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Effect of daily work on student's memorization ability in piano education

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It is very important for a student to study regularly so that the results of effective training given by the teacher can be positive. It is an inevitable fact that daily and regular work will bring success to students. Therefore, daily work is highly important in music education. Daily work in instrumental education, which is a part of music education, is important for students to get successful results. The purpose of this study, which was prepared on the basis of these considerations, is to investigate to a what extent a student that works every day in piano education has been able to memorize a piano he has worked on. The students of experimental and control groups, which were generated for this purpose, studied with different methods at different times. Students in the control group studied only for 60 min in one day. Students in the experimental group studied for 60 min in total of four consecutive days with a period of 15 min in a day. In this research, memorization levels of the experimental and control groups were measured. SPSS 17.00 package program was used for the measurements. A significant difference was determined between the pre-test and post-test scores of the control group students using the Wilcoxon Signed-Rank test. A significant difference was also determined between the pre-test and post-test scores of the experimental group students using the Wilcoxon Signed-Rank test. According to the results of the Mann-Whitney U test, a significant result (p= .004 >.05) has emerged in favor of the experimental group students studying on a daily basis. Thus, it has been concluded that the study conducted is effective and applicable in the following studies.

Key words: Piano education, daily work, effective work, memorization ability.

INTRODUCTION

In its plain and concise meaning, music education is the process of giving the individual certain musical behaviours purposefully through his/her own life, creating certain changes purposefully in the individual's musical behaviour through his/her own life or changing and development purposefully the musical behavior of the individual through his/her own life (Uçan, 1997).

Accordingly, all studies to be conducted in all areas of music education must be self-denying and planned on a daily basis. The desired behaviors in music education are to be acquired with a systematic study conducted in this way.

In education, studies that are to be done by an individual to gain the desired behaviour are important

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since they are the most basic way to achieve the intended purpose. These studies are used in every area of education in order to ensure the permanence and continuity of the gained behaviours or gain basic skills related to the subject that is wanted to be taught. These studies called practice or study are among the most fundamental elements required for an effective learning process (Toptaş and Çeşit, 2014).

The objective of music trainers and musical instrument trainers should be to raise students who are focused on the work or piece they will play, know what they should be careful about in the piece of music they will play, use their time efficiently, and who get to know themselves in the field of learning" (Akın, 2013). A student playing a musical instrument should first ask himself the following questions before starting a new work: who and which musical period does this work belong to, what does the composer composing this work want me to do, with which methods should I study this work, how much should I work daily. A student studying by asking himself these questions will have started to write and implement the first rules of systematic and planned study. "The realization of the aimed behaviours in musical instrument training, which is an important aspect of music training, requires a planned and organized process (Akbulut, 2013).

Learning piano is not different from other learning. However, one will disregard developmental differences by looking at this situation from this perspective" (Özçelik, 2010). Talent is one of the important factors to play an instrument. However, good education and systematical practice are also necessary, as well as talent. However, piano (violin, stringed instruments, etc.) is a subject of learning, too. The most important output of teaching is learning. Learning does not only occur through receiving training. The only way to achieve success with the training received is working systematically. It should be known that playing the piano is also a skill that develops through correct exercises and repetitions. Enough repetition of the sentences in a piece of music ensures that fingers learn that skill under the automatic control of the brain, without detailed orders and directives. However, this should not mean that the brain is passive, and it should be noted that the brain fulfils the interpretation aspect of music more freely by gaining skills of the fingers (Ercan, 2006).

That a student's level of reading musical notes and hand skills are good is not sufficient for playing the piano from all aspects. Thus, the trainer has a great role in piano teaching. Small hints that the trainer will show on the piano will ensure that the student plays the piece of work he studies more quickly and in a shorter time by understanding (Toptaş, 2014).

A good teacher in teaching piano is important in terms of the development and success of the students (Gökbudak, 2003). The guiding role of the trainer in the learning of the student of what systematic working means for a student playing a musical instrument is a key role. That students have correct attainments in their technical development, and the development of their playing skills will eliminate many possible problems that may be encountered at the subsequent stages and in their future life. At this point, students should be guided in order for them to gain correct working principles. For they have an effective playing skill by means of correct guidance (Kurtuldu, 2010).

The expected success in musical instrument training, which makes up an important branch of musical training, is about the memory and the functions of the memory to a great extent. Musical instrument training is a long and tiring education-training process which requires disciplined work that is planned in accordance with the physical and personal training status of a person (Uzunoğlu, 2006). There will be many situations in which students will encounter problems in the long learning period of musical instrument training. These situations may include technical skill problems about the musical instrument, the problem of the inability to read the musical notes correctly or the failure to remember the musical notes of a work studied at a sufficient level.

With the developing technology, smartphones and tablets have become an indispensable element of all people in their daily lives. Especially internet-based social networks have become a part of students' lives. Many students who receive training in various fields of music are affected by technology in their personal works either positively or negatively. Music students use their personal rooms to work on their instruments in general all around the world. Practice rooms mean that the student becomes one only with his musical instrument and works without being disturbed by any external factor. In today's world, many music students reduce the quality of their works by keeping their smartphones on while working in these rooms. And this does not mean anything for systematic, efficient and conscious working. It is necessary to become one with the instrument and work and work with a full concentration in order to learn the musical work worked on by heart with all of its properties in short time.

It is known that learning by heart is necessary to record knowledge in the memory. It is used in a widespread manner by students or teachers in education-training life either consciously or unconsciously; memory is especially about storage among storage and search-find-bring back functions, and it is necessary to store knowledge in memory for a long time. For example, storage of the etudes or works learnt within the scope of music training in the memory (for a long time) is possible by studying these pieces a lot or learning them by heart consequently to a great extent. Then, it can be said that learning by heart is related to brain functions, effectively included and used in coding, storage, search-find-bring back of the memory stages (Uzunoğlu, 2006).

Learning musical works by heart should not be

considered from only one perspective, solely as learning musical notes by heart. The musical interpretation properties, technical structure, rhythmic character, the harmonic pattern of the work should be learnt by heart as a whole, multi-directionally. “Permanent learning in music may only happen by “learning the music by heart”. Trying only to learn the musical notes by heart without learning the music by heart may lead to the loss of the music from the memory just as the information studied one day before the exam and forgotten during the exam (Duru, 2013).

The only way for permanent learning in music training and its sub-dimension of musical instrument training is to practice daily and to comply with particular working methods carefully. The necessity of permanent learning is known in the realization and maintaining of musical instrument training, which makes up one of the lower steps of music training. It can be considered that the permanence of the etudes or works learnt correctly and fully in musical instrument training that requires a long process is in direct correlation with the correct use of importing to the memory (Uzunoğlu, 2006).

Only keeping the musical notes in the memory does not mean that one has learnt the musical work. Learning the work completely leads the student to the correct result. It is necessary to work in a systematic and conscious way in daily practices in order to achieve this result. The teacher is an important factor in the systematic and conscious working of the student. The teacher should explain to the student how to work on a piece of work, which parts to focus on, how to make the connections of the work and how to achieve the correct result in a detailed way. That the teacher writes small explanatory and understandable notes on his/her work where he/she deems necessary will create more meaningful results. “It is necessary to focus on ear memorization, eye memorization, the memorization of hand and arm movements and the memorization of the work from various aspects (Duru, 2013).

The behaviour of playing or singing by heart may happen as a result of importing the etude/work to be played/sung into the memory with different memorization methods. The importing of the etude/work into the memory also requires focusing particularly on such properties as the harmonic structure, formal structure, rhythm patterns, musical note alignment, hand-arm movements and breathing points (activating the reticular activation system of the brain). The most important way of memorizing a particular piece of music is to work consciously. To working consciously is to work in line with a particular plan (Uzunoğlu, 2006).

Working on a piece of musical work without giving the necessary importance delays playing the work correctly. Moreover, the status of keeping the work in the memory is also taken into a hard situation. “Nevertheless, learning by heart may become a necessary and effective method in importing the information to the memory, not forgetting it and keeping it there for a long time, when a correct technique and orderly working plan are followed (Uzunoğlu, 2006).

The process of starting a new piano work by a piano student and working on the work is quite a complicated process. There are many situations that the student should be careful about. The finger numbers, musical signs and tempo of the work that is worked on are among these. Each new piano work requires students to perform certain behaviours systematically, otherwise, if these behaviours are not fulfilled, then only the musical notes of the piano work are played. In this case, general work is not carried out, and correct results cannot be obtained.

In the effective piano teaching, questions should be formed for students to be able to perceive the music in their minds, fictionalize and express it, to perceive musical integrity and reach musical integrity, in short, to play well. For example; ‘I know musical notes, I know what musical note I should play at what time, but I cannot play as my teacher does, or my teacher does not like what I play. Then, I should make other efforts or seek other things to be able to play well. What are these efforts and searches? It is expected that the questions of this kind occupy students’ minds’ (Bağçeci, 2005).

According to Öztürk (1995), repetition strategies used for understanding what is read are the strategies that are based on mental repetition and ensure that students choose knowledge by determining and acquiring it in this way (Karakış and Çelenk, 2007).

The general objective of these strategies can be considered as to help the processing of newly encountered knowledge in short-term memory, to be able to act preferentially in its transfer to long-term memory and process the chosen information to ensure that it becomes permanent. Individuals do a certain kind of mental practice both at the beginning of the processing process and in the realization of the processing that will ensure permanence. Repeating is the easiest mental exercise that one can resort to (Kurtuldu and Güçlü, 2010). In piano training, it is necessary to repeat a particular behaviour at regular intervals in order to reinforce and internalize it. The longer the time gap between these intervals is, the harder is this stage of reinforcing and internalizing the behaviour learnt. On the contrary, the more frequent the time gap between these periods is, the easier is the stage of reinforcing and internalizing the behaviour learnt; and consequently, the behaviour will be learnt (Pirigon, 2013).

A person can turn behaviour into a skill through repetition. The behaviour in the form of skill can be performed in the quality, duration and competence required automatically (Otacıoğlu, 2005).

As a result, there are many names for practicing by following a right path in order to achieve the targeted success level in an instrument. These can be named as working daily, systematically, regularly, in a planned manner, actively, without disrupting, effectively and efficiently. The basis of all these names is to be willing. Each student that is willing to work is already a person who

knows what he/she can do during the process of working.

METHODOLOGY

The research is aimed at investigating the level of memorization of piano works by university students who have received continuous piano training for two years through daily practice. Thus, the *pre-test – post-test control group model* among real trial models was used in the research. "Trial models are research models in which the data needed to be observed directly under the control of the researcher with the aim of determining cause and effect relations are produced" (Karasar, 2009: 87). "Experimental patterns are generally classified as real experimental patterns, semi-experimental patterns and pre-trial designs. Among experimental designs, the test subjects are appointed to experimental conditions in an unbiased manner only in real trial patterns" (Büyüköztürk, 2007: 10).

The "Volksliedchen" work by SCHUMANN from the book "Album For The Young" was used in the research. The research was limited to 5 days. On day 1, after the selected piece of piano work had been practiced for 20 min by the experiment and control groups, performance was rated by the assessment scale for the pre-test. The experiment group students practiced for 60 min in total by working on the same piece for 15 min on day 2, 3, 4 and 5. The control group students practiced for 60 min only on the fifth day. The study was carefully monitored by the researcher. During the study, none of the students exhibited any negative situation that would affect the results of the study. The study was concluded by applying the post-test to the students of the experiment and control groups that worked for an equal duration in total.

Statement of problem

The problem sentence of this research was formed based on the effect of daily practice in piano training on the level of memorization of the student is.

Study group

The study group consisted of 12 students who had continuously received piano training for 2 years. A "memorization level test" was applied to a group of 20 students in order to determine the study group of 12 people. F.BURGMÜLLER's Fortschritt – Progress piece of work that 20 students receiving piano training continuously for 2 years had never encountered before was used. These 20 students worked on this piece for 1 h and played by heart (without looking at musical notes). A mini performance scale was developed by the researcher in order to assess the piano piece chosen in a reliable manner. This mini performance scale was used in order to be able to assess the performance results. In this research, 12 people who remained below the first eight people in the ranking and have the weakest memorization power as a result of the test (between the 9th and 20th) were included in the study group. These 12 people were divided into the experiment and control groups equally in an unbiased manner by the scores they took. The study was put into action on the planned date and time as of the unbiased appointment of the experiment and control groups.

Data analysis

Data obtained as a result of the study conducted were analysed using SPSS 17.0 (Statistical Package for Social Science) software. The Wilcoxon Signed-Rank Test was used for the relevant measurements in the comparison of the pre-test – post-test scores of the experiment group students and the comparison of the pre-test – post-test results of the control group. The Mann-Whitney U Test, which is applied for unrelated measurements, was used in the analysis of the pre-test scores of the experiment group and control group and the analysis of the post-test scores of the experiment group and control group (Büyüköztürk, 2007: 155,162). The level of significance in statistical measurements was accepted as 0.05.

FINDINGS

Analyses for the answer of the following sub-problems were included in this part of the work.

1. Is there a significant difference in terms of the pre-test and post-test scores of the experiment and control groups regarding the effect of daily practice in piano training on the level of memorization of the student?
2. Is there a significant difference between the pre-test and post-test results of the experiment groups within themselves in terms of the effect of daily practice in piano training on the memorization level of the student?

As it is seen in Table 1, the pre-test rank average of the experiment group is 6.17, and the pre-test rank average of the control group is 6.83. There is a 0.66-point difference between the rank averages of the two groups. According to this analysis, the value ($U= 16.00$, $p>0.05$) obtained shows that there is no significant difference between the two groups. This result shows that the memorization skills of the study groups that are divided into two groups in an unbiased manner by the matching method according to the result of the "memorization level test" are equal.

The Mann-Whitney U test was used in order to compare the study groups' memorization skill levels of the piano piece after the study and determine whether there is a significant difference between the post-test scores. Table 2 shows the results of the Mann-Whitney U test conducted with the aim of determining whether there is significant difference between T1 post-test scores of the control group that worked for only one day and 60 min in total and the experiment group that worked for 15 min for 4 days and 60 min in total:

As it is seen in Table 2, the post-test rank average of the experiment group is 9.50, and that of the control group is 3.50. There is a difference of 6.00 points between the rank averages of the two groups. According to this analysis made, the value of ($U= 0.00$, $p>0.05$) obtained shows that there is a significant difference between the experiment and control group. This result revealed that daily and planned study conducted with the experiment group is a more effective method of memorizing a piece of piano work.

Alongside with the above stated Mann-Whitney U Test, the Wilcoxon Signed-Rank Test was used in order to determine whether there is a significant difference between the pre-test and post-test scores before and

Table 1. The Mann-Whitney U-test results of the pre-test scores by groups.

Groups	N	Rank average	Rank total	U	Z	p
Experiment	6	6.17	37.00	16.00	-0.324	0.746
Control	6	6.83	41.00			
Total	12					

Table 2. The Mann-Whitney U-Test result of the post-test scores by groups.

Groups	N	Rank average	Rank total	U	Z	p
Experiment	6	9.50	57.00	0.000	-2.887	0.004
Control	6	3.50	21.00			
Total	12					

Table 3. The Wilcoxon signed-rank test results of the pre-test – post-test scores.

Pre-Test – Post-Test	N	Rank average	Rank total	Z	p
Negative Ranking	0	0.00	0.00	-2.207	0.027
Positive Ranking	6	3.50	21.00		
Equal	0				
Total	6				

Table 4. The Wilcoxon Signed-Rank test result of the pre-test and post-test scores by the experiment group.

Pre-test/Post-test	N	Rank average	Rank total	Z	p
Negative Ranking	0	0.00	0.00	-2.226	0.026
Positive Ranking	6	3.50	21.00		
Equal	0				
Total	6				

after the experiment of the control group that worked only for one day and 60 min in total. The results of the Wilcoxon Signed-Rank Test carried out for the purpose of understanding whether there is a significant difference between the pre-test and post-test results of the control group are shown in Table 3.

As it is seen in Table 3, there is a significant difference between the pre-test and post-test results of the control group ($Z= -2.207$, $p<0.05$). This result shows that a change took place in the score of the control group that worked for only one day and 60 min. In other words, it was found out that there is a significant difference between the pre-test and post-test scores measuring the level of memorizing the piano work of the control group that worked for only one day and 60 min without the opportunity to make daily practice.

In parallel to the test carried out for the control group above, it was also examined whether there is a significant difference between the pre-test and post-test scores of the experiment group. The Wilcoxon Signed-Rank Test was used in order to determine whether there is a significant difference between the pre-test and post-test scores of the experiment group. Table 4 shows the results of the Wilcoxon Signed-Rank Test performed for the purpose of understanding whether there is a significant difference between the pre-test and post-test scores of the experiment group.

As it is seen in Table 4, there is a significant difference between the pre-test and post-test scores of the experiment group ($Z= -2.226$, $p<0.05$). This result shows that a change occurred in the scores of the experiment group that works for 15 min for 15 days and 60 min in total. In other words, it is seen that planned and daily practice with the experiment group creates positive results in memorizing the piece of piano work.

DISCUSSION

Piano, which was invented by Bartolomeo Cristofori and is among claviers, went through many structural changes from the past to present. Technology that constantly

changes has also initiated the gradual change of the piano. Piano music composers also took both the interpretation properties and technical playing properties of the piano with constant new trials during this structural change and development of piano. Thus, new working and exercise methods were developed for everyone playing each new work of the composers. Many teaching methods were developed so far especially for music students receiving basic music training. These teaching methods were structured differently in all fields of music. Music students are different from one another in terms of their skill levels, perception levels, structural properties of their bodies, working principles and in many other ways. Countless scientific studies were carried out measuring and assessing these differences and providing solution offers. A new method was tried in each scientific study, and practices were put in different fields of music education. The subject of what kind of a method to use in order to increase the level of memorization of piano students was examined in this study that is prepared by the researcher. For this purpose, the study was carried out with 12 students as the experiment and control groups. It was concluded that daily and regular practice is quite effective and efficient. Although this study was limited to one week and 60 min in total, this study carried out was completed with a significant result in favour of the experiment group students. With these results, all students that receive training in addition to piano students can be given the following advice. What is important in music training is to determine the targets correctly. It is necessary to walk towards the target that is wanted to be achieved slowly but surely. There is no such thing as small or easy in music. Playing even a single musical note incorrectly or more or less loudly than necessary can change the whole music. Success in music training is achieved as a result of long and tiring works. Delays may occur as a result of many external factors in this long working process. However, daily practice without renouncing general working principles is the pre-condition. Consequently, the method implemented in the memorization of the piece of piano work was proved with the analysis of the statistical data.

Conflict of Interests

The author has not declared any conflict of interest.

REFERENCES

Akbulut E (2013). Eğitim fakültesi Müzik Eğitimi Anabilim Dalı BİREYSEL ÇALGI. Dersi Hedeflerinin Gerçekleşme Düzeylerine İlişkin 3. Ve 4. Sınıf Öğrencilerinin Görüşleri Açısından Bir Değerlendirme [An Assessment in terms of the Point-of-view of the 3rd and 4th-Grade Students with regard to the Realization Levels of the Targets of "PERSONAL INSTRUMENT" Lesson in Education Faculty, Department of Music Teaching]. *Kastamonu Eğitim Dergisi* 21:1

Akın Ö (2013). Keman Eğitiminde Anlamlandırma Stratejisinin başarıya Etkisi (Örnek Bir Uygulama) [Effect of Interpretation Strategy in Violin Training on Success (An Exemplary Practice)]. Ekim 2013 Cilt:21 No:4 (Özel Sayı) Kastamonu Eğitim Dergisi. pp. 1551-1560.

Bağçeci SE (2005). Piyano Eğitiminin II. Yarıyılına İlişkin Analitik Yaklaşımlar [Analytic Approaches on the Second Semester of Piano Training]. Fırat Üniversitesi Sosyal Bilimler Dergisi 15(2):147-161.

Büyüköztürk Ş (2007). Deneysel desenler [Experimental Patterns]. (İkinci baskı). Ankara: Pegem A Yayıncılık.

Duru EG (2013). Keman Eğitiminde Ezber Yöntemine Dayalı Öğretim Programının Öğrenci Performansına Etkisi [Effect of the Curriculum Based on Memorization Method in Violin Training]. Mehmet Akif Ersoy Üniversitesi, Eğitim Bilimleri Enstitüsü, Güzel Sanatlar Eğitimi Anabilim Dalı, Yayınlanmamış Doktora Tezi, Burdur/Türkiye. Available at: https://tez.yok.gov.tr/UlusalTezMerkezi/

Ercan N (2006). Piyano Eğitiminde Alıştırma Yapmanın Önemi ve Bazı Öneriler [Importance of Practice in Piano Training and Certain Suggestions]. Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi. Yıl 7(12):104-108.

Gökbudak ZS (2003). Etkili Bir Piyano Eğitimi ve Öğretimi İçin Ailenin Rolü [Role of the Family for an Effective Piano Training]. Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, Sayı. 9:559-574.

Karakış Ö, Çelenk S (2007). Farklı Fakültelerde Öğrenim Gören Öğrencilerin Genel Öğrenme Stratejilerini Kullanma Düzeyleri "A.İ.B.Ü. Örneği" [Level of Using General Learning Strategies of Students Studying at Different Faculties A.İ.B.Ü. Example]. Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi 7(1):21-49.

Karasar, Niyazi (2009). Bilimsel Araştırma Yöntemi [Scientific Research Method]", Yirminci Basım. Ankara: Nobel Yayın Dağıtım.

Kurtuldu MK (2010). Piyano Eğitiminde Alıştırma Çalmanın Öğrenci Başarısına Etkisi [Effect of Practice on Student Success in Piano Training]. Ahi Evran Üniversitesi Eğitim Fakültesi Dergisi 11(1):245-256.

Kurtuldu MK, Güçlü HE (2010). Piyano Eğitiminde Planlı ve Eşit Tekrar Çalışmasının Öğrencilerin Başarısı Üzerindeki Etkileri [Effects of Planned and Equally Repeated Practice in Piano Training on Student Success]. Elektronik Sosyal Bilimler Dergisi 9(34):196-204.

Otacıoğlu SG (2005). Müzik Öğretmenliği Piyano Eğitimi Dersi İçin Bir Model Denemesi [A Model Trial for Music Teaching Piano Training Lesson]. Marmara Üniversitesi Eğitim Bilimleri Enstitüsü Güzel Sanatlar Eğitimi Anabilim Dalı, Yayınlanmamış Doktora Tezi, İstanbul. Available at: https://tez.yok.gov.tr/UlusalTezMerkezi/

Özçelik ÖA (2010). Suzuki Yetenek Eğitimi ve Bartok Mikrokosmos Yöntemleriyle Özengen Piyano Eğitiminde Yoğunlaşma Becerisi [Skill of Focusing on Volunteer Piano Training with Suzuki Skill Training and Bartok Microcosmos Methods]. Uludağ Üniversitesi Eğitim Fakültesi Dergisi 23(2):643-661.

Öztürk B (1995). Genel Öğrenme Stratejilerinin Öğrenciler Tarafından Kullanılma Durumları. [Use by Students Status General Learning Strategies] Yayımlanmamış Doktora Tezi, Gazi Üniversitesi Sosyal Bilimler Enstitüsü

Pirigon Y (2013). Piyano Eğitiminde Günlük Çalışma Yapmanın Öğrenci Başarısı Üzerine Etkisi [Effect of Daily Practice in Piano Training on Student Success]. Eğitim ve Öğretim Araştırmaları Dergisi J. Res. Educ. Teach. Ağustos. 2(3):6.

Toptaş B (2014). Piyano Eserlerinden Egzersiz Yazma Yöntemi [Exercice Writing Method in Piano Works]. J. Int. Soc. Res. 7:29.

Toptaş B, Çeşit C (2014). Carl Czerny Op. 599 etüt Kitabında Sol El Eşlik Yapılarının İncelenmesi [Examination of Left Hand Threshold Structures in Carl Czerny Op. 599 Etude Book]. NWSA 9(2).

Uçan A (1997). Müzik Eğitimi, Temel Kavramlar-İlkeler-Yaklaşımlar [Music Training, Main Concepts-Principles-Approaches]- Müzik Ansiklopedisi Yayınları, Ankara. P 30.

Uzunoğlu B (2006). Müzik Öğretmeni Yetiştiren Kurumlarda Ezber Çalmanın-Söylemenin Öğrenci Başarısına Etkisinin Değerlendirilmesi [Assessment of Playing-Singing by Heart in Institutions Raising Music Teachers on Student Success]. Yayımlanmamış Yüksek Lisans Tezi, Uludağ Üniversitesi Sosyal Bilimler Enstitüsü, Bursa. Available at: https://tez.yok.gov.tr/UlusalTezMerkezi/