

Chapter 9

Transition to Online Teaching Under COVID-19: The Case Study of UAE University



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Abstract This chapter discusses the role of universities and government in supporting the transition to online teaching, describes the challenges and reflections of academic staff on this transition to online teaching, their research efficiency during the lockdown, and their satisfaction and comfortability with the online teaching experience in general and in the future. This empirical study uses a cross-sectional online survey of faculty members' experience transitioning to online teaching at UAE University ($N = 175$ of faculty members). The chapter suggests that the UAEU case study could be treated as a successful example of the urgent transition to online learning and teaching since the vast majority of the faculty members were satisfied with their online teaching experience. Furthermore, results even speak for improved research efficiency, irrespective of gender.

Keywords Transition to online teaching · E-learning · Distance learning · Faculty members · COVID-19 · Higher Education UAE

9.1 Introduction

Many countries implemented severe restrictions to prevent the spread of COVID-19: lockdowns, travel bans, social distancing, closure of public places, transition to remote work from home, transition to online learning, vaccination campaigns, etc. The measures affected all social spheres of life, including education. All educational institutions in most affected countries had to shift the operation mode from face-to-face to online teaching and learning (Crawford et al., 2020; Cutri et al., 2020; John Lemay et al., 2021; Kessler et al., 2020; Rad et al., 2021; Rajab et al., 2020; Telles-Langdon, 2020).

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Recent advancements in the information technologies and global digitalization facilitated this transition (Bensaid & Brahim, 2021). However, countries with the highest digital divide faced multiple challenges throughout the process (United Nations Educational, Scientific, and Cultural Organization [UNESCO] Chairs, 2020). Countries without experience in online education before the COVID-19 outbreak had to make special efforts to close the digital divide (Agormedah et al., 2020; Mishra et al., 2020; Shomotova & Karabchuk, 2022a). Most faculty had to adjust and adapt to teaching online for the first time in their lives due to the urgent transitions (Johnson et al., 2020). Although some academic staff were familiar with digital platforms/tools such as Zoom, Blackboard, Skype (Mouchantaf, 2020) and had some technological knowledge, there was a gap between knowing technology and applying it to the daily online teaching (Alea et al., 2020).

The exploratory analysis of the transition to online teaching and learning under the COVID-19 lockdown restrictions allows to describe the possible effects on the quality of teaching and research as well as to disclose the challenges faced by academic staff. What roles can university administration and government in general play in coordinating and supporting such transitions? How difficult do the faculty members find this fast shift to online mode? Are there differences in combining family duties and remote work from home for male and female faculty members or for those who have or do not have children under 10 years old?

Most previous studies focused on student challenges in online learning under COVID-19 lockdown (Aboagye et al., 2021; Fatonia et al., 2020). This study analyzes the faculty experience in online teaching. The advantage of the study is that it uses empirical survey data collected in the fall of 2020. This allowed us to discuss challenges in distance teaching from the perspective of instructors, including their evaluations of their own teaching and research efficiency, and job satisfaction. It is vital to study those challenges and consequences of the shift to digital education from the faculty perspective to provide better solutions in the future.

This chapter sheds light on a successful example of the urgent transition to online teaching and learning in higher education institutions in the United Arab Emirates (UAE), which adapted to the new digital reality quite quickly and smoothly (Karabchuk & Shomotova, 2022). The UAE could be considered a regional leader in higher education and research, as it became a fast-growing higher education hub that attracts a large share of international students (Karabchuk & Shomotova, 2022). The country has one of the highest percentages of high school graduates enrolling in tertiary education: 95% of women and 80% of men (UAE Gender Balance Council, 2021). Gross enrollment rates in higher education increased from 15.55% in 2008 to 53.72% in 2020. The numbers are even higher for women, with an increase from 27.7% in 2008 to 66.35 % in 2020 (UNESCO UIS, 2021).

First, the chapter provides a comparative literature review analysis on transition to online teaching at higher education institutions under the COVID-19. Second, the study describes the context of the UAE when the shift to online teaching occurred. Finally, the chapter focuses on the analysis of a case study of the UAE University as the largest public university in the country.

9.2 Transition to Online Teaching Across the Globe

9.2.1 *Online Learning in Higher Education Before the COVID-19 Pandemic*

The online learning environment is a relatively new and fast-growing niche in education that has been built, implemented, and practiced at different levels of effectiveness worldwide. Previous studies highlighted that teachers' perceptions of the learning environment influence their approach to teaching (Prosser & Trigwell, 1997; Trigwell & Prosser, 2004). Indeed, teaching in a traditional face-to-face classroom is different from teaching online (González, 2012). Moreover, one of the reasons why online learning was not massively used was that teachers considered online learning only as an information transmission method (Journell, 2010). Similarly, students could not use electronic courses without the active support of tutors (Balabas, 2017) and were less certain of the prospects for successful online learning interactions (Lemay et al., 2021). For example, in post-soviet countries, e-learning was most often associated with mass open online courses (MOOCs), and often blended with the traditional type of in-class education (Kireev et al., 2019), but usually with low number of enrolled students. Moreover, students do not use technologies the same way as well as they learn in a different way (Whitefield, 2012).

The global digitalization and development of ICT helped universities adapt online and hybrid learning approaches. Introduction and use of the Learning Management System (LMS), an online web-based program, supported the delivery of educational courses. Although online teaching practices were incorporated into traditional content delivery models, technology was used primarily for administrative efficiency or convenient access to lecture slides rather than to develop innovative teaching strategies to facilitate deeper learning (Clemmons et al., 2014; Wang & Torrisi-Steele, 2015). Indeed, many higher education instructors and professors rarely developed teaching strategies to engage students in an interactive online environment using technology (Wang & Torrisi-Steele, 2015).

Lately, literature emphasized that there was a significant growth of online learning in higher education, and it is important to provide faculty training and student orientation programs on the tools, course materials, and consider the instructors expectations from online education (Davis et al., 2019). Furthermore, the proliferation of new technologies, the worldwide adoption of the Internet, and the increasing demand for a workforce to be well prepared for the digital economy have led to the rapid growth of online education in various ways (Palvia et al., 2018). Therefore, the positive outcome of the pandemic outbreak is that it speeded up the fast transition of HEIs to an online learning environment, the use and adaptation of new educational technologies, the creation of new teaching strategies and approaches to deliver course content and engage students online. As a result, academic staff and students had to inevitably adapt, teach, learn, interact, and engage online in a new normal context.

9.2.2 Online Higher Education Under the COVID-19 Pandemic

The digital transformation of higher education has been taking decades, but the COVID-19 pandemic forced this transition to occur just within a few days or weeks across the world. Distance and online learning require facilities such as laptops, tablets, PCs, the Internet connection, and software tools. Most countries could provide access to all mentioned facilities, but the main issue was the digital literacy and the competence to use the technology (Khan et al., 2021). Most faculty had zero experience in teaching online before COVID-19 restrictions were implemented (Johnson et al., 2020). The pandemic caught faculty and students poorly prepared, which accounted for challenges associated with technological competence (Khan et al., 2021).

Most of the faculty reported that they faced new various challenges in adjusting to online teaching in March 2020 (Lemay et al., 2021; Mishra et al., 2020; Moralista & Oducado, 2020). Among those challenges they often named communication, student assessment, use of technology tools, online experience, pandemic-related anxiety or stress, time management, and technophobia (Rajab et al., 2020). Furthermore, academic staff declared that logistic support and technical assistance to students consume a lot of their time and effort (Al-Karaki et al., 2021; Cui et al., 2021; Kaba et al., 2021; Khan et al., 2021; Taha et al., 2020). Faculty members now had to spend more hours on preparation for online course delivery working from home (Lemay et al., 2021), and it considerably increased the time spent in front of the screen, causing physical complications (Sepulveda-Escobar & Morrison, 2020; Kaden, 2020). They emphasized that teaching online could have a huge impact on the course and program learning outcomes (Al-Karaki et al., 2021) in addition to low student participation in online sessions (OECD, 2020; Khan et al., 2021). Thus, online classes were found by instructors to be more tiring than face-to-face teaching mode (Sepulveda-Escobar & Morrison, 2020).

The next section of this chapter focuses on details of a case study of the largest public university in the country, UAE University, and transition to online teaching and learning under the COVID-19 pandemic in the UAE.

9.3 Digitization of Higher Education in the UAE Before COVID-19

On the one hand, the UAE was always keen on new information and computing technology (ICT) and has been putting a lot of efforts to close digital divide in the country. In 2015, the UAE (92%) was ranked second in the world in internet use, after Canada (95%) (DataReportal, 2015). By the time the COVID-19 pandemic occurred in 2020, the share of active Internet users in the country reached 99% of the entire population. Furthermore, the speed of the mobile Internet connection (83.52 Mbps)

was the highest in the world, overcoming South Korea (81.39 Mbps), Qatar (78.38 Mbps), and China (73.35 Mbps) (DataReportal, 2021).

On the other hand, the UAE significantly reformed its education system and considerably invested in higher education to increase the number of HEIs and percentage of students enrolling in tertiary education (Karabchuk & Shomotova, 2022). Furthermore, a few years prior to the outbreak of COVID-19, the Ministry of Education (MOE) acknowledged the critical role of information and communication technology (ICT) in the long-term growth and advancement of education (Fook et al., 2015).

In contrast to other Arab countries, the UAE was the first to introduce digital Internet-based learning tools at all levels of education. Since 2013, the UAE has been purchasing the latest e-learning materials, technology platforms, and other equipment (Fraij, 2013) as well as integrating computer-aided learning methods into vocational and higher education (Raji, 2019). For example, students used laptops in class on university courses (Awwad et al., 2013). And by the end of the 2010s, most HEIs were equipped with learning management systems (LMS) with strong 24-h support by IT service providers (Alterri et al., 2020).

In addition, online learning was used through online learning applications. This type of learning allows students to access university courses/educational programs online from anywhere in the world (Raji, 2019). It enables faculty members to supervise their students from distance, to teach a larger number of students, to reuse content, to track student progress using digital technology (Salmon, 2012; Verbert et al., 2014) and allows universities to grow and compete throughout the world (Gokah et al., 2015). For example, in the UAE higher education faculty members used LMS Blackboard, Moodle, and Web CT for e-Learning (Raji, 2019).

9.4 Transition to Full-Time Online Teaching and Learning Under the COVID-19 Pandemic in the UAE

As an essential containment measure to stop the spread of the virus, the first decision of MOE was to close all public and private schools and higher education institutions (HEIs) in the UAE from March 8, 2020. All educational institutions were set for the early spring break for two weeks. All classes were resumed online after Spring Break, the university was closed for sterilizations, and all faculty members were urged to work from home.

The UAE has put many resources to support and facilitate the transition to online teaching and learning. From the first day of this transition, the UAE government cooperated with the Telecommunications Regulatory Authority (TRA), Du, and Etisalat to provide free access to online learning platforms and applications such as Blackboard, Zoom, Microsoft Teams, and Skype. Furthermore, in late April 2020, MoE collaborated with Al Yah Satellite Communications Company (Yahsat), to deliver high-speed satellite broadband services to students and teachers at various locations where such

services were unavailable before (UAE, 2020). Additionally, the government initiated the offer of free mobile Internet services for families without Internet connection at home (UAE, 2020). Furthermore, students and educators without devices were provided laptops (Alterri et al., 2020; Masoud & Bohra, 2020).

9.5 Experience of the Transition to Online Teaching at the UAE University

The United Arab Emirates University (UAEU) is the first largest public university established in 1976, with the highest number of faculty members in the country (Karabchuk et al., 2021). Among all other HEIs in the country, the UAE University strictly complied with the national regulations during the COVID-19 outbreak. As an institution, the UAEU strongly supported its students and faculty during the transition to online teaching and learning.

9.5.1 The UAEU Management of the Transition to Online Teaching and Learning Under COVID-19

The first email correspondence from the University Outreach Department, announcing the two days test of the online learning platforms (Blackboard Collaborate Ultra) at the UAE University, was issued on March 2, 2020. During physical classroom activities, students and teachers were asked to use laptops to log into online platforms to familiarize themselves with the system. After these two days of tests, all universities were sent for the earlier spring break to ensure the safety of the student and university community, in line with the efforts and measures taken at the national level to reduce the spread of COVID-19. More importantly, university management informed that after spring break classes would be delivered completely online using Blackboard Collaborate Ultra Virtual Classroom to ensure the continuity of education.

In addition to government support during the crisis, university leadership provided all the necessary resources to ensure a smooth transition to online teaching and learning (Rad et al., 2021). The transition to online learning can be successful if students and educators are prepared and provided with the necessary equipment and clear guidelines (Lemay et al., 2021; Telles-Langdon, 2020). Thus, the UAEU Center of Excellence in Teaching and Learning provided online training and recorded videos on how to operate online classrooms, prepare recorded materials, conduct online tests, and involve students in online class discussions. Furthermore, the easy-accessible 24/7 support from information technology specialists (IT helpdesk) facilitated the online teaching and learning experience for both students and faculty members.

9.5.2 The UAEU Study Description: Data and Analytical Strategy

To disclose all the challenges and bring more details on this experience in the transition to online teaching and learning, this study uses a self-administered survey of faculty members. Quantitative data was collected in Fall 2020 through the online survey platform (Qualtrics). It was a complete sample reaching out to all UAEU faculty members (the response rate comprises a bit less than 15%). The survey questions covered aspects such as the transition to online teaching, challenges of distance learning, well-being and happiness under lockdown, self-evaluations of teaching efficiency, and research productivity.

The final sample of the analysis consisted of 175 UAEU faculty members, out of which about 40% were females. About 75% of the sample were married and 12% were single; the rest were divorced. 38% of the academic staff reported that they did not have children. While 20% have only one child, 17% had two children, and 25% had three or more children in the family. 76% of the respondents had Ph.D. degrees, and around 50% of the sample declared that they worked at the UAEU for more than 7 years. The sample distribution by professor ranks was as follows: full professor—14%; associate professor—29%; assistant professor—27%; and instructor—24%.

9.5.3 The UAEU Study Outcomes

The first challenge in teaching online for faculty members was to learn the programs and tools to run the classes online. Since 68% of the respondents had never taught online before March 2020 it took them time and effort to become professional users of the online teaching tools (see Table 9.1). For those who gave a few webinars online before (17%) or were teaching blended courses with regular online lectures (13%), or even recorded online courses (2%) on different online platforms, such as Coursera, EdX. It was less time consuming to adjust to online teaching mode. Furthermore, UAEU faculty members, who had previously experience teaching online, were already familiar with Blackboard Collaborate Ultra, Skype, and Zoom as the most frequently used tools for online teaching. In general, each faculty member spent on average 3.2 h learning how to use the Blackboard Collaborate Ultra.

The experience of online teaching before reduced the number of hours for the class preparations. Thus, those who never taught online before spent on average 3.6 h to prepare for online classes, while those faculty members who had experience in online teaching before spent only 2.63 h for the class preparations. In general, faculty members needed two–three hours more to prepare for their online classes in March–May 2020 compared to the average time (1.69 h) required for face-to-face classes' preparations.

Table 9.1 Experience in teaching online before March 2020

I have never taught online	68.0%
I only taught a few webinars online	17%
I teach blended courses with regular online lectures	13%
I recorded my teaching for Coursera, EdX, Udemy, etc	2%

Source Authors' calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020

Spending more hours on class preparations might reduce time to work on research, and that is exactly what we see in Fig. 9.1. The average number of hours spent on research per week decreased slightly from 9.5 h to 8 h under lockdown. It is important to note that this reduction in research time was true for all academic positions. Academic staff spent more time adjusting to online teaching. Furthermore, work from home due to the COVID-19 pandemic forced researchers to face excessive multi-tasking. They were distracted by childcare and housework, resulting in an experience of fatigue that could reduce research time and efficiency (Cui et al., 2021).

However, the publications outcome speaks for the increased research productivity. Interestingly, despite the rank of the professorship positions and type of the publications, we see the overall increase in the number of published articles and books (see Table 9.2). It could be explained either by the increased free time at home due to the overall country's lockdown or by the general university's re-orientation toward research and publications.

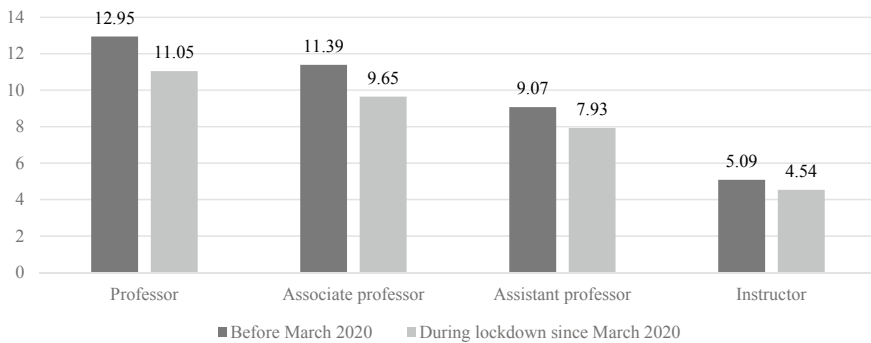


Fig. 9.1 The average number of hours that faculty members spent per week doing research before March 2020 and during lockdown since March 2020, by academic position (*Source* Authors' calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020)

Table 9.2 The average number of publications completed during March–September in 2019 and March–September 2020 by academic rank

Academic rank	March–September 2019			March–September 2020		
	Articles Indexed by Scopus	Chapters and Books	Non-indexed by Scopus	Articles Indexed by Scopus	Chapters and Books	Non-indexed by Scopus
Professor	3.7	1.2	1.1	3.5	3.5	1.4
Associate professor	2.1	1.1	1.1	2.4	2.4	1.3
Assistant professor	1.6	0.5	0.8	2.0	2.0	0.7
Instructor	0.5	0.1	0.5	0.4	0.4	0.3
Total	7.8	2.9	3.4	8.3	8.3	3.7

Source Authors’ calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020

9.5.4 *The Role of Gender and/or Family Status in Adjustment to Online Teaching*

Previous studies found that female professors spend more time doing multiple tasks, including home-related duties and childcare (Bianchi et al., 2012; Misra et al., 2012). Moreover, differences in gender diversity among faculty research productivity were found to be statistically significant, males researchers publish and collaborate more than females (Kaba et al., 2021). The pandemic further enlarged the gap between women’s and men’s domestic workload (Cui et al., 2021), as well as the gender gap in research productivity (Kaba et al., 2021). Figure 9.2 shows the existed gender gap in research hours before and after COVID-19: the about three hours difference on average that faculty spent on research remains. Important to underline that the expected further increase of this gender gap in hours was not observed in the UAEU. The gender difference in research hours even shrank from 3.04 h to 2.53 h. Both male and female faculty members reduced their time on research by one hour during the lockdown period.

Having children is likely to increase childcare-related tasks for parents-researchers. Previous studies reported that mothers found the transition to online teaching challenging because they running classed online and simultaneously were supervising their own children’s online learning (Al Lily et al., 2020; Shomotova & Karabchuk, 2022b). The results of this study are also in line with the previous findings (see, e.g., Al Lily et al., 2020). Faculty members with younger children under 10 years old at home spent slightly less time on research on average in comparison with those without younger children both before and after transition to online teaching (Fig. 9.3). At the same time, we do not see a considerable drop in research hours of the faculty members with children under 10 years old during the COVID-19 lockdowns in comparison with those faculty members without children.

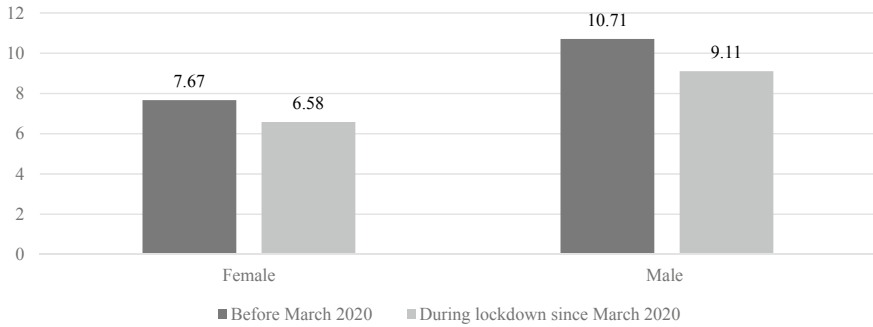


Fig. 9.2 The average number of hours spent on research per week before March 2020 and during lockdown since March 2020 by gender (*Source* Authors' calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020)

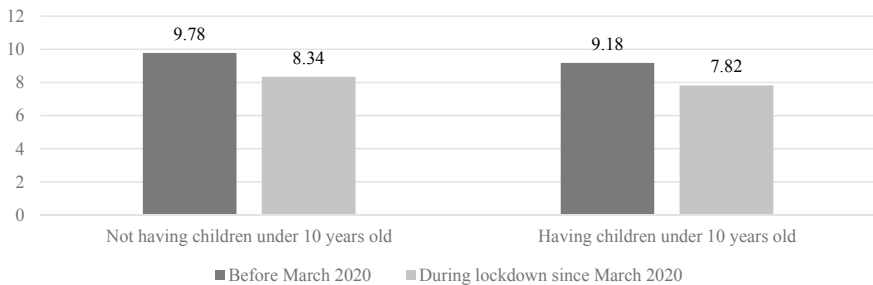


Fig. 9.3 The average number of hours spent on research per week before March 2020 and during lockdown since March 2020, having and not having children under 10 years old (*Source* Authors' calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020)

Figure 9.4 shows that more than half of the women agreed (54%) that they faced difficulties combining family and academic work during lockdown under the COVID-19 pandemic, while 52% of the men did not find it difficult to balance family and remote work from home during the same period from March to July 2020. Though there is a little difference found between genders, this question should be addressed in further research to provide better workplace strategies during emergency or crisis changes.

9.5.5 Challenges, Satisfaction, and Comfortability with the Online Teaching

Although the government in the UAE supported students and instructors with Internet access and technological resources (Sebugwaawo, 2020; Saif Almuraqab, 2020), educators needed some time to learn the online teaching tools and adapt to the

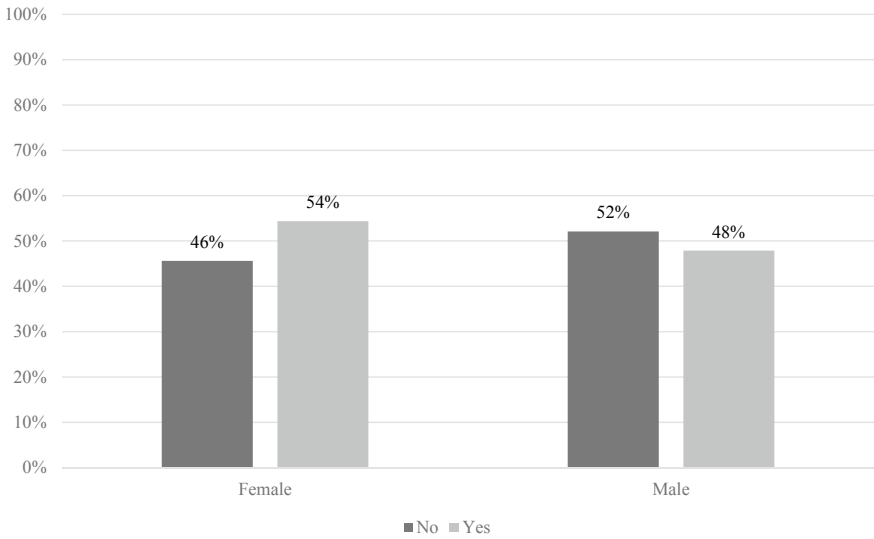


Fig. 9.4 The answer to the question ‘Do you face any difficulties in combining family responsibilities and academic work during the lockdown period from March to July 2020?’ by gender (Source Authors’ calculations based on data from the Online UAEU Faculty Well-being Survey, Fall 2020)

online classrooms (OECD, 2020). UAEU faculty members (89%) reported that the adjustment to online teaching has created new challenges and tasks in teaching. Most of the UAEU faculty members (83%) found that teaching online required more time and effort, especially for class preparations and providing feedback on assignments. In general, 73% of academic staff found that the workload was heavier during online learning than during face-to-face learning. These findings are much in line with the previous literature (Al-Karaki et al., 2021; Cui et al., 2021; Lemay et al., 2021; Khan et al., 2021).

In particular, 80% agreed that exams are better handled through traditional means than online. Exams online are more difficult to undertake if you have many people at home who distract you, the constantly open cameras during exams could give another type on anxiety (Al-Yateem et al., 2021; Khan & Khan, 2019). For the faculty members, the online exams require special strategies to reduce the dishonest behavior (Al-Yateem et al., 2021; Lassoued et al., 2020). In the UAE many universities required the use of exam integrity tools (e.g., LockDown Browser) and exam proctoring tools (e.g., Respondus Monitor) (Al-Karaki et al., 2021).

Online exams were not the only problem for the faculty members under this period of distant learning. Figure 9.5 shows the list of the most reported challenges that faculty members faced in the transition to online teaching and learning. 69% of the respondents mentioned low student engagement and discussion during online sessions. It was challenging to interact with students because they did not switch microphones and video-cameras; instead, they preferred to use chats. In addition to delivering the content of the course, teaching online required significant effort

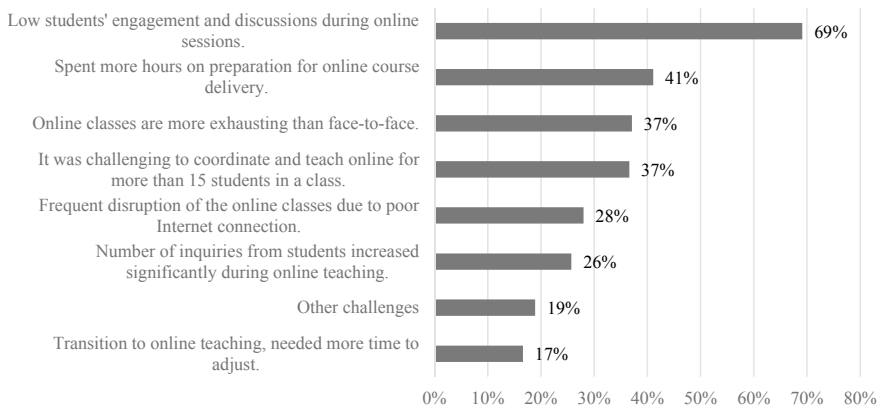


Fig. 9.5 The challenges academic staff faced during online teaching under the COVID-19 pandemic (*Source* Authors' calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020)

to judge whether students were paying attention and/or understanding the material. Due to low student engagement or no student responses, instructors needed to present the content of the class in various approaches to ensure that students understood the lesson. This required more time and effort than regular face-to-face classes.

As a result, 41% of the survey participants reported that they spent more hours preparing for the delivery of online courses. Furthermore, 37% of the faculty reported that it was challenging to coordinate and teach online classes with more than 15 students and that online classes were more exhausting/tiring than face-to-face. Furthermore, 28% of the faculty mentioned that poor internet connection and frequent interruptions were critical issues during online teaching.

Due to the emerging transition and the lack of time to change to online teaching, academic staff (26%) reported that they had to deal with the significantly increased number of student inquiries in an uncertain context of the pandemic. Other problems (19%) faced during online teaching were preparations for online examinations, managing online writing assignments, lack of practical sessions, more plagiarism and cheating during exams/tests, and lack of technology and digital literacy of students. Finally, academic staff (17%) needed more time to adjust to the rapid transition to online teaching.

The university support was highly appreciated by faculty members and was the key factor in rather high self-evaluations in the satisfaction of the transition to online teaching and learning at the UAEU. Almost all faculty reported receiving full support from the university while shifting to online teaching. They agreed that the UAE University: provided equipment and platforms for smooth transition to online teaching (93%); provided technical and training support to help me transition to online teaching (92%); replied quickly to my requests and questions about issues of online teaching (93%); regularly provided information on the process and regulations during online teaching (94%).

Table 9.3 The average scale of satisfaction by academic position and having or not having previous online teaching experience

		How satisfied are you with your transition to online teaching?	How satisfied are you with working remotely during a lockdown?
Academic rank	Professor	6.1	6.3
	Associate professor	6.9	6.6
	Assistant professor	6.9	7.1
	Instructor	7.3	7.1
Online teaching experience	Not having online experience	6.65	6.56
	Having online experience	7.19	7.25

Source Authors' calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020

Direct self-assessment questions allowed us to measure how much faculty members were satisfied with the transition to online teaching, remote work from home, their comfortability with online tools, and their perceptions about online teaching in the future. Table 9.3 shows that the younger generations of instructors and assistant professors had slightly higher average scores of satisfaction level than the older generations of professors. It looks like full professors faced more technostress and challenges in adjusting to the online teaching environment (6.1) and working remotely (6.3), in comparison with other academic staff.

Similarly, the previous research highlighted that most of the faculty respondents expressed feelings of stress and anxiety during their shift to online teaching (Johnson et al., 2020). At the same time, instructors were satisfied with the rapid transition to distance online teaching due to COVID-19 because of several advantages, such as online teaching saved time and energy to commuting back and forth between one's home and campus (Rad et al., 2021). In contrast, we also need to consider that the instructor position assumes heavier teaching loads than the full professor position, which accommodates time for research. If so, instructors should be the ones who suffered the most from the higher number of teaching hours online, but this trend was not obvious from the data.

Furthermore, it is critical to link the results on satisfaction with the previous online experience. Faculty members who had never taught online before were less satisfied with the transition to online teaching (6.65) and remote work (6.56) (Table 9.3). On the contrary, faculty members with previous online teaching experience were slightly more satisfied (7.19) with the transition to online teaching and (7.25) working remotely (Table 9.3).

Table 9.4 shows that females felt more comfortable with teaching online (7.81) and using online teaching tools (8.37) than male faculty (7.56) and (8.09) accordingly. Moreover, young faculty members (below 30 years old) were more comfortable (8.5) than older faculty members (7.53) to teach online, but interestingly, less

comfortable (8) of using the current tools to teach online. Academic staff without children under 10 years old had slightly higher comfortability score (7.75) against those who are with children (7.48) teaching online in general and using tools for online teaching (8.2). Notably, faculty members with previous online teaching experience were significantly comfortable with teaching online (8.21) and using online tools for course delivery (8.58) in comparison with those who did not have previous experience in online teaching (7.75).

On average, full professors were less comfortable (6.68) with teaching online compared to other faculty members (Table 9.4). Compared to instructors, who were the most comfortable (8.31) with online teaching, assistant professors and associate professors (7.71) reported to be less comfortable with online teaching. While all faculty members on average (8.19) on the scale from 1 (min) to 11 (max) were comfortable with using the current online teaching tools (BB Collaborate Ultra, MS Teams, Zoom, etc.), the instructors had slightly the highest score (8.69). The least comfortable with online teaching tools were full professors (7.64), who were as well less satisfied (6.1) with the transition to online teaching (Table 9.3).

Table 9.4 The average scale of comfortability with teaching online in general, with using the current online teaching tool, and positive feeling to continue teaching online in the future by gender, age, children under 10 years old, online experience, academic rank

		How comfortable are you with teaching online in general?	How comfortable are you with using the current tools to teach online?	To what extent do you feel positive to continue teaching online in the future?
Gender	Male	7.56	8.09	6.28
	Female	7.81	8.37	7.17
Age	<30	8.5	8	7
	>30	7.53	8.34	6.33
Children under 10 years old	Having children	7.48	8.17	6.33
	Not having children	7.75	8.2	6.76
Online experience	Having online experience	8.21	8.58	7.19
	Not having online experience	7.38	8	6.32
Academic rank	Professor	6.68	7.64	5.23
	Associate professor	7.56	8.16	6.56
	Assistant professor	7.71	8.1	6.71
	Instructor	8.31	8.69	7.46

Source Authors' calculations based on the Online UAEU Faculty Well-being Survey data, Fall 2020

Despite the challenges mentioned above, 43% of the faculty felt very positive about continuing teaching online in the future. Surprisingly, the share of positive forecasts for online teaching among female faculty members (7.17) was even higher than among male faculty members (6.28) (see Table 9.4). Younger faculty members (under 30 years old) appeared to be more positive (7) than those above 30 years old (6.33). Likewise, faculty with no children felt slightly more positive (6.76) about teaching online in the future. In addition, those who had previous online teaching experience reported that they felt more positive (7.19) about continuing teaching online in the future than faculty without the same experience (6.32). Considering academic positions, professors (5.23) are significantly less positive about teaching online in the future than instructors (7.46). Thus, we can conclude that instructors adopted online teaching a bit faster and have more positive perceptions of future online education. Similarly, a previous study found a significant difference in the favorability of online education in gender ($p = 0.036$), age ($p = 0.019$), years of teaching ($p = 0.048$), academic rank ($p = 0.013$) (Moralista & Oducado, 2020).

9.6 Conclusions

This chapter provided findings on how faculty members transitioned to online teaching and discussed the challenges that the faculty members faced with the focus on research efficiency and time for class preparations. In particular, the differences in combining family duties and remote work from home were highlighted for male and female faculty members and for those having/not having children under 10-year-old.

Most faculty worldwide had zero experience of teaching online before COVID-19 (Johnson et al., 2020) and the main issues were lack of digital literacy and technological competence (Khan et al., 2021). In this study, 68% of the respondents had never taught online before March 2020, and it took them time and effort to become professional users of the online teaching tools. They spent on average 3.6 h to prepare for online classes, while those faculty members who had experience in teaching online before spent only 2.63 h for class preparations.

Moreover, all faculty spent fewer hours on research per week under lockdown. Both male and female faculty reduced their research time by one hour during the lockdown period. Interestingly, despite that the survey revealed an overall increase in the number of published articles, chapters, and books.

Most university faculty found that the adjustment to online teaching created new challenges and tasks in teaching, especially for class preparations and providing feedback on assignments. Likewise, the workload was heavier during online learning than during face-to-face learning. More female faculty agreed that they faced difficulties combining family and academic work during the lockdown under the COVID-19 pandemic than male faculty members. Low student engagement and lack of discussion during online sessions were reported as one of the most significant issues in online teaching. It was challenging to coordinate and teach online classes with more

than 15 students and that online classes were more exhausting/tiring than face-to-face, in addition to poor internet connection and frequent interruptions.

As a result, full professors faced more technostress and challenges in adjusting to the online teaching environment (6.1) and working remotely (6.3), compared to other academic staff. Furthermore, they were less comfortable (6.68) teaching online in general compared to other faculty members. Similarly, faculty (6.65) who had never taught online before were less satisfied with the transition to online teaching and remote work in comparison with those who had this experience before. Only 43% of the faculty felt very positive about continuing teaching online in the future. Surprisingly, female faculty members were a bit more enthusiastic about teaching online in the future than male faculty members. In general, all faculty members on average (8.19) were comfortable with using the current online teaching tools (BB Collaborate Ultra, MS Teams, Zoom, etc.).

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