td>63</td>
<td>41.5%</td>
</tr>
<tr>
<td>Half</td>
<td>38</td>
<td>24.3%</td>
</tr>
<tr>
<td>Some</td>
<td>47</td>
<td>29.1%</td>
</tr>
<tr>
<td>None</td>
<td>6</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

The findings of the interviews slightly differ from the results obtained from the questionnaire as most of the informants (17) stated that a significant number of students could not manage to attend online classes. When asked about their students’ attendance, the vast majority of the respondents said that nearly half of students showed up. However, one respondent asserted that “there were lots of students who did not attend online meetings.” Some informants reported that many of their students marked their online presence via joining the platform, but they were not actually following the lessons, as one of the respondents claimed: “Many of my students logged in, switched off their cameras and turned off their mics; when asking them questions about the lesson, I got a dead silence…no interaction at all”. In a word, although it was found that over a half the students benefitted from distance learning, many students failed to attend e-lessons for different reasons.

The main hurdles encountered in online teaching during COVID-19 pandemic
Our second research question examined the main hurdles and problems Moroccan university teachers encountered while delivering their online classes during COVID-19 pandemic. To answer this question, the participants were requested to identify the type of obstacles they faced in the pre-implementation phase, the difficulties they encountered while accessing the platform and when preparing digital lessons; they were also asked if they had their own computer and access to the internet. Finally, respondents were enquired about their motivation to deliver online courses.

According to our results, 42.6% (n=65) asserted that most of the difficulties they had before delivering online courses were related to internet access, while 35.9% (n=56) reported encountering difficulties to access the platform and 37.2% (n=58) said they were demotivated to use teach online. Meanwhile, about a quarter of the respondents (25.1% (n=41) and 25.6% (n=40) respectively) mentioned that most of the problems they faced were related to preparing online lessons and having their own computer (see Fig.2).

![Fig.2: Hurdles faced prior to giving online Courses](image)

The interview data revealed a number of barriers the informants faced. Although the majority of the informants (12) claimed that they did not face
many problems before embarking on distance teaching, many (8) said they encountered several hurdles. Six interviewees said they were unfamiliar with online platforms and did know first how to use them to deliver lessons. One of them complained, “We were not trained to use such tools”; another confessed, “I have never done this before [teaching online] and I don’t know how to implement it.” Also, not having access to the internet regularly was among the issues mentioned almost by a third of our informants. However, only two respondents reported not having their own computer and said they used their mobile to interact with their students. Before they managed to teach online, about a third of the informants said they experienced some anxiety and were reluctant to try e-learning as it was an unprecedented experience for them. The key hindrances to the implementation of distance teaching that can be inferred from the interviewees were mainly technical, logistical or related to lack of training to use online platforms for educational purposes.

Meanwhile, in order to determine the type of obstacles teachers confronted while giving their courses, the respondents were asked if they faced any difficulties in relation to internet speed, ability to use the platform well, students’ disciplinary problems, lack of students’ interaction, or home distractors. Most respondents 82.1% (n=129) complained about the low interaction of students, and 75.6% (n=118) about low internet speed. Whereas half of the respondents (52.1%, n=131) reported facing disciplinary issues, and 49.4% (n=76) confessed that their inability to use the platform in an efficient manner was the main obstacle they faced. 57.1% (n=88) claimed that domestic distractors such as children and noise at home were the principal hurdles they encountered while giving online courses.
Fig. 3: Problems faced while teaching

The qualitative data regarding the main hurdles the respondents confronted while delivering their online lessons is in agreement with the questionnaire results. The vast majority of the informants (18 out of 20) said they faced technical problems due to breaking internet connection. Lack of interaction from students was another issue raised by many informants. One respondent, for example, said, “I had the impression of talking to the computer…I think that most of them just logged in to mark their presence and disappear.” Another stated that “the students were reluctant to participate online.” Lacking to skills to operate on the platforms was also another issue the interviews had to deal with when they first started teaching online as one respondent explained: “At first, I didn’t know what to do, but after having watched several DIY Videos on YouTube, I finally managed to use the assigned platform.” However, about a quarter of the informants complained that they were not trained to teach online and had to struggle to learn the functionalities and affordances of the platforms. A final issue most respondents (12) had to deal with during online teaching was distractors. Many complained that background noise was really disturbing. Some informants admitted being interrupted by their children many times while they were delivering their lessons. Others complained that some of their students...
forgot or did not know how to turn off the microphone, which distracted the teaching process.

The interviews with the informants revealed other difficulties students met during online teaching. The focal hitches students faced when trying to benefit from e-learning classes, as elicited from the respondents, were primarily linked to internet access, technical issues, lack of necessary skills to employ the platform and lack of interest. All the informants said their students faced technical issues due to slow internet speed. One of the interviewees stressed that “many students don’t have a computer, and the financial means to access the internet.” Another respondent explained: “The problems I encountered [while teaching online] had to do with students who did not have equipment or internet connection. Those students missed valuable moments of interaction and discussion.” Several informants (5) asserted that some of their students were unable to use the target platform. Many informants said some accessing online platforms requires good internet access, which is impossible for students to afford on a regular basis.” One respondent maintained: “Some students didn’t know how to use the platform efficiently. Another respondent asserted that “students don’t have good knowledge of the functionalities of Microsoft Teams.” Many informants (9) said that their students did not receive any prior training before being introduced to online classes. One female informant summed up all the challenges teachers confronted as follows: “After talking to some colleagues, I found out that we faced the same problems: Absence of interaction from students who are not used to this type of education and technical difficulties due to alternating, slow, broken internet connection. You know, we still don’t have good internet speed in Morocco.”

Participants’ perception and evaluation of their online teaching experience

The third research question investigated university teachers’ perception and evaluation of the online teaching experience during COVID-19 pandemic. To get the respondents’ feedback on the online teaching during the COVID-19 lockdown in Morocco, the respondents were asked to evaluate their online experience and the way they felt while delivering courses. Also, the respondents were requested to choose the type of teaching they prefer, whether in-person classes, online or mixed.
Our quantitative results indicated that the vast majority of the respondents were quite satisfied with their online teaching experience during the COVID-19 pandemic: 6.1% (n=11) claimed that the e-teaching experience was excellent and 32.1%(n=50) and 30.8 %(n=48) respectively mentioned that they found this experience to be good or not bad. However, 18.2% (n=27) and 12.8% (n=20) evaluated the experience as weak or fruitless as Table 3 demonstrates below:

**Table 3: The participants’ evaluation of the online teaching experience during the COVID-19 pandemic**

<table>
<thead>
<tr>
<th>Teachers’ evaluation of online teaching experience</th>
<th>Number of participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>11</td>
<td>6.1%</td>
</tr>
<tr>
<td>Good</td>
<td>50</td>
<td>32.1%</td>
</tr>
<tr>
<td>Not bad</td>
<td>48</td>
<td>30.8%</td>
</tr>
<tr>
<td>Weak</td>
<td>27</td>
<td>18.2%</td>
</tr>
<tr>
<td>Fruitless</td>
<td>20</td>
<td>12.8%</td>
</tr>
</tbody>
</table>

Our interview findings are in agreement with the questionnaire results. It was found that most of our informants (15 out of 20) qualified their online teaching experience as practical and useful given the circumstances. One informant explained that “at least distance learning kept students busy during the lockdown.” Another interviewee said that “online platforms enabled both students and teachers to keep in touch and share concerns.” However, about a quarter of the informants (7) regarded the experience as being fruitless. For example, while one respondent claimed that “There is nothing better than face-to-face communication”, another said that “online teaching is useless.”

Overall, it can be inferred from the qualitative data that the respondents had positive attitude towards distance learning as they gained much on the personal perspective, but were rather sceptical over the realisation of the goals set in the syllabus, as one informant summed it up when asked about their
evaluation of the online experience: “Fruitful to me as I learned new things and new teaching strategies, but as a whole I don’t think it reached its educative goals.”

We also examined the participants’ level of anxiety experience when delivering online courses. Although the vast majority of the respondents reported feeling at ease when teaching online (2.4% (n=5) said they felt very comfortable, 35.9% (n=56) comfortable and 37.2% (n=58) neutral), a significant portion of respondents still experienced certain levels of anxiety while e-teaching. It was found that 19.2% (n=30) reported feeling nervous, and 5.3% (n=7) very nervous. Table 4 below summarizes the main findings.

**Table 4: Teachers’ level of anxiety experienced while delivering online lessons**

<table>
<thead>
<tr>
<th>How teachers felt</th>
<th>Number of participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very comfortable</td>
<td>5</td>
<td>2.4%</td>
</tr>
<tr>
<td>Comfortable</td>
<td>56</td>
<td>35.9%</td>
</tr>
<tr>
<td>Neutral</td>
<td>58</td>
<td>37.2</td>
</tr>
<tr>
<td>Nervous</td>
<td>30</td>
<td>19.2%</td>
</tr>
<tr>
<td>Very nervous</td>
<td>7</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

The findings from the interviews are consistent with those obtained from the quantitative data. While most of the informants (15 out of 20) reported feeling comfortable or neutral during their experience with distance teaching during the COVID-19 lockdown, about a quarter of the interviewees (5 out of 20) said they felt nervous when teaching online, as one confessed: “I always ask my daughter for help when I want to teach online.” Another informant complained that “We aren’t trained to teach online; this is all new to us.” Meanwhile, others expressed a positive attitude towards this experience. One of the interviewees claimed that “It was a good experience for me because there were so many lessons that I learnt from e-teaching”, while another adds that “It was a new and challenging experience; at the
beginning I had problems adapting to the situation but overtime I managed to use this platform in my teaching.”

To illicit more data about teachers’ attitudes towards distance learning, the participants were asked about the type of teaching they preferred. The results from the questionnaire showed that the vast majority of the respondents favoured classroom teaching over e-teaching (66.6%, n=104). However, only 2.9% (n=3) preferred teaching online as the only mode of delivery, while 30.5% (n=49) opted for a blended teaching approach in tertiary education, as Table 5 indicates.

<table>
<thead>
<tr>
<th>Type of teaching preferred</th>
<th>Number of participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-person</td>
<td>104</td>
<td>66.6%</td>
</tr>
<tr>
<td>Online</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td>Blended</td>
<td>49</td>
<td>30.5%</td>
</tr>
</tbody>
</table>

Findings obtained from the qualitative data supports the quantitative results. While most of the informants were still reluctant to use online teaching (16 out of 20), about a few recommended opting for blended teaching. However, none of the informants preferred distance learning as the only mode of delivery in higher education. One informant asserted that “there is nothing better that face-to-face communication.” Another interviewee claimed that “online teaching is useless, and students don’t learn anything; it is just a waste of time.” In short, the vast majority of the interviewees expressed a negative attitude towards online teaching and regarded the experience as useless.

4. Discussion

The present study explored Moroccan university teachers’ experience with distance learning during COVID-19 pandemic. As stated in the introduction, it specifically investigated the extent to which Moroccan university teachers used online teaching during the lockdown. Another objective was to examine the main hurdles teachers confronted during the distance teaching process. A final aim was to find out teachers’ perception and evaluation of e-teaching in
tertiary education. The results revealed that despite the fact that the vast majority of the participants delivered online lessons through different platforms, many failed to cover all the syllabus. Also, students’ attendance to online lessons was also an issue as a significant number of the participants admitted that not all of their students benefitted from distance teaching. Results to research question two showed that most of the participants encountered logistical, technical, and disciplinary issues as well as problems linked to students’ lack of interaction and internal distractors. The last result indicated that although most of the participants had a positive attitude towards the distance learning and qualified the experience as good, many exhibited a reluctance to use e-teaching and regarded the experience fruitless.

The participants’ use of online teaching during COVID-19 pandemic

The study revealed that university teachers in Morocco faced different difficulties in relation to online teaching. The switch to this mode of delivery was abrupt and neither teachers nor students were prepared for it. This factor may be responsible for the challenges faced by these teachers. Another possible explanation for this finding is lack of training. That is, teachers had no formal training on how to teach using these platforms and this resulted in a lack of familiarity and hurdles for some to deliver their lessons using such tools. This experience identified different challenges and barriers that can be set as a reference point for the implementation of remote learning in the future.

As indicated by Venkatesh and Davis (2000), once a particular technology is mandatory, perceived usefulness and ease of use become less-determining factors in using that technology. Results of the current research showed that the vast majority used Microsoft Teams as it was the official online platform adopted by the Ministry of Education. The choice of that platform was rather mandatory and only few respondents opted for other platforms for their easiness of use or usefulness. Still, as the results of the study indicated, teachers reported difficulties dealing with various platforms. Henceforth, familiarization of teachers with such e-learning platforms would raise their tendency to use them more.

The main hurdles encountered in online teaching during COVID-19 pandemic

The current study found that other problems pointed out by the respondents were related to logistics and technical matters. Teachers and faculties used
different platforms with varying degrees and some students could not attend the online classes due to lack of internet access and equipment. One explanation for the technical problems reported by the participants could be attributed to low internet speed and constant connection failure. The results also point to the likelihood that many students cannot afford internet access on regular basis due to the fact that the cost of internet is still high in Morocco. Our findings are in line with those of Abuhammad's (2020), Amir et al.’s (2020), Arifiati et al.’s (2020) and Sari & Nayir’s (2020), who reported that the major challenges faced by teacher and students alike were related to technical problems, such as internet access, logistic, such as lack of material, and other problems related to disciplinary issues.

**Participants’ perception and evaluation of their online teaching experience**

The last aspect investigated by this study was teachers’ perception and evaluation of their online experience during the COVID-19 lockdown. While the vast majority still opted for in-person classes and asserted that the experience did not reach the underlined goals set by the Ministry of Education, some teachers perceive the experience as being fruitful at the personal level. Most of the respondents claimed that they gained a lot from this experience. It appears that teachers’ efforts to deliver online lessons to their students pushed them to learn how to use online platforms. This is consistent with Davis (1989) who claim that when users of a certain technology perceive it as useful, they are very likely to have positive attitudes towards it and thus apply it. However, a significant number of the participants showed a negative attitude towards distance teaching. Our findings would imply that the difficulty to use online platforms was the main factor behind this negative attitude. According to Davis, the easiness to use a particular technology also plays a determining factor in its adoption.

It appears that further trainings on ICT use and integration of e-learning as an integral part of the curricula would play a salient role in raising teachers’ acceptance and use of online platforms as new modes of delivery, which can enhance interaction and cooperation among both teachers and students in tertiary education. Perceived usefulness and perceived ease of use of a certain technology are still determining factors in making teachers adopt a given technology for educative purposes. That is, the teachers, for example,
who find it difficult to use particular online platforms when trying to deliver their lessons, have a negative attitude towards distance teaching, and thus are demotivated to exploit these tools in teaching. Also, platforms that are user-friendly and have easy to use functionalities would encourage some teachers to favour them over others.

5. Conclusion

The current study evaluated Moroccan university teachers’ online teaching experience during COVID-19 pandemic. It specifically investigated the types of hurdles faced while delivering online lessons as well as their attitudes towards this experience. As mentioned earlier, although the majority used online platforms as new modes of delivery, many encountered several barriers: technical, logistical, professional, disciplinary and personal. Also, our study found that although many teachers, especially those who were not familiar with using technology in teaching and who experienced anxiety, held a negative attitude towards the outcome of the experience, many perceived the experience as enriching and instructive.

Also, the fact that teachers and faculties used different platforms with varying degrees shows that there is an absence of a common and unifying strategy to teach online in tertiary education. One way to encourage the use of ICT in teaching at university is to provide the necessary logistics and good training to teachers to cope with this new mode of teaching. We suggest that ICT courses and e-learning classes should be integral components of the curriculum and equipment and internet connection should be available on-campus to boost teachers’ and students’ confidence and familiarity with such tools and consequently raise their level of use and implementation.

The COVID-19 pandemic was a turning point in the world and has demonstrated that the system of education should be reconsidered. The world is changing very fast, and now technology becomes a must in the process of evolution. Implementing such tools in delivering lessons as an integral part of the curriculum would raise teachers and students’ familiarity and acceptance to use them. Future research should focus on the outcomes of distance learning as the only mode of delivery in order to examine the prospects of virtual teaching/learning process.

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