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Applicability of Web Based Distance Education to Instrument (Guitar) Education

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Abstract

In this research, it is aimed to present the applicability of Web Based Distance Education (WBDE) method in instrument (guitar) education for Fine Arts High Schools. In accordance with this purpose, a web-based experimental study is developed within the scope of synchronous and asynchronous models for guitar education. The research is carried out in two different study groups in the 2017-2018 academic year at Aydın Doğan Fine Arts High School in Turkey. In order to evaluate web-based instrument education, the first study group is formed with 8 students in the 11th and 12th grade who have taken guitar education, and the second study group is formed with two students who have never studied guitar in order to evaluate the initial guitar education. In this mixed-method study, pretest-posttest matched control group random experimental pattern method is applied within the scope of quantitative method, interview and observation techniques are applied within the scope of qualitative method. Guitar performance grading scale (GPGS), initial guitar education basic behavior evaluation form, individual instrument course attitude scale, guitar course achievement test (GCAT), structured course observation form and interview form are used as data collection tools. According to the results of the study, the instrument (guitar) education program of Fine Arts High School could be applied by WBDE method and this method could be used as an alternative to traditional instrument education.

Keywords: Web based distance education, distance education, guitar education, instrument education, music education, Fine Arts High School

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Introduction

In our age, there are various developments and changes in many fields. Education is one of the most important areas where these developments and changes are experienced. In the last century education was generally defined as "the process of creating behavioral change in the desired direction in an individual", today it can be defined as all the processes in which the individual develops talents, attitudes and other forms of behavior such as especially problem solving ability of the individual, accessing information, analyzing information, interdisciplinary thinking, creative thinking (Gök, 2012, p.1). It is the most effective process in developing, changing, shaping and directing individuals and societies. Education covers all social processes that are organized with a content that includes science, technique and art, aiming to create permanent behavioral changes in individuals and societies, and that are effective in gaining the skills that can be used throughout life.

One of the most important elements of education is art education. Art education is the whole of the educational activities made to explain the feelings, thoughts and impressions of the person and to bring the talent and creativity to an aesthetic level. Art education, whose main objectives are to raise awareness in individuals, to gain critical thinking and interpretation and to guide towards creativity, should continue uninterruptedly through all levels of education.

Being a part of this universe, music education, is of great importance for the individual to express his cultural values in a different way, and to develop and enhance perception, skill, sensitivity and interpretation (Anatolian Fine Arts High School Introduction to Music Course, 2006). With the music education, the individual takes part in a systematic process that actually starts in the womb and continues all throughout the life and that causes changes in their musical attitude, ideas and the way they recognize and live their lives. In this process, the individual is under the influence of regular or irregular, conscious or unconscious music education.

Music education is initially carried out by the family, then by the social environment and formal and informal education institutions Music education in Turkey is given by conservatories, music teaching departments in faculties of education, music research centers, fine arts faculties, fine arts high schools, primary schools, secondary and high schools, military band schools, public education centers, private music courses and music clubs. These institutions, organizations and individuals are obliged to develop the music knowledge of the individuals at the maximum level, to popularize the music education as much as possible, and to train competent, effective and well-equipped individuals who can give music education. The application of modern education system in these institutions is of great importance for increasing the quality of education and for individuals growing under musical education to be trained in accordance with the equipment required by the 21st century, and for the development of music education in Turkey.

Today, considering the contemporary education systems, it is seen that the distance education system has an important place in education. Gaining power especially with the developments in internet and computer Technologies, web-based distance education method has been an effective education method used in the problems of education system.

WBDE is an education system where teachers and students can work together through the developing web technologies and computer conferencing systems, independent of time, place and distance (Guzley et al., 2001; Manzanares, 2004, cited in: Erümit, 2011, p.2). In this system, distant individuals can be reached based on the internet with Wide Area Networks (WAN) or Local Area Networks (LAN) (Sakarya, 2011, p.12). The course content prepared in WBDE is presented to the student with the help of computers. A universal information distribution area is created using standard Internet technologies such as TCP/IP Protocol and Web Browser (Erturgut, 2008, p.81). In this information distribution area, most commonly used multimedia tool "www" (world wide web) is called "WBDE". The technologies required for technical infrastructure in the application of WBDE can be analyzed in five groups: internet infrastructure, hardware infrastructure, software infrastructure, multimedia tools and education management system (EMS).

Instrument educaiton is one of the important areas where WBDE method can be used just like many other fields of education. It is carried out in three ways as general, specific and professional. The most important of these types of education is definitely professional instrument education. Professional instrument education in Turkey is given at the middle and upper secondary level of conservatories, high school level within the Ministry of National Education, undergraduate and graduate levels in non-conservatory universities. In these institutions, it is seen that there are some problems in terms of quality in instrument education. Lack of teaching staff to perform instrument education can be seen as the first of these problems. Uslu (2013), stated that the fact that quality of instrument courses could not be achieved at a desired level may refer to the lack of teaching staff in institutions that train music teachers, the high number of students, the number of students to participate in one course, etc. Especially for Fine Arts High Schools (FAHS), which is one of the important steps of professional instrument education, Çilden and Ercan (2004) approved the fact that the number of Anatolian FAHS, which was started to be applied in Istanbul in 1989, has increased gradually throughout the country, but stated that it was noteworthy that there were problems in terms of the quality of the teaching staff and teaching programs about instrument education. For the problems that occured in the teacher staff in instrument teaching of FAHS, Çiçek and Apaydınlı (2016), reported that FAHS students' academic achievement was adversely affected by stating the fact that they took courses from substitute teachers who were assigned to other institutions or had paid duties or teachers of other branches in their own school. Moreover, due to the inadequacy of the number of teachers, individuals cannot make a choice in the direction of their interests and wishes and

the principle of "equal opportunities in education" cannot be provided. It is thought that this important problem can be solved by "web based distance education" in contemporary education systems and a different dimension can be added to instrument education. From this idea; The question of whether or not instrument (guitar) education can be applied by WBDE method and whether this method can be a solution for the problem of teacher shortage as an alternative to traditional instrument education reveals the problem state of this research. Based on this problem, it is aimed to reach the following purpose.

In this study, it is aimed to present the applicability of WDBE method in instrument education for FAHS. For this purpose, the following sub-problems will be searched and the hypothesis of the research will be tested by developing a web based experimental study for guitar education within the scope of instrument education.

Sub-Problems

1. What are the opinions of students studying with WBDE method for distance guitar education?

2. Can the initial guitar education courses be performed effectively with the WBDE method?

Hypotheses

1. There is no significant difference between the guitar performance grading scale (GPGS) pretest scores of the students studying with WBDE method and the students studying traditional education (TE) method.

2. There is a significant difference between the GPGS pretest and posttest scores of students studying with TE method favoring the posttest results.

3. There is a significant difference between the GPGS pretest and posttest scores of students studying with WBDE method favoring the posttest results.

4. There is no significant difference between the GPGS posttest scores of the students studying with the WBDE method and the students studying with the TE method.

5. There is no significant difference between the guitar course achievement test (GCAT) pretest scores of the students studying with the WBDE method and the students studying with the TE method.

6. There is a significant difference between the GCAT pretest and posttest scores of students studying with TE method favoring the posttest results.

7. There is a significant difference between the GCAT pretest and posttest scores of students studying with WBDE method favoring the posttest results.

8. There is no significant difference between the GCAT posttest scores of the students studying with the WBDE method and the students studying with the TE method.

9. There is no significant difference between the individual instrument course attitude scale (IICAS) pretest scores of the students studying with the WBDE method and the students studying with the TE method.

10. There is a significant difference between the IICAS pretest and posttest scores of students studying with TE method favoring the posttest results.

11. There is a significant difference between the IICAS pretest and posttest scores of students studying with WBDE method favoring the posttest results.

12. There is no significant difference between the IICAS posttest scores of the students studying with the WBDE method and the students studying with the TE method.

Method

Research Design

In this research, embedded pattern was used within the scope of mixed method research. One of the quantitative or qualitative methods in the embedded pattern was more prominent than the other. In other words, the research was largely quantitative or qualitative one but data obtained by alternative method were also needed to support, generalize or explain the data obtained (Cresswell and PlanoClark, 2007, as cited in: Yıldırım and Şimşek, 2013, s.356). The research has been evaluated within the frame of "completion" function which was one of the five important functions of mixed method research. Qualitative and quantitative methods in completion function are used to examine different aspects of research problem. A comprehensive study of the research was presented by integrating the data collected in line with these aspects (Yıldırım & Şimşek, 2013, p.352).

In the research, pretest-posttest matched control group random real experimental pattern was applied within the scope of quantitative method. This pattern was used to increase the likelihood that the subject groups are equivalent. For this purpose, pairs of subjects were formed on certain determined variables. Theories, researcher experiences, expert opinions or pretest scores could be used to create subject pairs. Then the subjects in these pairs were randomly placed in the experimental and control groups. The coding of the pattern could be done as follows (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz and Demirel, 2014, p.207).

Experimental Group	MR	Pretest	Web Based Distance Education	Posttest
Control Group	MR	Pretest		Posttest

In addition, interview and observation techniques are used in the qualitative method.

The interviews were conducted within the context of semi-standardized interview. Questions of this type of interview were asked systematically and consistently to the participants, but the interviewers had the freedom to go out of them. Interviewers could deepen the answers to the standardized questions they prepare (Berg and Lune, 2015, p.136). The observation technique used in the research was carried out in the structured field work type. In this type of observation, the investigator generally uses a structured observation tool or tools. Thus, the behaviors in the observed environment were separated and they are included on the observation form (Yıldırım and Şimşek, 2013, p.202).

Study Groups

This study was carried out in ADFAHS (Aydın Doğan Fine Arts High School) with two separate study groups in 2017-2018 academic year.

First Study Group

The first study group consisted of 8 students in total, 4 students in the 11th grade and 4 students in the 12th grade. In order to create the experimental and control groups, guided by the opinions of their guitar teacher, “Johann Kaspar Mertz-Landler op.9 no.4” for the students who received guitar education in 11th grade and “Jose Ferrer-Ejercicio no.2 from coleccion 12a de Ejercicios” for the students who received guitar education in 12th grade were selected, and students were asked to prepare for the selected works for 2 weeks. The performance of the students during the play was recorded with a camera and presented to the evaluation jury consisting of 1 research assistant, 1 assistant professor and researcher. By using GPGS, the basic, technical and musical behaviors of the students during the play were measured and the experimental and control groups were formed and synchronized according to the measuring process.

Second Study Group

The main purpose of this study group was to determine whether the initial guitar training courses can be performed by WBDE method. Among the first and important steps of instrument education were the basic concepts of sitting-holding and basic knowledge. From time to time, these might require physical intervention to the student's posture, instrument holding, or sitting with the instrument in the instrument education given in TE method. Since there was no physical intervention in the WBDE method, it was approved to study these subjects with a separate study group.

The second study group included in the study was designed for the purpose of evaluating the initial guitar education using the observation technique within the scope of the qualitative research method. Since the students of 9th grade of ADFAHS had the information and experience about sitting-holding and basic knowledge in advance, for the experimental study to be evaluated properly, a separate study about sitting-holding information, right hand-left hand technique, finger excercises and notes in first position was carried out for 4 weeks with a separate two-person study group (second study group) to evaluate the applicability of web based instrument education without any interpretation.

Formation of Experimental and Control Groups

In the ADFAHS, performances of 5 students with guitar education in the 11th grade and 4 students with guitar education in the 12th grade during the play were scored by the performance evaluation jury with the use of GPGS and 2 different experimental and control groups were formed by analyzing the data obtained.

Experimental and Control Group in the 11th Grade

Grouping performance scores of the 5 students in the 11th grade from the evaluation jury are shown in Table 1.

Table 1. Grouping Performance Scores of the 11th Grade.

Students	Evaluator1	Evaluator2	Evaluator3	Total	Average
A1	48	49	44	141	47
A2	32	31	27	90	30
A3	40	39	41	120	40
A4	38	36	34	108	36
A5	50	56	53	159	53

As shown in Table 1, A1's score average received by the evaluation jury is calculated as 47, A2's score average received by the evaluation jury was calculated as 30, A3's score average received by the evaluation jury was calculated as 40, A4's score average received by the evaluation jury was calculated as 36 and A5's score average received by the evaluation jury was calculated as 53. As the average score of A5 was higher than other students, A5 was excluded from the group, and the remaining students were matched according to the average score they received and divided into experimental and control groups as shown in Table 2.

Table 2. Experiment and Control Groups in the 11th Class.

Experimental Group	Score	Control Group	Score
A3	40	A1	47
A4	36	A2	30
Group Score Average	38	Group Score Average	38,5

As shown in Table 2, the experimental and control groups ere formed by pairing A3 (40) with A1 (47) and A4 (36) with A2 (30). While forming groups, attention was paid to the fact that average scores of the two groups were close to each other, the average score of the experimental group was calculated as 38 and the average score of the control group was calculated 38.5 and 2 equal groups are formed.

Experimental and Control Group in the 12th Grade

Grouping performance scores of the 4 students in the 12th grade from the evaluation jury are shown in Table 3.

Table 3. Grouping Performance Scores of the 12th Grade.

Students	**Evaluator1**	**Evaluator2**	**Evaluator3**	**Total**	**Average**
B1	40	41	45	126	42
B2	39	38	40	117	39
B3	50	50	50	150	50
B4	39	38	37	114	38

As shown in Table 3, B1's score average received by the evaluation jury was calculated as 42, B2's score average received by the evaluation jury was calculated as 39, B3's score average received by the evaluation jury was calculated as 50, and B4's score average received by the evaluation jury was calculated as 38. The students were matched according to the average score they received and divided into experimental and control groups as shown in Table 4.

Table 4. Experiment and Control Groups in the 12th Class.

Experimental Group	Score	Control Group	Score
B3	50	B1	42
B4	38	B2	39
Group Score Average	44	Group Score Average	41,5

As shown in Table 4, the experimental and control groups were formed by pairing B3 (50) with B4 (38) and B1 (42) with B2 (39). While forming groups, attention was paid to the fact that average scores of the two groups were close to each other, the average score of the experimental group was calculated as 44 and the average score of the control group was calculated 41.5 and 2 equal groups are formed.

Study and Application Process

Before passing on to the application stage of the research, WBDE classes were established at Marmara University Distance Education Application and Research Center (DEC) and ADFAHS in order to perform WBDE and the internet, hardware, software and multimedia tools required for the study were made available to the computer system of the researchers and students. Also, the supplying and the installation of equipments used in the study such as TV screen, computer, guitar, microphone, speaker, printer, camera and so on. Were implemented and made ready for use by being tested before the study. In the study, Skype™ application for voice and video communication with students and screen sharing feature of "perculus" application which was integrated with EMS (Education Management System) used in DEC were used for sharing the documents with students to be used during the course on the screen.

For the courses with the experimental group, the Guitar Training course was created on the EMS and the user pages that the students could join to the virtual classes by entering the user name and password are prepared.

For the application phase of the research, the course content was prepared by examining the achievements covering the 8-week guitar course curriculum of 11th and 12th grade in FAHS. In line with the content of the course, 1 course video for each week, 16 course videos in total for 11th and 12th grades and also 3 work study video for the works that would be studied were prepared. The prepared videos were added to the EMS to enable students to work with the asynchronous education model from the distance education types outside the course hours. In addition, the unit documents in the 11th and 12th grade guitar textbooks and the supporting documents required for the studies were added to the EMS.

In order to collect the quantitative data before the study was carried out, IICAS and GPGS were provided to be applied within the pretest and posttest stage, and the 11th and 12th grade GCAT was formed by the researcher.

All the steps and preparations required for the experimental study were checked and the application process was started.

The equipment used in the classes to enable distance guitar training is shown below.

Marmara University Distance Education Class

- 50 "127 Screen Full HD LED TV
- Laptop

- Web Cam (HD)
- Condenser Studio Microphone
- Table Type Microphone Stand
- Soundbar Sound System
- External Sound Card

Aydın Doğan Fine Arts High School Distance Education Class

- 65 inch LED Screen Smart Board
- Web Cam (HD)
- Condenser Studio Microphone
- Table Type Microphone Stand
- Soundbar Sound System
- External Sound Card
- Printer

First Study Group (Experimental and Control Groups) Application Process

Before passing on to the application stage of the research, "Miguel Llobet-El Testament d'Amelia" for the students who received guitar education in 11th grade and "Anonim-Soleares" for the students who received guitar education in 12th grade were arranged to include achievements of guitar courses, and students were asked to prepare for the selected works for 2 weeks. At the end of the determined period, the performances of the students were measured with GPGS and evaluated within the pretest. In addition, pretest data about the students' course achievement and attitudes towards the course were collected by applying GCAT and IICAS

Experimental group students were asked to set a username and password to be able to login to EMS and each student were registered to the previously prepared user pages. Informations such as usage of EMS, video-voice call with Skype™, usage of course screen sharing etc. were shared with the experimental group students. A support member in charge of the system was assigned to eliminate the problems that might occur in the courses and the students were encouraged to use the system in the first courses and in the following courses the control was left to the students.

At the application stage of the research, the course content for the experimental group was conducted one-to-one in a separate space, with synchronous and asynchronous education model, video-conference method, the control group was studied by the traditional training method, in the same place, one-on-one by the researcher. During the study, each student was given 40-minute courses in 1 day a week for 8 weeks.

In the research, courses of control and experiment groups were held with the use of guitar textbooks, the necessary supporting documents are given to the control group students, as for the experimental group students they are shared via the EMS. Additionally, videos and documents supporting the course that the experimental group students could use within the scope of the asynchronous education model were presented via the EMS. Prepared course videos were transformed into an interactive structure with ”smart video“ application in EMS. At certain times of the course videos, multiple choice questions related to the subject of course were placed, if the student could not answer the question about the subject correctly, the video was returned to the time when the related subject was started to be explained. When the questions are answered correctly, the video continues where it was left off. In addition, it was aimed to enable students to achieve all targeted achievements by making an arrangement that would make the next week's activities inactive when the weekly activities such as the video used in EMS, document, etc are not seen by the students. Thus, the experimental group students' studies were supported by an asynchronous education model.

Second Study Group Application Process

In the context of the initial guitar training, the course content was prepared for the second study group in terms of sitting-holding information, right hand-left hand technique, finger exercises and notes in the first position. The group was given 40-minutes courses each day a week with the use WBDE method and each course was recorded with the camera by the researcher for evaluation within the scope of the observation method.

The students were asked to determine their username and password in order to be able to login to EMS, and each student was registered to the previously prepared user pages. Informations such as usage of EMS, video-voice call with Skype™, usage of course screen sharing etc. were shared with the second study group students. A support member in charge of the system was assigned to eliminate the problems that might occur in the courses and the students were encouraged to use the system in the first courses and in the following courses the control was left to the students.

At the end of the application phase, “Ole Halen-Vals” was given to the students in order to measure their final performances and they were asked to study for 2 weeks. The performance of the students was recorded with the camera and presented to the evaluation jury. The basic and technical behaviors of students in the initial guitar education process were evaluated and interpreted.

Data Collection Tools

In this research;

1. Guitar performance grading scale,
2. Basic behavior assessment form for initial guitar education
3. Individual instrument course attitude scale,
4. Guitar course achievement test,
5. Structured course observation form,
6. The interview form were used as data collection tools.

Guitar Performance Rating Scale

Guitar performance rating scale which was developed by Akçay (2011) to determine students' performance objectively in Individual Instrument (Guitar) Courses in Music Departments of Fine Arts Faculties and Music Education Programs of Education Faculties was arranged according to nine experts' oral and written opinions and suggestions. Experts points out that it can be used to measure guitar performance.

The generated scale was applied to 7 students of individual instrument guitar course and 4 persons from teaching staff participated in the research as a scorer. The scope, format, Likert and scoring method of the scale are clearly understood by all the teaching staff. 15 items collected under 3 dimensions on the scale was able to be scored in a time that was convenient to the use of the measuring instrument during performance.

Basic Behavior Assessment Form for Initial Guitar Education

In the research, after the 4-week study, a 5-itemed form was prepared by the researcher in order to measure the performance of the students in the second study group, who received the guitar training for the first time and the opinions of 8 guitar teachers who are experts in their field were taken to determine the construct validity of the form and the suitability of the items in the form. In line with the opinions received, a basic form of evaluation of the initial guitar training was formed by making the necessary corrections.

Individual Instrument Course Attitude Scale

While the Individual Instrument Course Attitude Scale prepared by Yalçınkaya and Eldemir (2013) was developed, 60 students were asked to write an essay containing their opinions about individual instrument course. As a result of the analysis of the essay data, a 36-itemed draft scale

consisting of 20 positive and 16 negative propositions was formed. Arranged according to the expert opinions, the scale was applied to 373 students. As a result of the data obtained from the students, Kaiser-Meyer-Olkin (KMO) test was applied to determine the structure validity and KMO value was found to be 0.96. Since this value was between 0.90 and 1.00, it could be said that the data were perfectly suitable for factor analysis.

As a result of the statistical analysis; An 18-item scale consisting of 2 factors, 12 positive and 6 negative propositions was obtained and the Cronbach Alpha reliability coefficient of the scale was found to be $\alpha = 0.947$. This result shows that the scale was valid and reliable to measure the attitudes of the students towards the individual instrument course.

Guitar Course Achievement Test (GCAT)

Covering the 8-week course for the experimental study, the achievements for the Guitar Teaching Program of 11th and 12th grade in the FAHS were examined to determine the population and sample of the behaviours, measurement tools were formed according to the determined sample, and in order to evaluate the suitability of the tests in terms of appearance, scope and structure validity, the tests were presented to 7 academist guitar instructors who are experts in their field to ask their opinions and necessary corrections were made by examining the achievements during 8-week course of study in 11th and 12th Grade in the FAHS and moved onto the pilot scheme. The pilot scheme was carried out in 7 FAHS in İstanbul, İzmir, Muğla and Mersin provinces. The data required for the forming of the achievement tests were collected by the pilot application performed with 40 students who took guitar courses in 11th and 12th grade in these high schools.

11th Grade Guitar Course Achievement Test

In accordance with the achievements to be applied within the scope of the experimental study, pilot application was conducted with 26 participants by creating a 18-itemed GCAT was created. As a result of the analysis with the obtained data, the item discrimination index (D) of the 2 items was found to be less than 0.20, therefore was excluded from the test, the average item difficulty index (P) of the 16-itemed achievement test was found to be 0.64 and the mean discrimination index (D) was found to be 0.50. Reliability of the test was analyzed with the internal consistency test, Cronbach's Alpha test, and a 16-item success test with $\alpha = 0.795$ coefficient was obtained. As a result of the expert opinions and analyzes obtained, it can be said that the achievement test is valid and reliable to measure the students' achievements.

12th Grade Guitar Course Achievement Test

In accordance with the achievements to be applied within the scope of experimental study, pilot scheme was performed with 14 participants by forming a 10-itemed GCAT of 12th grade, with

the data obtained from scheme the average item difficulty index (P) of the test was found to be 0.57 and the average discrimination index (D) was found to be 0.60. The reliability of the test was analyzed with Cronbach's Alpha test and 10-itemed achievement test with $\alpha = 0.785$ reliability coefficient was obtained. As a result of the expert opinions and analyzes obtained, it can be said that the achievement test is valid and reliable to measure the students' achievements.

Structured Course Observation Form

For the initial guitar education courses conducted with WBDE method to be examined in the research, a total of 8 courses during 4 weeks were carried out with two students (C1, C2) from the second study group who have not taken guitar education. During the application, all the courses were recorded with the camera as a part of the observation method and the collected data were registered to the structured observation form according to the categories determined in the scope of the research questions. During the observation, data were collected to evaluate whether the initial guitar education courses could be carried out with WBDE method; in this regard, whether the students' attitudes in the courses and the teaching of the course could make up to the guitar education given by traditional education method.

The Interview Form

In the research, individual interviews were conducted with experimental group students that are in the first study group after the experimental study. As a result of the interview consisting of 6 basic questions, the data gathered were registered to the interview form and analyzed and the themes and codes were determined and interpreted.

Data Analysis

In the research, within the scope of analysis method, pretest and posttest used to collect quantitative data were analyzed and interpreted with the Mann-Whitney U test, which is the nonparametric counterpart to the significance test of the difference between two independent groups, and Wilcoxon test, which is the nonparametric correspond to the significance test of the difference between the two dependent groups.

The data collected by taking students' opinions about experimental study were analyzed within the scope of descriptive analysis method and the themes and codes determined as a result of analysis of the data were interpreted.

The data obtained by observation technique were analyzed and interpreted by using structured course observation form.

Results and Comments

1. The results for hypothesis "There is no significant difference between the the GPGS pretest scores of the students studying with the WBDE method and the students studying TE method" are shown in Table 5.

Table 5. Results of Mann-Whitney U Test to determine if there is any difference between the GPGS pretest scores of the students studying with the WBDE method and the students studying with TE method.

Score	**Groups**	N	***Average Rank***	***Total Rank***	U	z	p
Performance Dereceleme Scale Pretest	Control	4	4,50	18,00	8,000	,000	1,000
	Experimental	4	4,50	18,00			
	Total	8					

As shown in Table 5, there was no statistically (p>0.05) significant difference between GPGS pretest scores of the students studying with the WBDE method and the students studying with TE method. In determining the experimental and control groups, it was seen that the group performances they presented after the students were divided into groups according to the works they play, were correlatively equal and experimental studies were started with two equal groups.

2. The results for hypothesis "There is a significant difference between the GPGS pretest and posttest scores of students studying with TE method favoring the posttest results" are shown in Table 6.

Table 6. Results of Wilcoxon Signed Ranks Test to determine if there is any difference between the GPGS pretest and posttest scores of the students studying with TE method.

Score	**Ranks**	N	***Average Rank***	***Total Rank***	z	p
Performance Posttest Performance Pretest	Negative	0	,00	,00	-1,826	0,068
	Positive	4	2,50	10,00		
	Equal	0				
	Total	4				

As shown in Table 6, there was statistically (p>0.05) significant difference between GPGS pretest and posttest scores of the students studying with TE method. The performance grading scale pretest and posttest scores given by the evaluation jury to the students studying with TE method are shown in Table 6.1.

Table 6.1 GPGS Pretest and Posttest Scores of the Students Studying with TE method.

Group	Students	Pretest	Pretest Average	Posttest	Posttest Average
Control	A1	27	31,25	51,3	56,05
	A2	27		50,3	
	B1	34		59,6	
	B2	37		63	

As seen in Table 6.1, obtained from GPGS, the average of pretest score of the students studying with TE method was found to be 31.25, and the posttest score average was found as 56.05. It was detected that there was no statistically significant difference between the pretest and posttest scores of the students studying with the TE method, but that they showed a certain level of improvement at the end of the education.

3. The results for hypothesis "There is a significant difference between the GPGS pretest and posttest scores of students studying with WBDE method favoring the posttest results" are shown in Table 7.

Table 7. Results of Wilcoxon Signed Ranks Test to determine if there is any difference between the GPGS pretest and posttest scores of the students studying with WBDE method.

Score	Ranks	N	*Average Rank*	*Total Rank*	z	p
Performance Posttest Performance Pretest	Negative	0	,00	,00	-1,826	0,068
	Positive	4	2,50	10,00		
	Equal	0				
	Total	4				

As shown in Table 7, there was no statistically ($p>0.05$) significant difference between GPGS pretest and posttest scores of the students studying with WBDE method. The performance grading scale pretest and posttest scores given by the evaluation jury to the students studying with WBDE method are shown in Table 7.1.

Table 7.1 GPGS Pretest and Posttest Scores of the Students Studying with WBDE Method

Group	Students	Pretest	Pretest Average	Posttest	Posttest Average
Experimental	A3	27	32	51	62,125
	A4	26		50,6	
	B3	39		79,6	
	B4	36		67,3	

As shown in Table 7.1, obtained from GPGS, the average of pretest score of the students studying with WBDE method was found to be 32, and the posttest score average was found as 62,125. It was detected that there was no statistically significant difference between the pretest and posttest scores of the students studying with WBDE method, but that they showed a certain level of improvement at the end of the education.

4. The results for hypothesis "There is no significant difference between the GPGS posttest scores of the students studying with the WBDE method and the students studying with the TE method" are shown in Table 8.

Table 8. Results of Mann-Whitney U Test to determine if there is any difference between the GPGS posttest scores of the students studying with the WBDE method and the students studying with TE method.

Score	**Groups**	*N*	***Average Rank***	***Total Rank***	*U*	*z*	*p*
Performance Grading Scale Posttest	Control	4	4,00	16,00	6,000	-,577	0,564
	Experimental	4	5,00	20,00			
	Total	8					

As shown in Table 8, there was no statistically ($p>0.05$) significant difference between GPGS posttest scores of the students studying with WBDE method and students studying with TE method. The performance grading scale posttest scores given by the evaluation jury to the students studying with WBDE method are shown in Table 8.1

Table 8.1 GPGS Posttest Scores of the Students Studying with the WBDE Method and Students Studying with TE method.

Groups	**Students**	**Posttest**	**Posttest Average**
Control	A1	51,3	56,05
	A2	50,3	
	B1	59,6	
	B2	63	
Experimental	A3	51	62,125
	A4	50,6	
	B3	79,6	
	B4	67,3	

As shown in Table 8.1, GPGS posttest points average of the students studying with TE method was found to be 56,05, and the posttest point average of the students studying with WBDE method was found to be 62,125. It was seen that there was no statistically significant difference between the GPGS posttest scores of the students studying with WBDE method and students studying with TE

method, yet when the performance scores of the students were evaluated, compared to TE method, WBDE method was seen to be more effective on students' performance.

5. The results for hypothesis “There is no significant difference between GCAT pretest scores of the students studying with the WBDE method and the students studying with the TE method” are shown in Table 9.

Table 9. Results of Mann-Whitney U Test to determine if there is any difference between the GPGS pretest scores of the students studying with the WBDE method and the students studying with TE method.

Score	**Groups**	N	***Average Rank***	***Total Rank***	U	z	p
Achievement Test Pretest	Control	4	4,00	16,00	6,000	-,584	0,559
	Experimental	4	5,00	20,00			
	Total	8					

As shown in Table 9, there was no statistically (p>0.05) significant difference between GPGS pretest scores of the students studying with WBDE method and students studying with TE method. It was seen that the success levels of guitar course students in the experimental and control groups were equal and experimental studies were started with two equal groups.

6. The results for hypothesis “There is a significant difference between the GCAT pretest and posttest scores of students studying with TE method favoring the posttest results” are shown in Table 10.

Table 10. Results of Wilcoxon Signed Ranks Test to determine if there is any difference between the GCAT pretest and posttest scores of the students studying with traditional educational method.

Score	**Ranks**	N	***Average Rank***	***Total Average***	z	p
Achievements Test Posttest Achievement Test Pretest	Negative	0	,00	,00	-1,826	0,068
	Positive	4	2,50	10,00		
	Equal	0				
	Total	4				

As shown in Table 10, there was no statistically (p>0.05) significant difference between GCAT pretest and posttest scores of the students studying with TE method. GCAT pretest and posttest scores of the students studying with TE method are also shown in Table 10.1.

Tablo 10.1 GCAT Pretest and Posttest Scores of the Students Studying TE method.

Group	Students	Pretest	Pretest Average	Posttest	Posttest Average
Control	A1	37,5	29	62,5	70
	A2	18,75		37,5	
	B1	50		80	
	B2	10		100	

As seen in Table 10.1, obtained from GCAT, the average of pretest score of the students studying with TE method was found as 29, and the posttest score average was found as 70. It was detected that there is no statistically significant difference between GCAT pretest and posttest scores of the students studying with TE method, but that they showed a certain level of improvement at the end of the education.

7. The results for hypothesis "There is a significant difference between the GCAT pretest and posttest scores of students studying with WBDE method favoring the posttest results" are shown in Table 11.

Table 11. Results of Wilcoxon Signed Ranks Test to determine if there is any difference between the GCAT pretest and posttest scores of the students studying with WBDE method.

Score	Ranks	*N*	*Average Rank*	*Total Average*	*z*	*p*
Achievements Test Posttest	Negative	0	,00	,00	-1,826	0,068
	Positive	4	2,50	10,00		
Achievement Test Pretest	Equal	0				
	Total	4				

As shown in Table 11, there was no statistically ($p>0.05$) significant difference between GCAT pretest and posttest scores of the students studying with WBDE method. GCAT pretest and posttest scores of the students studying with TE method are also shown in Table 11.1.

Tablo 11.1 GCAT Pretest and Posttest Scores of the Students Studying WBDE Method.

Group	Students	Pretest	Pretest Average	Posttest	Posttest Average
Experimental	A3	81,25	42	93,75	97
	A4	37,5		93,75	
	B3	10		100	
	B4	40		100	

As seen in Table 11.1, obtained from GCAT, the average of pretest score of the students studying with WBDE method was found to be 42, and the posttest score average was found as 97. It was detected that there was no statistically significant difference between GCAT pretest and posttest

scores of the students studying with WBDE method, but that they showed a certain level of improvement at the end of the education.

8. The results for hypothesis "There is no significant difference between the GCAT posttest scores of the students studying with the WBDE method and the students studying with the TE method" are shown in Table 12.

Table 12. Results of Mann-Whitney U Test to determine if there is any difference between the GCAT posttest scores of the Students Studying WBDE Method and the students studying with traditional educational method.

Score	**Groups**	*N*	***Average Rank***	***Total Rank***	*U*	*z*	*p*
Achievements Test Posttest	Control	4	3,25	13,00	3,000	-1,488	0,137
	Experimental	4	5,75	23,00			
	Total	8					

As shown in Table 12, there was no statistically ($p>0.05$) significant difference between GCAT posttest scores of the students studying with WBDE method and students studying with TE method. GCAT posttest scores of the students studying with the WBDE method and the students studying with TE method are also shown in Table 12.1.

Tablo 12.1 GCAT Posttest Scores of the Students Studying WBDE Method and the Students Studying with Traditional Educational Method.

Groups	**Students**	**Posttest**	**Posttest Average**
Control	A1	62,5	70
	A2	37,5	
	B1	80	
	B2	100	
Experimental	A3	93,75	97
	A4	93,75	
	B3	100	
	B4	100	

As shown in Table 12.1, GPGS posttest points average of the students studying with TE method was found to be 70, and the posttest point average of the students studying with WBDE method was found to be 97. It was seen that there was no statistically significant difference between the GCAT posttest scores of the students studying with WBDE method and students studying with TE method, yet when the performance scores of the students were evaluated, compared to TE method, WBDE method was seen to be more effective on students' performance.

9. The results for hypothesis "There is no significant difference between IICAS pretest scores of the students studying with the WBDE method and the students studying with the TE method" are shown in Table 13.

Table 13. Results of Mann-Whitney U Test to determine if there is any difference between the IICAS pretest scores of the students studying with the WBDE method and the students studying with TE method.

Score		**Groups**	*N*	***Average Rank***	***Total Rank***	*U*	*z*	*p*
Attitude Pretest	Scale	Control	4	3,75	15,00	5,00	-,877	0,381
		Experimental	4	5,25	21,00			
		Total	8					

As shown in Table 13, there was no statistically ($p>0.05$) significant difference between IICAS pretest scores of the students studying with WBDE method and students studying with TE method. It was seen that the attitudes of the students in the experimental and control groups towards individual instrument course are equal and experimental ere arwe started with two equal groups.

10. The results for hypothesis "There is a significant difference between the IICAS pretest and posttest scores of students studying with TE method favoring the posttest results" are shown in Table 14.

Table 14. Results of Wilcoxon Signed Ranks Test to determine if there is any difference between the IICAS pretest and posttest scores of the students studying with traditional educational method.

Score	**Ranks**	*N*	***Average Rank***	***Total Rank***	*z*	*p*
Attitude Scale Posttest Attitude Scale Pretest	Negative	1	3,00	3,00	-0,000	1,000
	Positive	2	1,50	3,00		
	Equal	1				
	Total	4				

As shown in Table 14, there was no statistically ($p>0.05$) significant difference between IICAS pretest and posttest scores of the students studying with TE method. IICAS pretest and posttest scores of the students studying with TE method are also shown in Table 14.1.

Tablo 14.1 IICAS Pretest and Posttest Scores of the Students Studying TE method.

Group	**Students**	**Pretest**	**Pretest Average**	**Posttest**	**Posttest Average**
Control	A1	3,94	4,44	3,94	4,42
	A2	4,44		5,00	
	B1	4,56		3,83	
	B2	4,83		4,94	

As seen in Table 14.1, obtained from IICAS, the average of pretest score of the students studying with TE method was found to be 4,44, and the posttest score average was found as 4,42. It was detected that there was no statistically significant difference between IICAS pretest and posttest scores of the students studying with TE method, but that, the students' attitudes towards individual instrument course decreased at a certain level at the end of the education.

11. The results for hypothesis "There is a significant difference between the IICAS pretest and posttest scores of students studying with WBDE method favoring the posttest results" are shown in Table 15.

Table 15. Results of Wilcoxon Signed Ranks Test to determine if there is any difference between the IICAS pretest and posttest scores of the students studying with WBDE method.

Score		**Ranks**	*N*	***Average Rank***	***Total Rank***	*z*	*p*
Attitude Posttest	Scale	Negative	0	,00	,00	-1,604	0,109
		Positive	3	2,00	6,00		
Attitude Pretest	Scale	Equal	1				
		Total	4				

As shown in Table 15, there was no statistically ($p>0.05$) significant difference between IICAS pretest and posttest scores of the students studying with WBDE method. GCAT pretest and posttest scores of the students studying with TE method are also shown in Table 15.1.

Tablo 15.1 IICAS Pretest and Posttest Scores of the Students Studying WBDE Method.

Group	**Students**	**Pretest**	**Pretest Average**	**Posttest**	**Posttest Average**
Experimental	A3	4,67	4,6	4,89	4,86
	A4	3,94		4,67	
	B3	4,83		4,89	
	B4	5,00		5,00	

As seen in Table 15.1, obtained from IICAS, the average of pretest score of the students studying with WBDE method was found to be 4,6, and the posttest score average was found as 4,86. It was detected that there was no statistically significant difference between IICAS pretest and posttest scores of the students studying with WBDE method, that, the students' attitudes towards individual instrument course increased at a certain level at the end of the education.

12. The results for hypothesis "There is no significant difference between the IICAS posttest scores of the students studying with the WBDE method and the students studying with the TE method" are shown in Table 16.

Table 16. Results of Mann-Whitney U Test to determine if there is any difference between the IICAS posttest scores of the Students Studying WBDE Method and the students studying with traditional educational method.

Score	**Ranks**	*N*	***Average Rank***	***Total Rank***	*U*	*z*	*p*
Attitude Scale Posttest	Control	4	4,13	16,50			
	Experimental	4	4,88	19,50	6,500	-0,438	0,661
	Total	8					

As shown in Table 16, there was no statistically ($p>0.05$) significant difference between IICAS posttest scores of the students studying with WBDE method and students studying with TE method. IICAS posttest scores of the students studying with the WBDE method and the students studying with TE method are also shown in Table 16.1.

Tablo 16.1 IICAS Posttest Scores of the Students Studying WBDE Method and the Students Studying with Traditional Educational Method.

Groups	**Students**	**Posttest**	**Posttest Average**
Control	A1	3,94	4,42
	A2	5,00	
	B1	3,83	
	B2	4,94	
Experimental	A3	4,89	4,86
	A4	4,67	
	B3	4,89	
	B4	5,00	

As shown in Table 12.1, IICAS posttest points average of the students studying with TE method was found to be 4,42, and the posttest point average of the students studying with WBDE method was found to be 4,86. It was seen that there was no statistically significant difference between the IICAS posttest scores of the students studying with WBDE method and students studying with TE method, yet when the performance scores of the students were evaluated, compared to TE method, WBDE method was seen to be more effective on students' performance.

13. The results for subproblem “What are the opinions of students studying with WBDE method for distance guitar education?” are as below.

After the interviews with the students studying the WBDE method, the collected data were analyzed and 3 different themes in distance education such as the applicability (functionality), usefulness and effectiveness of the curriculum were determined. Examining the codes of these themes, under the theme of “applicability”, all students reported that distance learning was an effective learning model and that they might prefer distance education in higher education. In addition, students A3 and B4 reported that distance education was more effective than traditional education, A3 reported

that distance education would be more appropriate where there was no traditional education and that A4 might prefer distance education rather than not being able to study in higher education. Nevertheless, under the theme of "practicability", all students reported that distance education was effective with reducing the need for teachers, the functionality of the EMS and course materials used in distance education. Also under this theme, students stated their opinions as follows:

A3; "We may not always find the teacher in traditional education. We may not ask our questions clearly. Maybe we are afraid to do so. There is no such problem in distance education. A shy student can improve himself / herself by watching videos when he / she cannot ask the teacher. When there is a subject that we don't understand, we can reinforce it by solving the tests and watching the videos there. There are documents, videos, tests defined in the system. We can reach videos whenever and wherever we want,"A4; "I get to have live courses without my guitar. I listen to the videos, I watch. I'm trying harder. Videos can attract students' attention more," B3; "In distance education, we can watch videos again. There are documents. There are questions and answers. I can meet my needs with videos. There is no such thing in traditional one. Someone in the traditional is not able to meet their needs. These can be considered as advantages," B4; "We see the teacher once in the traditional education, and that is in the course. We can't see them again, but we can see them continually in distance education. We are able to repeat videos continuously. EMS had very detailed information. It was very helpful."

Under the theme of the "effectiveness of the curriculum", all of the students reported that distance education was effective in the realization of the curriculum through distance education. Students A3 and A4 reported that distance learning was more effective in information acquisition, B3 and B4 reported that there was no difference between traditional education and distance education, in terms of skills acquisition, A3, A4 and B4 reported that distance education was more effective, while B3 reported that there was no difference between traditional education and distance education.

According to the results for subproblem "What are the opinions of students studying with WBDE method for distance guitar education?", it was concluded that the WBDE method was an effective method, and that the EMS used in distance education and the course materials uploaded on this system facilitate learning, and that students could prefer distance education as a method of education.

14. The results for subproblem "Can the initial guitar education courses be performed effectively with the WBDE method?" are as below.

1- How do students behave about the preparations at the beginning of the course?

At the beginning of the classes, the students were asked to start the video call, then to join the virtual classroom for themselves and to open the document sharing screen by logging in to the distance education system. In all the courses, students were able to complete the mentioned preparations in 2 to 5 minutes and started the classes.

In the first lesson with the students, the subject of sitting and holding was studied. In 5 of the other 6 courses, the students started the courses by paying attention to this subject. Student C2 started the third lesson by holding the guitar on their right foot and made the necessary correction after the warning.

2- Can visual and auditory communication between the student and the teacher be fulfilled in an effective way?

In the experimental study, web cam and television screen for visual communication, condenser microphone, sound card and sound system were used for auditory communication. During the courses, voice and video calls were carried out with Skype™ application and document sharing was carried out with EMS' screen sharing feature. In the courses, it was observed that guitar keyboard or strings could be seen easily, that right or wrong movements concerning the right hand-left hand finger movements could be recognized in the courses, that the documents to be studied in the courses could be seen easily on the screen and the students and the teacher did not have any problems about communication.

3- Is there any need for physical intervention to the students for technical studies in courses?

In the classes, there were studies on sitting-holding, right hand-left hand posture, finger exercises, notes in first position and a beginning level work and no physical intervention to the students was required in the studies. All targeted behaviors were explained, demonstrated to the students and applied without any problems.

4- How do students and teachers use the course documents?

The documents to be used in the course are arranged in the desired order and converted to pdf format and uploaded to EMS. The document to be used during the course was shared with the student on the television screen with the screen sharing feature of EMS. The document shown on screen sharing could be moved up and down when requested under teacher control, all the details can be highlighted with the help of the cursor on the document and ease of operation could be provided by expanding the focused document sections such as size, line, picture etc. Students or teachers did not experience any problems with the use of documents.

5- Do the students have the will, motivation and discipline to participate in the studies during the course?

Studies were conducted with the students for 4 weeks. It was observed that the students participated in all the studies in the courses, followed the instructions, they did not give up the experiment despite the difficulties in some studies, they were not interested in any other subject except the course, they continued to complete the last work they were working on though the course time was up and they were attentive in the communication they established with the teacher.

6- How is the students' feedback about the course achievements?

At the end of the courses, students were told what to pay attention in general about the studies and students were asked to repeat the studies until the next course. In the second and third courses with C1, a feedback regarding previous courses' achievements could not be received at the expected level, in the 4th lesson, the feedback was taken close to the expected level, in the second and third courses with C2, feedback was received at the expected level regarding the achievements previous courses, and the feedback could not be received at the expected level in the 4th lesson. It was observed that the extracurricular studies of the students were insufficient in general, but the knowledge and skill levels of the students were increased in every course.

In addition, in order to determine the performances of the students after the experimental study, a study was conducted at a beginning level in the 4th course and the performance of the students towards the work at the end of the determined period was measured with the initial guitar training basic behavior evaluation form. The results are shown in Table 17.

Table 17. Students' Initial Guitar Training Basic Behavior Evaluation Form Points.

Students	Evaluator1	Evaluator2	Evaluator3	Total	Average
C1	75	70	65	210	70
C2	85	80	70	235	78,3

As seen in Table 17, in accordance with the performance scores of the students regarding the work they played after the evaluation of the work, the average performance score of C1 was found as 70 and the performance score of C2 was found as 78.3. It was determined that the students provided feedback at the expected level in relation to their course achievements according to their performance score averages.

7- How do the students and the teacher use the duration of the course in terms of the obtaining the target achievements?

The first few minutes of the 40-minute course with the students were about the distance education system. During the rest of the course, all targeted achievements were transferred to the

students. It was observed that the students were able to realize the details required in the study and apply them at the expected level and they were able to work sufficiently during the course.

According to the results of the subproblem "Can the initial guitar education courses be performed effectively with the WBDE method?", it was concluded that in the WBDE courses, the behaviors of the students about the preparations to be made during the beginning of the course did not show any difference according to the TE, that there was no difference in terms of the teaching of visual and audio communication between the student and the teacher compared to the TE, that there was no need for physical intervention to students and that physical intervention which can be seen as an advantage in TE was not a disadvantage in distance education, that the students and teachers used the course documents more functionally than the TE, and that students had the motivation and discipline to participate in the studies in the course, and there was no difference compared to the TE in terms of the teaching of the course, that the student and teacher usde the course documents more functionally than TE, students had the will, motivation and discipline to participate in the studies in the course and there was no difference compared to the TE in terms of the teaching of the course, that the students provided feedback at the expected level related to the course achievements and there was no difference between the TE and the lesson in terms of the efficient use of course time.

Discussion

According to the 4th result of the study, it was determined that there was no statistically significant difference between the GPGS posttest scores of the students studying with the WBDE method and students studying with TE method. This result shows that when guitar courses are being conducted, behaviors aimed at achieving performance can be provided by WBDE method and this method can be used as an alternative to TE method. In addition, when the performance scores of the students are evaluated, it is seen that the performance scores of the students studying with the WBDE method are higher than the performance scores of the students studying with the TE method. This result obtained from this research is similar to that of Karahan (2016).

The asynchronous education model implemented within the WBDE method is considered to be an effective factor for the high performance scores of students studying with WBDE method. With the asynchronous education model, the students have access to the course videos prepared for the purpose of supporting the course whenever and wherever they want and they have benefited from this model effectively. According to Erümit (2011), the fact that WBDE allows the use of asynchronous education is one of the most important advantages. In this training model, students can benefit from the sources in the system whenever and however they want.

According to the 8th result of the study, it was determined that there was no statistically significant difference between GCAT posttest scores of the students studying with the WBDE method

and the students studying with TE method. This result shows that when guitar courses are being conducted, behaviors aimed at achieving success can be provided by WBDE method and this method can be used as an alternative to TE method. In addition, when the achievement test scores of the students are evaluated, it is seen that the achievement test scores of the students studying with the WBDE method are higher than the performance scores of the students studying with the TE method. In this result, it is ultimately thought to be one of the most influential factors for the implementation of WBDE.

Through the EMS, the interactive preparation of some materials were enabled as well as presenting video, document etc. materials to the student. In this context, the videos used to support the courses in the research were presented to the students in a more functional way with the "smart video" application. Multiple choice questions related to the subject of the course were prepared at certain times of the course videos if the student were not able to answer the question about the subject correctly, the video was returned to the time when the related subject started to be told. When the questions were answered correctly, the video continued where it was left off. In addition, when the weekly activities (video, document, exam, etc.) prepared on the EMS were not completed by the students, an arrangement has been made to keep the activities of the next week inactive. In this way, students could see all the videos and documents prepared for the targeted achievements and avoid missing any subject. This result of the study matches the results of Aydın's study (2011). Aydın states that the EMS system helps to work more effectively in a short period of time, thus increasing the performance in the courses, and that the EMS is beneficial in terms of feedback and that the learning process is used more effectively. It can be said that these and similar advantages provided by EMS are effective factor for the fact that success of the students studying with the WBDE method is higher than the students studying with TE method. In the research, it was determined that there was no statistically significant difference between the ingroup and inter group pre-test and posttest scores of the students according to the 9th, 10th, 11th and 12th results obtained from the analysis of the data from the IICAS applied to determine the attitudes of the students towards the course. This result shows that there is no change in the attitudes of students while performing guitar lessons with WBDE method and WBDE method can be used as an alternative to TE method. In addition, when the attitude scale scores of the students were evaluated, it was determined that the posttest scores of the students studying with the WBDE method were higher and the posttest scores of these students were higher than the posttest scores of the students who were educated by the TE method. Çetin (2010) reported a similar finding in his study in a different field.

It is thought EMS and the technological software and equipment used in this method are considered to be the factor for the IICAS posttest scores of the students studying with WBDE method to be higher than the students studying with TE method. Today, the developments in the field of

technology are known to be highly effective especially on the population called the millennium generation. In addition to being able to know and use the tools such as internet, computer, smartphone and tablet in this age group, it is seen that they are followers and even developers of technologically supported studies such as artificial intelligence, hologram technologies and space journeys whose research-development studies are in progress or intended to be fulfilled in the future. Günüç, Odabaşı and Kuzu (2013) stated that students are individuals, who are familiar with technology, are present on the internet and social networks and have technology-related knowledge and skills. In addition, they anticipated that the technology usage skills of the students will increase more in the future and their behavior will be affected more by technology with the increasing popularity of technology and access to technological developments. In this study, it can be said that the students who formed the experimental group had the potential to be interested in the mentioned studies due to their ages, therefore the advantages of WBDE method conducted by using technology support and the EMS, which is used as a technological tool in realizing the instrument course, positively affect the attitudes of students towards the course. According to the 13th result of the study, it was concluded that the WBDE method was applicable practical (functional) and effective in the teaching of the curriculum as a result of the interviews with the students studying the WBDE method. In the interviews, it was emphasized that the WBDE method differs from the traditional education, especially under the theme of “practicability”, and that this difference occurs in the effectiveness of the materials presented in the EMS and in reducing the need for teacher support.

The course videos and documents uploaded to EMS have been an important source for students to use after the one-to-one lessons when they had difficulties in understanding a subject and to apply when they forgot about the important points explained in the course. It was observed that when the students encountered a problem after the one-to-one courses, they used the videos and documents uploaded to EMS instead of finding the teacher’s free time or waiting fort he next course. Thus, there was no extra burden on the teacher and the students had the opportunity to complete their missing information. Kuzu and Balaban (2014) reached the following results in their research: “With the materials presented to the students, the student can repeat them as much as they wish and start and finish them wherever they want. Most of the study group students also expressed their satisfaction.” It can be said that in accordance with the findings obtained in the 4th, 8th and 12th results, the materials uploaded to EMS directly affect the students' performances, achievements and attitudes, and that they are an effective factor for the students studying with WBDE method to score higher compared to the students studying with TE method.

Another important result obtained from the student opinions was formed under the theme of “applicability” for WBDE method. Students reported that the WBDE method was an effective learning model and that they could prefer distance education in higher education. WBDE applications are

frequently encountered in higher education. WBDE has many individual and corporate advantages in terms of its structural characteristics. It has become more preferred by individuals and institutions over time due to its outstanding advantages such as the provision of savings in education expenditures, the conveying of education services to long distances, and the increasing of effectiveness of education programs. It is thought that the reason why students prefer WBDE method in higher education is due to the effect of the curriculum and the experiences gained by the students in the study. The students reported that the WBDE method was more effective than the TE method, especially in terms of knowledge and skills acquisition.

According to the 14th result of the study, it can be said that the initial guitar education courses performed with WBDE method did not make any difference compared to the TE method in terms of the course process within the initial guitar education courses. It is thought that some aspects of the course are important when performing the initial guitar training with TE method. These can be listed as: “Students' preparation for the course, the visual and auditory communication between students and teachers, physical intervention to support technical studies such as sitting-holding, the students’ and teacher's functional use of course documents, voluntary participation of the students for the works made in courses, having the motivation and discipline, getting feedback from the students at the expected level about the course achievements and using of the time efficiently.” The most striking point here is the physical intervention to students as a technical support. This study is of particular importance since there will be no physical intervention to the students in the WBDE method. According to Can and Yungul’s (2017) views on distance instrument education from graduate students; it was stated that it was required to have physical intervention on students for posture, holding and some technical issues in the instrument education from time to time, instrument course program given by TE method were more effective on students given that there was no study on this subject in distance education

As a result of the observation made in the study, all the behaviors intended to be acquired in the initial guitar training performed by WBDE method were explained to the students, demonstrated and applied without any problems. It was seen that there was no need for physical intervention to students in the courses and the physical intervention which could be seen as an advantage in the TE method did not constitute a disadvantage in WBDE method. According to the 14th result of the study, it can be said that there is no difference between the WBDE method and the TE method in terms of the teaching of the course.

Suggestions

1. It is recommended to determine the need for instrument teachers in FAHS music education institutions by determining permanent and substitute teachers in these institutions.

2. It is recommended that web based distance education studies should be conducted for all instrument types that are taught in FAHS.

3. It is recommended that web-based distance education studies should be conducted for the other courses in the FAHS Music Education Program.

4. According to Tuncer and Bahadir (2017), it cannot be said that distance education programs are yet entirely alternative to traditional educational practices. Some of the studies are converged on the concerns about the effectiveness of distance education programs. In this case, it is essential to overcome the deficiencies of this form of education by focusing on the problems in distance education. In particular, it is important to identify the problems experienced by learners in this process. In this respect, it is recommended to conduct longer and more comprehensive studies on distance instrument training and to identify possible problems and to search for solutions.

5. It is recommended that studies should be conducted to evaluate distance music education within the Open Education High School.

6. It is seen that Karahan (2016); Can and Yungul (2018) conducted web-based distance education studies on the synchronous training model for instrument education within the scope of undergraduate education. It is recommended to conduct studies in which asynchronous training model will be used with synchronous training for undergraduate education.

7. Can and Yungul (2017) stated in their study that students who received music education at postgraduate level expressed their positive opinions about web-based distance education. In this context, it is suggested to conduct studies for graduate level instrument training within the scope of web based distance education.

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References

Akçay, Ş. Ö. (2011). *Gitar Eğitiminde Performans Ölçeği Geliştirme Çalışması* (Unpublished Master's Thesis), Atatürk University Institute of Education Sciences, Erzurum.

Aydın, D. (2011). *Evaluation of the Effectiveness of the Material Science Course in Moodle Open Source Learning Management System* (Unpublished Master's Thesis), Bahçeşehir Üniversitesi Institute of Science, İstanbul.

Berg, B. L. and Lune, H. (2015). *Qualitative Research Methods in the Social Sciences,* Eğitim Publishing House, 8th Edition, Konya.

Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö.E., Karadeniz, Ş. ve Demirel, F. (2014). *Scientific Research Methods,* Pegem Academy, 18th Edition, Ankara.

Can, A. A. and Yungul, O. (2017). Müzik Eğitimi Kurumlarında Çalgı Eğitimi Alan Lisansüstü Öğrencilerin Uzaktan Eğitime Yönelik Görüşlerinin Belirlenmesi, *The Journal of Academic Social Science, Year: 5, Issue: 45*, p. 155-168. http://dx.doi.org/10.16992/ASOS.12216

Can, A. A. and Yungul, O. (2018). *Application of Web Based Distance Learning for Instrument (Guitar) Education at Undergraduate Program: Sample of Kastamonu University*. Journal of Education and Training Studies Vol. 6, No. 10. https://doi.org/10.11114/jets.v6i10.3102

Çetin, O. (2010). *Fen ve teknoloji dersinde "çoklu ortam tasarım modeli" ne göre hazırlanmış web tabanlı öğretim içeriğinin öğrenci başarı ve tutumlarına etkisi ile içeriğe yönelik öğretmen ve öğrenci görüşlerinin değerlendirilmesi* (Unpublished PhD Thesis), DEU Institute of Education Sciences, İzmir

Çiçek, V. and Apaydınlı K. (2016). The problems encountered in piano education in Fine Arts High Schools and Solution Suggestions (The Sample of the Black Sea Region)*, Atatürk University Institute of Social Sciences Magazine, Aralık, 20(4): 1471-1491*.

Çilden, Ş. and Ercan, N. (2004). The Qualification Problems in Instrument Education at the Faculty of Education Fine Arts Education Department of Music Education Departments and FA High Schools Music Departments, *1924-2004 Statement of Music Teacher Training Symposium from the Early Music Teaching Schools to Our Day*, Süleyman Demirel University, 7-10 April 2004, Isparta.

Erturgut, R. (2008). Organizational, Social, Pedagogical and Technological Components of Internet Based Distance Education, *Information Technologies Magazine, Volume: 1, Issue: 2*.

Erümit, S. F. (2011). *Course Material Design, Application and Determination of Material Design Criteria in Web Based Distance Education* (Unpublished Master's Thesis), Karadeniz Teknik University Institute of Science, Trabzon.

Gök, M. (2012). *The Effect of 5e Model on Academic Achievement, Attitude and Retention in Music Education* (Unpublished Master's Thesis), Gazi University Institute of Education Science, Ankara.

Günüç, S., Odabaşı, H. F. and Kuzu, A. (2013). Definition of 21st century student characteristics by pre-service teachers: A Twitter app, Theory and Practice in Education, *9(4)*, 436- 455.

Karahan, A. S. (2016). Comparison of Simultaneous Distance Piano Instruction with Traditional Piano Teaching, *International Periodical for the Languages, Literature and History of Turkish or Turkic, Turkish Studies, Vol. 11/21*, p. 211-228. http://dx.doi.org/10.7827/TurkishStudies.11244

Kuzu, S. and Balaban, F. (2014). Student Opinions on Web Supported Education Using Moodle, *Education and Teaching Research Magazine, Volume:3, Issue:2.*

Sakarya, A. (2011). *Development of a Distance Education System in Moodle Environment for Mentally Handicapped Children* (Unpublished Master's Thesis), Trakya University Institute of Science, Edirne.

Tuncer, M. and Bahadır, F. (2017). Evaluation of Distance Education Programs According to Students' Views. *Journal of Educational Reflections, 1(2),* 27-36.

Uslu, M. (2013). Evaluation of the Educator's Views on the Exercise of the Individual Instrument Training (Violin) Course Programs in the Faculties of Education, *Education and Teaching Research Magazine, 2 (1),* 47-57.

Yalçınkaya, B. and Eldemir, C. (2013). Development of Attitude Scale for Individual Instrument Course, *Mustafa Kemal University Institution of Social Sciences Magazine, Volume: 10, Issue: 21*, Pages 29-36.

Yıldırım, A. and Şimşek, H. (2013). *Qualitative Research Methods in the Social Sciences*, Seçkin Publishing House, 9th Edition, Ankara.