Faculty Perceptions of Online Learning During the Coronavirus Outbreak

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Abstract—This study examined the perceptions of faculty members at Ajman University during the period of COVID-19 to estimate the reality of the experience of employing E-learn applied during the 2020/2021 academic year at higher education establishments in the UAE. A descriptive method was adopted in the research. The study participants consisted of all staff the faculty (274) of Ajman University who were selected from different faculties with different specializations in the academic year 2020-2021. A questionnaire, consisting of (38) items, was developed as an instrument for the study after its validity and reliability were verified. The results indicated that faculty members' perspective of Ajman university as one of the UAE universities as being highly prepared, well trained, and equipped to apply online learning during the period of Covid-19. The findings also indicated that the faculty members' perspective related to the process of teaching and learning via online learning reached a moderate level, and the obstacles encountering the application of online learning reached a high level, while their perspective concerning suggestions to develop the online learning experience was at mid-level. Faculty members' responses regarding applying online learning differed according to the college variables came with favor for Medicine College, depending on the year of experience (in favor of 5- to less than 10 years), and depending on gender and academic rank of faculty members (the perspective of faculty members is statistically insignificant according to the gender and academic rank variables).

Keywords—online learning, COVID-19, faculty members, Ajman university, higher education

1 Introduction

The emergence of the Coronavirus (COVID-19) has brought almost all fields of our social life to a standstill such as political, social, educational, cultural, and economic needs. In order to combat the spread of this severe pandemic, the World Health Organ-

ization (WHO) stated social distancing. [1]. The world has witnessed the utmost extensive disruption in educational systems in history, involving 190 countries over the world, as face-to-face classes have been suspended around the world in early 2020.As much as 99% of the student population around the world has been affected by the closure of academic institutions[2]. The social distancing measures have closed campuses around the world. UNESCO admits that about 91.3 percent of the world's students, or about 1.5 billion of the world's students, cannot attend school due to COVID-19, so online learning is replacing them[3]. Due to closing the schools and universities, the educational system was disrupted and academic institutions had to cope with online learning without adequate preparation time. Students and teachers faced many challenges in transitioning and implementing the new teaching and learning model [4–6].

Many educational institutions have adopted online or distance learning as a solution to the covid-19 pandemic [7]. Many studies have demonstrated the importance of online education in a variety of universities around the world [8]. Among the most prestigious universities in developed countries, education has been delivered virtually for the last decade; traditional learning practices have been abandoned [4]. Many challenges had been identified due to the new model of teaching and learning. It therefore requires significant planning and organization to completely move to an online education [9]. Hence, to prepare for this and any future crises similar to it, educational institutions must assess the situation and identify their abilities, needs, and readiness [10]. According to a study conducted among chief online officers at faculties, most of the faculty and students believed remote teaching was logistically successful, but they also acknowledged that it was difficult due to low levels of faculty preparation and readiness [11]. According to another survey conducted by the E-learning Research Practice Lab (2020) at Indiana University Pervasive Technology Institute, two thirds of instructors felt disconnected from their undergarduates and found teaching more challenging. Similarly, a similar number of students reported completing online assignments was more time-consuming. Studies have discovered that teacher self-efficacy influences students' confidence in their ability to learn and their beliefs about teaching methods [12]. In order to ensure qualified delivery of online courses, instructors should receive sufficient training. Using laptops, tablets, and smartphones, students can access the material wherever they are, even from university campuses with adequate IT infrastructure and resources [13]. Beginning in March 2020, the UAE Ministry of Education and Etisalat Company worked together to implement continual online learning throughout COVID-19 across all sectors of the education system, i.e. public and private schools and undergraduate institutions. As an important part of this precaution, we need to protect the targeted students against Covid-19 and ensure that the learning process is conducted with high-standard teaching methods in a suitable manner. During the COVID-19 pandemic, we have implemented several measures to ensure success in the online learning process. In replying to the directive of the UAE Ministry of Education, Ajman University started implementing the online learning system in order to restrict the outbreak of the novel Coronavirus recognized as (COVID-19).

Although many studies over the past decades indicated the importance of online learning, but it has been ignored for long time, considering it as a useless and noneffective means of learning, But now it is clear that he has become the main forces in learning

in all over the world As of 17 April 2020, [13], polls asserted that nearly 91.3 percent or around 1.5 billion students around the globe cannot attend school due to COVID-19 spread, which has caused unique challenges worldwide. And the closing of schools as a precaution to stop the spread of infection. Where it was logistically viable, institutions switched to emergency online learning to maintain educational continuation, without given anytime for preparation [14]. Online learning is considered one of the most expanding trends in the use of technology in education [15]. The goal of online education, a form of distance learning, has always been to provide students with access to a learning environment that is as flexible as possible in terms of time and location as opposed to campus-based education. [16]. This indicates that online learning, which often occurs in a synchronous or asynchronous manner through the Internet rather than in a classroom, is an efficient process. Through a number of practical means, such as real-time assessments, real-time questions and responses, surveys, and practice sessions, synchronous learning takes place directly between professors and students. [16]. Meanwhile, [17] pointed out that there are several advantages to online learning, such as raising student cognitive levels, encouraging reflection and data processing, and leveling the action field for participants. Furthermore, [16] mentions some advantages of online learning for students and instructors, for example students are easy access the online materials anytime, providing real-time interaction between students and teacher, the accessing up-to-date and related learning subjects, and They have access to specialists in the subject matter they are studying. Additionally, since learners can access materials online, it is simpler for professors to direct them to pertinent information depending on what they need. Online learning systems can be employed to detect learners' requirements and assign suitable resources for learners to choose from, enabling learners to achieve their learning objective. [18]. Also, [19] pointed out that online learning gives accessibility, online Learning enables people to organize and guide their own learning, may help instructors improve their cognitive skills, and provides opportunity for them to become proficient in the use of Information and Communication Technology (ICT). On the other hand, many previous studies pointed that there are several risks, issues, and challenges associated with transferring and implementing the modren teaching and learning format for both instructors and students. [4–6]. COVID-19 had spread online learning culture across the countries, A lot of universities in different developing countries are not adequately equipped to teach online efficiently, even in development countries the situation was not much different, A report that published by University of Houston's in 2020 summarizing the faculty's perceptions concerning the transition to online learning at the period of COVID_19 has found that most people acknowledge that there is at least some difficulty when it comes to the deployment of technological tools and the manner of instruction due to the low levels of faculty and student readiness. [7]. Many previous studies investigated the faculty perception towards online learning, and indicated to how much faculty supporting the traditional education and explained the importance of online learning but it asserted that cannot replace traditional education [20–22]. Other studies have indicated while the online learning has been a quick and great solution for educational institution during COVID-19, But as a result faculty was facing many challenges in online teaching including, lack of tools

and skills need for online teaching process, IT skills and teaching strategies that encourage students to interact with their teachers during online classes [5, 10]. Further, numerous studies have stressed the importance of providing faculty with adequate support: different kinds of training and workshops are suggested, engagement tools are developed for online teaching processes that emphasize student interaction and motivation, advanced assessment tools are developed, various technologies are provided to facilitate the delivery of content and materials online, and a good internet connection is provided [20, 23–25].

1.1 Research questions

The main questions of research are as following

RQ1: To what extent the UAE universities are ready, trained, and technically supported for online learning at for the period of the COVID-19, as perceived by faculty of Ajman University?

RQ2: How satisfied are students with the online learning environment at institutions in the UAE during the COVID-19, as perceived by the faculty of Ajman University?

RQ3: How did Ajman University faculty members perceive the online learning application?

RQ4. How can Ajman University faculty members improve their experience of using online learning

RQ5. Does the faculty's level of perspective concerning the skill of online education application at the period of the COVID-19 differ according to gender, college, academic rank, and year of experience?

1.2 Research importance

- The study will focus on how professors really experienced online learning at the period of COVID-19.
- Owing to the spread of the COVID-19 around the world, the UAE Ministry of Higher Education has prioritized updating university teaching methods and strategies.
- The study may provide an accurate picture of the challenges and difficulties faculty face during online learning.

2 Methodology

2.1 Approach of the study

A questionnaire instrument will be used in this study as a data collection tool for a descriptive study.

2.2 Study participants

Ajman University's faculty members from different colleges with different specializations are targeted for this study during the academic year 2020-2021. There are 284 in total. (274) faculty members participate in the research because 25 faculty members were used for the experimental study to calculate the credibility coefficient. Table 1 and Figure 1 show the Demographic Data.

Table 1. Participants' demographic data

Study Variables	Variables levels	Frequency (f)	Percentage (%)
Gender	Female	144	52.6%
	Male	130	47.4%
	Total	274	100%
College	Faculty of Dentistry	35	12.8
	College of Pharmacy & Health Sciences	34	12.4
	College of Engineering and Information Technology	51	18.6
	College of Architecture, Art, and Design	33	12.0
	College of Business Administration	16	5.8
	Faculty of Law	15	5.5
	College of Mass Communication	21	7.7
	College of Humanities and Sciences	45	16.4
	College of Medicine	24	8.8
	Total	274	100.0
Academic rank	Professor	49	17.9
	Associate Professor	78	28.5
	Assist. Prof.	95	34.7
	Lect.	52	19.0
	Total	274	100.0
Experience	Less than 5 years	62	22.6
	5-10 years	124	45.3
	More than 10 years	88	32.1
	Total	274	100.0

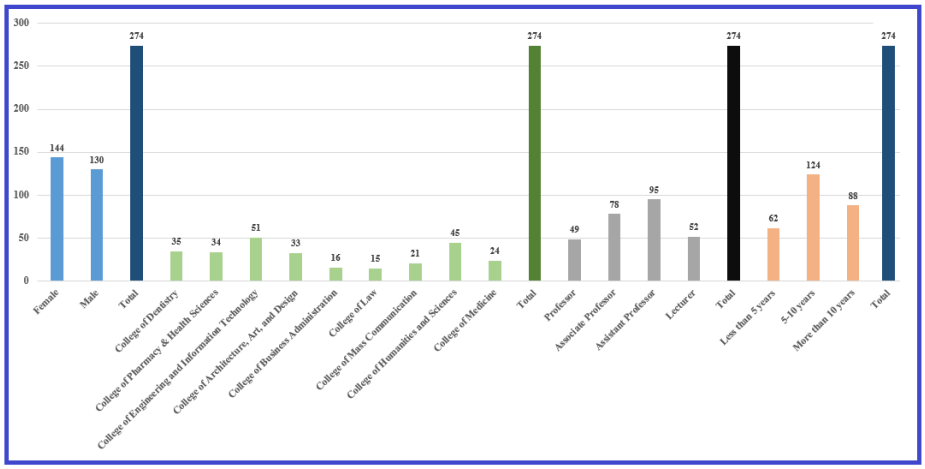

Fig. 1. Participants' demographic information

2.3 Instrument

Faculty members were sent the survey in the second term of academic year 2020/2021, when COVID-19 spread during the second term. There were two parts to the questionnaire. The first part of this survey collected the basic information about the faculty, while the second part consists of (38) items aimed at clarifying the faculty's goal.

2.4 The validity and reliability of the instrument

The adequacy of questionnaire items to the study aims was evaluated by a panel of adjudicators ten faculty members from UAE universities who had extensive knowledge of the field of learning. The recommendations of the academic experts have been taken into consideration, and deletions, revisions, and additions have been made, resulting in a questionnaire with (40) items after modification to fulfill the study objectives. Cronbach's alpha was employed to detect the validity and reliability of the study instrument. The Cronbach alpha coefficient was computed on a pilot study requiring (25) faculty members outside of the study sample (0.862).

2.5 Analytical measures of the data

An analysis of five dimensions is carried out as shown in Figure 2.

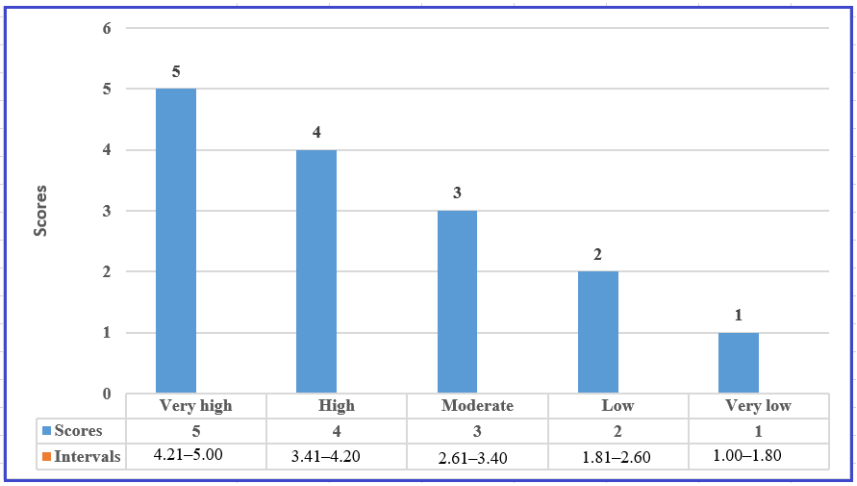

Fig. 2. It shows the Analytical Measures of the data

3 Findings

3.1 RQ 1 Study findings

RQ1: To what extent the UAE universities are ready, trained, and technical supported for online learning at the period of COVID-19, as perceived by faculty of Ajman University?

Each entry (1-7) of the tool was analyzed in descendent order in accordance with the Arithmetic mean presented in table five in order to respond to RQ1. The researchers calculated the means and standard deviations for the sample of research for faculty members.

All questionnaire elements (1-9) were calculated to have a mathematic mean of (3.45), while the standard deviation was (0.84). Ajman University demonstrated high levels of readiness and training for online learning at the period of COVID-19 pandemic. As illustrated in Table 2, students' responses to Item 8 " Technical support services are provided by the University quickly " had the highest average (3.99). A second-high level of rating is evident from the students' responses to item 9, which was rated as having an average of 3.93, a high level, for " It is easy and clear to connect to our online learning system.". Item 7 “The University provides various ways to communication with the university technical support service.” With a grade of 3.92, this third level is the most ready, with very good training, and with a great degree of technical support for online learning. Moreover, it is also clear from the faculty members' responses as shown in Table 2, that all other items 3, 4, 6, and 5 scored came at the level of moderate.

Table 2. shows the means, standard deviations, and technical assistance for implementing online learning

No	Items	Mean	S. Deviation	Description
1	The University provided enough number of training workshops on the online learning system for all faculty members	3.74	0.68	High
2	The University provided comprehensive and qualified training on online learning for all faculty members	3.74	0.68	High
3	The University held clarification meetings about online learning policy and procedures.	3.25	0.66	Moderate
4	Detailed instructions were provided by the University for how to use the online learning system.	3.30	0.67	Moderate
5	The University provides direct technical support service before or while teaching from within the university	2.53	1.23	Moderate
6	The University provides technical support service for faculty members in their homes or at off-campus locations	2.67	1.29	Moderate
7	The University offers different ways to communication with the university technical support service.	3.92	1.00	High
8	Technical support services are provided by the University quickly	3.99	0.71	High
9	The online learning system adopted by our university provides stress-free and clear connectivity (Blackboard - WebEx - Zoom ….) It is easy and clear to connect to our online learning system.	3.93	0.67	High
Total mean for Items		3.45		High
Standard deviation		0.84		

3.2 RQ 2 Study findings

RQ2: How satisfied are students with the online teaching and learning process at UAE institutions at the period of COVID-19, as perceived by the faculty of Ajman University? As shown in Table 3, writers calculated the means and standard deviations of the responses for each item of the tool (10-20) from the study example of students.

All items (10-20) in Table 3 had a mean (4.03) and a standard deviation (0.72), respectively. According to the findings of this study, faculty members of Ajman University have been high satisfied with the processes of teaching and learning via online learning. In Table 3, the highest average rating (4.61), as well as a high level of satisfaction, is shown for Item 12- "Online learning takes in consideration individual differences". Moreover, based on the respondents' responses to item 18- "Online learning increases the spirit of cooperation among students.", this paragraph had the 2nd highest level, with 4.13. As far as the teaching and learning process through online learning is concerned, item 13- “Online learning increases the effort made by a faculty member” showed the third highest level of satisfaction from faculty members of Ajman University with 4.12 Avg score, and the overall level of satisfaction was high as well. Similarly, items: 14, 19, 20, 10, 15, 17, 16 and 11 with their respective average values of 4.10, 3.99, 3.93, 3.91, 3.91, 3.91, 3.89 and 3.88 all were at highly satisfied.

Table 3. Means and standard deviation of satisfaction for the process of teaching and learning by online learning

No	Items	Mean	S. Deviation	Description
10	Online learning organizes a faculty member's time	3.91	0.73	High
11	Online learning develops a faculty member's skills in the use of information technologies	3.88	0.73	High
12	Online learning takes in consideration individual differences.	4.61	0.49	Very High
13	Online learning increases the effort made by a faculty member.	4.12	0.76	High
14	Online learning doesn't add to the faculty member any new skills	4.10	0.78	High
15	Working with online learning is comfortable for the faculty member.	3.91	0.73	High
16	Online learning allows fast and reliable communication with students.	3.89	0.73	High
17	Online learning promotes interaction and discussion with students.	3.91	0.78	High
18	Online learning increases the spirit of cooperation among students.	4.13	0.77	High
19	Online learning improves self-learning skills	3.99	0.71	High
20	Faculty members use all applications available in the online learning system.	3.93	0.67	High
Overall mean for items		4.03		Moderate
Standard deviation		0.72		

3.3 RQ 3 The findings of the study

RQ3: How did Ajman University faculty members perceive the online learning application? The mean and standard deviation were calculated for the items (21-33). The results were shown in Table 4, with means illustrated in descending order.

The Table 4 shows a mean of 3.98 and a standard deviation of 0.79 for all items (21-33. According to this data, the online learning application at Ajman University faced significant challenges from the faculty members' perspective. A faculty member's response to item 25 (network failures or slowness - audio outages) is also shown in Table 4 had the greatest average (4.70) and was at a very high level for the obstacles. Likewise, item 27-"Online learning increases cheating chances during tests" came at a very high level, with an average rating of 4.68, indicating that this item was rated highly by faculty members. As assessed by Ajman University faculty members, item 23- "sing online learning is a weakness for students." came in third place with a 4.25 average, ranking very high among the faculty members concerning education process via online learning. Moreover, item 30- "Students are facing difficulties in dealing with online tests." has a rating of 3.99 out of 5, and from the faculty's perspective scored well. Similarly, items: 29, 21, 22, 26, 31, 33, 28, 24 and 23 with the respective average values of 3.92, 3.91, 3.88, 3.81, 3.81, 3.78, 3.64 and 3.54 were also at a high level concerning the challenges.

Table 4. Arithmetic means and standard deviation of online learning application challenges

No	Items	Mean	S. Deviation	Description
21	Online learning takes more time and effort than traditional learning	3.91	0.73	High
22	Proficiency in using online learning is lacking among faculty members	3.88	0.73	High
23	Using online learning is a weakness for students	4.25	0.44	Very High
24	Weakness and Delay of technical support services	3.64	1.04	High
25	Lecture problems (network failures or slowness - audio outages)	4.70	0.46	Very High
26	Faculty and students rarely communicate directly	3.81	0.83	High
27	Online learning increases cheating chances during tests	4.68	0.47	Very High
28	Online learning applications are difficult for faculty members to use	3.78	0.89	High
29	Online learning increases the teaching load for a faculty member	3.92	1.01	High
30	Students are facing difficulties in dealing with online tests	3.99	0.92	High
31	The weakness internet available for some students at home.	3.81	0.83	High
32	Student home environments are unsuitable for online learning.	3.54	1.01	High
33	Students are less motivated to learn when they learn online	3.79	0.90	High
Total mean for items		3.98		High
Standard deviation		0.79		

3.4 RQ 4 Study findings

How can Ajman University faculty members improve their skill of using online learning? According to Table 5, the researcher calculated the mean and standard deviation of the faculty members' replies for the items (34-38).

Table 5. Means and standard deviation of the ideas for enhancing the effectiveness of online learning

No	Items	Mean	S. Deviation	Description
34	Training in a variety of methods (on campus/online/videos) for different and updated online learning applications	3.92	1.01	High
35	Continuously enhancing online learning programs	3.16	1.34	Moderate
36	Providing technical support quickly and continuously	2.93	1.38	Moderate
37	Making changes to the assignment, quiz, and exam distribution	3.11	1.37	Moderate
38	Establishing an effective and continuous online learning program in collaboration with the communications network	3.29	1.15	Moderate
Total mean for items		3.28		Moderate
Standard deviation		1.25		

A mean of 3.28 and a standard deviation of 1.25 can be illustrated in the above Table 5 for all items (21-33). According to this finding, faculty members from Ajman University offered moderate feedback and suggestions for improving online learning. Table 5 also illustrates that faculty members responses to item 34- "Training in a variety of methods (on-campus/online/videos) for varying and updated online learning applications" has the greatest average (3.92) and were at the top level when it came to suggestions for improving online learning. Moreover, item 38- "Establishing an effective and continuous online learning program in collaboration with the communications network" It has an average of 3.29 with moderate level concerning suggestions to develop the skill of employing online learning from the faculty members viewpoint. Similarly, items: 35, 37 and 36, with the values of respective average of 3.16, 3.11 and 2.93, were at a moderate level.

3.5 RQ 5 Study findings

RQ5. Does the faculty's level of perspective regarding online learning application skill during the COVID-19 differ based on sex, faculty, academic rank, and year of experience? A mean score and standard deviation were calculated to respond the research 5th question. Tests like the T test, averages, and others were identified using different methods. LSD test was adopted for hoc comparisons to assess the significance of mean differences. Based on the study variables, here is a summary of the responses from the participants

- Variable of Gender:

The independent sample test (T) was employed to ascertain the significance of differences in averages concerning the utilization of online learning at the period of COVID-19 depending on the gender variable, as shown in Table 6.

Table 6. The means and standard deviation of the faculty members responses depending on their sexes

Gender	N	Mean	Std. Deviation	T. Value	Sig (tailed)	Sig. level
female	144	3.7981	0.56322	0.895	0.186	Not Significant
Male	130	3.7340	0.60178			

In the table above, the 0.895 calculated value of T indicates that there was no significant change in significance (2.186), which is less than the calculated value of T which shows that there was no significant difference. Furthermore, this value is larger than 0.05, which is the mean without any favoritism of the two genders arithmetically.

- College Variable:

Based on the faculty members' answers, the results of the ANOVA test are illustrated in the following table.

Table 7. One-way ANOVA analysis of variance based on college variable

		Sum of Squares	df	Mean Square	F	Sig (tailed)	Sig. level
College	Among the Groups	20.196	8	2.525	9.113	0.000	Significant
	Within Groups	73.414	265	0.277			
	Total	93.610	273				

* Statistically significant at ($\alpha \leq 0.05$)

As shown in the table above, the statistically significant difference is 0.00, that is less than 0.05, the the required statistical significance level. This is centered on the staff perspective on the collage variable. LSD test are conducted to detect the reasons of the differences and to compare them, and the results can be found in the table.

Table 8. Results of the LSD test to understand the reasons for variances in faculty members answers based on college variables

(I) The college	(J) The college	Mean Difference (I-J)	Sig.
dentistry	Pharmacy &Health Science	0.20726	0.057
	Business Administration	-0.07202	0.610
	Engineering and Information Technology	-0.10723	0.308
	Architecture, Art and Design	.84640*	0.000
	Humanities & Sciences	.88266*	0.000
	Medicine	-0.13781	0.416
	Mass Communication	-0.02729	0.832
	Law	-0.08040	0.656
Pharmacy &Health Science	dentistry	-0.20726	0.057
	Business Administration	-.27929*	0.033
	Engineering and Information Technology	-.31449*	0.001
	Architecture, Art and Design	.63913*	0.000
	Humanities & Sciences	.67539*	0.000
	Medicine	-.34508*	0.033
	Mass Communication	-.23455*	0.046
	Law	-0.28766	0.096
Business Administration	dentistry	0.07202	0.610
	Pharmacy &Health Science	.27929*	0.033
	Engineering and Information Technology	-0.03521	0.783
	Architecture, Art and Design	.91842*	0.000
	Humanities & Sciences	.95468*	0.000
	Medicine	-0.06579	0.721
	Mass Communication	0.04474	0.762
	Law	-0.00837	0.966
Engineering and Information Technology	dentistry	0.10723	0.308
	Pharmacy &Health Science	.31449*	0.001
	Business Administration	0.03521	0.783
	Architecture, Art and Design	.95363*	0.000
	Humanities & Sciences	.98988*	0.000

(I) The college	(J) The college	Mean Difference (I-J)	Sig.
	Medicine	-0.03058	0.847
	Mass Communication	0.07994	0.483
	Law	0.02683	0.875
Architecture, Art and Design	dentistry	-.84640*	0.000
	Pharmacy &Health Science	-.63913*	0.000
	Business Administration	-.91842*	0.000
	Engineering and Information Technology	-.95363*	0.000
	Humanities & Sciences	0.03626	0.870
	Medicine	-.98421*	0.000
	Mass Communication	-.87368*	0.000
	Law	-.92679*	0.000
Humanities & Sciences	dentistry	-.88266*	0.000
	Pharmacy &Health Science	-.67539*	0.000
	Business Administration	-.95468*	0.000
	Engineering and Information Technology	-.98988*	0.000
	Architecture, Art and Design	-0.03626	0.870
	Medicine	-1.02047*	0.000
	Mass Communication	-.90994*	0.000
	Law	-.96305*	0.000
Medicine	dentistry	0.13781	0.416
	Pharmacy &Health Science	.34508*	0.033
	Business Administration	0.06579	0.721
	Engineering and Information Technology	0.03058	0.847
	Architecture, Art and Design	.98421*	0.000
	Humanities & Sciences	1.02047*	0.000
	Mass Communication	0.11053	0.528
	Law	0.05742	0.790
Mass Communication	dentistry	0.02729	0.832
	Pharmacy &Health Science	.23455*	0.046
	Business Administration	-0.04474	0.762
	Engineering and Information Technology	-0.07994	0.483
	Architecture, Art and Design	.87368*	0.000
	Humanities & Sciences	.90994*	0.000
	Medicine	-0.11053	0.528
	Law	-0.05311	0.775
Law	dentistry	0.08040	0.656
	Pharmacy &Health Science	0.28766	0.096
	Business Administration	0.00837	0.966
	Engineering and Information Technology	-0.02683	0.875
	Architecture, Art and Design	.92679*	0.000
	Humanities & Sciences	.96305*	0.000
	Medicine	-0.05742	0.790
	Mass Communication	0.05311	0.775

According to the college variable, the above table illustrates the study results for identifying the main causes of the variances. A favorable outcome came out of the study for the Medicine college.

- Academic rank

Below is a table that illustrates the results of the One-Way ANOVA for the academic rank variable for the staff.

Table 9. Analysis of variance based on the academic rank variable by One Way ANOVA test

		Sum of Squares	df	Mean Square	F	Sig (tailed)	Sig. level
Computer skills	Among the Groups	0.788	3	0.263	0.764	0.515	Insignifi-cant
	Within Groups	92.823	270	0.344			
	Total	93.610	273				

The preceding table demonstrates that there are no statistically significant differences in staff's opinions related to the variable of academic rank since the value of P is equal to 0.515, which is more than the value of 0.05.

- Year of experience.

Based on the faculty members' answers, the results of the ANOVA test are illustrated in the following table.

Table 10. One-way ANOVA analysis depending on the variable year of experience

		Sum of Squares	df	Mean Square	F	Sig (tailed)	Sig. level
College	Among the Groups	6.698	2	3.349	10.443	0.000	Significant
	Within Groups	86.912	271	0.321			
	Total	93.610	273				

* Statistically significant at ($\alpha \leq 0.05$)

As shown in the table above, the statistically significant difference is 0.00, that is less than 0.05, the required statistical significance level. This depends on the faculty members perspective on the year of experience variable. LSD test are conducted to detect the reasons of the differences and to compare them, and the findings can be found in the below table.

According to the year of experience variable, the table illustrates the study results for identifying the main causes of the variances. A favorable outcome came out of the study for the experience (5- to less than 10 years).

Table 11. Results of the LSD test to understand the reasons for variances in faculty members answers based on year of experience variables

(I) Experiences	(J) Experiences	Mean Difference (I-J)	Sig.
Less than 5 years	5- to less than 10 years	-.36874*	0.000
	more than 10 years	-0.09533	0.278
5- to less than 10 years	Less than 5 years	.36874*	0.000
	more than 10 years	.27341*	0.001
more than 10 years	Less than 5 years	0.09533	0.278
	5- to less than 10 years	-.27341*	0.001

4 Discussion

From the perspective of faculty members at Ajman University, the results related to the first research question indicate that UAE universities are capable of preparing for, training for, and providing tech-support to online learning at the period of COVID-19 pandemics at a high level, as illustrated in Table 2. Based on this result, Ajman faculty are satisfied and convinced that their university is prepared, trained, and equipped to support online learning at the time of COVID-19. The results of this research are consistent with recent studies that have looked at universities' preparedness, training, and supporting technically when it comes to adopting online learning at the period of Covid-19 from the perspective of their faculty members [4, 9, 10]. Based on these results, faculty members and students can adjust to up-to-date learning methods in the future, like blended learning and online learning entirely. According to chief online officers at colleges and universities, the results of the study in the first question contradicted that study in question 11, which argued that although the majority of administrators regarded remote teaching as a logistical success, they also acknowledged that there were some challenges, including a lack of preparedness among universities, faculty, and students. As well, according to another study conducted by [12], two-thirds of faculty members felt disconnected from their undergraduates, and teaching was becoming increasingly challenging. A similar number of students reported that completing their course assignments took more time after online learning was introduced. From the perspective of Ajman University faculty members, the 2nd research question examines the extent of satisfaction concerning online learning. Table 3 indicates that it achieved a high degree of satisfaction, with an arithmetic mean of 4.03 and a standard deviation of 0.72. Accordingly, the majority of items had a great mean, and this shows that most faculty members selected high in most cases, indicating that the degree of approval is high. According to Ajman university faculty members, the teaching and learning process in their university is highly satisfied and convincing following COVID-19 pandemic. Researchers found Ajman University's faculty members had good instructional methods and well-designed courses, along with experience teaching online courses. They may also have good technical experience and a teaching method that is well suited to online learning. A good faculty member should design and organize courses with clear goals, according to[26]. Students and faculty could benefit from this strategy in order to be as prepared as possible before their courses. Moreover, according to [27],

faculty should be prepared to provide students with emotional, pedagogical, and technological support. In several studies, faculty members were found to be moderately satisfied with the process of teaching and learning via online learning [28]. In the third study, students at Ajman University discuss the challenges they face with the online learning application. In Table 4, you can see that the results came at high levels, with total mean of 3.98 and a standard deviation of 0.79. The high means of most items indicate that respondents have high levels of difficulty encountering the online learning use. Based on the findings, faculty at Ajman University believe that online learning application challenges will remain moderate during COVID-19. Results presented in Table 4 indicated that technical difficulties during lectures (network failure, slowness, audio outage) were the biggest challenges facing online learning. Access to the online learning atmosphere must be available to the students. Regardless of the reason, otherwise, eligible students will not be able to take part in the course due to lack of access. Rural areas and neighborhoods with low socioeconomic status face this problem. This result may also be explained by slow internet connectivity and problems with communication software, two of the most frequent technical issues I encountered throughout the whole courses. It was also noted as seen shown in Table 4 also that online learning increased the chances of cheating during exams. The reason, according to researchers, may be a weak investment in online learning programs in technology such as learning management systems (LMSs). These systems can integrate with other fraud detection technologies that provide identity verification and other features designed to thwart fraud. Moreover, the results indicate that from the faculty members' perspective, one of the challenges in implementing online learning is that students' skills in using online learning are weak thus students may struggle to understand course materials because of this. As part of this research, a fourth question was asked about providing suggestions to improve and develop the skill of employing online learning from the aspect of Ajman University faculty members. According to Table 5, the obtained outcomes demonstrated that the result had 3.28 of arithmetic mean and 1.25. of standard deviation Thus, most items have a moderate mean, indicating that the respondents are moderate willing to suggest ways to improve online learning. Studies have found that faculty members are moderately satisfied with the process of education via online learning from own perspective, which agrees with several studies that have maintained this level [29-40].

The 5th research question is raised to determine the difference in the faculty members' responses depending on their genders, college, academic rank, and year of experience. Our findings, illustrated in Table 6, 7, 8, 9, 10 and 11, showed that the difference of responses of faculty members' regarding of adopting online learning during a COVID-19 according to the college variables came in favor for Medicine college, depending on year of experience (in favor of 5- to less than 10 years), and depending on gender and academic rank of faculty members (there is no statistical significance from the perspective of staff based on the gender and academic rank variables).

5 Limitations

Some limitations, however, were also identified in the study. This research was limited by the use of non-probability sampling, and the fact that only one UAE university was involved in the research. The findings therefore are unable be generalized to all UAE higher education institutions. A longitudinal study would be valuable to identify how universities modified to exclusively online education. The degree to which teachers interact with students, how the students are progressing, how well their academic performance has improved, the extent of teacher-student interaction, and how well students' attitudes towards online learning have improved.

6 Recommendation

- Develop and improve online learning platforms according to modern educational technologies.
- Implementation of training and professional growth programs for faculty members in universities.
- Teaching at the period of pandemics such as the Covid-19 requires faculty members to be open to changing and to try novel ways of teaching.
- The need to work on developing the infrastructure necessary to obtain a high-quality educational system, such as the availability of all requirements for online learning, such as the availability of a strong internet network, sufficient devices, the presence of technical support teams, and other requirements.

7 Delimitations of study

- *Subject limits:* Considering Ajman University is one of the United Arab Emirates' higher education universities, the study focused only on online education at Ajman University.
- *Human limits*: Members of the faculty at Ajman University, United Arab Emirates
- *Spatial limits:* Ajman University in the United Arab Emirates.
- *Time limits: Second semester of* academic year 2020-2021

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