

Nursing and Allied Health Sciences Faculty Satisfaction with e-Learning during COVID-19 pandemic in UAE

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Abstract

Since the declaration of COVID-19 as a pandemic, e-learning has been massively expanding in higher education institutions. The abrupt transition to e-learning may have influenced the teaching-learning process and created frustration and dissatisfaction among healthcare faculty members. This study aimed to examine faculty members' satisfaction with e-learning during the Covid-19 pandemic. The study followed a cross-sectional research design to examine faculty satisfaction with e-learning from May 2020 to July 2020. A total of 61 nursing and allied health faculty members involved in e-learning since the COVID-19 lockdown responded to the 'Online Instructor Satisfaction Measure' (OISM) tool. Descriptive statistics were used to describe the participants' demographics and aggregate the responses. The results showed that the most highly rated domain was Course Design/Development/Teaching. The highest level of satisfaction among faculty members was their ability to access students in the e-learning environment. The least satisfactory domain was institutional support. In conclusion, this study provided insights for education administrators and policymakers on the importance of institutional support for faculty members throughout the implementation of e-learning. The study recommends continuous faculty training activities, adequate managerial support, availability of adequate hardware and software tools, and standardized rules and policies for effective delivery of e-learning.

Keywords: Nursing, Allied health, e-learning, Faculty, Satisfaction.

1. Introduction

Many countries have imposed a national lockdown since the World Health Organization (WHO) declared COVID-19 a pandemic. These measures have impacted all business sectors, including higher education institutions (HEI). Several universities and colleges closed their campuses to avoid direct social interaction among students and staff members. In the United Arab Emirates (UAE), all educational institutions were directed by the Ministry of Education (MoE) to adopt e-learning for seamless delivery of courses and as a precautionary measure to minimize social contact and limit the virus's spread. In addition, all institutions need to follow the Department of Health (DoH) guidelines to ensure the health and safety of students and academics. Therefore, it was inevitable to incorporate e-learning in all HEI in the UAE. The growth of e-learning continues to expand in higher education since the first virtual classroom was introduced in 1960 at the University of Illinois and attracts different disciplines and teaching communities (Johnson, Hewapathirana, and Bowen 2019).

E-learning is also referred to as online learning or electronic learning. It is defined as learning activities delivered through electronic technologies and media such as Zoom, Teams, and Blackboard Collaborate (Zhou et al. 2020). Synchronized online classrooms replaced conventional face-to-face classrooms. It is based on students' and teachers' separation, while the knowledge content is delivered through a computer network that facilitates two-way electronic communication between the students and teachers (Sewart,

Keegan, and Holmberg 2020). E-learning has rapidly developed globally and has become an essential method of education (Zhou et al. 2020). The advantages of e-learning are that it provides students the flexibility to study at home and promotes self-paced learning with recorded learning activities for students to access at their own time (Wells 2004). It is also a cost-effective and efficient means of delivering the course contents, especially during these unprecedented times because of COVID-19. On the downside, e-learning may lead to social isolation, lack of practical skills acquisition, limited feedback, and increased chances of misconduct during the assessment. The barriers to e-learning include computer literacy and accessibility to computers and the internet. In addition, there may be several other socio-economic factors that may hinder students' e-learning experience. It is essential to understand these factors to devise strategies to enhance the learning experience.

The use of e-learning in healthcare education has numerous benefits. It facilitates the overall academic development, empowers students and faculty members, and enhances educational achievements (Sharma 2017). However, the unexpected transition to e-learning in most institutions because of the COVID-19 pandemic may positively and negatively influence the teaching-learning process. The sudden changes to the delivery of courses from classroom to online can be frustrating and disappointing to faculty members, mainly if they lack technical skills and institutional support (Zhou et al. 2020). Hence, higher education institutions adopting the e-learning platform must be attentive towards faculty satisfaction to achieve the desired outcomes for all courses. The satisfaction of faculty members is one

of the crucial elements that might negatively influence faculty members' performance and, consequently, the educational system's stability. Faculty members' satisfaction must be considered adequately by policymakers at educational institutions using e-learning (Yengin, Karahoca, and Karahoca 2011). There is limited empirical evidence that examines nursing and allied health faculty satisfaction with e-learning within the Middle East region. This study aimed to examine faculty members' satisfaction with e-learning transition during the Covid-19 pandemic. The study will answer the following question:

What was the level of faculty satisfaction with the transition of e-learning during the Covid-19 pandemic in a Nursing and Allied Health Sciences institution in the UAE?

2. Literature Review

The Covid-19 pandemic has led to global transformations on a broad spectrum of economic, sociocultural, and educational activities (Kulikowski, Przytuła, and Sułkowski 2021). In response to the pandemic, many higher education institutions have moved very fast towards implementing large-scale e-learning (Chang and Fang 2020). The fast transition to e-learning created new educational conditions and brought several challenges due to the nature and degree of online technology embracement and the limited support available for academic staff (Kulikowski, Przytuła, and Sułkowski 2021). Several studies showed significant limitations of e-learning, posing a real challenge on the motivation of the academic staff and institutions (Ferri, Grifoni, and Guzzo 2020; Yusuf and Ahmad 2020;

Vlachopoulos 2020). Sithole et al. (2019) study on 17 faculty members in four U.S universities reported a large number of students in the virtual classes posing lack of interaction with students, academic dishonesty, and high volume of emails on faculty members delivering these courses. Ferri, Grifoni, and Guzzo (2020) study highlighted three main challenges: technological related to the availability of devices and proper internet access, pedagogical related to computer skills, and social related to lack of interaction with students. Yusuf and Ahmad (2020) noticed that students might be less focused during e-learning courses, might not have adequate access to the learning tools and material, or might not even attend the online classes. Similarly, Thomas and Rogers (2020) cautioned about the possible learning inequalities among students from different socioeconomic backgrounds and affecting the availability of needed learning resources.

In a recent study on e-learning challenges and opportunities in Libya, Maatuk et al. (2021) stated that faculty members perceived e-learning as beneficial in developing students' technological skills and facilitating their learning during the pandemic. According to faculty members, the main challenge was the high cost of implementing this new model of learning.

In Jordan, Jarab et al. (2022) evaluated faculty members' satisfaction during the pandemic. The study showed that faculty members who received appropriate training were more satisfied than those who did not receive training. The study concluded that intensive training for e-learning systems is needed to improve overall faculty satisfaction and education outcomes. The adoption of e-learning necessitates training academic staff members on

course preparation, delivery, and evaluation techniques of online learning (Martin, Budhrani, and Wang 2019) to improve students' learning engagement and apprehension of course content (Bao 2020). In another study, Hodges and his colleagues investigated faculty members' perceptions of online delivery in a U.S based research university (Hodges, Way, and Shepherd 2013). The study found that convenience and flexibility were significant advantages of online teaching. However, faculty members felt that online teaching is more laborious and intensive than face-to-face teaching. The study also reported the need for reliable and latest online teaching platforms, continuous training and technical support, and clear institutional policies related to online courses. Similarly, in their study to explore the readiness of medical faculty to deliver e-learning, Houshmandi et al. (2019) reported that faculty members' technology readiness was not ideal and recommended sustained technology professional development to ensure faculty preparedness for e-learning.

Bolliger, Inan, and Wasilik (2014) conducted a study to develop and validate an instrument to measure instructors' satisfaction with online courses. This study included 168 instructors actively involved in online teaching at a public university in the United States. Overall, the online teaching experience reported by the participants was generally satisfactory. Higher scores were given to affordability, followed by course design/development and teaching. In Saudi Arabia, Al-Zahrani (2015) used the instrument developed by Bolliger, Inan, and Wasilik (2014) to analyze online teaching satisfaction among 104 instructors. The study results revealed a higher level of satisfaction in student-student and staff-student interactions,

affordances, course design, development, and teaching. Institutional support received a lower level of satisfaction. The author emphasized developing policies and practices for online teaching and listed various demands such as access to online teaching platforms, training support, consideration of the instructor's professional and psychological needs. Faculty workload is another area of concern in e-learning. In their phenomenological inquiry of online courses, Chiasson, Terras, and Smart (2015) found that faculty were more time intensive in designing, preparing, and learning various instructional technology tools for online courses. In the UAE, Elshami et al. (2021) performed a study to identify factors affecting faculty satisfaction with online learning during Covid-19 pandemic among medical and health sciences colleges. Faculty members were satisfied with students' enthusiasm and were loaded by the higher workload and the more time required to prepare the teaching and assessment materials.

3. Methodology

3.1. Design

The study followed a cross-sectional survey design to examine faculty members' satisfaction with e-learning in the UAE. According to Fraenkel, Wallen, and Hyun (2015), cross-sectional surveys collect information from a large pool of subjects at just one point of time from a predetermined sample and compare differences between groups. Total population sampling was used in this study. This sampling method was selected to collect data from all

faculty members involved in online teaching since the COVID-19 pandemic. The study was conducted at Fatima College of Health Science (FCHS), one of the leading nursing and allied health education providers in the UAE. The college was established in 2006 to graduate qualified healthcare specialists to meet the increasing needs for skilled allied health and nursing professionals in the UAE. The college has four campuses: three in the Emirate of Abu Dhabi and one in the Emirate of Ajman. Before the lockdown, all theory and practical sessions were conducted on campus.

3.2. Study Instrument

The online survey consisted of three sections. The researchers developed the first section to collect the participants' demographic data such as campus location, department, years of academic experience, age group, and job title. For the second section, the researchers adopted the Online Instructor Satisfaction Measure (OISM) developed by Bolliger and his colleagues in 2011 (Bolliger, Inan, and Wasilik 2014). The OISM tool consists of 27 items divided into five domains: Instructor-to-student interaction (ISI), Student-to-student interaction (SSI), Affordances (A), Institutional support (IS), and Course design/development/teaching (CDT), all answerable using a five-point Likert scale (5 = strongly agree to 1 = strongly disagree). To keep the OISM tool coherent with the participants' context, the phrases "online courses" and "online teaching" were replaced with "e-learning" to denote that the courses being delivered were not fully online courses, to

begin with, and were just adopted for online delivery at the start of the lockdown due to the pandemic. The third section of the online survey had one open-ended question to provide participants' views on e-learning implementation experience about opportunities, challenges, and recommendations for improvement. The researchers disseminated the online survey through the email accounts of 189 eligible faculty members. The survey was made available from May 2020 to July 2020 with two standard follow-up emails.

3.3. Data Analysis

Quantitative data was organized and analyzed using SPSS software version 21. Descriptive statistics were used to describe the participants' demographics and aggregate the OISM tool's responses. The 5-point Likert scale options were coded as 1, 2, 3, 4, and 5, representing the participant's degree of agreement from lowest to highest. Responses were coded in reverse among the negatively worded questions to present the actual meaning of the response.

Responses to the open-ended question "Provide your views on your e-learning implementation experience about opportunities, challenges, and recommendations for improvement." underwent content analysis. Two of the researchers read the narrative responses independently. Each of the researchers started to mark and identify possible codes for the meaning units in the text. Sentences and phrases were highlighted, compared, and classified under possible codes and categories. When all codes were grouped, the

researchers rechecked all the codes and categories to reduce the possibility of errors. This process helped identify five themes based on the domains of the OISM tool. The researchers served as independent coders to ensure that the identified codes and themes were accurate. Intercoder reliability was achieved when 80% agreement was established between the two researchers (Creswell and Creswell 2017).

3.4. Validity and Reliability

Bolliger and his colleagues reported that the instrument validity was determined through a review by four experts (Bolliger, Inan, and Wasilik 2014). The instruments' internal reliability coefficient reported by the authors was (0.93), and the sub-scales were affordances (0.86), teacher-to-student interaction (0.79), institutional support (0.79), student-to-student interaction (0.78), and course design, development, and teaching (0.67). In this study, we calculated Cronbach's alpha to evaluate the internal consistency of the tool (Table 1.). Cronbach's alpha for the Instructor-to-student Interaction – ISI subscale was (0.739), Affordances – A (0.709). Institutional Support – IS (0.818), Student-to-student Interaction – SSI (0.675), and Course Design/Development/Teaching – CDT (0.755). Cronbach's alpha for the entire tool was 0.781. These results indicate the desirability of the internal consistency of the study tool.

Table 1. Reliability of the Study Tool

OISM Categories	Cronbach's Alpha	No of items
Instructor-to-student Interaction - ISI	0.739	6
Affordances - A	0.709	5
Institutional Support - IS	0.818	6
Student-to-student Interaction - SSI	0.675	5
Course Design/Development/Teaching - CDT	0.755	5
Total OISM	0.781	

4. Results

The following subsections will answer the following research question: What was the level of faculty satisfaction with the transition of e-learning during the Covid-19 pandemic?

4.1. Demographic Data

The online survey link was sent via email to N=182 teaching staff at FCHS across four different campuses, out of which n=61 responded, generating a 33.5% response rate. The participants were from four different campuses of FCHS representing seven departments, namely General Requirements, Nursing, Pharmacy, Physiotherapy, Radiography and

Medical Imaging, Emergency Health, and Psychology. Most of the participants had more than five years of academic experience working in different roles and belonging from the 31-40 age group. Participants' demographic characteristics are presented in Table 2.

Table 2. Demographic Characteristics

Demographic	N= 61
Campus	
FCHS Abu Dhabi	28
FCHS Al Ain	18
FCHS Al Dhafra	6
FCHS Ajman	9
Department	
GRD	8
Nursing	22
Pharmacy	9
Physiotherapy	7
RMI	7
Emergency Health	7
Psychology	1

Years of academic experience

Less than 5 years	10
5-10 years	22
More than 10 years	29

Age group

21-30 y/o	2
31-40 y/o	29
41-50 y/o	23
Above 50 y/o	7

Job Title

Lab Specialist	20
Instructor	21
Senior Instructor	12
Principal Instructor	1
Assistant Professor	5
Associate Professor	1
Professor	1

4.2. Faculty Satisfaction

Among the five domains of the OISM tool in Table 3., the most highly rated was Course

Design/Development/Teaching ($M=3.67$, $SD=0.667$). The highest level of satisfaction in this domain (as in Table 4.) was seen among the prompt ‘I am accessible to students in an e-learning environment’ ($M=4.07$, $SD=0.793$) 81% of the respondents agreed and strongly agreed. The second highest-rated prompt was, ‘*My online students receive quality feedback*’ ($M=3.72$, $SD=0.733$), with 69% of participants who agreed and strongly agreed. Participants also showed a high level of satisfaction in Affordances ($M=3.66$, $SD=0.814$). In this domain, 69% of participants answered ‘*e-Learning provides a flexible learning environment*’ ($M=3.75$, $SD=0.994$) and 68% ‘*I am satisfied that my students can access their courses from almost anywhere*’ ($M=3.79$, $SD=1.097$). However, the least satisfactory domain was Institutional Support ($M=3.03$, $SD=0.949$). 73% of the participants disagreed with the prompt ‘*My institution provides fair compensation or incentives for teaching online.*’ ($M=2.74$, $SD=1.182$) Furthermore, 60% disagreed with ‘*Teachers are given sufficient time to design and develop online courses.*’ ($M=2.85$, $SD=1.314$). Also, 66% disagreed with ‘*I am satisfied with online teaching policies that my institution has implemented.*’ ($M=2.87$, $SD=1.118$).

Table 3. The Rank of OISM Domains

	N	Mean	SD
ISI	61	3.17	.468
A	61	3.66	.814

IS	61	3.03	.949
SSI	61	3.35	.713
CDT	61	3.67	.667

Table 4. Descriptive Statistics of OISM

Items (N = 61)	M	SD	Agree/S.A. Disagree/S.D.	
			%	%
Instructor-to-student Interaction - ISI				
1. My online students participate enthusiastically.	3.20	1.077	39	61
2. My online students are somewhat passive in their interactions. [R]	3.18	1.008	27	73
3. My interactions with online students are satisfying.	3.38	.897	51	49
4. I do not get to know my online students well. [R]	3.18	1.204	34	64
5. I am pleased with the quality of student work in online courses.	3.15	1.014	35	65

6. I am satisfied with students' motivation in
online courses. 2.98 1.147 33 67

Affordances - A

1. Online courses provide a flexible learning
environment. 3.75 .994 69 31

2. I am satisfied with the convenience of the
online learning environment. 3.57 .991 59 41

3. Online teaching allows me to reach a more
diverse student population. 3.57 1.102 59 41

4. I am satisfied that my students can access their
online course from almost anywhere. 3.79 1.097 68 32

5. Online courses allow students to access a wide
range of resources. 3.62 1.019 59 41

Institutional Support - I.S.

1. At my institution, teachers are given sufficient
time to design and develop online courses. 2.85 1.314 40 60

2. I have adequate technical support by my
institution. 3.33 .978 52 48

3. My needs for training to prepare for teaching
online have been met. 2.90 1.076 34 66

4.	My institution provides fair compensation or incentives for teaching online.	2.74	1.182	27	73
5.	I am satisfied with online teaching policies that have been implemented by my institution.	2.87	1.118	34	66
6.	My institution provides the necessary technology tools (equipment and software) for teaching online.	3.54	1.042	54	46

Student-to-student Interaction - SSI

1.	My online students share resources with each other within the course.	3.41	.844	51	49
2.	My online students actively collaborate.	3.34	.892	49	51
3.	My students appear to be part of an online community in the course.	3.25	.869	42	58
4.	My students work well together online.	3.36	.913	47	53
5.	In online courses, every student has an opportunity to contribute.	3.41	1.006	46	54

Course Design/Development/Teaching - CDT

1.	My online students receive quality feedback.	3.72	.733	69	31
2.	I am accessible to students in online courses.	4.07	.793	82	18

3. It takes a lot of time to develop an online course. [R]	3.80	1.108	15	85
4. I am satisfied with how I assess students in online courses.	3.25	1.059	51	49
5. I am satisfied with the content quality of my online courses.	3.56	.922	56	44

*[R] – responses to negatively phrased questions

were coded in reverse.

** S.A. - Strongly Agree

*** S.D. – Strongly Disagree

4.3. Open-ended Question

Two themes emerged after analyzing the open-ended question. These themes were technological issues and teaching-learning issues. Participants' quotes were labeled with the number of each participant.

4.3.1. Technological Issues

One of the main issues described by the faculty members was the need for training in running new technologies required to conduct online teaching. The perceived lack of training caused undue pressure on those not proficient enough to entirely online courses.

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Professional development workshops are needed to maximize (sic) teaching efforts and know what we can do better in course design. Support with exam-taking and analysis is needed as faculty are on their own. (Participant 29)

In addition to training, faculty members also mentioned the need for support, specifically information technology personnel's presence, to provide the on-demand support.

Proper training shall be given to all faculty about the technologies & soft wares they use in e-learning by an I.T professional. (Participant 47)

It has been challenging to be everything, a teacher, I.T expert, and a support system competently. (Participant 37)

Faculty members also shared their experience with connectivity issues, resources availability, and the latest technology. They stated that connectivity was a central concern. Furthermore, not all students owned new personal computers to effectively participate in the live online sessions.

Many students take (sic) advantage of connection issues to not attend the session.

This is a big challenge. (Participant 14)

I fear that this process will continue in the future without adequate resources eg I.T support, and adequate broadband on-site. (Participant 11)

Some do not have computers, and some have poor Internet access. My feedback from the students is that they do not enjoy the current e-learning and prefer face-to-face education. There is a significant lack of social support for students in distance

learning. (Participant 43)

4.3.2. *Teaching-Learning Issues*

The faculty members raised concerns in both the teaching and assessment aspects of online teaching. They recognized that online teaching had been a good temporary substitute for face-to-face sessions in light of the COVID-19 situation. However, practical skills and real-life experience required for a health care student were not met despite efforts to supplement the learning with alternate means. One of the main concerns was preventing academic misconduct, consistency, and appropriateness of the exams in the assessed knowledge or skills.

For the health care professions, online teaching has to be limited to a degree, not affecting the quality of teaching. Competency-based learning needs a live interaction with students rather than online. (Participant 6)

E-learning is a substitute for on-campus learning during a challenging time or for specific courses that do not require a hands-on or interactive session, especially in the health field. (Participant 8)

I strongly disagree when it comes to implementing assessments. The integrity of the assessments cannot be preserved. (Participant 48)

inaccuracy in the evaluation of students, clinical and lab component is affected, less one-to-one interaction. (Participant 50)

Some overlapping opinions were noted when faculty described their experiences with interaction. One of the main drawbacks was that students interacted less during the online environment than classroom-based sessions. Faculty members felt that online teaching is like a one-way conversation. During sessions, questions from instructors to students were sometimes left unanswered as there was less interaction among students. Students' e-learning sessions are not optimal, as there were some distractions at home during the sessions.

I feel most of the students do not take e-learning seriously. A small percentage do; however, they do not represent the majority who are not engaging. Many students log in but are being distracted by matters at home. (Participant 43)

Respondents also expressed that the extra workload associated with implementing e-learning was not accounted for in their actual workload, which called for flexible working hours. Overall, the respondents felt that e-learning is challenging and expected more support from the institution.

E-learning should not be considered a means for reducing staff or increasing the credit load of individual instructors. Time requirements for online lessons are often more significant than the time needed for traditional lessons. (Participant 39)

E-learning and blended learning materials take a considerable [amount of] time and effort to develop and should be considered for workload allocation. (Participant 2)

More positive aspects were voiced, such as the convenience of e-learning for both staff and students, and since it required no traveling, it consequently saved them time. The e-learning environment could also accommodate a more significant number of students.

An online class can accommodate a large number of students... convenient for both student and teacher. No need to travel & spend time in college. (Participant 47)

5. Discussion

The study examined nursing and allied health faculty members' satisfaction with e-learning during the Covid-19 pandemic. Satisfaction level was measured in five domains, namely Instructor-to-student interaction (ISI), Student-to-student interaction (SSI), Affordances (A), Institutional support (IS), and Course design/development/teaching (CDT). The results of quantitative data showed the highest level of faculty satisfaction in the aspects of Course Design/Development/Teaching (CDT) and Affordances (A), followed by Student-to-Student Interaction (SSI) and Instructor-to-Student Interaction (ISI). Higher Scores in CDT have confirmed faculty's willingness, involvement, and enthusiasm in e-learning. They were excited to teach online for the first time, even though the course was initially developed for face-to-face delivery. These findings reflect those of Elshami et al. (2021) and Kumar et al. (2021) studies reporting high satisfaction with course design. On the contrary, Al-Zahrani's study showed a higher level of satisfaction on Student-to-Student Interaction (SSI) and Instructor-to-Student Interaction (ISI), followed by Course Design/Development/Teaching

(CDT) and Affordances (A) (Al-Zahrani 2015).

In this study, the lowest level of satisfaction was observed in Institutional Support (IS) due to a lack of confidence in handling sudden online teaching. Faculties felt that they received less support from the institution to deliver the courses online. Al-Zahrani (2015) also reported a similar observation regarding institutional support, where Elshami et al. (2021) and Kumar et al. (2021) reported high levels of satisfaction in this domain. Despite the onboarding requirement of the institution that faculty pass IC3 certification courses, most of the faculty members expressed concerns about the lack of training and support related to e-learning implementation. IC3 certification only covers the fundamentals of operating the computer but does not have anything to do with implementing online courses, which requires a separate set of skills and, therefore, a different training set. Also, the fast transition to e-learning may not have prepared faculty members to deal effectively with the emerging teaching technology, and faculty may have expected more training, especially in the preparation and conduct of assessments. Dealing with students' related issues during teaching and assessment, such as internet breakdown, technical failure, faulty camera, and students' comprehension of instructions, may have influenced the overall faculty satisfaction. The need for more training was similarly expressed among faculty of other universities (Hodges, Way, and Shepherd 2013; Maatuk et al. 2021; Jarab et al. 2022). The required training expressed by respondents of the current study centered on designing online courses, making sessions more interactive, and using software and technological tools for e-learning.

In Johnson et al. critical review, factors such as designing and structuring online courses, creating an interactive learning environment, and adept use of technology were necessary qualities and factors contributing to an effective and robust online teaching (Johnson, Hewapathirana, and Bowen 2019).

Faculty workload was a significant concern among respondents because of the long preparation and administration time to convert face-to-face sessions into full online sessions.

In Wingo, Ivankova, and Moss's synthesis of empirical studies on technology acceptance among faculty and their perceptions about teaching online, the workload was also cited as one of the common concerns of faculty members as online programs require substantial time and commitment to deliver (Wingo, Ivankova, and Moss 2017). Online teaching is deemed more labor-intensive than face-to-face learning (Hodges, Way, and Shepherd 2013). While the prevailing opinion of faculty members in this study was that online teaching is an excellent substitute for face-to-face sessions during the COVID-19 situation, faculty members in Elshami et al. (2021) and Chiasson, Terras, and Smart (2015) studies expressed divergent opinions. Faculty members with a positive experience in e-learning agreed that it is equivalent to traditional classroom learning, while those who never taught online or had a negative experience with e-learning did not see it on par with classroom learning. In the current study, the opinion that e-learning is, at best, a temporary substitute is highly dependent on the instructors' subject matter.

Next to CDT, Affordability (A) has a higher satisfaction level. Faculties felt that e-learning

is flexible and convenient as students can access the class from almost anywhere supplemented with a wide range of resources, including recorded lectures. Still, some students were raised as having issues with affordances, connectivity, and lack of hardware. This study is conducted with faculties who teach only female students. Social, cultural, and family circumstances might have played a role in the “Affordability,” which was not well studied. Students living in large families find it difficult to get separate rooms to attend classes or write exams. The study from home is always associated with distracting students who live with siblings or family commitments. However, faculty were not adequately satisfied with both student-to-student and instructor-to-student interactions for similar reasons to Johnson et al. study (Johnson, Hewapathirana, and Bowen 2019). This included how necessary the following factors are contributing towards effective and robust online teaching: ‘regular communication with students’, ‘knowing the students’, ‘enhancing teacher-student relationship’, ‘guiding student learning’, ‘creating an interactive learning environment,’ and ‘integration of student feedback’. One of the concerns is the lack of focused attendance, wherein students attend the sessions but lack the necessary attention to the subject matter. In a study about the effectiveness of online courses in facilitating learning outcomes, it was found that students had positive learning experiences with online learning if courses were presented in different modes rather than sessions that were delivered with only one mode of instruction (Limperos et al. 2015).

In a higher education institution where students are trained to be future nursing and allied

health professionals, e-learning may not suit practicing skills and building students' practical competence. Also, interpersonal relationships and dynamic teamwork may not develop in a fully online environment. Online learning and the use of technology are inevitable in education. However, there should be a balance between face-to-face and e-learning, depending on the courses' learning outcomes. Regarding academic misconduct in online exams, faculty members expressed concerns about academic misconduct among online courses. Faculty can use measures to prevent possible misconduct, such as a learning management system that monitors students' activities during the examination. Also, they might consider alternate assessment types rather than usual recall questions, such as scenario-based activities and written assignments wherein students must synthesize learned information instead of merely recalling concepts. Faculty members should continually reinforce good practice and instill the value of honesty, ethics, and good conduct, which are vital to success as a professional.

6. Conclusion

The satisfaction of faculty members with e-learning is imperative for administrators and policymakers to consider as the use of online platforms for educational purposes is becoming popular. This study provided insights for education administrators and policymakers on the importance of institutional support of faculty members throughout the implementation of e-learning. The study's factors affecting faculty satisfaction support

educational institutions' focus on professional development and support efforts. These efforts can encourage and motivate faculty members to achieve their role, strengthen effective e-learning strategies, improve students' enrollment and satisfaction, and develop the overall institutional achievements.

7. Recommendations and Limitations

The findings of this study provided recommendations to improve faculty members' satisfaction with e-learning. First, continuous training and development initiatives should be provided to change faculty members' perceptions and run technological platforms for online teaching. Appropriate training and practice could help to achieve it. Delivering one or two online courses every semester will sustain the faculty's efficiency in online teaching. Second, infrastructure and adequate support in hardware and software tools are required for online teaching. Contribution from I.T. administrators and peers is required for faculty robustness to deal with online teaching/assessments, facilitate students' performance, and improve their outcomes. This support is significant in the beginning period of e-learning. The support includes but is not limited to laptops with required software for e-learning, training to develop lecture videos, conduct assessments with and without monitoring and assistance during technical failure. Third, there is a need to set standardized practice guidelines for online teaching and assessments such as designing online courses, creating

course content, guiding student learning, evaluating students' performance, engaging students in online activities, handling missed and deferred assessments, and enhancing teacher-student communication to maintain an interactive teaching-learning environment. Several setting options are available in teaching (Blackboard) and assessments platform (Respondus). Specific guidelines and uniform settings are recommended to maintain consistency for all the courses taken by the students.

One of the limitations of this study is that participants' attention to complete the survey items may have been affected by their high workload, work commitments, or time-related factors. Therefore, there is a possibility that some participants may have given impulsive responses that do not necessarily reflect their actual experiences. Besides, all participants were from a single institution representing different health sciences faculty in the United Arab Emirates. Hence, repeating the study on a broader sample would improve the generalizability of future studies. Teaching was suddenly moved to e-learning, i.e., lecturing via the online platform. Hence, tools developed for "online courses" might not work well for live online lecturing.

8. Statement of Ethics

The study received ethical approval from the FCHS Ethics Governance Committee before the data collection (reference number: INTSTF003BSN20). All study participants were asked to complete the study instrument voluntarily. Before collecting data, the study's nature,

purpose, data collection, and data analysis procedures were explained to all participants. Participants' anonymity and confidentiality were protected throughout the study. All electronic and hardcopy data were stored and secured with the principal investigator throughout the study.

9. Disclosure Statement

The authors declare no conflicts of interest; this article does not concern any commercial product.

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