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A Research on the Online Teaching Experiences of Ankara University Veterinary Faculty Academics

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ABSTRACT In this study, it has aimed to determine the perceptions of veterinary faculty academics of Ankara University regarding their online teaching experiences during the Covid-19 pandemic. The study has included 92 academics who provided theoretical and/or practical courses via online teaching in Ankara University Faculty of Veterinary Medicine (AUFVM). The data of the study has collected with a 21-item questionnaire. The questionnaire has basic questions such as the quality of the courses given, the active participation of the students in the courses, experienced technological problems during their education, and whether they consider online teaching effective. Academics in clinical sciences gave negative answers to the question about the sustainability of online teaching at a higher rate than the academics in basic sciences (p=0.016). Only all academics who think online teaching has no disadvantages stated that it provides effective learning (p=0.001). Academics who think online teaching provides effective teaching mostly want to continue online, while those with opposing considerations "generally" prefer to continue online or can "sometimes" continue (p<0.001). The lack of classroom interaction and technological incapacity can be considered a con of this method. As a result, it can be concluded that academics are biased towards online teaching and do not tend to prefer this method consistently.

Keywords: *COVID-19, Education, Distance, Veterinary education.*

ÖZ

Ankara Üniversitesi Veteriner Fakültesi Akademisyenlerinin Çevrimiçi Öğretim Deneyimleri Üzerine Bir Araştırma

Bu çalışmada Ankara Üniversitesi Veteriner Fakültesi akademisyenlerinin Covid-19 pandemisi sürecinde çevrimiçi öğretim deneyimlerine ilişkin algılarının belirlenmesi amaçlanmıştır. Araştırmaya Ankara Üniversitesi Veteriner Fakültesi'nde çevrimiçi öğretim yoluyla teorik ve/veya uygulamalı dersler veren 92 akademisyen dahil edilmiştir. Araştırmanın verileri 21 maddelik bir anket ile toplanmıştır. Ankette verilen derslerin kalitesi, öğrencilerin derslere aktif katılımı, eğitim sırasında yaşanan teknolojik sorunlar ve çevrimiçi öğretimi etkili bulup bulmadıkları gibi temel sorular yer almaktadır. Bulgulara göre, klinik bilimleri akademisyenleri çevrimiçi öğretimin sürdürülebilirliğine ilişkin soruya temel bilimler akademisyenlerine göre daha yüksek oranda olumsuz yanıt vermiştir (p=0.016). Yalnızca çevrimiçi öğretimin herhangi bir dezavantajı olmadığını düşünen akademisyenlerin tamamı, bu yöntemin etkili öğrenme sağladığını belirtmiştir (p=0.001). Çevrimiçi öğretimin etkili öğretim sağladığını düşünen akademisyenler eğitime çoğunlukla çevrimiçi olarak devam etmek isterken, karşıt görüşlere sahip olanlar eğitime "genellikle" veya "bazen" çevrim içi olarak devam etmeyi tercih etmiştir (p<0.001). Sınıf etkileşiminin olmaması ve teknolojik yetersizlikler bu yöntemin eksilerinden biri olarak kabul edilebilir. Sonuç olarak, akademisyenlerin çevrimiçi öğretime karşı önyargılı oldukları ve bu yöntemi sürekli olarak tercih etme eğiliminde olmadıkları sonucuna varılabilir.

Anahtar Kelimeler: *COVID-19, Eğitim, Uzaklık, Veteriner hekimliği eğitimi.*

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INTRODUCTION

The distance education model, which has become popular again with the pandemic (Franklin et al. 2021), is an education model that operates with two different working principles as direct and indirect, uses the technological infrastructure, and does not require the presence of students and lecturers in the same physical place (Wagner et al. 2021). In the direct form of distance education, which includes one-on-one interaction and direct contact, the educator and the student have the chance to communicate and interact with each other simultaneously in real time. In the direct form, it is seen that an actual course is taught remotely with technological infrastructure. On the other hand, the indirect form offers the student the chance to watch the previously recorded lectures at different times (Tsai et al. 2021; Wagner et al. 2021). The coronavirus pandemic, which emerged in Wuhan in 2019, has affected education activities drastically all over the world. Within the scope of pandemic measures, it has been reported that education at all levels has been suspended for various periods in many countries, such as for 49 weeks in Türkiye (Unesco 2020). In this process, which was suspended in line with the opinions of education and health authorities, the face-to-face/traditional education model was tried to be transformed quickly into a distance education such as online teaching (OT) and learning model (Saadeh et al. 2021).

As in the whole world, OT has been implemented in the Turkish educational system as of March 2020 in order to comply with the social distance rule as one of the precautions to prevent viral transmission during the Covid-19 pandemic (CoHE 2020a). The pandemic process has forced educational institutions to determine new strategies on how to continue veterinary training. While some preferred the hybrid method, a few veterinary schools have completely switched to online teaching and learning activities, preferring educational methods such as online lessons, small group sessions, video conferences, and pre-recorded videos via online platforms (Amanda 2020). Within that period, all first- and fifth-grade students at Ankara University Faculty of Veterinary Medicine (AUFVM) completed theoretical and practical courses remotely, and many exams were conducted remotely and online (Anonymous 2020b). To be included in OT, all academics at Ankara University had to complete the "Online Instructor Certificate Program", which includes 60 hours of theoretical and practical training. Thus, an adaptation of the lecturers to OT method has been aimed at the program (Anonymous 2020c). As of August 2020, a face-to-face and distant hybrid method has been adopted in all higher education institutions in the country (CoHE 2020b) and this hybrid method (Anonymous 2020a; Anonymous 2020b) has been continued in the 2021-2022 academic year.

This study aimed to evaluate the perceptions of AUFVM's academics regarding the practicableness and effectiveness of OT because they had officially experienced it for the first time in veterinary training.

MATERIAL AND METHODS

Approval of the study was obtained from Covid-19 Scientific Research Evaluation Commission, Republic of Türkiye Ministry of Health (Application Number: 2021-01-26T13_19_33, Date: 29.01.2021), and Ankara University Ethics Committee (Date: 12.04.2021 Decision No: 06/51).

The study was designed as a structured cross-sectional survey. A questionnaire consisting of 21 questions, including sociodemographic data, was used as the data collection tool (Table 1). The form was created using Google Forms infrastructure by making use of the previous studies (Armstrong-Mensah et al. 2020; Can and Köroğlu 2020; Di Pietro et al. 2020; Gençoğlu and Çiftçi 2020) on the subject.

The research populatio was determined as 152 academicians who provided OT due to the Covid-19 pandemic at AUVFM in the 2019-2020 and 2020-2021 academic years. Sample selection was not made since it was aimed to reach the whole population in the study. Participants were invited to the study by sending an electronic survey link to their e-mail addresses. Academics were reminded by a reminder note to participate in the questionnaire two weeks after the questionnaire link was sent for the first time. They were given two more weeks to answer the questionnaire, in this period the study was terminated when all academics who agreed to participate were reached. The completed questionnaire forms were stored anonymously in electronic media.

Data for the pilot study were collected in April 2021. The prepared form was presented to 152 academicians on a voluntarily, who formed the population of the study, and the answers of the first 20 participants who completed the form were evaluated within the scope of the pilot application. After reaching 20 participants and completing the pilot study, access to the questionnaire was temporarily terminated. Feedback was requested from the participants of the pilot study for each question and corrections were made accordingly. Within the scope of the pilot study, the questions that needed to be understood were clarified, and the answer options were revised and updated. The 20 participants in the pilot study were not included in the main study.

Key words of the study's abstract were chosen from "The Medical Subject Headings" (MeSH). Turkish key words were selected from "Türkiye Bilim Terimleri version 2.0" and written without any changes.

Statistical Analysis

After the pilot study, the data of the main study were collected between May 2021 and June 2021. The collected data were evaluated using SPSS 14.1. Descriptive statistics were calculated and shown as frequency and percentage for categorical variables. Pearson Chi-Square or Fisher's Exact Test was applied considering the distribution of expected values to cells in comparing the frequencies of categorical variables between groups. The statistical significance level was considered as $p<0.05$.

RESULTS

Among the 152 participants invited to the study; 20 academics were included in the pilot study; 92 of them voluntarily participated in the main study and no response was received from 40 of them. 57.6% of the 92 participants were male (n=53) and 42.4% were female (n=39). 23.9% of the participants were research assistants (n=22) and 76.1% were teaching fellows (professor, associate professor and assistant professor) (n=70). The sociodemographic characteristics of the academicians and the detailed frequencies and percentages of their answers to the questionnaire are given in Table 1.

The distribution of the answers given by the academics to the survey questions according to the divisions they work in is presented in Table 2. Accordingly, the distribution of the answers to the question *"Are there any students who reported that they could not attend your course's online exam due to technological/technical difficulties?"* differed statistically between the divisions where the academicians worked (p=0.047). Academics working in the Division of Food Hygiene and Technology reported that there were students who reported that they could not attend the online exam of their courses due to technological/technical difficulties at a lower level than those working in the Division of Preclinical Sciences. Regarding the use of OT in practical courses, the answer "*Definitely not applicable*" was given by the academicians of the Division of Clinical Sciences at a higher rate than the academicians of the Division of Animal Husbandry and Animal Nutrition. In addition, the answer *"Partially applicable"* was given by the academics of the Division of Animal Husbandry and Animal Nutrition at a higher rate than the academicians of the Division of Clinical Sciences (p<0.001). Finally, academics working in the Divison of Clinical Sciences gave negative answers to the question *"Would you like to continue online teaching after switching to face-to-face education again?* at a higher rate than the academics of the Division of Basic Veterinary Sciences (p=0.016).

In Table 3, the relationship between the interaction of the academics with the students during the online course and the participation of the students in the course was evaluated. Accordingly, academics who stated that questions were *never/rarely* received from students during the online course mostly found participation *insufficient*. Academics who stated that they *sometimes* get questions, mostly found the participation *insufficient and partially sufficient*, whereas academics who stated that questions were asked *often/always* mostly found the participation *partially sufficient* (p<0.001). The academics, who stated that the questions they asked during the online course were *never/rarely* and *sometimes* answered by the students, mostly reported that the participation needed to be improved. Contrary to expectations, academics who stated that the answers were *often/always* answered also noted that the involvement required to be increased (insufficient or partially sufficient, p=0.008).

The evaluations of the academics on whether OT is an effective teaching tool is presented in Table 4. The academics who found the participation of the students in the distance courses *sufficient* stated that they *sometimes* think that OT provides effective learning, while the academics who found OT *insufficient* stated that they do not think that it mostly provides *sufficient* learning (p=0.023). When OT and face-to-face education methods were compared, academics who prefer face-to-face education mostly said that OT *does not* provide or *partially* provides effective learning; on the other hand, academics who prefer OT stated that it mostly provides effective learning and *undecided* academics reported that it mostly provides *partially* effective learning (p<0.001). Although academics thought that OT has advantages, they mostly reported that it *does not* provide or *partially* provides effective learning. Unsurprisingly, academics who think that OT has no advantages stated that it *does not* provide effective learning (p=0.011). Similarly, academics who think that OT has disadvantages mostly said that it *does not* provide effective learning; while all of the academics who think that OT does not have any disadvantages stated that it provides effective learning (p=0.001). Academics who stated that OT is *definitely applicable* in practical courses mostly stated that it provides effective learning, but conversely, academicians who stated that OT should not be applied at all, mostly reported that it *does not* provide or *partially* provides effective learning (p=0.002).

Academics who think that online exams are not carried out safely stated that OT is mostly not an effective learning tool; while the academics who are *undecided* about whether online exams are carried out safely stated that OT is mostly a *partially* effective learning tool (p=0.005). Finally, academics who want to continue OT after switching to face-to-face education again said that OT is an effective teaching tool; on the contrary, academics who do not want to continue mostly said that it is not an effective teaching tool, and academicians who *sometimes* want to continue reported that it *does not* provide or *partially* provides effective teaching (p<0.001) (Table 4).

In Table 5, the willingness of the academics to continue OT after switching to face-to-face education are presented. Academics who stated that they *never/rarely* received questions from students during the online courses mostly said that they do not want to continue OT or that it could be applied *sometimes*; academics who stated that students *often/always* ask questions said that OT can *sometimes* be continued (p=0.018). Concordantly, academics who stated that the students *never/rarely* answered the questions asked by them during the online courses said that they mostly *do not* or *sometimes* want to continue OT; however, academics who stated that they are *sometimes* and *often/always* received answers from students mostly reported that OT *sometimes* could be continued (p=0.014). Even though academics who think that OT provides effective teaching mostly want to continue OT; academics who think that it does not provide effective teaching stated that they mostly do not want to continue OT or can *sometimes* continue (p<0.001). Academics who think that OT is advantageous mostly reported that OT can *sometimes* be continued; at the same time, academics who think that it is not advantageous mostly do not want to continue OT (p<0.001). Similarly, whereas, academics who think that OT is disadvantageous *mostly* stated that they *do not* or *sometimes* want to continue; academics who think that OT is not disadvantageous mostly stated that they want to continue OT (p=0.017). Academics who think that online teaching can *definitely* be used in practical courses mostly want to continue OT; however, academics who think that it cannot be used have stated that they *do not* want to continue online teaching or *sometimes* it can be continued (p<0.001). Academics who think that the assessment and evaluation method in OT should be face-to-face, mostly *do not* or *sometimes* want to continue OT; although, academics who think that it should be online and those who are *undecided* mostly stated that OT can *sometimes* be continued (p=0.021).

Table 1: Frequency and percentage of all questions in the survey.

Categories	n (%)
Gender	
Female	39 (42.4)
Male	53 (57.6)
Academic title	
Research assistant	22 (23.9)
Lecturer	70 (76.1)
Division	
Basic veterinary sciences	23 (25.0)
Preclinical sciences	24 (26.1)
Clinical sciences	21 (22.8)
Food hygiene and technology	9 (9.8)
Animal husbandry and animal nutrition	15 (16.3)
What is the quality of the courses given before the Covid-19 pandemic?	
Theoretical	10 (10.9)
Theoretical and practical	76 (82.6)
Practical	6 (6.5)
Did you provide online/distance education before the Covid-19 pandemic?	
Yes	20 (21.7)
No	72 (78.3)
Do you think you have the technological knowledge required for online teaching?	
Yes	57 (62.0)
No	2 (2.2)
Partially	33 (25.9)
Can you use your course time effectively in online teaching?	
Yes	58 (63.0)
No	8 (8.7)
Sometimes	18 (19.6)
Undecided	8 (8.7)
What would you think about your students' instant/online participation in the course you teach via online teaching?	
I find the participation of those taking the course sufficient	5 (5.4)
I find the participation of those taking the course insufficient	63 (68.5)
I find the participation of those taking the course partially sufficient	24 (26.1)
Do you get questions from your students during the online course?	
Never	4 (4.3)
Rarely	43 (46.7)
Sometimes	32 (34.8)
Often	11 (12.0)
Always	2 (2.2)
Do you get answers to the questions you ask during the online course?	
Never	5 (5.4)
Rarely	25 (27.2)
Sometimes	22 (23.9)
Often	26 (28.3)
Always	14 (15.2)
Do you experience technological/technical problems (disconnection, system not working, storage problems, etc.) while teaching online?	
Never	12 (13.0)
Rarely	40 (43.5)
Sometimes	31 (33.7)
Often	9 (9.8)
Always	-
Do you have students who reported that they could not attend your course due to technological/technical difficulties?	
Yes	50 (54.3)
No	42 (45.7)
Are there any students who reported that they could not attend your course's online exam due to technological/technical difficulties?	
Yes	49 (53.3)
No	43 (46.7)
Do you think online teaching provides effective learning?	
Yes	10 (10.9)
No	51 (55.4)
Undecided	31 (33.7)
When you compare online teaching and face-to-face education methods, which one do you prefer?	
Face-to-face education method	78 (84.8)
Online teaching method	6 (6.5)
Undecided	8 (8.7)
Do you think online teaching has some advantages?	
Yes	46 (50.0)
No	28 (30.4)
Undecided	18 (19.6)
Do you think online teaching has some disadvantages?	
Yes	82 (89.1)
No	3 (3.3)
Undecided	7 (7.6)
What do you think about the use of online teaching in practical courses?	
Definitely applicable	4 (4.3)
Definitely not applicable	47 (51.1)
Partially applicable	41 (44.6)
What method do you think should be used to assess and evaluate the course you teach via online tools?	
Face-to-face assessment	40 (43.5)
Online assessment	44 (47.8)
Undecided	8 (8.7)
Do you think that online exams are held securely (students answer questions by being honest)?	
Yes	4 (4.3)
No	67 (72.8)
Undecided	21 (22.8)
Would you like to continue online teaching after switching to face-to-face education again?	
Yes	12 (13.0)
No	27 (29.3)
Sometimes	53 (57.6)

Table 2: Distribution of answers according to the divisions.

		Divisions					p
		Basic veterinary sciences	**Preclinical sciences**	**Clinical sciences**	**Food hygiene and technology**	**Animal husbandry and animal nutrition**	
Do you think you have the technological knowledge required for online teaching?	Yes	13 (22.8)	14 (24.6)	13 (22.8)	5 (8.8)	12 (21.1)	0.781[1]
	No	1 (50.0)	0 (0.0)	1 (50.0)	0 (0.0)	0 (0.0)	
	Partially	9 (27.3)	10 (30.3)	7 (21.2)	4 (12.1)	3 (9.1)	
Can you use your course time effectively in online teaching?	Yes	15 (25.9)	17 (29.3)	15 (25.9)	3 (5.2)	8 (13.8)	0.181[1]
	No	1 (12.5)	3 (37.5)	2 (25.0)	0 (0.0)	2 (25.0)	
	Sometimes	6 (33.3)	3 (16.7)	1 (5.6)	5 (27.8)	3 (16.7)	
	Undecided	1 (12.5)	1 (12.5)	3 (37.5)	1 (12.5)	2 (25.0)	
What would you think about your students' instant/online participation in the course you teach via online tools?	I find the participation of those taking the course sufficient.	0 (0.0)	0 (0.0)	3 (60.0)	2 (40.0)	0 (0.0)	0.232[1]
	I find the participation of those taking the course insufficient.	17 (27.0)	16 (25.4)	14 (22.2)	5 (7.9)	11 (17.5)	
	I find the participation of those taking the course partially sufficient.	6 (25.0)	8 (33.3)	4 (16.7)	2 (8.3)	4 (16.7)	
Do you get questions from your students during the online course?	Never/rarely	10 (21.3)	10 (21.3)	16 (34.0)	4 (8.5)	7 (14.9)	0.298[1]
	Sometimes	10 (31.3)	9 (28.1)	3 (9.4)	3 (9.4)	7 (21.9)	
	Often/always	3 (23.1)	5 (38.5)	2 (15.4)	2 (15.4)	1 (7.7)	
Do you get answers to the questions you ask during the online course?	Never/rarely	4 (13.3)	10 (33.3)	10 (33.3)	3 (10.0)	3 (10.0)	0.071[1]
	Sometimes	8 (36.4)	5 (22.7)	2 (9.1)	0 (0.0)	7 (31.8)	
	Often/always	11 (27.5)	9 (22.5)	9 (22.5)	6 (15.0)	5 (12.5)	
Do you experience technological/technical problems (disconnection, system not working, storage problems, etc.) while teaching online?	Never/rarely	13 (25.0)	10 (19.2)	16 (30.8)	5 (9.6)	8 (15.4)	0.242[1]
	Sometimes	9 (29.0)	12 (28.7)	3 (9.7)	2 (6.5)	5 (16.1)	
	Often/always	1 (11.1)	2 (22.2)	2 (22.2)	2 (22.2)	2 (22.2)	
Do you have students who reported that they could not attend your course due to technological/technical difficulties?	Yes	14 (28.0)	17 (34.0)	8 (16.0)	6 (12.0)	5 (10.0)	0.080[1]
	No	9 (21.4)	7 (16.7)	13 (31.0)	3 (7.1)	10 (23.8)	
Are there any students who reported that they could not attend your course's online exam due to technological/technical difficulties?	Yes	12 (24.5)	18 (36.7)	7 (14.3)	3 (6.1)	9 (18.4)	0.047[1]
	No	11 (25.6)	6 (14.0)	14 (32.6)	6 (14.0)	6 (14.0)	

Table 2 (continued): Distribution of answers according to the divisions.

		Divisions					p
		Basic veterinary sciences	**Preclinical sciences**	**Clinical sciences**	**Food hygiene and technology**	**Animal husbandry and animal nutrition**	
Do you think online teaching provides effective learning?	Yes	6 (60.0)	2 (20.0)	2 (20.0)	0 (0.0)	0 (0.0)	0.475[1]
	No	11 (21.6)	12 (23.5)	12 (23.5)	6 (11.8)	10 (19.6)	
	Undecided	6 (19.4)	10 (32.3)	7 (22.6)	3 (9.7)	5 (16.1)	
When you compare online teaching and face-to-face education methods, which one do you prefer?	Face-to-face education method	18 (23.1)	19 (24.4)	18 (23.1)	8 (10.3)	15 (19.2)	0.092[1]
	Online teaching method	4 (66.7)	0 (0.0)	2 (33.3)	0 (0.0)	0 (0.0)	
	Undecided	1 (12.5)	5 (62.5)	1 (12.5)	1 (12.5)	0 (0.0)	
Do you think online teaching has some advantages?	Yes	17 (37.0)	12 (26.1)	8 (17.4)	3 (6.5)	6 (13.0)	0.189[1]
	No	2 (7.1)	8 (28.6)	9 (32.1)	3 (10.7)	6 (21.4)	
	Undecided	4 (22.2)	4 (22.2)	4 (22.2)	3 (16.7)	3 (16.7)	
Do you think online teaching has some disadvantages?	Yes	20 (24.4)	22 (26.8)	18 (22.0)	9 (11.0)	13 (15.9)	0.831[1]
	No	1 (33.3)	0 (0.0)	2 (66.7)	0 (0.0)	0 (0.0)	
	Undecided	2 (28.6)	2 (28.6)	1 (14.3)	0 (0.0)	2 (28.6)	
What do you think about the use of online teaching in practical courses?	Definitely applicable	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	<0.001[1]
	Definitely not applicable	9 (19.1)	13 (27.7)	18 (38.3)	5 (10.6)	2 (4.3)	
	Partially applicable	10 (24.4)	11 (26.8)	3 (7.3)	4 (9.8)	13 (31.7)	
What method do you think should be used to assess and evaluate the course you teach via online tools?	Face-to-face assessment	11 (27.5)	13 (32.5)	6 (15.0)	4 (10.0)	6 (15.0)	0.582[1]
	Online assessment	9 (20.5)	10 (22.7)	12 (27.3)	4 (9.1)	9 (20.5)	
	Undecided	3 (37.5)	1 (12.5)	3 (37.5)	1 (12.5)	0 (0.0)	
Do you think that online exams are held securely (students answer questions by being honest)?	Yes	0 (0.0)	1 (25.0)	2 (50.0)	1 (25.0)	0 (0.0)	0.585[1]
	No	18 (26.9)	19 (28.4)	12 (17.9)	6 (9.0)	12 (17.9)	
	Undecided	5 (23.8)	4 (19.0)	7 (33.3)	2 (9.5)	3 (14.3)	
Would you like to continue online teaching after switching to face-to-face education again?	Yes	6 (50.0)	5 (41.7)	1 (8.3)	0 (0.0)	0 (0.0)	0.016[1]
	No	2 (7.4)	8 (29.6)	11 (40.7)	2 (7.4)	4 (14.8)	
	Sometimes	15 (28.3)	11 (20.8)	9 (17.0)	7 (13.2)	11 (20.8)	

Table 3: Online teaching and active participation in the course.

		How would you evaluate your students' instant/online participation in the course you teach via online tools?			**p**
		I find the participation of those taking the course			
		sufficient	**insufficient**	**partially sufficient**	
Do you get questions from your students during the online course?	Never/rarely	2 (4.3)	43 (91.5)	2 (4.3)	<0.001[1]
	Sometimes	3 (9.4)	15 (46.9)	14 (43.8)	
	Often/always	0 (0.0)	5 (38.5)	8 (61.5)	
Do you get answers to the questions you ask during the online course?	Never/rarely	1 (3.3)	27 (90.0)	2 (6.7)	0.008[1]
	Sometimes	1 (4.5)	15 (68.2)	6 (27.3)	
	Often/always	3 (7.5)	21 (52.5)	16 (40.0)	

Table 4: Quality of the online teaching.

		Do you think distance education provides effective learning?			**p**
		Yes	**No**	**Sometimes**	
Do you think you have the technological knowledge required for online teaching?	Yes	7 (12.3)	29 (50.9)	21 (36.8)	0.715[1]
	No	0 (0.0)	1 (50.0)	1 (50.0)	
	Partially	3 (9.1)	21 (63.6)	9 (27.3)	
Can you use your course time effectively in online teaching?	Yes	9 (15.5)	29 (50.0)	20 (34.5)	0.531[1]
	No	1 (12.5)	5 (62.5)	2 (25.0)	
	Sometimes	0 (0.0)	11 (61.1)	7 (38.9)	
	Undecided	0 (0.0)	6 (75.0)	2 (25.0)	
What would you think about your students' instant/online participation in the course you teach via online tools?	I find the participation of those taking the course sufficient.	0 (0.0)[a]	1 (20.0)[a]	4 (80.0)[b]	0.023[1]
	I find the participation of those taking the course insufficient.	7 (11.1)[a]	41 (65.1)[b]	15 (23.8)[a]	
	I find the participation of those taking the course partially sufficient.	3 (12.5)[a]	9 (37.5)[a]	12 (50.0)[a]	
Do you get questions from your students during the online course?	Never/rarely	5 (10.6)	30 (63.8)	12 (25.5)	0.3838[1]
	Sometimes	3 (9.4)	16 (50.0)	13 (40.6)	
	Often/always	2 (15.4)	5 (38.5)	6 (46.2)	
Do you get answers to the questions you ask during the online course?	Never/rarely	2 (6.7)	20 (66.7)	8 (26.7)	0.648[1]
	Sometimes	3 (13.6)	11 (50.0)	8 (36.4)	
	Often/always	5 (12.5)	20 (50.0)	15 (37.5)	

Table 4 (continued): Quality of the online teaching.

		Do you think distance education provides effective learning?			p
		Yes	**No**	**Sometimes**	
Do you experience technological/technical problems (disconnection, system not working, storage problems, etc.) while teaching online?	Never/rarely	8 (15.4)	25 (48.1)	19 (36.5)	0.504[1]
	Sometimes	2 (6.5)	20 (64.5)	9 (29.0)	
	Often/always	0 (0.0)	6 (66.7)	3 (33.3)	
Do you have students who reported that they could not attend your course due to technological/technical difficulties?	Yes	4 (8.0)	28 (56.0)	18 (36.0)	0.626[2]
	No	6 (14.3)	23 (54.8)	13 (31.0)	
Are there any students who reported that they could not attend your course's online exam due to technological/technical difficulties?	Yes	2 (4.1)	28 (57.1)	19 (38.8)	0.072[2]
	No	8 (18.6)	23 (53.5)	12 (27.9)	
When you compare online teaching and face-to-face education methods, which one do you prefer?	Face-to-face education method	3 (3.8)[a]	49 (62.8)[b]	26 (33.3)[b]	<0.001[1]
	Online teaching method	5 (83.3)[a]	1 (16.7)[b]	0 (0.0)[b]	
	Undecided	2 (25.0)[b]	1 (12.5)[b]	5 (62.5)[a]	
Do you think online teaching has some advantages?	Yes	9 (19.6)	20 (43.5)	17 (37.0)	0.011[1]
	No	0 (0.0)	22 (78.6)	6 (21.4)	
	Undecided	1 (5.6)	9 (50.0)	8 (44.4)	
Do you think online teaching has some disadvantages?	Yes	6 (7.3)	49 (59.8)	27 (32.9)	0.001[1]
	No	3 (100.0)	0 (0.0)	0 (0.0)	
	Undecided	1 (14.3)	2 (28.6)	4 (57.1)	
What do you think about the use of online teaching in practical courses?	Definitely applicable	3 (75.0)	0 (0.0)	1 (25.0)	0.002[1]
	Definitely not applicable	2 (4.3)	32 (68.1)	13 (27.7)	
	Partially applicable	5 (12.2)	19 (46.3)	17 (41.5)	
What method do you think should be used to assess and evaluate the course you teach via online tools?	Face-to-face assessment	2 (5.0)	28 (70.0)	10 (25.0)	0.061[1]
	Online assessment	8 (18.2)	18 (40.9)	18 (40.9)	
	Undecided	0 (0.0)	5 (62.5)	3 (37.5)	
Do you think that online exams are held securely (students answer questions by being honest)?	Yes	1 (25.0)	1 (25.0)	2 (50.0)	0.005[1]
	No	4 (6.0)	44 (65.7)	19 (28.4)	
	Undecided	5 (23.8)	6 (28.6)	10 (47.6)	
Would you like to continue online teaching after switching to face-to-face education again?	Yes	7 (58.3)	1 (8.3)	4 (33.3)	<0.001[1]
	No	0 (0.0)	23 (85.2)	4 (14.8)	
	Sometimes	3 (5.7)	27 (50.9)	23 (43.4)	

Table 5: Sustainability of the online teaching.

		Would you like to continue online teaching after switching to face-to-face education again?			p
		Yes	**No**	**Sometimes**	
Do you think you have the technological knowledge required for online teaching?	Yes	9 (15.8)	16 (28.1)	32 (56.1)	0.828[1]
	No	0 (0.0)	1 (50.0)	1 (50.0)	
	Partially	3 (9.1)	10 (30.3)	20 (60.6)	
Can you use your course time effectively in online teaching?	Yes	10 (17.2)	16 (27.6)	32 (55.2)	0.274[1]
	No	1 (12.5)	4 (50.0)	3 (37.5)	
	Sometimes	1 (5.6)	3 (16.7)	14 (77.8)	
	Undecided	0 (0.0)	4 (50.0)	4 (50.0)	
What would you think about your students' instant/online participation in the course you teach via online tools?	I find the participation of those taking the course sufficient.	0 (80.0)	1 (20.0)	4 (80.0)	0.357[1]
	I find the participation of those taking the course insufficient.	7 (11.1)	22 (34.9)	34 (54.0)	
	I find the participation of those taking the course partially sufficient.	5 820.8)	4 (16.7)	15 (62.5)	
Do you get questions from your students during the online course?	Never/rarely	5 (10.6)	20 (42.6)	22 (46.8)	0.018[1]
	Sometimes	5 (15.6)	7 (21.9)	20 (62.5)	
	Often/always	2 (15.4)	0 (0.0)	11 (84.6)	
Do you get answers to the questions you ask during the online course?	Never/rarely	3 (10.0)	16 (53.3)	11 (36.7)	0.014[1]
	Sometimes	3 (13.6)	3 (13.6)	16 (72.7)	
	Often/always	6 (15.0)	8 (20.0)	26 (65.0)	
Do you experience technological/technical problems (disconnection, system not working, storage problems, etc.) while teaching online?	Never/rarely	11 (21.2)	13 (25.0)	28 (53.8)	0.116[1]
	Sometimes	1 (3.2)	10 (32.3)	20 (64.5)	
	Often/always	0 (0.0)	4 (44.4)	5 (55.6)	
Do you have students who reported that they could not attend your course due to technological/technical difficulties?	Yes	4 (8.0)	16 (32.0)	30 (60.0)	0.285[2]
	No	8 (19.0)	11 (26.2)	23 (54.8)	
Are there any students who reported that they could not attend your course's online exam due to technological/technical difficulties?	Yes	3 (6.1)	17 (34.7)	29 (59.2)	0.086[2]
	No	9 (20.9)	10 (23.3)	24 (55.8)	

Table 5 (continued): Sustainability of the online teaching.

		Would you like to continue online teaching after switching to face-to-face education again?			p
		Yes	**No**	**Sometimes**	
Do you think online teaching provides effective learning?	Yes	7 (70.0)	0 (0.0)	3 (30.0)	<0.001[1]
	No	1 (2.0)	23 (45.1)	27 (52.9)	
	Undecided	4 (12.9)	4 (12.9)	23 (74.2)	
When you compare online teaching and face-to-face education methods, which one do you prefer?	Face-to-face education method	3 (3.8)	26 (33.3)	49 (62.8)	<0.001[1]
	Online teaching method	5 (83.3)	1 (16.7)	0 (0.0)	
	Undecided	4 (50.0)	0 (0.0)	4 (50.0)	
Do you think online teaching has some advantages?	Yes	12 (26.1)	4 (8.7)	30 (65.2)	<0.001[1]
	No	0 (0.0)	20 (71.4)	8 (28.6)	
	Undecided	0 (0.0)	3 (16.7)	15 (83.3)	
Do you think online teaching has some disadvantages?	Yes	8 (9.8)	27 (32.9)[b]	47 (57.3)[b]	0.017[1]
	No	2 (66.7)	0 (0.0)[b]	1 (33.3)[b]	
	Undecided	2 (28.6)	0 (0.0)[a]	5 (71.4)[a]	
What do you think about the use of online teaching in practical courses?	Definitely applicable	3 (75.0)	0 (0.0)	1 (25.0)	<0.001[1]
	Definitely not applicable	3 (6.4)	24 (51.1)	20 (42.6)	
	Partially applicable	6 (14.6)	3 (7.3)	32 (78.0)	
What method do you think should be used to assess and evaluate the course you teach via online tools?	Face-to-face assessment	1 (2.5)	15 (37.5)	24 (60.0)	0.021[1]
	Online assessment	11 (25.0)	10 (22.7)	23 (52.3)	
	Undecided	0 (0.0)	2 (25.0)	6 (75.0)	
Do you think that online exams are held securely (students answer questions by being honest)?	Yes	1 (25.0)	0 (0.0)	3 (75.0)	0.151[1]
	No	7 (10.4)	24 (35.8)	36 (53.7)	
	Undecided	4 (19.0)	3 (14.3)	14 (66.7)	

DISCUSSION AND CONCLUSION

The participation rate of the academics invited to the research was 73.6%. It is thought that this ratio will give realistic information about the reflection of the whole population of the study and the generalizability of the results. The fact that the majority of the academics (82.6%) included in the study are academic staff who teach both theoretical and practical courses may indicate that more qualified data is obtained in the evaluation of OT. In other words, the majority of the participants do not teach only theoretical or practical courses may show that their evaluations are not one-dimensional and the model is evaluated with a holistic approach.

In the study, it was determined that the clinicians do not want to carry out the practical courses with OT and they have negative thoughts about it. When clinicians and basic sciences academics are compared, it is seen that this negative idea is more striking. It is thought that the characteristic of the courses taught has an important effect on this difference of opinion. It is known that students' hands-on practices, examination, diagnosis and treatment at the bedside and experience of communication and consultation skills in practical courses make learning much more effective and easier (Mehta et al. 2021). In a study (Amanda 2020) questioning the OT experiences of trainers from various veterinary schools in different countries during the pandemic period, it is seen that some trainers emphasize the importance of hands-on practices. On the other hand, in a report discussing the effectiveness of online anatomy training of veterinarian candidates, it was stated that OT is instructive and applicable for students (Choudhary 2021). It is striking that pre-recorded videos and live applications are beneficial for successfully teaching surgical interventions to medical students. It is also demonstrated that medical students give positive feedback on surgical training with OT and this method can be used effectively in the future thanks to the developing technology (Mehta et al. 2021). In this context, it would be wrong to think that OT is only a didactic method. By making use of techniques such as video-based courses, roundtable discussions, small group sessions, case-based learning, serious games and simulations, more active use of online teaching by students can be encouraged and their learning processes can be improved.

In the study, the academics stated that they did not generally experience difficulties in participating in OT due to technological/technical reasons, while the students had. Similarly, attention has been drawn in the literature (Ahmed et al. 2020; Amanda 2020; Choudhary 2021; Mehta et al. 2021) to some technological and technical inadequacies, which may be experienced due to the inability of each student to have sufficient economic power, can be considered one of the vital disadvantages of OT.

Based on the findings of this study, the lack of active participation of students in the courses can be suggested as another disadvantage of OT. It is understood that the students' asking questions about the course is positively related to their participation in the lesson. It is observed that academics are generally not satisfied with asking and receiving questions from students. The skill of asking questions encourages active learning, keeps the interest in the lesson alive and facilitates learning. According to Tsai et al. (2021), one of the features of OT that negatively affects the academic success of students is the absence of classroom interaction. From this point of view, it can be evaluated that OT brings some difficulties in active learning, since there are only a few questions from the students in OT. Moreover, it is seen that the expected relationship, communication and cooperation between the lecturer and the student (Regmi and Jones 2020). In a study, it was concluded that face-to-face education is much more efficient in terms of working collaboratively and communication skills (Ahmed et al. 2020).

It was concluded that academics think that OT is also inadequate in cases where participation is insufficient. On the other hand, the fact that those who think OT is effective and want to use this method in the future is an indicator of the consistency between the answers. Although academics generally find students' participation in the course sufficient, it can be argued that they are not ready for OT. Moreover, when the face-to-face and distance education preferences of academics are evaluated, it is seen that 84.7% of the participants prefer the face-to-face education model. A study (Cooperman 2007) claimed that the preparation styles of the lecturers for face-to-face education and online education are very different from each other. When academics' reasons for preferring face-to-face education are justified, similar to what Cooperman (2007) mentioned, it can be argued that it would not be surprising to prefer the method they are accustomed to in terms of preparation and teaching strategies.

In the literature, when it comes to the evaluation of distance and online education, it is seen that one of the most important evaluation criteria is the student interaction with the lecturer and other students (Byrne et al. 2021). Among the most important difficulties of online exams are the problems that students may experience in ensuring their privacy and getting used to the new exam system. Another problem with online exams is ensuring exam security and preventing academic fraud. For honesty to be at the forefront, students can declare their identities before starting the exam and use microphones and cameras to ensure that the area where they will take the exam can be observed (Marín García et al. 2021). Despite these opportunities, it is considered unrealistic to control these applications by academics, who are sometimes the only instructors of the course, for exams with a large participant population. In a study, it was revealed that remotely supervised exams to ensure academic honesty cause problems in students' privacy, causing them to experience stress and anxiety (Paredes et al. 2021). Based on these data, it can be suggested to prioritize online classroom interaction and participation in the assessment and evaluation of students. As a matter of fact, according to Oncu and Cakir (2011), formative assessment is considered more appropriate instead of summative assessment in online education.

It has been determined that although questions are asked from the students to the lecturers during the courses or the questions asked by the lecturers are answered, the academicians are skeptical about the continuation of online education or they think that it can continue under some conditions. Moreover, it is clearly seen that academics associate their views on the sustainability of OT with whether it is an effective learning method and the majority of them have a negative approach to distance education being one of the basic teaching methods. However, OT has many advantages as it is a flexible method that allows students to participate wherever and whenever they want (Houlden and Veletsianos 2019; Tsai et al. 2021; Veletsianos et al. 2021; Wagner et al. 2021). For this reason, it is recommended that academics do not

ignore the features that are in favor of the students before deciding on the OT method. It is considered that conducting both distance and traditional face-to-face education together can be a much more effective method as an alternative to totally OT (Matkin 2007).

In the international literature (Bill 2007; Dhein 2007; Murray and Sischo 2007; Varnhagen and Wright 2008), there are many studies on distance education conducted from the past to the present in the fields of veterinary medicine. In recent years, the existence of studies particular to the Covid-19 pandemic draws attention (Amanda 2020; Routh et al. 2021; Mahdy and Sayed 2022). For this reason, it is thought that this study will contribute to the literature in terms of the effects of Covid-19 on veterinary medicine education.

The online teaching and learning model in the field of veterinary medicine in Türkiye is a new and open concept. Before the pandemic, in addition to some traditional courses in some veterinary faculties, it is seen that academics recorded their courses and made these recordings available to students on various social media platforms. Although it is known that academics share these videos with their students, there is no reliable data that can confirm this information. In the pre-pandemic period, no course/curriculum which is officially conducted with distance education method or any scientific research/report/document that covers the whole of veterinary education has been found in Türkiye. However, after the pandemic, a study (Aslım et al. 2023) was found that evaluated the views of veterinary students about distance education. Considering the previous study and current study, it can be claimed that these are one of the pioneering studies that proves the existence of online education in the field of veterinary medicine in Türkiye and draws a general framework by questioning its pros and cons.

Consequently, the perspectives and perceptions of academics on the new OT method were evaluated after the compulsory and sudden transition in the AUFVM due to the Covid-19 pandemic. Academics have expressed their opinion that online education generally contains technical/technological difficulties and that this method should not be used in practical courses. In addition, it has been determined that the academics have an attitude and approach not to prefer the OT method among the standard education methods in the future. Comprehensive qualitative research is needed to examine the reasons for these negative attitudes. Moreover, due to the sudden and unprepared introduction of OT in veterinary education, determining the strengths and areas that need improvement from the point of view of academics can be determined as one of the subjects of further studies.

Aslım et al. (2023) showed that most of the Turkish veterinary students (77%) thought that applied courses should be face-to-face. Besides, another study designed by the authors of current article has highlighted the experience and perceptions of students about the OT process that they are trying to adopt in the Covid-19 pandemic. In this way, it has aimed to evaluate OT to determine the perceptions of lecturers and students, compare them and make improvements as a result, not only in one way but also bidirectional.

In conclusion, this study revealed that some clinicians don't want to carry out the practical courses with OT. Insufficient participation of students and technological inadequacied can be cons of the education. It can be argued that the academics do not tend to prefer and are biased against OT.

CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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AUTHOR CONTRIBUTIONS

Idea / Concept: AÜA
Supervision / Consultancy: AÜA, PA
Data Collection and / or Processing: AÜA, PA
Analysis and / or Interpretation: AÜA, PA
Writing the Article: AÜA
Critical Review: AÜA

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