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Emergency Distance Education (EDE), Urgent Transition to Distance Learning from the Perspective of UAE University Teachers

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Abstract: To combat the spread of COVID-19, education systems around the world were facing an unprecedented challenge of mass university closures. This research attempts to analyze this sudden and urgent transition to Distance Learning, which was a new experience for 93.9% of UAE university teachers. We have called this urgent situation “Emergency Distance Education”, to which we have given a definition. A survey was conducted among 240 teachers to express their opinion on this new way of teaching, and to answer a set of questions, such as: what were their main challenges? did they provide theoretical courses in the same way as practical courses? and what do they suggest as future solutions for best practices in Distance Learning? As result, we found three categories of challenges raised by the respondents, namely: Pedagogical, Technical, and Interaction problems. The results of this study show that the greatest number of teachers were suddenly transferred to Distance Education without having previous experience. And the most notable suggestion made by more than 60% of teachers, and which could be an open path to a new field of study, is that the measure of a credit hour in Distance Education compared to that in face-to-face must be reviewed.

Keywords: Distance Learning – Covid-19 – Transition - Emergency Distance Education.

1 Introduction

In September 2020, a state of health emergency was introduced in the UAE, by denouncing the outbreak of an unprecedented period of confinement of the population [1]. Universities were among the first institutions affected by an immediate closure, they had rapid reaction to the pandemic [2], putting teachers in front of a sudden injunction of distance teaching practice. Thus, in the context of confinement, the practice of teachers was the decreed adjustment variable for organizing “virtual classes”. In addition, Emergency Distance Education (EDE) was not the subject of a reading grid on which to rely, this period of confinement has not been anticipated [3].

Based on an interdisciplinary approach, our project aims to better understand the reconfiguration of the work of university teachers based on their experience relating to this unprecedented period of confinement. At the crossroads of the disciplines forging our theoretical base, we pursue the objective of highlighting the experience of teachers mobilized in a daily life of confined teleworking through several axes: the mediating role of Information and Communications Technology (ICT) in activities, or even the challenges of a distance educational practice. Information and Communication Sciences (ICS), as a discipline understood as a mirror held up to other academic fields, forms the main foundation of our research perspective, considering the preponderant place of ICT in the implementation of the EDE. Building on the approaches of technological mediation [4]. For its part, the psychology of work allows us to grasp the psychosocial resonance [5-6] and the emergence of creative and/or defense strategies [7-8] of the experience of mediated activity among teachers and how did they experience this rapid transition?

The study on which this paper is based relates to a qualitative corpus filled in by nearly 240 participants through a quantitative questionnaire, inviting respondents, to express their attitude of EDE. The qualitative analysis carried out, in a resolutely observatory manner, aims to answer a certain number of questions:

- What were the effects of the sudden and unanticipated transition to DL on the working conditions of teachers?
- What were the procedures for setting up this urgent DL?
- What is the psychological resonance of this EDE solution of pedagogical work among teachers?

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- Does this renewal of educational activity, which passes exclusively using ICT, give rise to risks depending on the nature of courses delivered (practical or theoretical courses)?

2 Theoretical frameworks:

2.1. Problem statement

The purpose of this study is to analyze the rapid change that happened during the Covid-19 pandemic with UAE Higher Education Teachers shifting urgently from face-to-face education to distance learning.

2.2. Research Objectives:

- The objective of this reflection is to problematize the transition "face-to-face to distance education" at UAE universities in the time of Covid-19 in connection with the didactic issues that are emerging in this period marked by the emergency. Conceptually, problematizing consists of linking facts and concepts to ask relevant questions and obtain relevant answers, thus making it possible to understand and explain a phenomenon. Operationally, problematizing is a methodological operation that consists "in the selection and ordering, by the researcher and according to his own perspectives, of the elements that will constitute the territory of questioning where his research will evolve" [9].

- Exploring UAE Higher Education Teachers' experience and depicting the effects of EDE.

2.3. Research Importance:

The coronavirus health crisis has subjected education systems to an unprecedented shock in the history of education, university life on all continents of the world. This research would be a historical testimony on the experience lived by teachers in the UAE, it will indeed make it possible to grasp the strengths of EDE and to strengthen them, but also to highlight the weak points and to think of solutions.

2.4. Research Methodology:

This research, which is part of an inductive approach, is motivated by the need to understand the new roles assumed by university teachers involved in distance university education. This interest arises from the questions born of our experience as a practitioner and led by a questionnaire answered by 240 university teachers from the UAE of different specializations and disciplines. To collect the maximum of exploitable data and thus carry out this study, we decided to use methods relating to both qualitative and quantitative approaches, and to measure the experience of the teachers with DL before the pandemic, if they had any, and how this experience was during the pandemic. The study is characterized by a single phase where a survey was submitted to teachers and filled. Analysis of two main points that will generate the findings of this research, are:

1-Teachers' pre-pandemic experience with DL.

2-Teachers' experience with DL during the pandemic.

3 Terminological framework and previous studies

From a terminological point of view, we must define the appropriate terms such as Distance Learning, Transition, The COVID-19 Pandemic as a disruptive event, and to give a definition for Emergency Distance Education (EDE) that has never been defined before.

3.1. Distance Learning (DL):

DL is often synonymous with online learning (e-learning), correspondence education, distance studies, so-called flexible learning, and open and massive online courses. Common characteristics of DL are spatial and/or temporal separation, as well as the use of media and technology to enable communication and exchange during the learning process. This can be done through print materials, one-way distribution (TV and radio programs) or the web (social media and learning platforms). Distance learning tends to place high demands on students in terms of discipline and organization, and purely academic skills need to be supported by new teaching, learning and coaching strategies [10].

In general, Distance Education is considered as a mode of teaching where the act of teaching is separated from the act of learning in time and space. According to Rumble: "Distance learning is a teaching method that physically separates the student from the teacher. Although teachers may be in direct contact with their students by telephone and through audio- and videoconferences, the physical separation between student and teacher involves the use of certain media for teaching".[11]

It is important to mention that the different forms of learning through ICT are defined in the relevant literature by a couple of different terms, such as e-learning, telematics environments, electronic learning, virtual classrooms, online education,

e-Campus, electronic communication, cyberspace learning environments, interactive computer-driven communication, decentralized learning etc. [12-13].

3.2. Transition:

This concept is linked to the evolution over time of an educational phenomenon moving from a face-to-face phase to a remote phase. The pivotal concept that is mobilized here is linked to the issue of temporalities in the Human and Social Sciences [14], that is the concept of transition. “Transition is the desired change,” says philosopher [15]. It then refers to positive transitions such as ecological transitions and democratic transitions. “The transition is a considered transformation, which aims to be mature, peaceful, yet pragmatic” [16]. Transition is a process that involves moving from one state to another, but by mobilizing dialogue and consultation. It “marks passage and change, as if our society, driven by the acceleration of flows of all kinds, needed a reassuring word to signify that the transformations experienced could be positive” [17].

3.3. The Covid-19 Pandemic: A Disruptive Event

In 2020-2021, the crisis linked to the COVID-19 pandemic is contributing to the acceleration of the transition from face-to-face to DL at the university. The uncertainty about the time needed to reach the end of the crisis (the discovery of a drug or a vaccine) reinforces the idea that this pandemic had a lasting and structuring impact on the method of education at the university. This crisis has undoubtedly caused a bifurcation. In fact, there are disruptive events on the timelines, at the junction of the unpredictable and the irreversible. They cause crises likely to lead to bifurcations [18].

In terms of didactic issues, the concepts of knowing how to teach and knowing how to learn are mobilized here. It is a complex articulation of teacher knowledge and student knowledge involving learner and teacher characteristics, content, context, assessment, pedagogy, resources, and technology. This articulation accounts for different teaching and learning solutions for each content, depending on the level of teaching [19].

At university, professors face the challenges of the transformation of modes of communication and interpersonal relationships induced using digital technology and those of the development of teaching methods adapted to a diverse student population [20-21]. Technology should not simply support traditional practices but bring about a change in teaching practices [22]. However, taking charge of the didactic process by technological support confirms the dissociation between the act of teaching and the act of learning [23-24]. The debate on the contributions and constraints of digital technology is necessary to meet the challenges facing university education. Digital represents “an educational renewal based on audacity, openness to the world and adaptation to the speed of change” [25]. Technologies increase the possibility of learning if feedback is optimized and that teachers are trained in their use [26]. Digital technology in higher education (HE) is also an issue.

3.4. Emergency Distance Education (EDE):

Starting from March 2020, many UAE universities started the distance learning process, immediately after the decision of the government to close all educational institutions in the country. This abrupt shift to online teaching, without prior technical and pedagogical preparation, has disrupted the education system at UAE universities, which have been challenged to adjust very quickly to this new context to cope with the emergency.

The emergence of new information and communication technologies is considerably transforming the information landscape, particularly in terms of learning practices. The general sanitary confinement imposed on the UAE in March 2020 has encouraged the accelerated experimentation of these new learning practices within Emirati universities. Indeed, the disruptions of this pandemic crisis have been very strong, education has changed radically, with the unprecedented rise of online education, where learning is delivered remotely via digital platforms, the great technological progress in the field of communication has made it possible to manage a complete educational course without the need for students and teachers to be present in a narrow space [27].

EDE is a new concept that has not been defined before, for this we will try to give an adequate definition while understanding the meaning of the term “emergency”. According to Cambridge Academic Content Dictionary, the word emergency means “a dangerous or serious situation, such as an accident, that happens suddenly or unexpectedly and needs immediate action”. Consequently, emergency is a total social fact in the sense that it conditions the lives of people, societies, and institutions. It is the new expression of our relationship to time in the face of the risks inherent in social events of crisis (such as that of COVID-19), characterized by immediacy, instantaneity, speed and brutality, Emergency requires immediate and rapid action.

The closure of universities due to the spread of Corona virus, and this emergency required a rapid reaction to deliver the courses virtually. Through these facts, we can define EDE as “a virtual distance education delivered remotely on the internet, produced as an urgent solution to unexpected circumstances”.

3.5. Previous studies:

It should be noted that faced with the health crisis linked to Covid-19, and from the start of the pandemic, scientific publications have multiplied rapidly, particularly in the field of Human and Social Sciences. Many of them target the psychological corollaries of confinement on the general population [28]. In the international scientific literature, pedagogical continuity has been the subject of a few case studies and theoretical articles relating, for example, to the functioning of Chinese schools during their confinement [29-30]. In France, a survey conducted at the end of March 2020 provided some data to better understand the experience and realities of implementing DL [31]. The results show that most of the personnel questioned do not live calmly with the situation. Among the studies that have investigated the problem of the rapid transition to DE and more particularly the subjects related to EDE, we cite the following research:

1. Rapid transition to distance learning due to Covid-19: Perceptions of postgraduate dental learners and instructors done by: Fatemeh Amir Rad, Farah Otaki, Zaid Baqain, Nabil Zary, Manal Al-Halabi at Mohamed Bin Rashid University of Medicine and Health Sciences, Dubai, UAE. September 20, 2020. Learners and instructors were satisfied with the rapid transition from face-to-face to distance learning. Instructors were more satisfied than learners. Lessons learned on how to overcome obstacles and challenges to continue the process of education. Experience enforces and maximizes learned and teaching [32].

2. Education in times of crisis: Rapid transition to distance learning done by: Zivko Bojović, Petar D. Bojović, Dusan Vujosevic, Jelena Suh at the University of Novi Sad in Serbia. August, 2nd, 2020. The study focused on the implementation of distance learning system and interaction of students during the distance learning process. The study results showed high satisfaction with the distance learning process. The research implied acceptability of prolonged distance learning if needed. Hybrid education system might be embraced for next generations [33]

3. Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity done by: Chrysi Rapanta, Luca Botturi, Peter Goodyear, Loudres Guardia and Marguerite Koole. Collaboration study among University of Nova de Lisboa, Portugal; University of Applied Sciences and Arts of Southern Switzerland, Switzerland; The University of Sydney, Australia; University of Saskatchewan, Canada. July 7th, 2020. The study focused on organizing and designing better learning experience during the pandemic. The study found that certain characteristics are needed to have a better adaptation and transition to the new online learning system which includes social, cognitive and facilitator concepts [34].

4. The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: a qualitative study exploring medical students' perspectives done by Rehana Khalil, Ali E. Mansour, Walaa A. Fadda, Khaled Almisnid, Mohammed Aldamegh, Abdullah Al-Nafeesah, Azzam Alkhalifah and Osama Al-Wutayd at the Qassim University in Saudi Arabia. August 28th, 2020. The study explored undergraduate students' perspective of the synchronized online learning during the pandemic. The study found that the shift was acceptable for the medical students and there is a promising potential for future education using the online system. Regular evaluation is needed to ensure the effectiveness of the system [35].

4 survey analysis

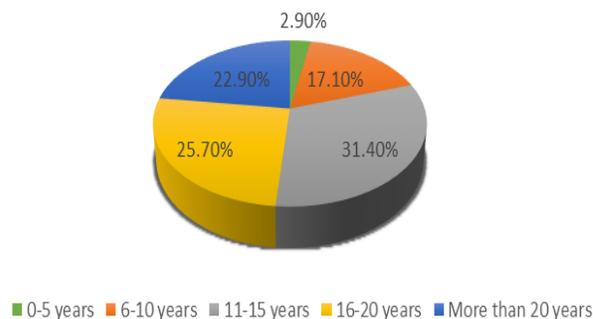


Fig. 1: Years of experience in HE

This first pie graph shows that most respondents (31.4%) have between 10 and 15 years of experience in HE. 25.7% have between 15 and 20 year-experience and 22.9% have more than 20 year-teaching experience in HE. While 17.1% of teachers have between 5 and 10 year-experience and only 2.9% have less than 5 year-teaching experience.

That means 80% of HE teachers in UAE have more than 10 year-teaching experience, this is due to the policy of recruitment of universities that depends on the teaching experience.

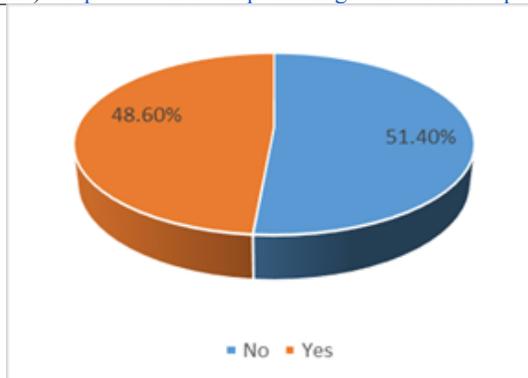


Fig. 2: Having experience in D E before Covid-19

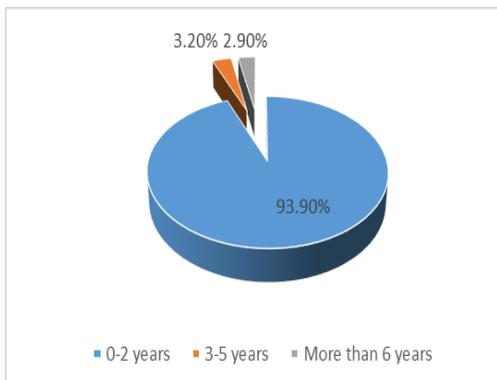


Fig. 3: Years of experience in DE before Covid-19

For 51% of respondents, this was their first experience with online teaching and on the other hand, 48.6% had experience with online teaching (figure2). But 93.9 % of them have less than 2 years in online teaching, this means that the biggest number of teachers are less experienced in DL.

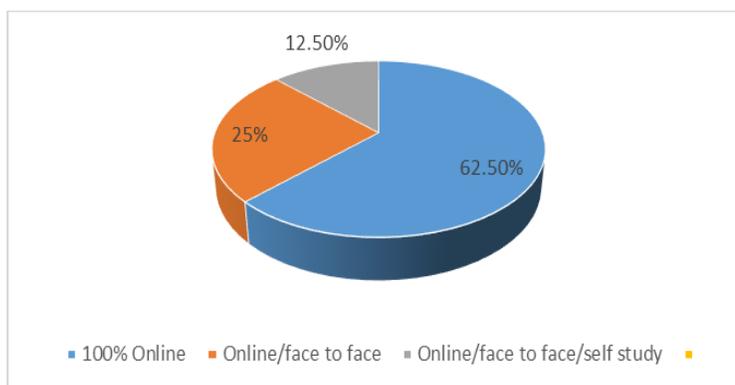


Fig. 4: Type of DL has been taught.

Among experienced teachers in DL, 62.5% taught the totally online method and 25% have taught both in online and face-to-face method. While 12% combined online, face-to-face and self-study method which was called Blended Learning and was taught in some selected courses at many UAE Universities before COVID-19.

It should be noted that we have three types of common learning methods, namely:

- 1- 100% Online: in which the courses are given entirely on an internet platform.
- 2- Online and face-to-face: in this method, the course is delivered partially online and in class.
- 3- Blind learning: this method consists of three parts:
 - Online: where the teacher delivers part of the course from an online platform.

- Face-to-face: where part of the course is given in class.
- Self-study: Where the student follows a pre-recorded course in Moodle.

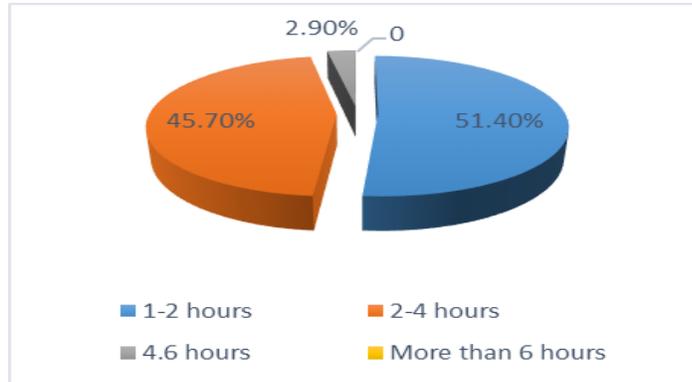


Fig. 5: Time spent to prepare one-hour Online lesson.

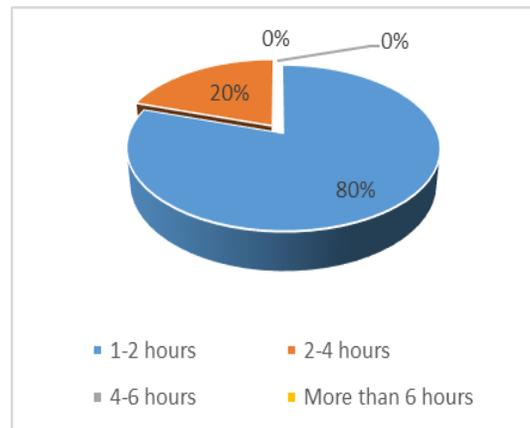


Fig. 6: Time spent to prepare one-hour face-to-face lesson.

51.4% of respondents said that the time spent for preparing an hour of DL lesson is between 1 and 2 hours and 45.7% required 2 to 4 hours of preparation and only 2.9% spent more than 4 hours preparing one-hour-lesson (figure5). On the other hand, most teachers (80%) said that they only spend 1 to 2 hours preparing a one-hour face-to-face lesson. However, only 20% said they spend between two and four hours preparing an hour of face-to-face teaching.

These two graphs summarize that 48.6% of teachers who teach online spend more time preparing DL lessons compared to face-to-face lessons.

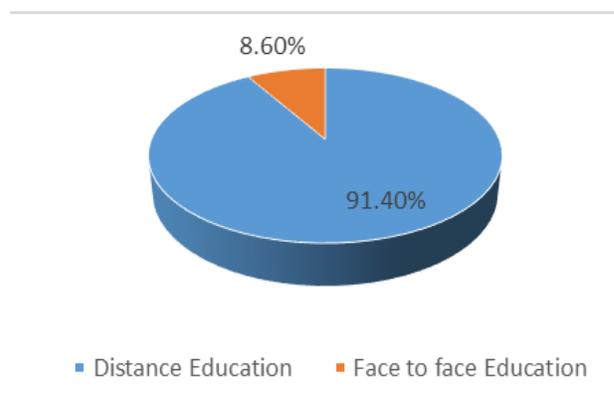


Fig. 7: In terms of difficulties, which method is the most tiring?

91.4% of respondents affirmed that online teaching requires more efforts. On the other hand, only 8.6% saw that the face-to-face method is more tiring.

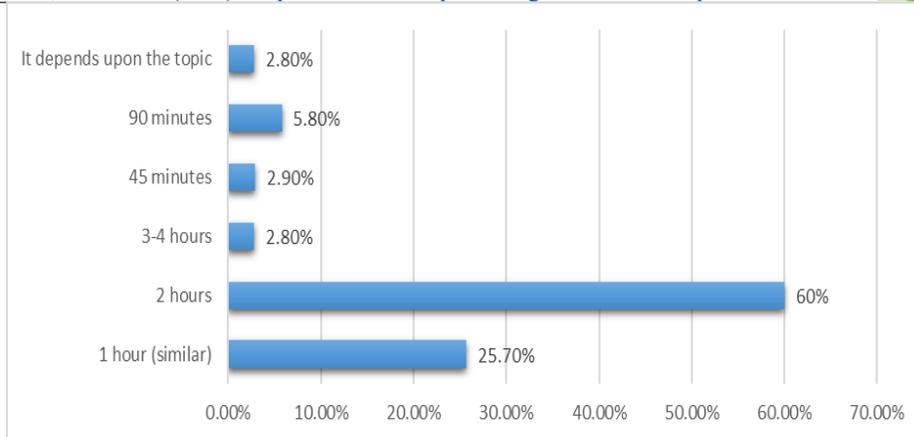


Fig. 8: What could be the equivalent of 1 hour of DL compared to the face-to-face method?

More than 60% of respondents think that 1 hour of DL should be equivalent to 2 or more than 2 hours Face-to-face Learning.

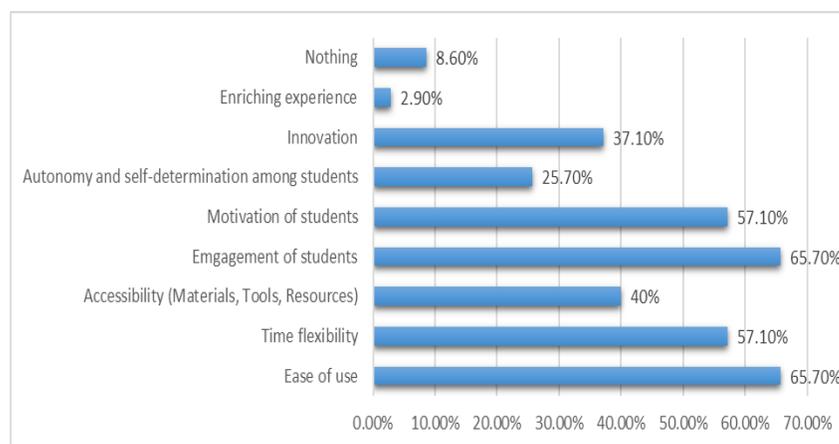


Fig. 9: What has pleasantly surprised the teachers in their 100% Online Learning experience?

The pleasant surprise, mentioned by 65.7% of respondents, was ease of use and engagement of students. This is followed by time flexibility and motivation of students (57.1%), accessibility (Materials, Tools, Resources) (40%), innovation (37.1%) and autonomy and self-determination among students (25.7%).

A smaller 8.6% said that nothing is pleasant in this experience, while only 2.9% of respondents found that it was an enriching experience.

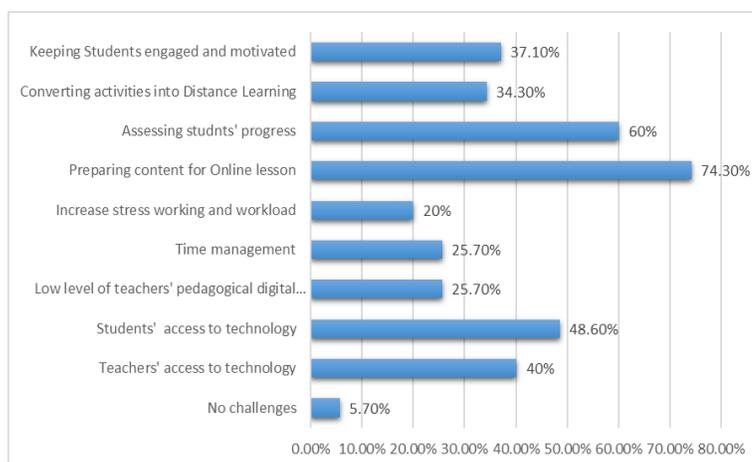


Fig. 10: What were the main challenges for teachers when switching to DL?

The most frequently mentioned challenge was mounting stress from working and workload (74.3%). Followed by assessing students' progress which was reported by 60%, and students' access to technology by 48.6%.

The challenge related to teacher's access to technology was 40%, keeping students engaged and motivated (37.1%), both preparing content for online lesson and converting activities into online learning (34.3%).

The low level of digital competencies for students and pedagogical level competencies for teachers was reported as a challenge both for students (25.7%) and for teachers (25.7%), closely followed by time management (20%). Only 5.7% felt that there was no challenge to mention.

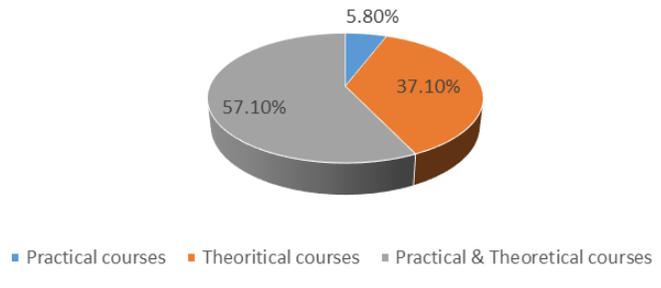


Fig. 11: Kind of courses have been taught online.

Among the total number of respondents 57.1% have taught practical and theoretical courses and 37.1% have taught theoretical courses, while only 5.8% have taught practical courses.

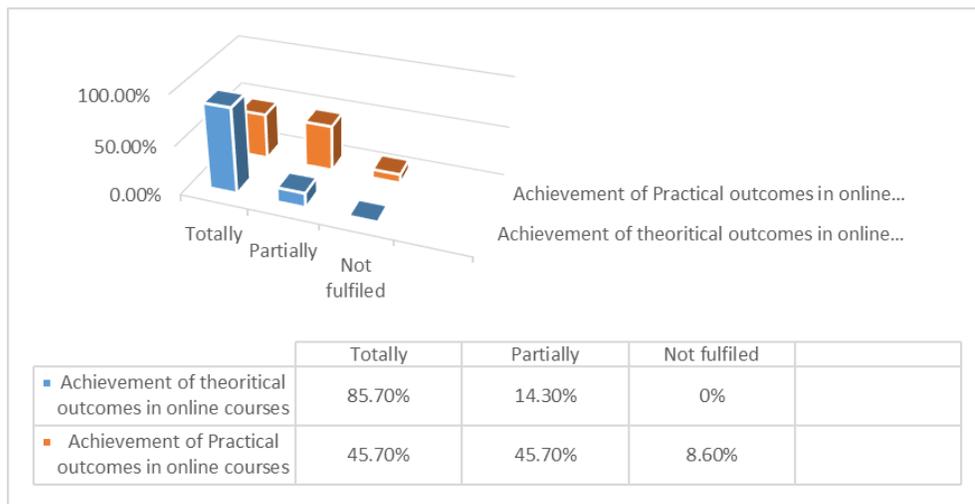


Fig. 12: Achievement of Learning Outcome (a comparison between theoretical and practical outcomes)

In terms of achievement of Courses Learning Outcomes, instructors felt that 85.7% of theoretical courses outcomes have been completely achieved and 14.3% of theoretical outcomes have been partially fulfilled. On the other hand, 45.7% of practical course outcomes have been achieved and 45.7% have been partially achieved, but 8.6% of these outcomes haven't been fulfilled.

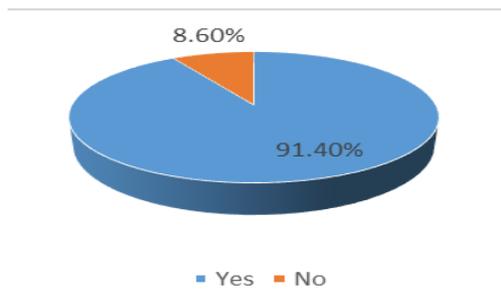


Fig. 13: Due to the current circumstances created by the Covid-19 pandemic, when the University reopens completely, should Distance Learning remain a part of university practice?

Online education should remain a part of university practice after Covid-19, according to 90.1% of respondents. A further 8.6% felt that school should return to its original practice.

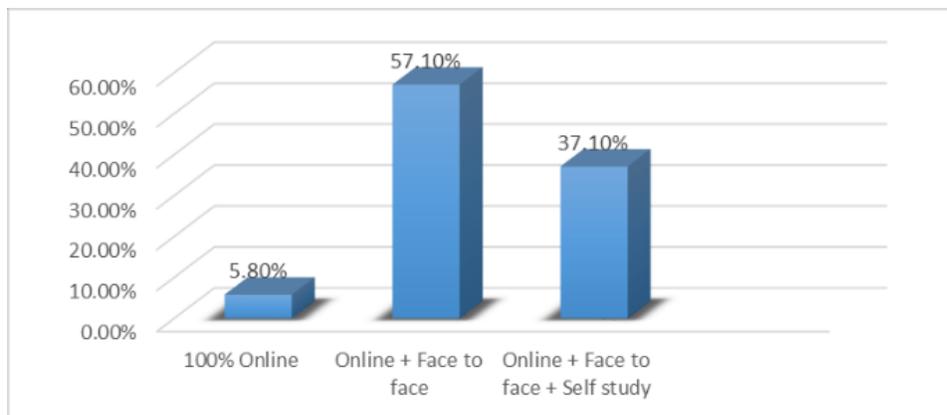


Fig. 14: Should education stay completely or partially online?

According to 57.1% of respondents, when the University reopens completely, Education should combine the face-to-face and the DL method, 37.1% agreed that the method of teaching should combine face to face, online and self-study, and only 5.8% supposed that method should be 100%online.

5 Conclusions and results

80% of HE teachers in UAE have more than 10 year-teaching experience, this is due to the policy of recruitment of universities that depends on the teaching experience.

93.9 % of HE teachers in UAE had less than 2 year-experience in online teaching when teaching started remotely due to the spread of the Corona virus, 51% of them was their first experience with DL. That means that due to covid-19, the biggest number of teachers were suddenly transmitted to DL without having prior experience.

Considering the period of Covid-19 pandemic, 62.5% of teachers have taught in DL. But before that, 25% have taught both Online and Face-to-face method, and only 12% have been experienced in Blinded Learning (Online + Face-to-face + Self-study). This may reveal that distance education in UAE had not been in the interest of the biggest number of teachers until Covid-19.

Comparing the number of credit hours required to prepare an equivalent of an hour of face-to-face course and DL course hour, 80% of respondents said that they spend less than 2 hours to prepare an hour of face-to-face lesson. However, 45.6% declare that they spend more than 2 hours to prepare a 1hour Distance Learning lesson. Which really means that Distance Learning require more efforts than face-to-face learning, this has been affirmed by 90.4% of respondents. As result, more than 60% of respondents think that 1 hour of Distance Learning should be equivalent to not less than 2 hours Face-to-face Learning.

What pleasantly surprised the teachers in this distance learning experience were the points successively cited as follows:

- First, the ease of use and engagement of students.
- Second, the time flexibility and motivation of students.
- Third, the accessibility (Materials, Tools, Resources).
- Fourth, the innovation.
- Fifth, the autonomy and self-determination among students.

By looking at the teachers' responses about the challenges and difficulties they encountered, we found that the most frequently mentioned challenge was increase stress working and workload (74.3%). But, overall, we can group the challenges into three categories:

1- Pedagogical problems:

Several teaches mentioned many problems relating to the conduct and management of exams, some said that there was an inaccuracy in evaluation, and many others said they have faced several difficulties in grading and providing feedback electronically. 60% of them mentioned that it was difficult to assess student's progress and 37.1% mention that keeping

students engaged and motivated was also a challenge for them.

In terms of pedagogy also, it seems evident that 54.3% of respondents claimed problems regarding the delivering of practical courses, they said that the practical course outcomes have been partially or haven't been achieved, mainly for courses that require Labs or Studios, such as Health, Engineering, and Media courses.

2- Technical problems:

Most of technical problems were related to practical courses that require labs. Some of tutors mentioned that this is because practical software were not provided to students, others said because of lack of material and equipment and other respondents said that it was difficult to manage virtual whiteboard.

3- Interaction problems:

Some teachers claim that the fact that the students do not open their cameras during the lesson does not produce an interaction with them and it cannot give a clear idea with reference to the achievement of the course objectives.

From other perspectives, several teachers said that Students using smartphones are less interested in the lesson than those using computers.

The most notable suggestions mentioned by the respondents are:

- a- Online education should remain a part of university practice after Covid-19.
- b- Education should combine the face-to-face and the distance learning methods.
- c- Practical courses should be taught in class (face-to-face), or we should find an alternative.
- d- The measurement of a credited hour in distance education compared to that in face-to-face must be reviewed, since most respondents declare that an hour online is much more tiring than that in class.

6 Recommendations

- 1- The DE should be offered in addition to and not as a replacement for face-to-face education, especially in practical courses which require laboratories and supervised training.
- 2- The quality and richness of interactions as well as the development of relational and communication skills should be guaranteed both in distance and face-to-face courses.
- 3- What should be done by universities towards professors:
 - to provide adequate training for teachers.
 - to always offer technical support.
 - to offer conditions that are as close as possible to those of teaching face-to-face.
 - to provide reliable, efficient, and easy-to-use computer equipment.
 - respect for the professional autonomy of teachers, as regards the control of course content and its updating.
 - recognition of the additional working time induced by distance education.
- 4- The opening of the student and teacher's camera is fundamental for successful interaction between teacher and student, the fact that students refuse to open their cameras does not allow the teacher to better assess their understanding of the course, for this reason it would be better to require the opening of the camera so that students behave as in a real classroom.
- 5- Favor scientific research which gives a well-studied measure of DL credit hour, (should it be equivalent to a face-to-face hour?) As the questionnaire shows according to most respondents that the teaching hour in DL is much more tiring and stressful than a face-to-face hour.

Conflicts of Interest Statement

I certify that I have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Acknowledgment:

I am grateful to all my 240 higher education colleagues from different universities in the United Arab Emirates, who took their precious time to answer my questionnaire.

Abbreviations:

DE: Distance Education

DL: Distance Learning

EDE: Emergency Distance Education

HE: Higher Education

ICS: Information and Communication Sciences

ICT: Information and Communications Technology

UAE: United Arab Emirates

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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