Giving Applied Courses with E-Learning in Technician

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ABSTRACT: COVID-19, which became the main headline in the entire world in December 2019, has turned into a nightmare worldwide. Various measures have been taken in order to reduce the spread rate of the virus, reduce death rates and gain time for treatment research. Transformation of the face-to-face education in the classrooms into the distance education system comes first among these measures. Accordingly, social distancing was tried to be ensured, and all educational institutions in Turkey started to shift from the formal education system to the distance education system on March 16th, 2020. In this case, the entire education sector had to undergo a transformation during the pandemic.

This study involved the evaluation of the transition to the distance education model in order to continue education after the decision on stopping the formal education, and the distance education practices that were developed due to this transition. Students generally provided positive feedback on the theoretical lessons they attended within the distance education system; however, they provided negative feedback on the lessons that required practice.

In this study it is tried to evaluate the changes that occurred in educational activities with the introduction of the distance education system and the effects on the education of students enrolled in Gaziantep University Naci Topçuoğlu Vocational School, Department of Handicrafts - Carpet and Rug Weaving Program, where the practical learning model was widely implemented.

KEYWORDS: Covid-19, Coronavirus, Distance Education Method, Applied Courses, Carpet Design, University, Technıcıan

I.   INTRODUCTION

Looking at the history of the world, epidemics related to many infections such as smallpox, plague, cholera, HIV / AIDS, SARS, swine flu and MERS have been observed. Interactions with the widespread trade network and travels have increased, resulting in accelerated spread of outbreaks. [1]. The coronavirus first appeared in 2019 in Wuhan, China's Hubei province. The name of the disease caused by the virus was first given as 2019 Novel Coronavirus and then Covid-19. [2].

Coronavirus is a group of viruses that cause disease in humans. Therefore, coronavirus is known to cause respiratory infections up to severe infectious diseases. [3]. The coronavirus spread rapidly to many countries after China, causing an infectious epidemic. [4]. The germs that spread to the environment with the coughing or sneezing of the patients are transmitted by inhalation. After being in environments contaminated by these means, the virus can be taken by touching eyes, face etc. without washing the hands [3].

Coronavirus (COVID-19) epidemic has taken Turkey under its effect in a short time. According to data from the Ministry of Health of the Republic of Turkey, the first Coronavirus (COVID-19) case was detected in Turkey on March 11, 2020 [5].

The epidemic caused by the SARS-CoV-2 virus and the disease described as COVID-19 (novel coronavirus disease 2019) were declared as a global pandemic by the World Health Organization (WHO) on March 12, 2020. [6].

Due to the high contagious nature of the coronavirus (COVID-19), this virus has changed the flow of life all over the world. Many measures have been taken to slow the spread of the virus. The most important of these measures are flexible working hours, rotating working and closing educational institutions. Within the scope of these measures taken, education was suspended for 3 weeks on March 16, 2020, but it was decided to stop formal education completely due to the spread of the virus.

In Turkey, distance education started from the date of March 23, 2020.

II. DISTANCE EDUCATION

The distance education system has become the mandatory choice of all countries to ensure the continuity of education during the pandemic period. While the act of teaching and learning response in face-to-face education takes place in the same environment and together, these two elements distinguish them from each other in distance education. [7]. Distance education is an effective form of learning that is carried out regardless of location and time, in which the educational materials can be flexibly configured in electronic environment and the student and the educator are in separate places with features such as 24-hour use. Distance education is also called e-learning or digital learning.

Distance education started in the 1700s, and in the 18th and 19th centuries, it was seen as education by letter in many countries in Europe. This practice, which became widespread in England, Germany and France, was applied in different ways in the world in later periods [8]. The main advantage of distance education is that it allows you to adapt your learning to your work and home life. Usually you can also set your own studying speed. The student decides when and where to study. Having the internet is sufficient to establish a connection. As with a full-time course, students may find they gain useful, transferable skills such as planning and research. Distance education is generally less costly than a full time course [9].

There are both pros and cons of the distance education model. Distance education model does not take place simultaneously. For this reason, problems such as the student's inability to communicate with the instructor instantaneously, the student's being alone and away from the interaction in the classroom, the lack of exchange of ideas, low motivation and lack of communication have emerged. It is possible to fix these problems by maximizing the communication between the student and the lecturer, and it should not be forgotten that the internet and technology are decisive in this process. [10].

During this pandemic period, universities have developed a distance education system in such a way that all students can easily use this system if there is an existing distance education system. If there is no existing distance education system, universities have developed a new infrastructure and switched to distance education. However, looking at the periods before the epidemic, the distance education system was generally used in theoretical courses. Therefore, after the coronavirus epidemic, the distance education system was comfortable and easy to apply for theoretical courses, while it was a bit difficult to apply for applied courses. [11].

III. APPLIED COURSES BASED ON DESIGN

Naci Topçuoğlu Vocational School Carpet Weaving and Kilimmaking Program offers both theoretical and practical courses for students studying there. Thus, it is aimed to ensure the professional development of the students.

The aim of art and design education is to increase the awareness of the individual in the society, to raise the awareness of the individual and to enable the individual to express themselves well. [12].

In the courses for design and pattern, it is aimed to teach students the basic knowledge, skills and concepts related to the pattern lesson, to examine pattern examples and to improve their aesthetic understanding. With these courses, it is aimed to develop the creative thinking of the student. Although the course contents of these courses vary according to the characteristics of the department, they are similar in general. The main purpose of these lessons is to enable the students to apply the design that they envision in their minds in detail with appropriate methods and appropriate colors.

Drawing is a tool used to express the thought and it is one of the ways the designer can best describe their design. In the design process, firstly, ideas are written on paper and sketches are created. It is then developed by recycling and the final version is transferred back to paper. Knowing all the stages of the design also brings along personal confidence [13].

IV. LITERATURE

Eygu and Karaman (2013) examined the relationship between student and distance education satisfaction in their study. As a result of the survey, it was stated that the relationship between students' age and their satisfaction with distance education was found significant [14].

Keskin and Kaya (2020) found in their studies that the contribution level of the distance education system to theoretical and general culture was determined to be medium level, while

professional practice skills were found to be at a lower level [15].

Tanrıkulu et al. (2010) examined the critical success factors of the distance education process in their study. In the research, a questionnaire was applied to the students and as a result of the questionnaire, in the distance education system, it has been observed that success factors such as usability, efficiency, interoperability, easy accessibility come to the fore [16].

Keser and Karahoca (2010), in their study, aimed to design a project management course over the e-learning system. In this study, they applied a questionnaire to students studying at the engineering faculty, and as a result of the survey, they revealed that the distance education system can be used in project courses and is important for project-oriented courses [17].

Richardson et al (2017), in their study, revealed that face-to-face education in the classroom was seen to be more beneficial by students [18].

Farmer et al. (2010), in their research, examined the attitudes of students towards distance education by applying a questionnaire to the students of Gazi University Vocational School. In the study, it was revealed that the classroom and the education program are related to the level of resistance in students, but not with the demographic characteristics of the participants [19].

Yilmaz (2020) examined the attitudes and behaviors of the students of the Faculty of Health Sciences towards distance education in his research. As a result of the research, it was revealed that an alternative method should be found for the practice-based lessons.

Kahraman (2020) examined the outcome of the basic design course using a distance education system in his study. It was observed that this course was successful with the distance education system. However, since the interaction of the instructor is required in drawing lessons, it has emerged that it will be difficult for the instructor to conduct the entire course with the distance education system. In addition, it has been revealed that the motivation of the students is high in the formal education system due to being motivated by the educator, so it is necessary to try to realize a virtual environment with the distance education system of practical lessons [11].

In their study, Kurtuncu and Kurt (2020) aimed to identify the problems nursing students experience in distance education and revealed that nursing students found distance education in theoretical and practical courses inadequate [20].

V. RESEARCH METHOD

The aim of this study is to examine the distance education system carried out in universities during the coronavirus pandemic process from the perspective of students, to provide carpet education at associate degree level with distance education and to determine students' views on the effectiveness of students in practice.

For this purpose, answers to the following questions will be sought:

1. What are the digital environments that students use in the distance education system?

2. How is the efficiency of applied courses in the distance education system?

3. What are the students' views on the effectiveness and efficiency of the distance education system?

4. What are the students' opinions on the competencies of the instructors during the pandemic period?

VI. MATERIAL AND METHOD
i. Population and Sample of the Study

The universe of the research is Gaziantep University Naci Topcuoglu Vocational School, Handicraft Department - Carpet Making and Kilim Making Program.

The research was conducted with 92 associate degree students from the First and Second Year of the Carpet Making and Kilim Making Program in the fall semester of the 2020-2021 Academic year. The reason for choosing this group of participants is that it is easy to reach the group. In order for the research to give a healthy and accurate result, students who completed the distance education process in the fall semester of the 2020-2021 Academic year were selected and a questionnaire was applied at the end of the semester and the percentages of the answers given by the participants were calculated with the help of the SPSS program.

ii. Data Collection Tools

All of the data to be collected in the study were carried out with a questionnaire form prepared over electronic media (https://docs.google.com/forms) due to the pandemic. First of all, students to be interviewed were determined and contacted, and then a questionnaire was conducted.

The questionnaire used in this study is a form covering student-distance education satisfaction. The questionnaire applied in the research was applied impartially without any guidance. No questions were asked to reveal the

identity of the participant. In the first part of the questionnaire form, there are questions about the demographic information of the students and the distance education system. The 16-question questionnaire in the other half of the questionnaire was prepared in five-point Likert type. Answers to questionnaire questions;

　　　　I Strongly Disagree
　　　　Disagree
　　　　I Am Indecisive
　　　　Agree
　　　　I Strongly Agree

iii. Research Method

　　　　In the study, the changes that may occur in education and training during the e-learning system and the effects on the education of the students of Gaziantep University Naci Topçuoğlu Vocational School, Department of Handicrafts - Carpet Making and Kilim Making Program, where the applied learning model is frequently used, was tried to be evaluated with a survey study.

　　　　The analysis of the data was carried out using the "Statistical Package for Social Science (SPSS)" package program, and the frequencies and percentages were statistically calculated using the arithmetic mean and standard deviation.

VII. FINDINGS AND DISCUSSION

　　　　The questionnaire was answered by 92 associate degree students studying in Gaziantep University Naci Topçuoğlu Vocational School, Department of Handicrafts - Carpet Weaving and Kilim Making Program.

i. Findings Regarding Demographic Features

　　　　The demographic information of the students participating in the questionnaire is given in

　　　　Table 1. As seen in Table 1, 92 students participated in the questionnaire. According to Table 1, while 79.35% of the participants are female students, 31% are 21 years old. Looking at the grade they study, it is seen that 56.52% of the students are in the first grade.

Table 1. Demographic data of students

Demographic Features		N	%
Gender	Male	19	20,65
	Female	73	79,35
Age Distribution	18	10	10,87
	19	18	19,57
	20	16	17,39
	21	29	31,52
	22	3	3,26
	23	5	5,43
	24	6	6,52
	29	1	1,09
	30	1	1,09
	43	1	1,09
	44	2	2,17
Grade	1st Grade	52	56,52
	2nd Grade	40	43,48

ii. Findings on Determining Students' Ideas Regarding the Teaching Methods of the Lessons

　　　　Table 2 shows the frequency and percentage distribution of the answers given by the students participating in the survey to the questions about the teaching methods of distance education courses.

　　　　Table 2. Findings about the teaching methods of the lessons

What Is The Tool You Use To Participate In Distance Education?	N	%
Sphonemart	80	86,96
Laptop	10	10,87
Desktop Computer	2	2,17
How Often Do You Follow Your Distance Education Lessons?		
Every Day	74	80,43
Once Every 2 Days	12	13,04
Once A Week	4	4,35
Once A Month	2	2,17

　　　　Looking at the highlights in Table 2, 86.96% of the students participating in the survey attend distance education lessons with their smart phones. In addition, 80.43% of the students follow their lessons every day during distance education.

iii. Findings Related to Determining the Students' Thoughts Regarding the Delivery of Design-Based Practical Courses in Carpet Education with Distance Education

As a result of the questionnaire applied to the students, information about the distance education process of applied lessons based on design in carpet education was collected.

• In the 16-question questionnaire applied to the students, the first 3 items expressed their opinions about the distance education system, and the remaining 13 items stated their opinions about the distance education and effectiveness of practical lessons based on design in carpet education.

• In the 16-question questionnaire applied to the students, the first 3 items expressed their opinions about the distance education system, and the remaining 13 items stated their opinions about the distance education and effectiveness of practical lessons based on design in carpet education.

• While 45% of the students had difficulty in finding the necessary materials for the application of practical lessons based on design in carpet education, 38% of them stated that they did not have difficulty.

• The answers given to the question "I had a hard time making the desired drawings in the Applied Design Based Courses in Carpet Education", the ratios of the students who answered I agree and I do not agree were found to be very close to each other.

• While the rate of students who have difficulties in performing the desired dyeing applications in Design Based Courses in Carpet Education is 43%, the rate of those who do not have difficulty is 40%.

• Before starting to work in applied lessons in the distance education system, it was answered that sufficient number of examples were shown in the lessons.

• In the distance education system, it has been observed that approximately 84% of the student group can make original designs in applied lessons, and it has been observed that the same rate of participants are able to understand the topics and able to work accordingly.

• Although it was observed that 46% of the students participating in the survey found the practical lessons based on design enjoyable in carpet education, it was observed that 37% of the students did not enjoy these lessons.

• While 61% of the students did not find the distance education method enjoyable in the applied lessons, 29% of the students stated that the distance education was more enjoyable.

• While 56% of the students did not find the distance education method efficient in applied courses, 32% of the students stated that distance education was more efficient.

• 76% of the students participating in the survey stated that the success rate will decrease in the distance education system and they will end the period with failure.

• The rate of those who think that distance education will be insufficient is 76%.

When these results are examined, it is understood that the student should be more active during the lesson in distance education. This situation is expected to increase the quality and efficiency of the course.

Before the pandemic, students used the distance education system only in Turkish, Ataturk's Principles and History of Revolution and English, and after the pandemic they had to use it in all lessons, as can be seen from their answers to the first judgment, this situation caused distrust of the distance education system. However, looking at the 2nd and 3rd judgments, students found the university's distance education system to be easy to use.

Table 3. Data of distance education method assessment scale of applied courses based on design in carpet education

Statements	I Strongly Disagree	I Disagree	I Am Indecisive	I Agree	I Strongly Agree
	N %	N %	N %	N %	N %
I thought that education would be interrupted due to the epidemic.	1 (1,09)	4 (4,35)	6 (6,52)	32 (34,78)	49 (53,26)
I had a hard time learning how to use the school's distance education system.	5 (5,43)	25 (27,17)	7 (7,60)	30 (32,61)	25 (27,17)
Using the school's distance education system is easy.	7 (7,61)	6 (6,52)	16 (17,39)	45 (48,91)	18 (19,57)
I regularly attended the distance education period of the Applied Courses Based on Design in Carpet Education.	1 (1,09)	5 (5,43)	13 (14,13)	40 (43,48)	33 (35,87)
I had a hard time finding materials for the applications of the Design Based Applied Courses in Carpet Education.	10 (10,87)	25 (27, 17)	15 (16,30)	35 (38,04)	7 (7,61)
I had a hard time making the desired drawings in the Applied Design Based Courses in Carpet Education.	15 (16,30)	25 (27, 17)	9 (9,78)	23 (25,00)	19 (20,65)
I had difficulty doing the desired dyeing in the Design Based Applied Courses in Carpet Education.	15 (16,30)	22 (23,91)	15 (16,30)	26 (28,26)	14 (15,22)
Sufficient examples were shown before starting to work in Applied Design Based Lessons in Carpet Education.	5 (5,43)	8 (8,70)	10 (10,87)	37 (40,22)	32 (34,78)
I was able to make original designs in Applied Design Based Courses in Carpet Education.	3 (3,26)	6 (6,52)	6 (6,52)	41 (44,57)	36 (39,13)
I was able to understand and work on the topics in the Design-Based Practical Courses in Carpet Education.	2 (2,17)	5 (5,43)	8 (8,70)	45 (48,91)	32 (34,78)
The distance education method was enjoyable in the Applied Classes Based on Design in Carpet Education.	21 (22,83)	13 (14,13)	16 (17,39)	30 (32,61)	12 (13,04)
Distance education method in applied lessons is more enjoyable than formal education.	39 (42,39)	17 (18,48)	9 (9,78)	13 (14,13)	14 (15,22)
Distance education method in applied lessons is more efficient than formal education.	38 (41,30)	14 (15,22)	10 (10,87)	15 (16,30)	15 (16,30)
When starting distance education, I thought that my success would decrease.	8 (8,70)	8 (8,70)	6 (6,52)	39 (42,39)	31 (33,70)
I thought that the distance education process would fail.	8 (8,70)	9 (9,78)	8 (8,70)	40 (43,48)	27 (29,35)
I thought distance education would be insufficient.	9 (9,78)	7 (7,61)	6 (6,52)	33 (35,87)	37 (40,22)

VIII. DISCUSSION AND CONCLUSION

Coronavirus (COVID-19), which entered the world agenda in December 2019, caused all educational institutions to switch from formal education to distance education system in Turkey on March 16, 2020. In this case, the entire education sector had to undergo change during the pandemic.

In this section, the results have been obtained and discussed based on the findings of the research. The research was carried out in order to get the opinions of 92 associate degree students studying in Gaziantep University Naci Topçuoğlu Vocational School, Department of Handicrafts - Carpet Making and Kilim Making Program during the pandemic process.

When the answers of the questionnaire study are evaluated, demographic findings show that the participants are mainly 1st grade students and women. Participants stated that they attended distance education lessons with their own smart phones. A great majority of the participants stated that sufficient sample practices were shown in distance education lessons. It can also be said that they can do original work and do not have difficulty in painting applications.

Within the scope of the study, it was observed that approximately 81% of the students of the Carpet and Kilim Making Program could follow the distance education lesson system, which Gaziantep University implemented in a short time, every day. For this reason, it can be said that communication on the internet, especially the use of smart phones, has an important place in the lives of young people.

Regarding distance education, the number of students who stated that this teaching model would be insufficient and their success would decrease in lessons is too high to underestimate.

Social isolation is one of the most necessary measures to be taken during the pandemic period we are in. In order to ensure social isolation during the pandemic period, it is the safest way to continue formal education with distance education methods. In this process, it is necessary to strengthen the infrastructure of the distance education system in order to ensure high student satisfaction and efficiency in education. In addition, although distance education increases satisfaction, face-to-face training is more preferred, especially in applied courses.

With this study, the opinions of the students who were introduced to the distance education system during the pandemic period about the applied lessons in the carpet education they received with distance education were determined and it is thought that this will contribute to the literature. Due to the limited time and access, the sample selection of the study was made by Easy Sampling. For this reason, the participants of this study are limited to Gaziantep University Naci Topçuoğlu Vocational School students. Therefore, the study is open to development and it has been tried to give ideas to those concerned and those who are interested in the subject for both academic, administrative and social studies.

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