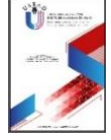




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## **DISTANCE EDUCATION STUDENTS' ATTITUDES TOWARDS ONLINE EXAMS IN HIGHER EDUCATION**

**YÜKSEKÖĞRETİMDE UZAKTAN EĞİTİM ÖĞRENCİLERİNİN ÇEVİRİMİÇİ SINAVLARA  
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**Abstract:** Online assessment has been considered an effective assessment instrument since distance education was widespread in the context of higher education throughout the world. During the COVID-19 pandemic, many higher education institutions had to conduct online examinations as an alternative way of assessment. Although there were numerous studies on university students' opinions about e-learning or distance learning there was not much research on their attitudes toward e-assessment. With this aim, the present study intends to understand undergraduate students' attitudes toward online exams and compare their attitudes in terms of gender, major, and first-time takers of online exams. Sample of the study comprised 130 undergraduate students taking first-year courses online through distance education from different departments of a university in Türkiye. The data were collected online and subjected to SPSS statistical analysis. The results displayed that distance students mostly had negative attitudes toward online exams. Individual features played a significant role in students' attitudes toward online assessment regarding gender and their first online exam experience. However, major did not play a significant role in students' attitudes.

**Key Words:** Higher Education, Online Exams, Distance Learning, Distance Education

**Öz:** Uzaktan eğitimin dünya genelinde yükseköğretim bağlamında yaygınlaşması nedeniyle çevrimiçi değerlendirme etkili bir ölçme aracı olarak düşünülmektedir. COVID-19 salgını sırasında birçok yükseköğretim kurumu çevrimiçi sınavları alternatif bir değerlendirme yöntemi olarak uygulamıştır. Üniversite öğrencilerinin e-öğrenme veya uzaktan öğrenmeye ilişkin görüşleri üzerine çok sayıda çalışma bulunmasına rağmen, e-değerlendirmeye yönelik tutumları üzerine çok fazla araştırma yapılmamıştır. Bu amaçla, bu çalışma, lisans öğrencilerinin çevrimiçi sınavlara ilişkin tutumlarını anlamayı ve tutumlarını cinsiyet, bölüm ve çevrimiçi sınavlara ilk kez girenler açısından karşılaştırmayı amaçlamaktadır. Araştırmanın örneklemini Türkiye'de bir üniversitenin farklı bölümlerinde öğrenim gören, birinci sınıf derslerini uzaktan eğitim yoluyla çevrimiçi alan 130 lisans öğrencisi oluşturmaktadır. Veriler çevrimiçi olarak toplanmış ve SPSS istatistiksel analizine tabi tutulmuştur. Sonuçlar, uzaktan öğrencilerin çoğunlukla çevrimiçi sınavlara karşı olumsuz bir tutuma sahip olduğunu göstermiştir. Öğrencilerin cinsiyet açısından çevrimiçi değerlendirmeye yönelik tutumları ve ilk çevrimiçi sınav deneyimleri üzerinde bireysel özellikler önemli rol oynamıştır. Ancak eğitim aldıkları bölümün öğrencilerin tutumları üzerinde anlamlı bir etkisi olmadığı anlaşılmıştır.

**Anahtar Kelimeler:** Yükseköğretim, Çevrimiçi Sınavlar, Uzaktan Öğrenim, Uzaktan Eğitim

## 1. Introduction

Online exams have been one of the most effective assessment tools since distance education was widespread in the context of higher education throughout the world. If it is implemented effectively it is believed that online assessment provides many benefits in terms of the learning process and learners (Afacan Adanir et al., 2020). In order to understand to what extent learners obtain information assessment gets prominence in the educational system (Alsadoon, 2017). Enhancing learners' confidence through acquainting them with formats and technology use and forming their assessment competency are also of great importance (Aristeidou et al., 2023).

When examining the literature about university students' perceptions of online assessment many studies have appeared focusing on the issue from different perspectives (Abasli et al., 2023; Afacan Adanir et al., 2020; Almoslamani, 2022; Alsalhi et al., 2022; Arslan, 2023; Benghalem & Melouk, 2021; Mondal, 2021; Ocak & Karakuş, 2021; Shraim, 2019; Sözen & Güven, 2019). Some studies focused on students' negative opinions about online exams and the reasons behind them. Ocak and Karakuş (2021) investigated university students' opinions about online exams. The qualitative method namely a semi-structured interview was followed by using content analysis. The findings of the research indicated that participants encountered many problems during online exams such as sudden logout, lack of motivation during the exam, lack of feedback, and motivation along with insufficient time. Additionally, insufficient information about exams, internet problems, not returning to the previous question and lack of instructor-student interaction were among other difficulties met by the students during online exams. Similarly, Benghalem and Melouk (2021) also examined students' opinions about online assessment. It was the participants' first experience in taking online exams. The results of the research displayed participants' negative attitudes toward the exams. Among the factors that mostly negatively affected the students' attitudes there was poor quality of the internet during the implementation of the online exams. It was suggested that students' opinions should be taken into consideration to ensure the future success of online exams.

However, some research results showed students' positive views of online exams. Alsalhi et al. (2022) sought to measure undergraduate students' approval of online assessments in Jordan. It was seen that participants showed a high degree of acceptance of the implementation of online assessment in various ranks of degrees. The reason behind this was related to the flexibility of online exams in terms of place and time, time-saving, quick feedback, and chance to go back to unanswered questions. Findings indicated that students from the computing sciences department demonstrated a higher level of acceptance of online exams than others. There was not a significant difference between female and male students. It was suggested that technical and internet-related problems needed to be solved and cheating during online exams should be prevented to create better exam atmospheres. In a similar vein, Shraim (2019) explored undergraduate students' views about the implementation of online examinations and the results displayed that there were some advantages of online exams regarding security, practicality, affective factors, reliability, validity, and pedagogy. Students regarded online exams as more beneficial than paper-based exams or in other words, than traditional exams in terms of efficiency of cost, effort, time, and reliability of grading. Nevertheless, they mentioned fairness, validity, and security problems in the process of implementing online exams. In another study, Almoslamani (2022) stated that undergraduate students in Saudi Arabia had a positive attitude towards e-assessment. Students reported that online exams were accurate and flexible and they could rely on

online exams. According to them, online exams provided help for them to show their academic achievement and enhance their cognitive skills at the same time.

Although results of studies on online assessment varied from positive to negative opinions, some research indicated both the advantages and disadvantages of online exams. Specifically, Abasli et al. (2023) studied the students' impressions of online exams implemented during Corona Virus 19 in a university in Azerbaijan. The participants were taking online exams for the first time and had both negative and positive views on online exams. Findings displayed that low cost of education, lack of technological infrastructure, quick feedback, decrease in exam anxiety, and effective use of time were considered as the benefits of online exams reported by the students while cheating, inadequacy of control mechanism, and internet-related problems were among the poor sides of this type of assessment. It was recommended that training human resources and developing infrastructure were vital solutions to prevent possible drawbacks of online assessment. Arslan (2023) examined university students' attitudes toward online assessment methods in a Turkish university regarding final and midterm exams in terms of region, department, age and gender. Participants from various departments of the university were taking distance information technology courses. Results displayed no significant differences in participants' attitudes after the process of online exams considering the variables of region, age, and gender except from department. The majority of the participants thought that online exams had some advantages as they were comfortable and practical. Nevertheless, they did not hold a positive attitude towards online assessment after entering final and midterm exams as most of them mentioned about disadvantages of exams like technical problems and management met during the process of the exam. Furthermore, Afacan Adanir et al., (2020) compared the attitudes of undergraduate students from two different universities in Kyrgyzstan and Türkiye towards online assessment. The study indicated participants' different attitudes regarding prior online course experience, major, and gender. There were significant differences between Kyrgyz and Turkish students as Turkish participants thought online assessments fairer, more reliable, and less stressful compared to paper-pen exams. However, cheating, the existence of identical questions, and the only use of multiple-choice questions were among the factors that Kyrgyz students complained about. It was suggested that system usage and computer literacy needed to be enhanced and students should be informed about the use of online exams before they took the exams. In a similar vein, Mondal (2021) studied to determine university and college students' perceptions of e-assessment. It was found that there was a statistical difference between females' and males' attitudes toward online examinations as male students had more positive perceptions about online exams than their female counterparts. Moreover, Sözen and Güven (2019) stated that students' motivation was important while taking online exams and online assessment

instruments could be used to improve students' motivation for their subjects in class activities.

Although researchers need to study the perceptions of distance learners about the implementation of distance education, it is also necessary to explore their opinions about online exams to identify the problems in conducting these exams in higher education and have a better implementation of them. Accordingly, higher education institutions can increase teaching methodology and "online testing technology for the purpose of successful e-assessments" (Tran, Nguyen, Nguyen & Tran, 2021, p. 208). For this purpose, this study intends to find proper responses to the following research questions:

1. What are distance education students' attitudes towards online exams in higher education?
2. Do distance education students' gender, major, and first online exam experience affect their attitudes toward online exams in higher education?

## **2. Method**

In this section, the research design, participants, data collection instrument, data collection procedure, and data analysis were given in detail.

### **2.1. Research Design**

The current study was designed as a descriptive type of general survey research design with a quantitative method.

### **2.2. Participants**

The participants were 130 undergraduate students from various faculties and vocational schools at a public university in Türkiye. They were all first-grade students and taking all their courses online for the year the present study was carried out. 64.6% of the students were female (n=84) and 35.4% were male (n=46). 62 (47.7%) of the participants were studying at three faculties and 68 (52.3%) of them were studying at three vocational schools. 40 (30.8%) of them stated that they had already taken online exams before while 90 (69.2%) of them were first takers of online exams.

### **2.3. Instrument**

The scale of the Undergraduate Students' Attitudes towards Online Exams developed by Ocak and Karakuş (2022) was conducted to understand students' attitudes towards online exams in higher education. The scale comprised four dimensions such as exam structure, individual features, taking precautions, and technical element. In detail, technical element consisted of hardware, software, vehicle-related problems, internet connection problems, system problems, and vehicle problems. Taking precautions contained exam security and lack or insufficiency of course documents. Individual features included pedagogical impact, affective feature, time (preparation), motivation-anxiety, social control and communication, and exam structure were related to the exam, question structure, technical system, exam content, and duration (Ocak & Karakuş,

2022). The Cronbach alpha was found to be .825 for the overall scale. It was 0.74 for technical element, 0.75 for taking precautions, 0.70 for individual features, and 0.76 for exam structure. For the present study, the overall Cronbach alpha was found to be .88. Reliability analysis for the first factor was .89, for the second factor .88, for the third factor .78, and for the fourth factor 61. Five-point Likert scale was applied ranging from 1 (totally disagree) to 5 (totally agree).

#### 2.4. Data collection procedure

The current research was administered at a state university in Türkiye in the fall semester of the 2023-2024 academic year. Data were collected shortly after midterm exams via Google Forms. All the exams including midterm, final, and make-up exams were created with the help of the LMS system. A learning management system (LMS) was used by the university to deliver all the courses the participants of the study were taking at the time of the study. The LMS system also allowed students to take online exams, projects, and homework synchronously or asynchronously along with providing to watch and re-watch the lecture videos. Before entering the exam, students were informed about the time and date of the exam through the system and on the websites of the university.

Data were collected through the survey shortly after midterm exams via Google Forms. With this aim, first, the students were sent an invitation email to fill out the scale. The invitation mail was sent in week nine to ensure students could explain their opinions about online exams and it was opened to the students for one week. All the students were provided with detailed information about the goal and the procedure of the study. They were also informed that their participation was voluntary and assured of anonymity and confidentiality.

#### 2.5. Data analysis

A statistical program, SPSS, was used to analyze the quantitative data of the study. Independent sample t-test and one-way ANOVA were conducted to understand the mean differences for the factors and the scale. The significance level was set at 0.05.

### 3. Findings

#### 3.1. Findings from students' attitudes toward online exams

To answer the first research question which was asked to understand students' attitudes toward online exams in higher education, descriptive means and standard deviations were calculated and presented in the tables below. Table 1 shows university students' responses about technical element of online exams.

Table 1. Descriptive statistics for students' responses to the items about the technical structure of online exams

Technical element	M	SD
1. If I have a problem with the system during the exam, the thought of	4.53	1.08

whether my exam will be repeated makes me unhappy.		
2. I hate experiencing problems due to the environment (power outage, sound, etc.) during the online exam.	4.68	.86
3. If I experience an internet outage during an online exam, I get nervous.	4.65	.83
4. I am afraid of making mistakes due to problems caused by the system while coding the answers in the online exam.	4.39	1.13
5. I am very afraid of my computer breaking down during the online exam.	4.31	1.14
6. It makes me uneasy when questions are missing from the system during the exam.	4.48	1.02
Total mean score	4.50	1.01

Table 1 indicates that university students' attitudes toward the technical element of online exams were at a very high level with a general arithmetic mean of 4.50 and a standard deviation of 1.01. The majority of the students reported that they hated experiencing problems due to the environment (power outage, sound, etc.) during the online exam ( $M=4.68$ ) and if they experienced an internet outage during an online exam, they got nervous ( $M=4.65$ ). Additionally, if they had a problem with the system during the exam, the thought of whether their exam would be repeated made them unhappy ( $M=4.53$ ) and it made them uneasy when questions were missing from the system during the exam ( $M=4.48$ ).

Table 2. Descriptive statistics for students' responses to the items about taking precautions during online exams

Taking precaution	M	SD
7. Knowing that the infrastructure of the system is good reduces my anxiety.	4.30	1.09
8. It motivates me that institutions take precautions against problems related to the examination system in advance.	4.55	.94
9. Checking the questions assigned in the online exam in advance increases my sense of confidence.	4.34	1.11
10. The fact that the online exam questions are compatible with the course reduces my anxiety.	4.62	.86
11. Getting information about the type of online exam (multiple choice, open-ended, etc.) increases my motivation to prepare for the exam.	4.48	.97
12. It would be a relief for me to contact the course instructor if I need it during the online exam.	4.47	.95
Total mean score	4.46	.98

Table 2 displays that university students' attitudes toward taking precautions during online exams were at a very high level, with a general arithmetic mean of 4.46 and a standard deviation of .98. As seen in the table, most of the students stated the fact that online exam questions were compatible with the course reduced their anxiety ( $M=4.62$ ) and it motivated them that institutions took precautions against problems related to the examination system in advance ( $M=4.55$ ).

Table 3. Descriptive statistics for students' responses to the items about individual features of online exams

Individual features	M	SD
13. During online exams, I feel uneasy until the time runs out.	3.49	1.41
14. I can't sleep before an online exam.	2.58	1.50
15. If I have problems during the online exam, I cannot express myself.	2.30	1.40
16. I spend a lot of time on questions in online exams.	3.12	1.24
17. I cannot get any results from online exams.	3.04	1.32
18. I worry about not being able to complete online exams on time.	3.94	1.22
Total mean score	3.07	1.35

Table 3 demonstrates that university students' attitudes toward the individual features of online exams were at a moderate level, with a general arithmetic mean of 3.07 and a standard deviation of 1.35. Most students reported that they worried about not being able to complete online exams on time (M=3.94) and they felt uneasy during online exams until the time ran out (M=3.49).

Table 4. Descriptive statistics for students' responses to the items about exam structure of online exams

Exam structure	M	SD
19. It concerns me that the questions in online exams come from the question pool.	3.04	1.35
20. Not being able to answer questions during the exam makes me nervous.	4.30	1.06
21. I would be annoyed if everyone got different questions in online exams.	3.09	1.58
Total mean score	3.47	1.34

Table 4 shows that university students' attitudes toward the exam structure of online exams were at a high level, with a general arithmetic mean of 3.47 and a standard deviation of 1.34. The students stated that not being able to answer questions during the exam made them nervous (M=4.30), they would be annoyed if everyone got different questions in online exams (M=3.09) and it concerned them that the questions in online exams came from the question pool (M=3.04).

### 3.2. Findings from the relationship between students' attitudes toward online exams and gender

An independent t-test was conducted to answer research question two as indicated in Table 5 to determine if there was a significant difference between gender and students' perceptions of online exams.

Table 5. Means and standard deviations of students' answers based on gender

Group	Gender	N	M	SD	t	p
Technical structure	Female	84	4.55	.88	.922	.35
	Male	46	4.41	.71	.980	
Taking precautions	Female	84	4.41	.87	-.823	.41
	Male	46	4.53	.60	-.916	
Individual features	Female	84	3.21	.93	2.24	<b>.026*</b>
	Male	46	2.82	.90	2.26	
Exam structure	Female	84	3.51	1.05	.64	.51
	Male	46	3.39	.95	.66	



As presented in Table 5, there was not a significant difference between the mean values for females and males in the factors of technical element ( $.35 < 0.05$ ), taking precautions ( $.41 < 0.05$ ), and exam structure ( $.51 < 0.05$ ), p value of which was greater than the required statistical significance level (0.05). On the other hand, a significant difference was found in the factor of individual features ( $.026 > 0.05$ ) and gender as female students had a higher mean score than male students.

### 3.3. Findings from the relationship between students' attitudes toward online exams and major

One-way ANOVA was applied to give a response to research question two whether there was a significant difference between students' major and their perception of online exams as shown in Table 6.

Table 6. One-way ANOVA test results for students' majors and online exams

		Ss	DF	MS	F	Sig.
Technical element	Between Groups	.631	1	.631	.909	.342
	Within Groups	88.861	128	.694		
	Total	89.492	129			
Taking precautions	Between Groups	.000	1	.000	.000	.992
	Within Groups	80.726	128	.631		
	Total	80.726	129			
Individual features	Between Groups	.002	1	.002	.002	.960
	Within Groups	114.840	128	.897		
	Total	114.842	129			
Exam structure	Between Groups	.182	1	.182	.175	.677
	Within Groups	133.582	128	1.044		
	Total	133.764	129			

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As indicated in Table 6, the findings revealed that no statistically significant differences existed between students' attitudes towards online exams and their majors according to the variables of technical element ( $.342 < 0.05$ ), taking precautions ( $.992 < 0.05$ ), individual features ( $.960 < 0.05$ ) and exam structure ( $.677 < 0.05$ ).

### 3.4. Findings from the relationship between students' attitudes toward online exams and their first online exam experience

One-way ANOVA was used to answer research question two if there was a significant difference between students' first online exam experience and their perception of online exams as demonstrated in Table 6 below.

Table 7. One-way ANOVA test results for students' first online exam experience

		Ss	DF	MS	F	Sig.
Technical element	Between Groups	.436	1	.436	.627	.430
	Within Groups	89.056	128	.696		
	Total	89.492	129			

Taking precautions	Between Groups	.407	1	.407	.649	.422
	Within Groups	80.318	128	.627		
	Total	80.726	129			
Individual features	Between Groups	6.987	1	6.987	8.292	<b>.005*</b>
	Within Groups	107.855	128	.843		
	Total	114.842	129			
Exam structure	Between Groups	.931	1	.931	.897	.345
	Within Groups	132.833	128	1.038		
	Total	133.764	129			

Based on Table 7, the results clearly showed that there were no statistically significant differences in students' perspectives according to the variables of technical element ( $.430 < 0.05$ ), taking precautions ( $.422 < 0.05$ ), exam structure ( $.345 < 0.05$ ) and their first online exam experience. However, there was a significant difference between the variable of individual features ( $.005 > 0.05$ ) and entering an online exam before as those who did not have online exam experience before had higher mean scores than the others.

#### 4. Discussion and Conclusion

The present study aimed to identify the attitudes of university students toward online exams in a higher education institution in Türkiye according to four factors such as exam structure, individual features, taking precautions and technical element. It also intended to show whether there were any differences between gender, major, students' first online exam experience, and perceptions of students towards online exams in distance learning.

By looking at the results of the study, it was displayed that the students held mostly negative attitudes towards online exams, the result of which was supported by the previous research (Benghalem & Melouk, 2021) but inconsistent with the findings of the other research (Almoslamani, 2022) which indicated positive attitudes of participants towards e-assessment. In detail, the research showed that the majority of the participants felt anxious while taking the exam regarding the technical element dimension of the online exam. The results displayed that internet and system-related problems were among the most important factors affecting participants' views of the technical element of online exams. This finding aligned closely with the results of the study which displayed that online assessment had some disadvantages such as management, technical problems (Arslan, 2023), and poor internet quality during online exams (Benghalem & Melouk, 2021; Abasli et al., 2023). To be more specific, students were worried about external factors that could affect the exam atmosphere such as noise and power outage. Another reason for the anxiety the participants reported was internet connection problems and system-related problems met during the exam. Concerning taking precautions for online exams, participants' motivation played a vital role as most students felt motivated if the university could take precautions against problems related to the exam system in advance and if they knew there was not a problem in the infrastructure of the system. As

previously pointed out (Sözen & Güven, 2019) online instrument tools could be used to enhance students' motivation. Moreover, having information about the kind of online exams and the opportunity to check the questions beforehand made them feel relaxed. The help of the course instructors during the online exam also could contribute to enhancing their motivation. Lack or insufficiency of course documents was another factor that increased their anxiety before taking online exams. In this study, individual features were observed to receive the lowest level of satisfaction of the participants. In terms of individual features, the results showed that participants mainly felt anxious about time management as they were worried about not completing the exam on time. The results displayed that duration played the most important role in exam structure according to the participants' perceptions of online exams as they felt nervous about not answering all questions during the exam.

Furthermore, the results of the study found no significant differences between females and males regarding mean scores of technical element, taking precautions, and exam structure. The result obtained from this study was compatible with the study (Alsalhi et al., 2022) but inconsistent with another study (Mondal, 2021). Nevertheless, a statistical difference was observed in the factor of individual features where the female participants had higher mean scores compared to the males. Similarly, there was not a connection between students' perspectives on technical structure, taking precautions, exam structure, and their first online exam experience. However, there was a significant difference between individual features and entering online exams before as the students who did not have prior experience with online assessment obtained higher mean scores than those who had previous experience. This result indicated that having prior experience with taking an online exam could make students less worried and less anxious. For this reason, the students should be informed about the type of online exam structure and given courses or training about using technology in an effective way to deal with the possible drawbacks they could meet during the online exams because insufficient information about exams is an important factor affecting students' perception of online exams (Ocak & Karakuş, 2021). Without giving adequate information about the type of exam and useful instructions it would be difficult for the students to take online exams successfully. Additionally, students' opinions should be taken into consideration and changed positively in order to enhance the success of online exams (Benghalem & Melouk, 2021).

This study also displayed that there was no correlation between the students' majors and their attitudes toward online exams.

## 5. Suggestions

This study explored to give a detailed profile of distance education students' attitudes towards online exams and understand whether there were significant differences according to gender, major, and first-time takers of online exam variables. It is considered that the current research can contribute to the

progress of the literature in this field to better understand the issue of distance learners' attitudes toward online assessment. It is suggested that researchers studying in the area of distance education could investigate and explain the problems met during the implementation of online exams and look for possible ways to diminish these problems.

The study has some limitations as in the following:

- It is limited only to 130 first-year distance learners and certainly requires further investigation, including more diverse samples from different departments of the university with a larger sample group. For this reason, the study can't be generalized to the entire subjects.
- For future research, similar studies about online exams are recommended using different variables.
- The current study is limited as it utilized only a quantitative data collection instrument, however, using qualitative research tools like semi-structured interviews and observations could provide help for a better understanding of the issue.

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**GENİŞLETİLMİŞ ÖZET:** Uzaktan eğitimin dünya genelinde yükseköğretim bağlamında yaygınlaşmasından bu yana çevrimiçi sınavlar en etkili değerlendirme araçlarından biri olmuştur. Etkili bir şekilde uygulandığı takdirde çevrimiçi değerlendirmenin öğrenme süreci ve öğrenenler açısından birçok fayda sağladığı görülmektedir (Afacan Adanir, vd., 2020). Öğrenenlerin bilgiyi ne ölçüde elde ettiğini anlamak için eğitim sisteminde değerlendirme ön plana çıkmaktadır (Alsadoon, 2017). Öğrencilerin formatlar ve teknoloji kullanımıyla tanıştırılması ve değerlendirme yeterliliklerinin oluşturulması yoluyla güvenlerinin artırılması da büyük önem taşımaktadır (Aristeidou vd., 2023). Uzaktan eğitimin uygulanmasına ilişkin uzaktan öğrenenlerin algılarının araştırılması önemli olmakla birlikte, yükseköğretimde bu sınavların yapılmasındaki sorunların tespit edilmesi ve daha iyi uygulanması için çevrimiçi sınavlara ilişkin öğrenci tutumlarının da araştırılması gerekmektedir. Buna göre yükseköğretim kurumları, başarılı e-değerlendirmeler yapmak amacıyla öğretim metodolojisini ve "çevrimiçi test teknolojisini" artırabilirler (Tran vd., 2021, s.208). Bu amaç doğrultusunda, bu çalışma üniversite öğrencilerinin uzaktan eğitim sürecinde çevrimiçi sınavlara yönelik tutumlarının neler olduğunu ve cinsiyet, bölüm ve öğrencilerin ilk çevrimiçi sınav deneyimlerinin üniversite öğrencilerinin çevrimiçi sınava yönelik tutumlarını etkileyip etkilemediği sorularına cevap aramıştır. Bu çalışma, 2023-2024 eğitim-öğretim yılı güz döneminde Türkiye'deki bir devlet üniversitesinde uygulanmıştır. Veriler ara sınavlardan kısa bir süre sonra Google formları aracılığıyla toplanmıştır. Çalışmanın yapıldığı üniversitede LMS sistemi, öğrencilerin eşzamanlı veya eşzamansız olarak çevrimiçi sınav, proje ve ödev yapmalarına olanak sağlamanın yanı sıra ders videolarını izleme ve tekrar izleme olanağı sağlamaktadır. Çalışmaya, Türkiye'deki bir devlet üniversitesinin çeşitli fakülte ve meslek yüksekokullarının 1. sınıfında öğrenim görmekte olan 130 lisans öğrencisi katılmıştır. Katılımcıların 84'ü kadın ve 46'sı ise erkek öğrencilerden oluşmaktadır. Katılımcıların 62'si fakültelerde ve 68'i ise meslek yüksekokullarında öğrenim görmektedir. Katılımcılardan 40'i daha önce çevrimiçi sınav deneyimi olduğunu ifade etmiştir, 90'ı ise çevrimiçi sınavları ilk defa deneyimlediğini belirtmiştir. Öğrencilerin çevrimiçi sınavlara ilişkin tutumlarını ölçmek amacıyla Ocak ve Karakuş (2022) tarafından geliştirilen Lisans Öğrencilerinin Çevrimiçi Sınavlara Yönelik Tutum Ölçeği kullanılmıştır. Ölçek, sınav yapısı, bireysel özellikler, önlem alma ve teknik unsur olmak üzere dört alt boyuttan oluşmaktadır. Veriler ara sınavlardan kısa bir süre sonra Google Formları aracılığıyla toplanmıştır. Bu amaçla öncelikle öğrencilere ölçeği doldurmaları için bir davet e-postası gönderilmiştir. Öğrencilerin çevrimiçi sınavlara ilişkin tutumlarını açıklayabilmeleri amacıyla dokuzuncu haftada davetiye postası gönderilmiş ve ölçek bir hafta boyunca öğrencilerin erişimine açılmıştır. Tüm öğrencilere çalışmanın amacı ve süreci hakkında detaylı bilgi verilmiştir. Araştırma verilerinin analizinde SPSS istatistik programı

kullanılmıştır. Faktörlerin ve ölçeğin ortalama farklarını anlamak için bağımsız örneklem t testi ve tek yönlü ANOVA testleri yapılmıştır. Anlamlılık düzeyi 0,05 olarak belirlenmiştir. Araştırmanın sonuçları, öğrencilerin çevrimiçi sınavlara karşı çoğunlukla olumsuz tutum sergilediklerini ortaya koymuştur. Araştırma, ayrıntılı olarak incelendiğinde katılımcıların çoğunluğunun sınava girerken çevrimiçi sınavın teknik unsur boyutuna ilişkin kaygı duyduklarını, çevrimiçi sınavların teknik unsuruna ilişkin tutumlarını etkileyen en önemli faktörler arasında internet ve sistem kaynaklı sorunların olduğunu ortaya çıkarmıştır. Öğrenciler gürültü, elektrik kesintisi gibi sınav atmosferini etkileyebilecek dış etkenlerden endişe duyduklarını belirtmişlerdir. Katılımcıların kaygılarının diğer nedenleri arasında internet bağlantı sorunları ve sınav sırasında karşılaşılan sistemsel sorunlar gelmektedir. Çevrimiçi sınavlara yönelik önlemlerin alınması konusunda motivasyon önemli bir rol oynamaktadır çünkü çoğu öğrenci, üniversitenin sınav sistemiyle ilgili sorunlara karşı önceden önlem alabilmesi ve sistemin altyapısında bir sorun olmadığını bilmesi durumunda kendini daha motive hissettiğini belirtmiştir. Ayrıca öğrencilerin çevrimiçi sınavların türleri hakkında bilgi sahibi olmaları, soruları önceden kontrol etme imkanına sahip olmaları ve dersi veren öğretim elemanlarının çevrimiçi sınav sırasında kendilerine yardımcı olmaları da motivasyonlarının artmasına katkı sağlayacak etkenler arasındadır. Öğrencilerin, ders dokümanlarının eksikliği ya da yetersizliği çevrimiçi sınavlara girmeden önce kaygılarını artıran bir diğer faktördür. Bu çalışmada katılımcıların en düşük düzeyde memnuniyet belirttikleri boyutun bireysel özellikler olduğu görülmüştür. Bireysel özellikler açısından çalışmanın sonuçları, katılımcıların sınavı zamanında tamamlayamama endişesi nedeniyle çoğunlukla zaman yönetimi konusunda kaygı duyduklarını göstermiştir. Araştırma sonuçları, katılımcıların çevrimiçi *sınava yönelik tutumlarına* göre, sınav sırasında tüm soruları yanıtlayamamaktan duydukları tedirginlik nedeniyle sürenin sınav yapısında en önemli rolü oynadığını göstermiştir. Çalışma sonuçları, kadın ve erkek katılımcılar arasında teknik unsur, alınacak önlemler ve sınav alt yapısı açısından anlamlı bir fark bulunmadığını göstermiştir. Bununla birlikte, bireysel özellikler faktöründe kadın katılımcıların erkeklere göre daha yüksek puan ortalamalarına sahip olduğu istatistiksel bir farklılık olarak ortaya çıkmıştır. Öğrencilerin teknik yapıya, önlem almaya, sınav yapısına bakış açıları ile ilk çevrimiçi sınav deneyimleri arasında da bir bağlantı bulunamamıştır. Ancak bireysel özellik ile daha önce çevrimiçi sınava girme faktörü arasında anlamlı bir fark ortaya çıkmıştır; çünkü çevrimiçi sınav konusunda daha önce deneyimi olmayan öğrenciler, daha önce çevrimiçi sınav deneyimi olanlara oranla daha yüksek ortalamaya sahiptirler. Ayrıca, bölümlerine göre öğrencilerin çevrimiçi sınavlara ilişkin tutumları arasında bir farklılık olmadığı görülmüştür.

**EXTENDED ABSTRACT:** Online exams have been one of the most effective assessment tools since distance education was widespread in the context of higher education throughout the world. If it is implemented effectively it is believed that online assessment provides many benefits in terms of the learning process and learners (Afacan Adanir et al., 2020). In order to understand to what extent learners obtain information assessment gets prominence in the educational system (Alsadoon, 2017). Enhancing learners' confidence through acquainting them with formats and technology use and forming their assessment competency are also of great importance (Aristeidou et al., 2023). Although researchers need to study the perceptions of distance learners about the implementation of distance education, it is also necessary to explore their opinions about online exams to identify the problems in conducting these exams in higher education and have a better implementation of them. Accordingly, higher education institutions can increase teaching methodology and "online testing technology for the purpose of successful e-assessments" (Tran et al., 2021: 208). For this purpose, this study intends to find proper responses to the questions: What university students' perceptions of online exams during distance education are, and whether gender, major, and students' first online exam experience affect university students' perceptions of online exams. The current research was administered at a state university in Türkiye in the fall semester of the 2023-2024 academic year. Data were collected shortly after midterm exams via Google Forms. The LMS system allows students to take online exams, projects, and homework synchronously or asynchronously along with providing to watch and re-watch

lecture videos. The participants were 130 undergraduate students from various faculties and vocational schools at a public university in Türkiye. They were all first-grade students and taking all their courses online for the year the present study was carried out. 84 of the students were female and 46 of them were male. 62 of the participants were studying at faculties and 68 of them were studying at vocational schools. 40 of them stated that they had already taken online exams before while 90 of them were first takers of online exams. The scale of the Undergraduate Students' Attitudes towards Online Exams developed by Ocak and Karakuş (2022) was conducted to understand students' attitudes towards online exams in higher education. The scale comprised four dimensions as exam structure, individual features, taking precautions and technical element. Data were collected through the survey shortly after midterm exams via Google Forms. With this aim, first, the students were sent an invitation email to fill out the questionnaire in week nine. All the students were provided with detailed information about the goal and the procedure of the study. A statistical program, SPSS, was used to analyze the quantitative data of the study. Independent sample t-test and one-way ANOVA were conducted to understand the mean differences for the factors and the scale. The significance level was set at 0.05. It was revealed that the students held mostly negative attitudes towards online exams. The research showed that the majority of the participants felt anxious while taking the exam regarding the technical element dimension of online exams. The results displayed that internet and system-related problems were among the most important factors affecting participants' views of technical element of online exams. Students were worried about external factors that could affect the exam atmosphere such as noise and power outage. Another reason for the anxiety the participants reported was internet connection problems and system-related problems met during the exam. Concerning taking precautions for online exams, participants' motivation played a vital role as most students felt motivated if the university could take precautions against problems related to the exam system in advance and if they knew there was not a problem in the infrastructure of the system. Moreover, having information about the kind of online exams, the opportunity to check the questions beforehand made them feel relaxed and the help of the course instructors during the online exam also could contribute to enhancing their motivation. Lack or insufficiency of course documents was another factor that increased their anxiety before taking online exams. In this study, individual features were observed to receive the lowest level of satisfaction of the participants. In terms of individual features, the results showed that participants mainly felt anxious about time management as they were worried about not completing the exam on time. The results displayed that duration played the most important role in exam structure according to the participants' perceptions of online exams as they felt nervous about not answering all questions during the exam. In this study, individual features were observed to receive the lowest level of satisfaction of the participants. In terms of individual features, the results showed that participants mainly felt anxious about time management as they were worried about not completing the exam on time. The results displayed that duration played the most important role in exam structure according to the participants' perceptions of online exams as they felt nervous about not answering all questions during the exam. The results of the study found no significant differences between females and males regarding mean scores of technical element, taking precautions, and exam structure. Nevertheless, a statistical difference was observed in the factor of individual features where the female participants had higher mean scores compared to the males. Similarly, there was not a connection between students' perspectives on technical structure, taking precautions, exam structure, and their first online exam experience. However, there was a significant difference between individual features and entering online exam before as the students who did not have prior experience with online assessment obtained higher mean scores than those who had previous experience. This study also displayed that there was no correlation between the students' majors and their attitudes toward online exams.

