A Review on Effectiveness of Cello Etudes Created for Longas and Syrtos

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A R T I C L E I N F O	A B S T R A C T

Purpose: This study has been performed with a view to find a solution to challenges experienced in cello performances of pieces in the forms of Longas and Syrtos within the category of instrumental Turkish Music — due to their inherent agility, technical difficulties, etc., to ensure that the pieces can be more precisely and easily played in technical and musical terms. **Methods:** Both descriptive and experimental methods are used in this study. As for the preparatory exercises, the etude writing model adapted from the Taba-Tyler model is used. Longas and Syrtos, which will be examined in the scope of this study, were determined through interviews held with cello teachers at Turkish music conservatories in Turkey, whereas an experimental method was used for the second part of the study. In this study, a pretest-posttest control group model (N=8) was used. The data obtained upon the performance evaluation were compared by applying the Wilcoxon signed-rank test and the Mann–Whitney U test through the SPSS program. **Findings:** According to the statistical data obtained, significant differences were found in the arithmetic means of the experimental group, whereupon it was concluded that the preparatory exercises created according to this result are highly effective. **Implications for Research and Practice:** Within the scope of this study, etudes were created to facilitate the performance of the pieces, and a significant difference was observed in the performances of the students. Many other etudes can be written to overcome challenges in other genres and observe their effect on student success.

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Introduction

Turkish Music is grouped into two forms: instrumental music and vocal music, and these are further divided into various categories. Although vocal music is at the forefront of Turkish Music, there are also certain forms that are specific to instruments, such as *Pesrev*, *Taksim*, *Medhal*, *Saz Semâi, Longa*, *Syrto*, and Traditional Dance Music.

Longas and Syrtos are forms of instrumental music. İsmail Hakki Ozkan (2000) defines the term Longa as follows: "Longa refers to swift and lively traditional dance music, mainly measured at a rhythmic pattern of 2/4 as *Nîm Sofyan usûl*, typically in 2, 3 or 4 hanes (parts of a musical piece), with or without teslim (the part returned to after every hâne)". Ozkan (2000) defines the term Syrto as follows: "Syrto refers to musical pieces composed for stringed instruments, with a relatively free structure compared to Longas, with or without hânes, allowing *usûl geckisi* (rhythm transitions) in final hânes, and having a very swift minor *usûl*, basically composed to accompany a dance called Syrto. Syrtos have their special rhythmic patterns" (p.81). As these works, which have their origins in the Balkans, were often composed with maqams in Turkish Music, they went through a transformation within Turkish Music and thus inherited the character of Turkish Music. Although Longas and Syrtos are considered Traditional Dance Music, they have often been used as energetic music for stringed instruments but not performed as a *raks* (dance) element in Turkish Music. All of these musical pieces involve agility, instrumental control, high level of technical knowledge, experience, and practice.

A performer must possess the ability to overcome technical difficulties arising from the structure of the related instrument. Today's performers being trained in Turkey are expected to be capable of using all technical possibilities of the instrument in the western sense while at the same time remaining familiar to their own culture and music. In this regard, it has been concluded that Longas and Syrtos, all of which require agility, instrumental control, high technical knowledge, experience and practice, should be supported with etudes as well as preliminary preparatory studies aimed at facilitating their cello performance.

Etudes are the shortest and the most systematic form of progress, both technically and musically, in instrument education. "Etudes refer to exercises which are performed to enhance performance in technical terms and which generally form the content of instrumental methods" (Türkel & Sen, 2016, p.914). "Etudes are used as a practice to build up knowledge and skills on style, phrasing, technique, tone, intonation and harmony" (Lancaster, 1994, p.16). As for instrument education, etudes fulfill various functions including, for example, helping in the acquisition of technical and sight-reading skills, improving speed, and developing musical sense (Ercan, 2008, p.96). As is indicated, the currently available etudes are used to teach and strengthen overall technical and musical knowledge, and the mentioned etudes should be utilized as well. The exercises prepared within the frame of this study, on the other hand, were especially written to ensure that the performer can overcome the difficulties in the selected works. The etudes function as a preparation for musical pieces, supporting

effective time management, easier and faster acquisition of targeted behaviors, and eliminating difficulties in pieces.

The preparatory etudes created in this study are aimed at fulfilling particular requirements and targets. At this point, the basic observations of the researcher are of considerable importance. For example, an instructor who observes that students make similar mistakes on the same subjects when performing a particular musical piece can create small exercises or melodic patterns in order to overcome related technical challenges (Yalcinkaya, 2010, p.27). The researcher has years of experience as a cello instructor and performer, which ensured her ability to make observations at formal and informal musical education institutions for this study. Moreover, the need for such research has been verified by interviews held with persons who are experienced and specialized in the field.

Longas and Syrtos are different from other pieces of Turkish Music both in the sense that they are included in Turkish Music forms and that they contain musical elements of Western Music, which are musical dynamics, chromatic passages, double sounds, swiftly playing passages, arpeggios, large intervals, and chords. This study is based upon the assumption that the preparatory exercises created for cello with the help of the data obtained upon analysis on Longas and Syrtos will facilitate and improve performance if such exercises are practiced in advance.

Method

Research Design

The study employed a mixed model consisting of descriptive and experimental methods. There are comparisons and checks in the experimental part of the research. Therefore, the research pattern is a pre-test-posttest control group model (N=8). Eight participants were randomly assigned to the control and experimental groups, with four students in each.

The pre-test-posttest control group model includes two groups formed through objective assignment. One of them is employed as the experimental group while the other is employed as the control group. Pre-test and posttest measurements are performed in both groups. The availability of pre-tests in the model helps recognition of the similarity levels of groups prior to the tests and correction of the results of posttests accordingly (Karasar, 2007, p.97).

As for the descriptive part of the research, the etude writing model adapted from the Taba-Tyler model was used while creating the preparatory exercises. According to this model, the following basic steps of programming must be followed when designing an etude: "a) Identifying the requirements for writing an etude, b) Identifying the distant goal, general and special objectives, c) Selecting and arranging the content special for the designated objectives, d) Selecting and arranging the learning experiences" (Yalcinkaya, 2012, p.23–24).

Below are the programming steps for this study: a) According to the data obtained from the researcher's observations and interviews held with experts, the challenges encountered in the performance of pieces in the Longa and Syrto forms by cello create the need for exercises aimed at facilitating the performance of such pieces. b) The distant goal ascertained is to introduce the forms of Longa and Syrto in Turkish Music, and also pieces and preparatory exercises in the mentioned forms to both Turkish Music performers and cellists interested in musical genres other than Turkish Music by preparing such pieces and preparatory exercises in a key that is suitable for cello and in bass clef. This research aims at serving vocational education, whereas the special objective of the research is to find solutions to the problems experienced in the performance of pieces in the Longa and Syrto forms that are included in the musical category for stringed instruments in Turkish Music — due to reasons such as agility, technical difficulties, etc. c) Opinions of experts were received while selecting the content of preparatory exercises. The experts stated that there are usually challenges experienced in terms of "coordination between the right hand and the bow, detaché bow technique, transitions between strings". Thus, the mentioned challenges provided the basis for the content of preparatory exercises. d) The preparatory exercises were created on the basis of the 'known to unknown' principle in this research. In order to ensure that these exercises would be more efficient and practiced more consciously, written explanations were provided under each exercise, describing which behaviors are meant to be improved through such exercises, and which points are to be taken into consideration.

Research Sample

The study group in the scope of this research was determined by a monographic sampling method, which is among the non-probability sampling methods. In monographic sampling, the researcher works on a cluster of single or multiple subjects, which the researcher thinks can represent the universe based on information and predictions about the universe (Ural, Kilic, 2011, p.44). The basic idea in monographic sampling is to select as a sample any sub-group of the universe, which must be described on the basis of the information available according to the assumption that the sub-group will represent the universe (Arslanturk, 1997, p.109). In light of these data, the study group was selected among senior undergraduate students and graduate students at Marmara University and Gazi University. This selection was made on the basis of directives made by their cello teachers: eight students with the capability to play the etudes in the scope of the study who are at similar levels in technical terms were selected. These students were confirmed by experts to be at technically similar levels.

Research Instrument and Procedure

The interview technique was used to determine the basis of the research, to select the musical pieces, and to reveal the challenges in the pieces. Interviews were held with three academics. Moreover, a rubric consisting of five options was prepared as another data collection tool. This rubric was designed to find out whether the basic

behaviors that the performer is expected to achieve in cello performance were achieved. The opinions of the experts were received during the preparation of the rubric; the evaluation criteria were finalized in line with their opinions. The etudes were prepared with the aim to facilitate the performance of pieces such as Longa and Syrto, and they were submitted to the experts for their opinions by means of the rubric created. The experts were asked to evaluate the results of the pre-test and posttest obtained by the study group through the rubric. The results of the pre-test and posttest obtained by the study group were examined by three different experts in the field of cello education (1 TRT Artist, 2 academics), and the rubric was filled out according to these data. Analyses were performed by using the data obtained from the rubrics and non-parametric tests; the results obtained were compared and interpreted. The data are presented in the findings section.

The first part of this research is a qualitative study of descriptive type. This part consists of two stages: During the first step, the general screening model was used and a literature review was performed to collect information about the subject with a view to determine the basis and specify the subject ascertained for the research. Scores of all Longas and Syrtos were accessed in the sheet music archive of TRT Ankara Radio. In order to determine the basis for the research, select the Longas and Syrtos to be reviewed in scope of the research, and identify the challenges encountered in the pieces, one-to-one interviews were held with three persons who are cello teachers at classical Turkish music conservatories in Turkey. According to Buyukozturk and his friends , "Semi-structured interview technique is used as it combines both fixed alternative questions and the possibility of an in-depth analysis in the relevant field". During the interview, answers were sought to a number of questions regarding which pieces of Longa and Syrto are taught, which of them pose challenges in performance, and what kind of challenges are encountered, if there is any requirement for writing preparatory exercises for such challenging pieces, which points must be taken into consideration when writing such exercises, and what kind of opinions can be further included. Through interviews held with experts, the pieces were selected and the topics were identified that needed to be focused on in the preparatory writing exercises on the basis of the topics posing challenges and the suggestions of the experts.

During the second stage, the Longas and Syrtos selected during interviews held with experts were first transposed into bass clef and then transposed into a key suitable for cello. Later, the scores of these pieces were analyzed and the parts that could be used in the cello education were selected. The content of the analysis involves identification of technical and musical elements in these works. Preparatory exercises were written to support the performance of the selected pieces according to the results of analyses on such works, and basic techniques and appropriate bow signs suitable for the works were added. Preparative exercises were created in conformity with the structure of the analyzed Longas and Syrtos, the sound field of the cello, easy playability on cello, the aim to achieve a good tone, the data obtained from interviews held with experts, and their suggestions. These exercises were created with regard to the requirements that the exercises must be aimed at overcoming the challenges

encountered in performance of Longas and Syrtos, they must be easily decipherable and universal, and must follow the 'known to unknown' and 'simple to complex', etc. principles. These exercises were finalized after technical and musical revisions were made to them, including legatos, finger numbers, ornaments, nuance signs, etc. Bass clef was used when writing the cello exercises so that this study would address all persons interested in Turkish Music or other musical genres.

An experimental method is used for the second part of the study. During this stage, the sample group was divided into two groups of four persons through unbiased assignment, including one as the experimental group and the other as the control group. During the pre-test stage, the students both in the experimental and control groups were provided with the musical pieces, and they were asked to decipher the pieces after a review of five minutes. The researcher took part in these sessions solely as the observer. During the next two weeks, the students were given training for one hour daily for five days a week. The experimental group was asked to practice the etudes while the control group was asked to practice the musical pieces, as they are instructed per the teaching method applied in the educational system at conservatories. During the posttest stage of the experiment, the musical pieces were performed both by the experimental group and the control group. Videos of the pre-test, posttest, and training stages were recorded. All performance records taken after the end of the experiment stage were evaluated by three experts in the field of cello education through the evaluation scale prepared for this research. The results were statistically interpreted.

Data Analysis

During this stage, the mean of the numerical data obtained as a result of the evaluation performed by the experts was taken and the mean scores were subjected to two statistical analyses via the SPSS program. Non-parametric statistics were used in the analysis as the sizes of the experimental and control groups were fewer than 15 individuals. The Wilcoxon signed-rank test was applied to compare the pre-test and posttest scores of the study group according to the pieces and persons. The Mann–Whitney U test was employed to find the difference between the evaluations made by the experts.

Results

Findings on Selection of the Musical Pieces

In order to select the Longa and Syrto pieces to be included in the research, it was examined whether the musical pieces of this genre are taught at Turkish music conservatories. For this purpose, three academicians lecturing at different universities were interviewed as experts, and they were asked to indicate the pieces that they used in their classes, and the pieces in Longa and Sirto forms that are challenging for students. Out of the musical pieces in Longa and Syrto form that are commonly used

in education, *Sehnaz Longa* composed by Santuri Ethem Efendi, *Nihavend Longa* composed by Kemani Kevser Hanim, *Kurdilihicazkar Longa* composed by Kemani Sebuh Efendi, and *Sehnaz Hicaz Syrto* composed by Sultan Abdulaziz are taught by all of the academics who were interviewed. Furthermore, all of the academics interviewed stated that their students had difficulties performing these pieces. Therefore, the scope of this research covers the mentioned four pieces. After the pieces were selected, the difficulty levels of these works were identified, and the etudes were prepared accordingly. The results of Kolmogorov-Smirnov test are presented in Table 1.

Findings to Be Used on Determining the Tests

Table 1

Kolmogorov-Smirnov Test

		a	b	c	d	e	f	g	TMV
PreTest	Number of observations (n)	96	96	96	96	96	96	96	96
	Test statistic	0,194	0,217	0,255	0,233	0,263	0,266	0,235	0,150
	Probability value (p)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Post Test	Number of observations (n)	96	96	96	96	96	96	96	96
	Test statistic	0,202	0,202	0,244	0,223	0,249	0,219	0,240	0,141
	Probability value (p)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Note: a, b, c, d, e, f, g, express evaluation criteria. a: 'ability to play precise and clean', b: 'ability to play with rhythmic accuracy', c: 'ability to apply right-hand techniques', d: 'ability to apply left-hand techniques', e: 'ability to play with musicality', f: 'ability to play with fluidity', g: 'ability to play at the designated tempo'. H0: All variables are normally distributed. H1: All variables are not normally distributed.
TMV: Total mean values

Since the probability value (p) $<\alpha = 0,05$, the H0 hypothesis is rejected and the H1 hypothesis is accepted. The variables are not normally distributed. For this reason nonparametric hypothesis tests should be used. Therefore, the Wilcoxon signed-rank test and Mann–Whitney U test are used for the study. The scores given by each of the experts to both groups and an evaluation of the results are presented Table 2.

Findings on the Evaluation Scores Given by Experts

Table 2

Individual Evaluation Scores of Control and Experimental Groups for Experts

		Pretest								Posttest							
		g	f	e	d	c	b	a	TMVpr	g	f	e	d	c	b	a	TMV-post
Control Group	Number of Observations	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Mean	3,5	4,13	4,06	3,75	3,31	3,88	3,94	26,56	3,75	4,19	4,25	4,06	3,75	4,25	4,31	28,56
Experimental Group	Number of Observations	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Mean	2,56	2,88	3,5	2,81	2,19	2,44	2,69	19,06	3,06	3,25	3,63	3,13	2,5	3	3,13	21,69
Total	**Number of Observations**	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
	Mean	3,03	3,5	3,78	3,28	2,75	3,16	3,31	22,81	3,41	3,72	3,94	3,59	3,13	3,63	3,72	25,13
	Mann–Whitney U (p)	0,012	0,000	0,058	0,003	0,004	0,003	0,002	0,002	0,119	0,042	0,036	0,018	0,004	0,084	0,005	0,056
Control Group	Number of Observations	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Mean	2,75	2,69	2,81	2,94	2,5	2	2,25	17,94	2,81	3,13	2,94	3	2,94	2,31	2,69	19,81
Experimental Group	Number of Observations	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Mean	2,5	1,87	1,81	2,13	1,75	1,56	1,13	12,75	4,5	4,75	4,5	4,69	4,56	4,63	4,69	32,31
Total	**Number of Observations**	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
	Mean	2,63	2,28	2,31	2,53	2,13	1,78	1,69	15,34	3,66	3,94	3,72	3,84	3,75	3,47	3,69	26,06
	Mann–Whitney U (p)	0,762	0,013	0,001	0,023	0,012	0,327	0,000	0,013	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Control Group	Number of Observations	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Mean	1,56	1,56	2	2	1,69	1,62	1,75	12,19	2,25	2,31	2,25	2,38	2,38	2,06	2,31	15,94
Experimental Group	Number of Observations	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	Mean	1,31	1,31	1,94	1,62	1,25	1,38	1,31	10,13	3,25	3,31	3,62	3,38	3,25	3,38	3,5	23,69
Total	**Number of Observations**	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
	Mean	1,44	1,44	1,97	1,81	1,47	1,5	1,53	11,16	2,75	2,81	2,94	2,87	2,81	2,72	2,91	19,81
	Mann–Whitney U (p)	0,245	0,184	0,771	0,051	0,056	0,245	0,030	0,036	0,005	0,001	0,000	0,002	0,009	0,001	0,001	0,000

Note: a, b, c, d, e, f, g, expresses evaluation criteria. a: 'ability to play precise and clean', b: 'ability to play with rhythmic accuracy', c: 'ability to apply right-hand techniques', d: 'ability to apply left-hand techniques', e: 'ability to play with musicality', f: 'ability to play with fluidity', g: 'ability to play at the designated tempo'.

If probability value (p)<α=0,05, the test is statistically significant.

TMV-pre: Total mean values of pre test, TMV-post: Total mean values of post test

When the results of both groups were examined for Expert 1, it was observed that the evaluation scores of the control group were higher than the evaluation scores of the experimental group in both the pre-test and posttest. The data show that the etudes applied to the experimental group between the pre-test and the posttest were not found to be successful by Expert 1.

When the pre-test characteristics of both groups were examined by Expert 2 and Expert 3, it was observed that the evaluation scores of the control group were higher than the evaluation scores of the experimental group. On the other hand, when the posttest characteristics of the groups were examined, it was observed that the evaluation scores of the experimental group were higher than the evaluation scores of the control group. The data show that the etudes applied to the experimental group between the pre-test and the posttest were found to be successful by Expert 2 and Expert 3. The scores given to the experimental group and the control group for all musical pieces, and an evaluation of the results are presented Table 3.

Findings on the Evaluation Scores Given According to Musical Pieces

Table 3

Individual Evaluation Scores of Experimental and Control Groups for All Musical Pieces

All Musical Pieces		Pre-test								Posttest							
		a	b	c	d	e	f	g	TMV-pre	a	b	c	d	e	f	g	TMV-post
Control Group	Number of Observations	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
	Mean	2,60	2,79	2,96	2,90	2,50	2,50	2,65	18,90	2,94	3,21	3,15	3,15	3,02	2,88	3,10	21,44
Experimental Group	Number of Observations	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
	Mean	2,12	2,02	2,42	2,19	1,73	1,79	1,71	13,98	3,60	3,77	3,92	3,73	3,44	3,67	3,77	25,90
Total	Number of Observations	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
	Mean	2,36	2,41	2,69	2,54	2,11	2,15	2,18	16,44	3,27	3,49	3,53	3,44	3,23	3,27	3,44	23,67
	Mann–Whitney U (p)	0,050	0,002	0,012	0,001	0,000	0,006	0,000	0,001	0,005	0,015	0,001	0,010	0,049	0,005	0,007	0,004

Note: a, b, c, d, e, f, g, expresses evaluation criteria. a: 'ability to play precise and clean', b: 'ability to play with rhythmic accuracy', c: 'ability to apply right-hand techniques', d: 'ability to apply left-hand techniques', e: 'ability to play with musicality', f: 'ability to play with fluidity', g: 'ability to play at the designated tempo'. If probability value $(p) < \alpha = 0,05$, the test is statistically significant.
TMV-pre: Total mean values of pre test, TMV-post: Total mean values of post test

When the pre-test characteristics of the experimental group and the control group were examined for all pieces, it was observed that the evaluation scores of the control

group were higher than the evaluation scores of the experimental group. On the other hand, when the posttest characteristics of the groups were examined, it was observed that the evaluation scores of the experimental group were higher than the evaluation scores of the control group. The data show that the etudes applied to the experimental group between the pre-test and the posttest were successful in all the pieces. The scores given to the experimental group and the control group for each of the individuals forming the study group, and an evaluation of the results are presented Table 4.

Findings on the Evaluation Scores Given According to Individuals

Table 4

Comparison of the Mean Scores of the Pre-test and Posttest According to the IndMV-preividuals in the Experimental Group and the Control Group

Persons	a-pre	a-post	b-pre	b-post	c-pre	c-post	d-pre	d-post	e-pre	e-post	f-pre	f-post	g-pre	g-post	TMV	TMV	TMV
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
C.G. Person 1	2,00	2,42	2,50	2,92	2,58	2,67	2,42	2,83	1,92	2,50	2,25	2,50	2,25	2,75	15,92	18,58	2,66
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
C.G. Person 2	2,50	2,83	2,50	3,00	3,08	3,17	2,75	3,08	2,17	2,83	2,17	2,67	2,50	2,92	17,67	20,50	2,83
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
C.G. Person 3	2,75	2,92	2,92	3,33	2,92	2,92	3,08	2,92	2,92	3,17	2,75	3,00	2,92	3,08	20,25	21,33	1,08
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
C.G. Person 4	1,92	4,33	2,25	4,50	2,75	4,25	2,42	4,42	3,00	3,58	2,83	3,33	2,92	3,67	21,75	25,33	3,58
Kruskal-Wallis Test (p)	0,125	0,057	0,369	0,455	0,464	0,076	0,142	0,145	0,024	0,071	0,430	0,477	0,386	0,295	0,104	0,054	
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
E.G. Person 1	2,75	4,25	2,58	4,25	2,67	4,42	2,83	4,25	2,58	4,08	2,75	4,33	2,50	4,33	18,67	29,92	11,25
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
E.G. Person 2	2,25	3,33	1,75	3,25	2,42	3,92	2,17	3,50	1,75	3,25	1,67	3,42	1,67	3,75	13,67	24,42	10,75
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
E.G. Person 3	1,58	2,50	1,50	3,08	1,83	3,08	1,33	2,75	1,08	2,67	1,00	2,58	1,08	2,83	9,42	19,50	10,08
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
E.G. Person 4	3,17	3,58	3,25	3,58	3,25	3,83	3,33	3,75	1,50	3,75	1,75	4,33	1,58	4,17	14,17	29,75	15,58
N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Kruskal-Wallis Test (p)	0,024	0,001	0,061	0,003	0,184	0,000	0,001	0,001	0,000	0,062	0,000	0,003	0,004	0,026	0,001	0,002	

Note: a, b, c, d, e, f, g, expresses evaluation criteria. a: 'ability to play precise and clean', b: 'ability to play with rhythmic accuracy', c: 'ability to apply right-hand techniques', d: 'ability to apply left-hand techniques', e: 'ability to play with musicality', f: 'ability to play with fluidity', g: 'ability to play at the designated tempo'. TMV: Total mean values, TMV-Dif: TMV-Difference between Pre-test and Post-test

The cells highlighted in yellow are pre-test data. N: Number of observations, C.G.: Control Group, E.G.: Experimental Group.

If probability value (p)<α=0,05, the test is statistically significant.

The posttest mean scores of both the control group and the experimental group are higher than the pre-test mean scores. In other words, the persons performing the piece made progress later (in the posttest) compared to the beginning (pre-test), and the evaluation scores increased as a result of the posttest evaluation. However, increases in the mean score of the students in the control group are much higher than the increases in the mean score of the students in the experimental group. This can be explained by the fact that the etudes created in preparation for the musical pieces are more effective than traditional educational methods. The scores given by each of the experts to the experimental group and the control group for each musical piece, and an evaluation of the results are presented Table 5.

Findings on the Evaluation Scores Given by Each of the Experts for Each Musical Piece

Table 5

Comparison of The Mean Scores of Pre-test and Post-test According to Experts

Group	Expert		Piece1		Piece2		Piece 3		Piece 4		Total	
			TMV pretest	TMV posttest	TMV pretest	TMV posttest	TMV pretest	TMV posttest	TMV pretest	TMV posttest	TMV pretest	TMV posttest
Control Group	Expert 1	N	4	4	4	4	4	4	4	4	**16**	**16**
		Ort.	29,75	31,25	25,50	29,75	25,25	26,00	25,75	27,25	**26,56**	**28,56**
	Expert 2	N	4	4	4	4	4	4	4	4	**16**	**16**
		Ort.	23,50	24,25	18,75	22,75	15,00	16,00	14,50	16,25	**17,94**	**19,81**
	Expert 3	N	4	4	4	4	4	4	4	4	**16**	**16**
		Ort.	12,00	17,00	13,00	17,00	13,25	15,75	10,50	14,00	**12,19**	**15,94**
	Total	**N**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**48**	**48**
		Ort.	**21,75**	**24,17**	**19,08**	**23,17**	**17,83**	**19,25**	**16,92**	**19,17**	**18,90**	**21,44**
	Kruskal-Wallis Test (p)		**0,034**	**0,157**	**0,011**	**0,016**	**0,025**	**0,024**	**0,011**	**0,017**		
Experimental Group	Expert 1	N	4	4	4	4	4	4	4	4	**16**	**16**
		Ort.	22,25	24,00	20,75	23,50	16,25	19,25	17,00	20,00	**19,06**	**21,69**
	Expert 2	N	4	4	4	4	4	4	4	4	**16**	**16**
		Ort.	12,75	32,50	13,75	32,75	12,75	32,00	11,75	32,00	**12,75**	**32,31**
	Expert 3	N	4	4	4	4	4	4	4	4	**16**	**16**
		Ort.	11,00	23,75	9,50	25,25	10,50	23,00	9,50	22,75	**10,13**	**23,69**
	Topl.	**N**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**48**	**48**
		Ort.	**15,33**	**26,75**	**14,67**	**27,17**	**13,17**	**24,75**	**12,75**	**24,92**	**13,98**	**25,90**
	Kruskal-Wallis Test (p)		**0,078**	**0,099**	**0,024**	**0,069**	**0,205**	**0,061**	**0,087**	**0,069**		

Note: If probability value (p)<α=0,05, the test is statistically significant.
TMV-pre: Total mean values of pre test, TMV-post: Total mean values of post test

The pre-test and posttest mean evaluation scores of the seven characteristics of the experimental group and the control group — individually for all the pieces — were examined, and it was checked whether there is any difference between the experimental group and the control group according to the etude exercises given. It was found out that Expert 1 gave higher scores to the control group in the pre-test and posttest evaluations on average for all pieces. These results reveal that the etudes

applied to the experimental group did not yield successful results according to Expert 1. When the scores given by Expert 2 and Expert 3 to the experimental group and the control group for all musical pieces were examined, it was observed that the mean scores of the control group were higher than the scores of the experimental group. However, it was seen in the posttest evaluations made after the etudes that the mean scores of the experimental group were higher than the mean scores of the control group. This shows that the etudes applied between the pre-test and the posttest yielded successful results according to Expert 2 and Expert 3.

Discussion and Conclusion

Discussion

The study by Parasiz (2009) is a review, in terms of functionality and effectiveness, of preparatory exercises aimed at improving performance in the practice of Modern Turkish Music pieces being used in violin education. For this reason, the study comprises a test model and pre-test-posttest model with a control group within that model. As a result of this study, it has been concluded that the preparatory exercises are effective in performances of Modern Turkish Music pieces that are used in violin education.

The study by Kaya and Gokbudak (2011) analyzed the suitability of maqam etudes and exercises for use in the process of cello education in branches of music education at departments of fine arts education at faculties of education, and their possible contributions to cello education. An experimental method is used in the study. It has been concluded in the frame of the study that maqam etudes and exercises are effective and can be used in parallel with the tonal etudes and exercises used to ensure that the performer acquires basic techniques in the process of cello education.

For inscription of practicing patterns and etudes, several parts were chosen for notation among Necdet Yasar's *taksim*s under the study by Bilgin (2011); later, exercises and etudes were formed by using such parts. The observation method was employed in the study, manifesting the style characteristics in Necdet Yasar's performance.

As for the results of the research conducted, it has been observed that the etudes formed for the instruments used in Turkish Music are aimed at ensuring easier comprehension of the styles of certain composers or facilitating the performance of certain musical pieces. However, no study has been identified that includes preparatory etudes for cello so as to facilitate the performance of Turkish Music pieces. This study was conducted in an effort to make a contribution to the field upon realization of the lack of sources available on the subject.

Conclusion

When the findings on the evaluation scores given by the experts were examined, it was observed that the evaluation scores by Expert 1 of the control group were higher than the evaluation scores of the experimental group both in the pre-test and posttest. When the pre-test characteristics of the experimental group and the control group were examined for Expert 2 and Expert 3, it was observed that the evaluation scores of the control group were higher than the evaluation scores of the experimental group. On the other hand, when the posttest characteristics of the groups were examined, it was observed that the evaluation scores of the experimental group were higher when compared to the evaluation scores of the control group. The data show that the etudes applied to the experimental group between the pre-test and the posttest were not found successful by Expert 1, while they were found successful by Experts 2 and 3.

When the findings on the evaluation scores given according to the musical pieces were examined, it was seen that the same result was achieved for all the pieces. When the pre-test characteristics of the experimental group and the control group were examined, it was observed that the evaluation scores of the control group were higher than the evaluation scores of the experimental group. On the other hand, when the posttest characteristics of the groups were examined, it was observed that the evaluation scores of the experimental group were higher when compared to the evaluation scores of the control group. The data show that the etudes applied to the experimental group between the pre-test and the posttest were successful for all of the four pieces.

When the findings on the evaluation scores according to the individuals were examined, it was seen that the posttest mean scores of the persons both in the control group and the experimental group were higher than their pre-test mean scores. In other words, the persons performing the piece made progress later (in the posttest) compared to the beginning (pre-test), and the evaluation scores increased as a result of the posttest evaluation. However, increases in the mean score of the students in the control group are much higher than the increases in the mean score of the students in the experimental group. This can be explained by the fact that the etudes created in preparation for the musical pieces are more effective than traditional educational methods.

Finally, the pre-test and posttest mean evaluation scores of the seven characteristics of the experimental group and the control group — individually for all the pieces — were examined and it was checked whether there is any significant level of difference between the experimental group and the control group. It was found out that Expert 1 gave higher scores to the control group in the pre-test and posttest evaluations on average for all pieces. It is seen that the etudes applied to the experimental group did not yield successful results according to Expert 1. When the scores given by Expert 2 and Expert 3 to the experimental group and the control group for all musical pieces were examined, it was observed that the mean scores of the control group were higher than the scores of the experimental group. However, it was seen in the posttest

evaluations made after the etudes that the mean scores of the experimental group were higher than the mean scores of the control group. This shows that the etudes applied between the pre-test and the posttest yielded successful results according to Expert 2 and Expert 3.

In conclusion, it was discovered that the etudes written with the aim to improve and facilitate the performance of musical pieces in the scope of this study created a significant difference in students' skills, which include the 'ability to play precise and clean', 'ability to play with rhythmic accuracy', 'ability to apply right-hand techniques', 'ability to apply left-hand techniques', 'ability to play with musicality', 'ability to play with fluidity', and 'ability to play at the designated tempo'.

Recommendations

Within the scope of this study, etudes were created to facilitate the performance of the pieces, and a significant difference was observed in the performances of the students. Similarly, instructors have been provided with the opportunity to create small but functional etudes, as well as various course materials, for their students when applying the etude writing system on the students by using a Turkish Music piece. There are a large number of methods and etudes to teach the cello technique. Therefore, as in this study, any etudes that are written should aim at enabling the student to perform musical pieces by helping them overcome difficulties unique to the piece in terms of technique, musicality, and style.

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Longa ve Sirtoların Viyolonsel ile Seslendirilmesine Yönelik Olarak Oluşturulan Etütlerin Etkililik Yönünden İncelenmesi

Özet

Problem Durumu: Türk Müziği türlerinden olan Longa ve Sirtoların seslendirilmesinde, öğrenciler tarafından aynı noktalarda benzer yoğunlukta hatalar yapıldığı tespit edilmiştir. Hataların yapıldığı kısımlardaki teknik ve müzikal sorunların giderilmesine yönelik olarak etütler yazılmasının, bu sorunları giderebileceği varsayımıyla hareket edilerek bu araştırmaya başlanmıştır. Literatürde bu konuda yapılan çalışmalar incelendiğinde, bazı bestecilerin üsluplarını anlamaya yönelik olarak veya bazı eserlerin seslendirilmesini kolaylaştırmak adına Türk Musikisinde kullanılan enstrümanlar için etüt yazma yoluna gidilmiştir. Fakat Türk Musikisi eserlerinin seslendirilmesini kolaylaştırmak adına viyolonsel için hazırlayıcı alıştırmaların yazıldığı bir çalışmaya rastlanmamıştır. Bu çalışma, bu boşluğun fark edilmesi üzerine bu alana katkı sağlayabilmek amacıyla yapılmış bir çalışmadır.

Araştırmanın Amacı: Bu araştırma, Türk Müziğinde çalgı müziği içerisinde yer alan Longa ve Sirto formundaki eserlerin -içerdikleri ajilite, teknik zorluklar, vb. sebeplerle- viyolonsel ile icra edilmelerinde yaşanan zorluklara çözüm bulunabilmesi ve bu yolla bu eserlerin teknik ve müzikal olarak daha doğru ve daha kolay çalınabilir hale getirilmesi amacıyla yapılmıştır. Bu alanda yapılan araştırmaların sonuçlarına bakıldığında, bazı bestecilerin üsluplarını anlamaya yönelik olarak veya bazı eserlerin seslendirilmesini kolaylaştırmak adına Türk Musikisinde kullanılan enstrümanlar için etüt yazma yoluna gidilmiştir. Fakat Türk Musikisi eserlerinin seslendirilmesini kolaylaştırmak adına viyolonsel için hazırlayıcı alıştırmaların yazıldığı bir çalışmaya rastlanmamıştır. Bu çalışma, bu boşluğun fark edilmesi üzerine bu alana katkı sağlayabilmek amacıyla yapılmış bir çalışmadır.

Araştırmanın Yöntemi: Araştırmada karma model kullanılmıştır. Araştırmanın deneysel kısmında karşılaştırma ve kontrol etme durumları söz konusudur. Bu sebeple araştırma; ön-test son-test kontrol gruplu model olarak desenlenmiştir. Ön-test son-test kontrol gruplu modelde, deney grubu ve control grubu olmak üzere yansız atama ile oluşturulmuş iki grup bulunur. Bu iki grupta da deney öncesi ve sonrası ölçmeler yapılır. Modelde ön testlerin bulunması, grupların deney öncesi benzerlik derecelerinin bilinmesine ve son test sonuçların buna göre düzeltilmesine

yardım eder (Karasar, 2007, 97). Hazırlayıcı alıştırmaların oluşturulmasında ise Taba-Tyler Modelinden uyarlanan etüt yazma modeli kullanılmıştır.

Bu araştırmada çalışma grubu, monografik örneklem seçme yöntemiyle belirlenmiştir. Monografik örneklem, olasılık dışı örneklem oluşturma yöntemlerinden biridir. Bu örneklem türünde araştırmacı, evreni temsil edebileceğini düşündüğü bir küme ya da bir-birkaç denek üzerinde çalışır (Ural, Kılıç, 2011, 44). Arslantürk (1997)'e göre monografik örneklemede örneklem, mevcut bilgiler yardımıyla betimlenmek istenen ana kütlenin herhangi bir alt grubunun ana kütleyi temsil edeceği varsayılarak seçilmektedir. Bu bilgilere göre araştırmanın çalışma grubu, Marmara Üniversitesinde ve Gazi Üniversitesinde lisans dört ve lisansüstü düzeylerde öğrenim gören öğrenciler arasından seçilmiştir. Bu seçim yapılırken viyolonsel öğretmenlerinin yönlendirmeleri doğrultusunda hareket edilmiş, araştırma kapsamındaki etütleri çalabilecek ve teknik açıdan benzer seviyede olan sekiz öğrenci belirlenmiştir. Bu öğrencilerin teknik olarak benzer düzeyde oldukları uzman kişiler tarafından onaylanmıştır.

Birinci aşamada, genel tarama modelinden yararlanılmıştır. Bu araştırma için belirlenen konunun doğru bir temele oturtulması ve bu konuda yapılan çalışmaların içeriğinin belirlenmesi için literatür taraması yapılarak konuyla alakalı veriler toplanmıştır. TRT Ankara Radyosu nota arşivinde bulunan tüm Longa ve Sirtoların notalarına ulaşılmıştır. Araştırmada incelenecek olan Longa ve Sirtolar Türkiye'deki Klasik Türk Müziği Konservatuarlarında viyolonsel öğretimi veren kişiler ile görüşme yapılarak belirlenmiştir. Belirlenen Longa ve Sirtolar öncelikle fa anahtarına dönüştürülmüş, viyolonsele uygun olan bir perdeye transpoze edilmiştir. Belirlenen eserlerin analiz edilmesi ile ortaya çıkan sonuçlara göre bu eserlerin çalınmasını destekleyecek hazırlayıcı alıştırmalar yazılmış ve bu eserlere uygun yay işaretleri ile temel teknikler eklenmiştir.

Araştırmanın ikinci bölümünde ise deneysel yöntem kullanılmıştır. Bu bölümde Longa ve Sirtoların viyolonsel öğretiminde icra edilmesini kolaylaştırmaya yönelik olarak hazırlanan alıştırmaların öğrenci performansı üzerinde ne derece etkili olduğunu ölçmek amacıyla, ön-test son-test kontrol guruplu modelden yararlanılmıştır. Çalışma grubundaki tüm öğrencilerin kayıtları üç uzman kişi tarafından –belirlenen yedi müzikal unsur açısından- değerlendirilmiştir. Çalışmanın sonunda, uzman kişiler öğrencilerin performanslarını değerlendirmişlerdir. Bu değerlendirmeler yoluyla elde edilen bilgiler, SPSS programı yardımıyla Wilcoxon işaretli sıralar testi ve Mann-whitney u testi uygulanarak karşılaştırılmıştır.

Araştırmanın Bulguları: Elde edilen istatistiksel verilere göre, deney grubunun aritmetik ortalamalarında anlamlı farklılıklar bulunmaktadır. Buradan hareketle, oluşturulan alıştırmaların öğrenci performansında başarıyı önemli ölçüde artırdığı belirlenmiştir. Bu araştırmada eserlerin icralarını iyileştirmek ve kolaylaştırmak amacıyla yazılan etütlerin, öğrencilerin 'temiz ve doğru çalabilme', 'doğru ritm ile çalabilme', 'sağ el teknik davranışlarını gerçekleştirebilme', 'sol el teknik davranışları gerçekleştirebilme', 'müzikal çalabilme', 'akıcı çalabilme' ve 'belirtilen tempoda çalabilme' becerilerinde anlamlı farklılık oluşturduğu bulunmuştur.

Araştırmanın Sonuçları ve Önerileri: Bu çalışma kapsamında eserlerin icrasını kolaylaştırmaya yönelik olarak etütler oluşturulmuş ve öğrencilerin icralarında kayda değer bir farklılık tespit edilmiştir. Aynı şekilde öğretim hayatında Türk Musikisi eserlerinden hareketle etüt yazma yöntemini öğrencisine uygulayan öğretmen, farklı ders kaynaklarına ek olarak öğrencisine yönelik küçük ama işlevsel etütler üretebilecektir. Viyolonsel tekniğini öğretmeye yönelik metotlar ve etütler çok fazla sayıdadır. Bu sebeple bundan sonra yazılacak etütler, bu çalışmada da olduğu gibi eserlere özgü teknik, müzikal, üslup vb. açılardan yaşanan çalım zorluklarını kolaylaştırmaya dönük olmalıdır. Bunun yanı sıra, viyolonsel ve diğer enstrümanlarda yaşanan çalım zorlukların giderilmesine yönelik olarak farklı Türk Müziği türlerindeki eserler üzerine de çalışmalar yapılması önerilir.

Anahtar Kavramlar: Türk Müziği, enstrümantal müzik, çello eğitimi, hazırlık alıştırmaları.