The Effect of Song Maps Created by Using Graphs, Symbols and Images on The Success of Teaching *

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Abstract

In recent years, various teaching strategies based on creativity and effective learning have been developed within the scope of the Turkish Elementary Education Programs. These strategies are reinforced with visual materials to establish an active learning environment. In doing so, the aim is to ensure active participation of students in courses by means of using concept and mind maps in different fields of education. Visual materials are known to play an important role in achieving more effective teaching by means of materializing knowledge, increasing memorability and making courses attractive for the students. It is believed that visual materials must be used to symbolize while teaching the fourth grade students knowledge, and even songs, taking account of their cognitive development. This study aims to find out to what extent the song maps developed by the author are affective in teaching students school songs and to determine the practicability of these maps for teachers and students as a another song teaching approach. In line with this purpose, we performed an experiment throughout a period of 6 weeks with experimental (N=25) and control groups (N=23) comprising of fourth grade students from an elementary school in the Nilüfer District of Bursa in the school year 2015/16. 6 songs were chosen in line with the Fourth Grade Music Course Curriculum and these songs were mapped by the author. Before and after the experiment, the scale for measuring the success of learning school songs prepared by the author was used in the pre-test and post-test. Besides, another scale measuring students' opinions on song maps was prepared by the author and administered on the students in the experimental group in the final course to determine their opinions. A Mixed ANOVA was carried out for data analysis using the SPSS 23 package program. The findings of the study showed that the success levels of the experimental group in learning the songs were higher than those of the control group. Moreover, song maps were found to increase memorability and to have positive impact on the students.

* This article is derived from Çiğdem Yiğit's PhD dissertation entitled "The effect of song maps created by using graphs, symbols and images on the success of teaching", conducted under the supervision of Sezen Özeke.

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Introduction

The emergence of healthy societies that have improved themselves at all points depends on a quality educational system. A society that also includes art education can be said to robustly shape growth and development. The rapid development of science and technology in recent years has led to new searches in learning and teaching. It is considered that learning strategies are very important in music education, as in all areas of education, in the realization of effective teaching.

Music education, which is one of the more important branches of art education, is, briefly, the process of introducing musical knowledge and skills (Uçan, 1994). Music education must diversify students' capacity for musical perception, compel students to adopt the habit of making and listening to sophisticated music, and develop students' individual capacities (Uçan, 1994). At the same time, it should be aimed that the student learns by making and experiencing music through active participation. (Milli Eğitim Bakanlığı [MEB], 2007).

Song teaching, which is one of the most basic elements of general music education, forms the focus of music education. Sophisticated and multidimensional, song teaching involves lyric-melody-rhythm precession. Each song that is suited for a child's educational level helps the child see and find, live, develop and realize himself. Through language, the child learns language, learns to talk; with dance, he learns about his body; and with listening, he learns to think, pay attention and respect others. Songs introduce self-confidence, socialization, studying, learning, success, satisfaction and creativity to the child (Gedikli, 2007). According to Yıldız and Karakelle (2017), with all of these aspects, singing is an important element used not only in musical education, but also in other fields of education.

The most popular song teaching methods in Turkey are teaching songs by ear and teaching songs by notation. Teaching songs by notation can take place in two ways: 1. Musical note and song teaching using the skeleton of the song, and 2. Musical note and song teaching through rhythmical reading and musical reading. The method of teaching songs by ear is adopted at the preschool and primary school level, when musical note teaching has not yet been introduced. The musical note teaching method is usually employed in two ways:

1- Song teaching through holistic teaching; and

2- Song teaching through the Whole-Part-Whole method (Seyrek, 2012).

In holistic teaching, the teacher sings the song a few times or has the children listen to it, then expects his or her students to sing it. This method is especially employed in teaching songs with short lyrics and a simple melody, such as tongue twisters, counting, etc. In song teaching using the Whole-Part-Whole method, on the other hand, the teacher strives to help the children comprehend the song by breaking it into pieces after singing it as a whole or has children listen to it as a whole and then helps them learn the song by singing it in its entirety again. In order for the song to be learned correctly, it must be generously repeated. Such repetition will help children learn the song correctly, but it may also cause them to become bored or lose attention. The teacher must be careful in this regard and avoid distractions (Seyrek, 2012).

According to Ayhan (2012), song teaching methods adopted in music education need to be supported by more creative methods in an avant-garde manner. A teaching method that more effectively employs creativity and visuality is thought to more rapidly and effectively achieve success.

In addition to modern and creative methods, memorability is also one of the more important issues that must be emphasized in song teaching. In order for information to be remembered at the learning stage, symbolization and codification of such information matter (Korkmaz & Mahiroğlu, 2007). Morton and Trehub's (2007) research revealed that lyrics are more easily remembered than the melody. Taking into consideration the fact that a song forms a whole through its lyrics and its melody, this may be perceived as a problem. Therefore, it should be aimed to carry out studies on the perception of songs as a whole in song teaching.

According to the Gestalt Theory of Learning, which posits that the whole is more than the sum of its parts, an individual is expected to perceive not by dividing the whole into parts, but through an understanding of something in its entirety (Yokuş & Yokuş, 2010). In Gestalt school, it is not only the recording of basic units of sensory experience but also forming meaningful wholes from these units that are thought to be the basic function of the mind. This includes, for example, perceiving sounds in a musical melody as a whole, consisting of sounds organized within the framework of specific rules rather than sounds that are independent from one another (Alıcı, 2011). According to Küçükahmet (1994), the Gestalt theory is a way of thought that is based on perception of the conscious as a whole. The function of the teacher is to create a learning environment that will make perception easier in light of this theory.

According to Bruner's musical approach, the child uses symbols to explain the meaning of the activity or the perception in the symbolic period of cognitive development. With articulations represented by symbols, the use of musical notes and rhythmic patterns as visual aids such as pictures is ensured (Erdal, 2012). Visual symbols contribute to the emergence of new achievements and creativities in teaching activities. In order for visual symbols to make learning easier, they must be qualified and used effectively in the teaching process (İpek, 2003). The conversion of sounds into symbols is also a very valuable and creative activity. Tonal and melodic features of sounds become visual with graphics, drawings and graphic symbols (Morgül, 2001). In this manner, the learning of melody and elements comprising the melody can much more easily be insured.

"Listening maps," also known as "musical maps" in musical education literature, focus the child on listening and improve listening skills by ensuring the concretization of sound with visual materials. Listening maps ensure the portrayal or graphical presentation of many musical elements, such as melodies, rhythms, themes, forms, dinamics, etc. (Özeke, 2010).

Other mapping methods used in different fields of education that help express information in a more concrete manner include mind maps and concept maps. Concept maps are presentations of information by way of organization through graphics. Concepts are usually written in circles or boxes and attempts at schematically developing the relationships between concepts in a proper manner are made (Novak & Canas, 2008). Mind maps, which represent another map technic, represent visual and graphical tools of thought suitable for memory, creativity, learning, and all kinds of functions of the brain (Buzan, 2015). Mind maps are a note taking technique developed by Tony Buzan, a mathematician, psychologist and brain researcher. The most significant function of mind maps is to ensure the organization of information (Brinkmann, 2003), forming a creative technique that enables the use of both hemispheres of the brain (Buzan, 2015).

Throughout the cognitive developmental stages, children at primary school fall within concrete operational stages in terms of age intervals. Piaget argued that thought systems of children at concrete operational stages are built on concrete facts. Yetkin Özdemir (2008) and Çekirdekçi and Toptaş (2011) emphasized the idea that concrete objects support the abstract understanding of children by presenting Skemp's study in 1987 in mathematics. Çekirdekçi and Toptaş (2011) also stated that abstract concepts and relationships were made concrete for children by using teaching materials and these materials should be used as visual objects that stimulate children's senses.

Rendered more comprehensive in the field of education and training in Turkey, the 2006 Primary School Music Lesson Curriculum is a program in which important learning outcomes are achieved with regard to practice. In applying this program, important tasks fall to classroom teachers. There are four learning domains, namely: Listening-Singing-Playing, Musical Perception and Knowledge, Musical Creativity, and Music Culture in the music lesson curriculum for the fourth grade at the primary school level. Although musical note teaching starts in the fourth grade, a musical note is an abstract concept for students. Because students in this age group are in the concrete operational stage among the developmental periods, each piece of information given to them must be concretized. A map consisting of graphics, symbols and pictures is thought to render song teaching more interesting for students at the fourth grade level, when symbols are more easily comprehended, thus motivating the entire class to participate in active learning.

If we look at the literature, Levy (1983) created a musical graphic model to visually show the general structure and form features of the works. Remembering the passages in the works graphics, chord symbols, rhythmic stems, explanatory words and pictures. Pound and Harrison (2002) point out that graphical representation of sounds plays an important role in the development of musical ideas in children. For this reason, adults have to help children to express their ideas in a symbolic form, by giving them pens while listening to music and making notes on musical ideas on paper or blackboards, which should allow different patterns, timbre, speed and sound curves to be represented through maps. Blair (2006) examined the relationship between musical understanding and musical mapping processes in his doctoral dissertation. In this study, musical maps were used as a tool when performing music activities of students. 6 primary school fifth graders were told to listen to music, to provide musical meanings and then to create their own stories according to the talents left by them, and to reflect the story in action. Weyde and Wissmann (2004) point out that some musical ideas can be presented via maps. They are also cognitively appropriate to visualize musical ideas and their relations to each other through maps, as in other abstract matters. They pointed out that musical ideas and their relation to each other are made concrete by using the map with the use of music in the frame and it is an important necessity to use map in musical and it is necessary to carry out further research on this subject. Shockley (2006) states that when a work is learned, a map can be used at any stage and a different point of view can be gained by this method. According to the story created, music maps are also asked. At the end of the study, it became clear that students learned to express musical ideas through mapping and understood music better.

Whether and to what extent song maps designed to contribute to music education and prepared as a different approach in song teaching are successful in teaching school songs is considered an issue worthy of research. In this direction, the determination of whether there is a significant difference between students' success in song teaching through song maps formed by using graphics, symbols and pictures and teaching songs by ear at the fourth grade level at primary school forms the basis of this research.

This study seeks to determine the extent to which song maps created by the researcher are effective in teaching school songs and whether such song maps are applicable as a different song teaching approach from the perspective of teachers as well as students. Effective teaching of songs with the song maps created is at the goal.

This study is important because of the fact that it will introduce a new approach to song teaching, support creative work, have a positive impact on permanence and song teaching through maps, and contribute to music education. Additionally, the fact that such a study about "song maps" has not previously been carried out adds significance to the study in terms of its contribution to the extant literature.

Method

In this study, "freehand," "photo shop" and "paint" programs were employed during the mapping of songs to be used in song teaching in conjunction with a graphic design expert. Each song was turned into a graphic, with symbols identified by taking the musical notes, volume and time values into consideration, and pictures reminding children of the lyrics of the songs added to the maps. Space was given for basic musical symbols included in the song as well. While symbols in the song map vary by song lyrics, some common symbols are used in the song maps in the same way. While creating these symbols, quarter notes are shown with a long dash (＿), and a half note plus an eighth note with a short dash (_). Again, a whole note rest is shown with a large cross (X), and a half note rest is shown with a small cross (x). Large symbols in song maps are usually designated as long duration sounds, and small symbols are designated as short duration sounds. Musical notes that need to be sung staccato in the song are symbolized with a dot (.). In order to be able to apply song maps in the classroom, the maps were scaled up to 60x90 in a printing house and made ready for application and then reproduced in A4-sized papers to be distributed to the students in the experimental group. Warm up activities was carried out, and songs were taught in each lesson in both groups, consistent with music education principles

for six weeks. In the experimental group, songs were taught with song maps, whereas in the control group, the method of teaching songs by ear was employed.

In order for song teaching to be consolidated, songs learned were repeated at the end of each lesson and at the beginning of the next lesson by having students sing them. Each lesson was videotaped throughout the implementation process.

Factorial design handling three independent variables was employed in this study in order to determine the effect of song maps created by using graphics, symbols and pictures on the success of learning school songs. Variables in the research are Group, Learning/Recalling, and Test variables. Factorial designs are experimental designs with a minimum of two independent variables and one dependent variable (Büyüköztürk, 1997).

This study strives to elaborate on the primary effect of three independent variables in the research and the interaction thereof using multilateral analysis of variance involving 2x2x2 mixed measurements applied in this research.

Study Group

The study group for the research consists of two randomly selected fourth grade classrooms at Emir-Koop Primary School, which is affiliated with the Ministry of National Education in the Nilüfer district in the city of Bursa. One of the randomly selected fourth grade classrooms forms the experimental group, and the other forms the control group.

Data Collection Tools

A pretest/posttest measuring tool was developed by the researcher as a data collection tool for the research to measure the effect of song maps created using graphics, symbols and pictures on learning school songs. A measurement tool with five degrees – (5) excellent, (4) very good, (3) good, (2) fair, and (1) poor – was prepared. Eighteen items in the measurement tool employed in this research were divided into two and were thus evaluated in order to measure the permanence of learning. The first nine items were intended for measuring success in the new song learned, and the other nine items were intended for measuring success in the old song learned. Items in the measurement tool were prepared for measuring cognitive behaviours predicated on revealing students' success in learning the song (tonality, volume, time values, lyric, musical symbols). A measurement tool for measuring students' opinions on song maps was prepared by the researcher to identify the affective effect of song maps created from the research on students and applied in the experimental group in the last lesson. Again, a measurement tool with five degrees – strongly agree, agree, partly agree, disagree, and strongly disagree – was prepared. The opinions of three experts, one professor, one instructor, and one music teacher were used to determine whether the behaviors to be measured were appropriate or not. The validity of the measurement tool was ensured by making the measurement tool prepared with the changes made in line with the opinions received and made ready for implementation in the pre-test and post-test. Classroom teachers were also asked to observe students and the overall lesson and to write their thoughts on an A4 paper for the purpose of taking their opinions relating to the lesson during each session in which the application was performed.

Data Collection and Analysis

A pretest was performed during the first week at the beginning of the implementation period of the research to measure the success of the songs taught by the researcher on that day against the songs already taught by the classroom teachers, with students asked to sing both songs. While performing the pretest, the method of song teaching by ear was employed in both groups. At the end of the sixth week, students were asked one-by-one to sing one of the songs taught that day and one taught before that day by casting lots, and the posttest was performed. Both tests were videotaped. Video archives were sent to pretest and posttest markers, and data arriving from the markers was analysed using a Mixed ANOVA test for 2x2x2 Mixed Measurements. Values from three different markers were entered into the SPSS 23 package program in the pretest and the posttest, and the results were tabulated. For statistical significance, a significance level of 0.05 was selected. Pre-test and post-

test evaluations were carried out by 3 raters, one professor, one research assistant and one teacher. Different raters were included in each test.

A measurement tool revealing students' opinions on song maps was applied to the experimental group at the end of the lesson at the end of the sixth week, and item point averages and standard deviations for each opinion were taken and reported

Findings

In this section, findings showing the statistical results of the Kendall W Test that demonstrate the agreement between the markers taking part in the research, the Levene Test testing the equality of variances between the experimental and control groups, and the Mixed ANOVA Test for 2x2x2 for Mixed Measurements are given. Item point average results identifying the affective effect of song maps on students are also provided. A significance level of 0.05 was selected for statistical significance.

Results of Kendall W Test Showing Agreement Between Markers

In Table 1, Kendall W values relating to the agreement between the points given by three markers to 48 students are given.

Table 1. Results of Kendall W Test Showing Agreement Between Markers

	N	W	Df	P
Pretest A	3	.837	47	< .001
Pretest B	3	.792	47	< .001
Pretest General	3	.861	47	< .001
Posttest A	3	.942	47	< .001
Posttest B	3	.863	47	< .001
Posttest General	3	.943	47	< .001

A = Part consisting of the first nine questions in the measurement tool, which are intended for the song learned on that day.
B = Part consisting of the second nine questions in the measurement tool, which are intended for the song learned before that day.

As seen in Table 1, significant agreement (p <. 001) was found between the points given by the markers for "Pretest" (W = 0.837), "Pretest B" (W = 0.792), "Pretest General" (W = 0.861), "Posttest A" (W = 0.942), "Posttest B" (W =0.863), and "Posttest General" (W = 0.943).

Average and Standard Deviation Results of Pretest and Posttest Points

Average and standard deviation results of pretest and posttest points of the experimental and control groups are given in Table 2.

Table 2. Average and Standard Deviation Results of Pretest and Posttest Points

Group	Test	N	M *	SD
Experimental	Pretest A	25	24.39	7.30
	Pretest B	25	28.21	5.79
	Pretest General	25	52.60	11.98
	Posttest A	25	29.83	8.82
	Posttest B	25	38.11	4.68
	Posttest General	25	67.93	11.86
Control	Pretest A	23	28.41	7.71
	Posttest B	23	27.49	7.75
	Pretest General	23	55.90	14.77
	Posttest A	23	19.99	8.25
	Posttest B	23	30.87	6.87
	Posttest General	23	50.86	11.91

A = First nine items in the measurement tool, which measure success in the song learned on that day.
B = Last nine items in the measurement tool, which measure success in the song learned before that day.
* Parts A and B of the tests were evaluated out of 45 points, and the general tests were evaluated out of 90 points.

As seen in Table 2, although the pretest general points of the control group (M = 55.90) are a little higher than that of the experimental group (M = 52.60), the posttest general points of the experimental group (M = 67.93) are observed to be higher than those of the control group (M = 50.86).

When examining points relating to part B, which measures the success of the song learned previously in the measurement tool, it is seen that the posttest points of both groups are higher than their pretest points, but the control group's posttest points relating to remembering the song learned previously are lower than those of the experimental group. Under the circumstances, it is possible that the experimental group's success in learning the song is higher than that of the control group.

Results of the Levene Test Testing the Equality of Variances
Results of the Levene Test, which tests for the equality of variances between the experimental and control groups, are given in Table 3.

Table 3. Results of Levene Test Testing the Equality of Variances

	F	*df1*	*df2*	*P*
Pretest A	0.017	1	46	.898
Pretest B	0.360	1	46	.552
Posttest A	2.290	1	46	.137
Posttest B	2.198	3	127	.145

As seen in Table 3, as a result of the Levene Test, it was determined that the variance between the experimental and control groups for Pretest A, Pretest B, Posttest A and Posttest B can be considered as equal, and therefore the equality of the variances assumption has been ensured. This test shows that in order to be able to test variance measurements, equality of variances must be ensured.

ANOVA Table Showing the Difference Between the Groups
The results of the analysis determining the primary effect of the group when other variables are ignored is given in Table 4:

Table 4. ANOVA Table Showing the Difference Between the Groups

	SS	*df*	*MS*	*F*	*P*
Group	568.652	1	568.652	4.875	**.032**
Residual	5365.734	46	116.646		

According to the ANOVA table showing the difference between the experimental and control groups in Table 4, when other variables are ignored (when the general average of the Pretest and Posttest is taken into consideration), the experimental group (M = 30.133 [out of 45]) is observed to have received significantly higher points than the control group (M = 26.688), F = 4.875, p =. 032.

ANOVA Table Showing the Differences Within the Groups
The primary effects of the variables and their interaction with one another according to the ANOVA table showing the differences within the groups are given in Table 5:

**Table 5.** ANOVA Table Showing Differences Within the Groups

	SS	*Df*	*MS*	*F*	*P*
Learning/Recalling	1459.733	1	1459.733	66.590	**< .001**
Learning/Recalling x Group	13.659	1	13.659	0.623	.434
Residual	1008.369	46	21.921		
Test	317.092	1	317.092	7.283	**.010**
Test x Group	1243.481	1	1243.481	28.559	**< .001**
Residual	2002.850	46	43.540		
Learning/Recalling x Test	790.854	1	790.854	28.872	**< .001**
Learning/Recalling x Test x Group	161.512	1	161.512	5.896	**.019**
Residual	1260.034	46	27.392		

Learning/recalling, learning/recalling-group, test, test-group, learning/recalling-test, and learning/recalling-test-group interactions are handled in detail in Table 5.

Primary Effect of Learning/Recalling

The results of the analysis determining the primary effect of learning/recalling when other variables are ignored is as follows:

The primary effect of learning/recalling (the fact that the song has just been learned or was learned previously) on the points obtained is found to be significant: $F(1.46) = 66.590$, $p < .001$.
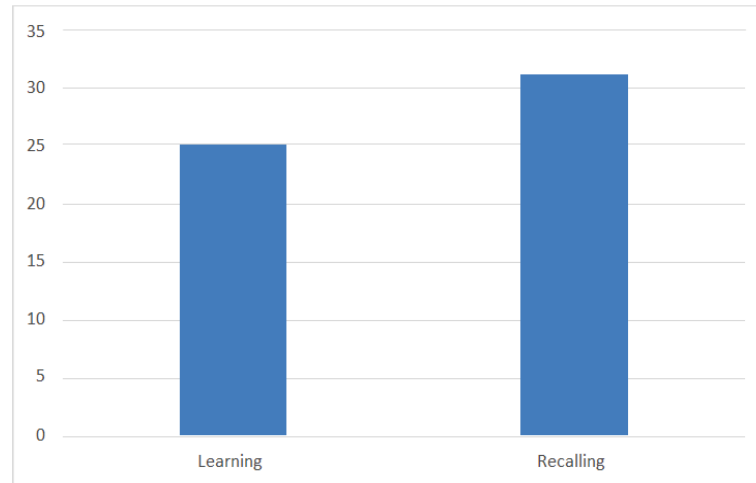
Figure 1. Difference Between Learning/Recalling

As seen in Figure 1, the points students received from the song they learned previously ($M = 31.171$) are higher than the points they received from the songs they have just learned ($M = 31.171$). Therefore, it can be said that students' success in the songs they learned previously is higher than their success in the songs they have just learned.

Learning/Recalling and Group Interaction

The results of the analysis determining learning/recalling and group interaction when other variables are ignored are as follows:

Learning/recalling (whether the song has just been learned or was learned previously) and group interaction (being either the Control group or Experimental group) were not found to be statistically significant F $(1.46) = 0.623$, p $=.434$. As seen in Figure 2, the difference between the success in learning the song and the success in recalling the song does not vary by group.
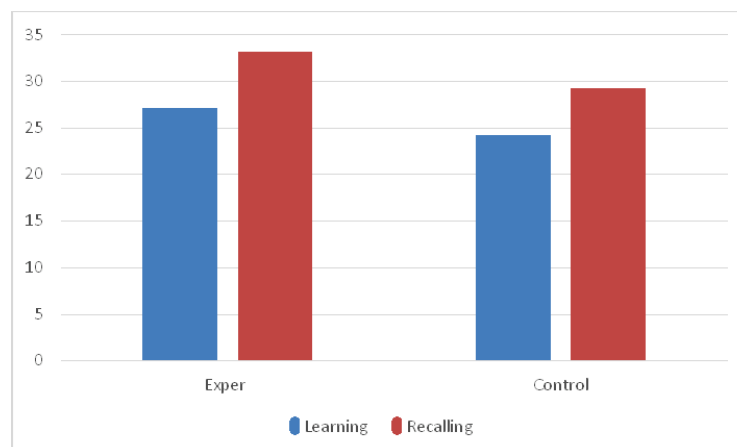

Figure 2. Results Regarding Whether The Difference Between Learning/Recalling Varies By Groups

Main Effect of the Test (pretest-posttest)

The results of the analysis determining the main effect of the test when other variables are ignored are as follows:

The primary effect of the test (whether the pretest or the posttest) on the points obtained was found to be significant F (1.46) = 7.283, p =.010.
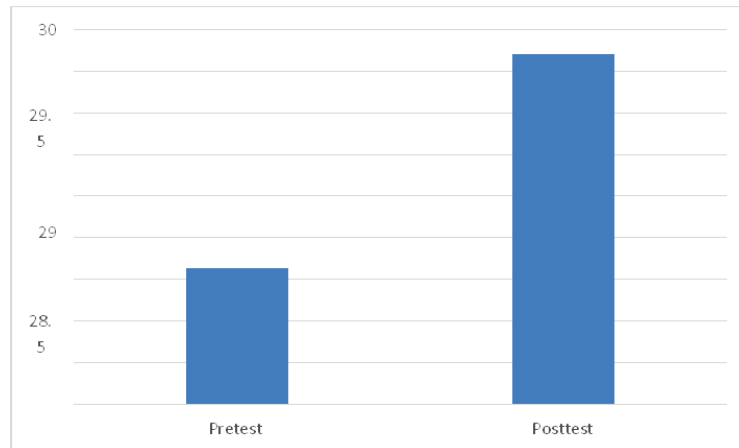
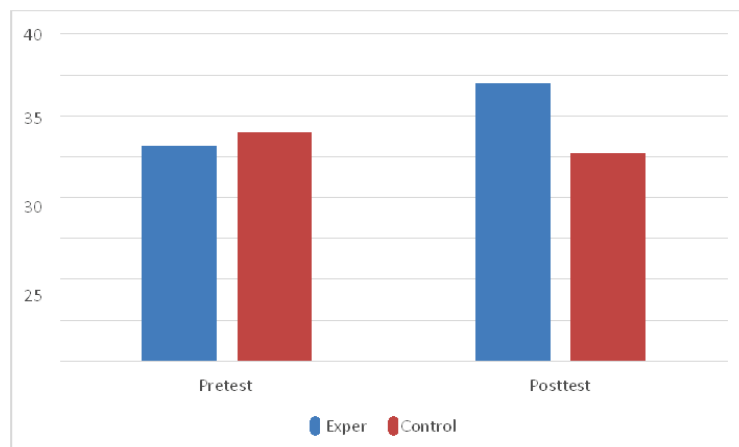**Figure 3.** Difference Between the Pretest And The Posttest

In Figure 3, students' posttest points (M = 29.697) are observed to be higher than their pretest points (M = 27.125).

Test and Group Interaction

The results of the analysis determining the test and group interaction when other variables are ignored are as follows:

Test (Pretest or Posttest) and Group (Experimental or Control group) interaction were found to be statistically significant F (1.46) = 28.559, p <.001.
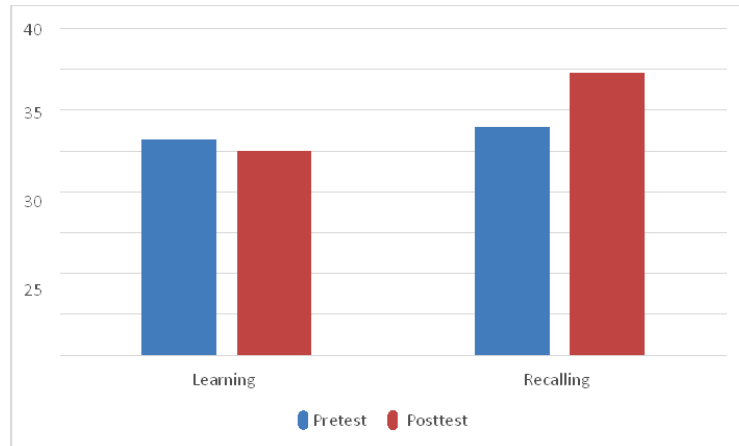

Figure 4. Results Regarding Whether The Difference Between The Pretest And the Posttest Differs by Groups

As seen in Figure 4, whereas an improvement was observed in the experimental group between the pretest (M = 26.300) and the posttest (M = 33.967), the success of the control group in the pretest (M = 27.949) dropped in the posttest (M = 25.428).

Learning/Recalling and Test Interaction

The results of the analysis determining the learning/recalling and test interaction when other variables are ignored are as follows:

Learning/recalling and test interaction were found to be statistically significant F (1.46) = 28.872, $p <. 001$.


Figure 5. Results Regarding Whether Learning/Recalling Differs by Pretest and Posttest

As seen in Figure 5, while the recalling points (Pretest M = 27.853; Posttest M = 34.488) increase, the learning points (Pretest M = 26.396; Posttest M = 24.906) decrease.

Learning/Recalling, Test and Group Interaction

The results of the analysis determining the learning/recalling, test and group interaction when other variables are ignored are as follows:

Learning/Recalling x Test x Group interaction was found to be statistically significant F (1.46) = 5.896, p =.019.
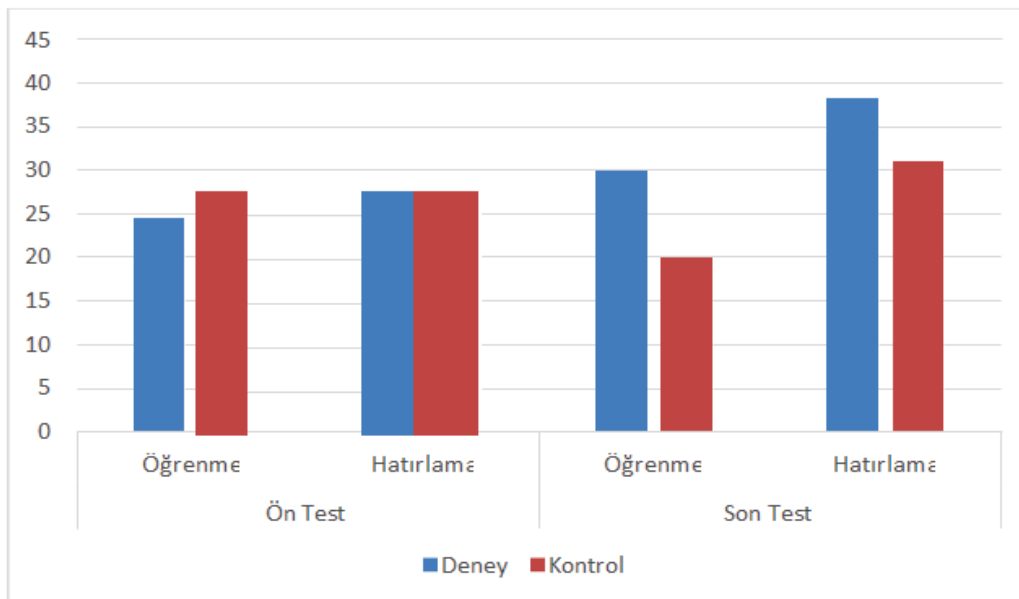
Figure 6. Learning/Recalling, Test and Group Interaction

As seen in Figure 6, there was an increase in the posttest points for learning and recalling in the experimental group. The increase in the points for recalling the song is observed to be higher than the increase in the points for learning the song. Whereas there is some increase in the posttest points for recalling the song in the control group in Figure 6, a decrease in posttest points for learning the song was observed. Variances in the success points of the song learned previously and the song just learned (the difference between recalling and learning) between the pretest/posttest differ between the experimental and control groups.

Different markers were involved in the pretest and the posttest. The different points of view in markers used for evaluation is thought to have affected the point decreases between the pretest and the posttest in the control group.

Table Showing the Affective Effect of Song Maps on Students

In Table 6, the affective opinion of song maps on students is shown based on item point averages:

Table 6. Table Showing Affective Effects of Song Maps on Students

Student Opinions	Strongly Agree		Agree		Partly Agree		Disagree		Strongly Disagree		Item Point Averages	Standard Deviation
	F	%	f	%	f	%	f	%	f	%		
1-Song maps drew my attention.	23	88.46	2	7.69	1	3.85					**4.84**	**0.46**
2-I think song maps are unnecessary.	4	15.38			1	3.85	2	7.69	19	73.08	**1.77**	**1.45**
3-I felt the melody better thanks to the symbols in the song maps.	19	73.08	4	15.38	2	7.69			1	3.85	**4.54**	**0.93**
4-I had difficulty following the song maps.	1	3.85	2	7.69			2	7.69	21	80.77	**1.46**	**1.08**
5-It was enjoyable to sing following the song map.	22	84.62	2	7.69	1	3.85			1	3.85	**4.69**	**0.87**
6-I wasn't bored during the music lesson with song maps at all.	22	84.62	1	3.85	2	7.69			1	3.85	**4.65**	**0.92**
7-Song maps did not seem creative to me.	2	7.69	2	7.69			3	11.54	19	73.08	**1.65**	**1.27**
8-The song maps made me want to create song maps for other songs.	11	42.31	3	11.54	2	7.69	1	3.85	9	34.62	**3.23**	**1.78**
9-Thanks to the song maps, I am now more interested in music lessons.	21	80.77	3	11.54	2	7.69					**4.73**	**0.59**
10-I felt that I was bored during music classes with word maps.					1	3.85	2	7.69	23	88.46	**1.15**	**0.46**

Taking item point averages in Table 6 into consideration, it can be said that among the group using song maps, song maps aroused students' interest with an item point average of 4. 84. It can also be said that with an item point average of 4.73, students' interest in a lesson involving the use of song maps increases; with an item point average of 4.69, students enjoy singing songs with a song map; with an item point average of 4.65, students are never bored with the lesson; and with an item point average of 4.54, students feel the melody better with the help of a song map. With an item point average of 3.23, motivation from song maps to instill passion for creating other song maps leads us to believe that students are willing to improve their creativity during class but must be supported in this matter. Song maps can be said to have a positive effect on children in general.

Discussion and Conclusion

Within the results obtained from the findings in this study; During the academic year of 2015-2016 academic year,

- It was observed that the experimental group is more successful in both learning the song and remembering it when compared to the control group; however, the difference between the experimental and control groups in terms of learning was observed to be equal to the difference in terms of recall. Therefore, we can say that the difference between the successes achieved by students in recalling the song they learned previously and the success achieved by students in learning the new song does not vary by group.

- Research has revealed that the improvement between the pretest and posttest points of students in the experimental group is better than that of students in the control group. Therefore, the success of students in the experimental group was observed to be higher in terms of learning and recalling songs.

- The improvement between the pretest and the posttest of students in the experimental groups for recalling the song they have already learned and learning the new song was observed to be better than the students in the control group.

- The effect of teaching songs through song maps on learning was observed to be better than the effect thereof on recall. According to the results, map songs can be said to be effective in both learning and recalling but are more effective in learning the song.

- Whereas no significant progress was made in students' success in recalling the song using the traditional method, a significant decrease was observed in their success in learning the song. This decrease is considered to arise from different markers.

- Research has revealed that songs were learned in a more effective manner in song teaching through song maps. It can be said that the research has determined that upon the introduction of song maps as visual materials in teaching, they have played a significant role in students' success in terms of song learning and recall.

- In the experimental research carried out, a significant difference was observed in the effect of song maps created using graphics, symbols and pictures on the success of teaching school songs between the experimental and control groups, favoring the experimental group in statistical terms.

Consistent with the opinions taken from students to identify the affective effect of song maps on students, it was determined that:

- Song maps arouse students' interests;

- Students feel the melody better thanks to the symbols in the song maps;

- Students do not experience difficulty in following song maps, and they even enjoyed it; and

- Thanks to song maps, students' interest in music lessons increased, and students never become bored during the lesson.

In terms of contemporary educational perception, when disseminating knowledge using a holistic approach, it can be said that the constructivist approach is supported, and that, consistent with the requirements of the program, song maps create a more effective learning/teaching environment in song teaching. Song maps, in introducing an alternative point of view to this method, have contributed to the achievement of learning outcomes in these learning fields by guiding children into active listening in the "Listening-Singing-Playing" learning domains in the primary school fourth grade curriculum, prompting children to sing more accurately and helping them see sound volumes in graphics, show them on the graphics, and also distinguish the key features of sounds in the "Musical Perception and Knowledget" learning domain during primary school fourth grade lessons, in which musical note

teaching has just been introduced and song teaching by ear is most commonly actively employed. Additionally, song maps encourage children creatively and motivate them to make graphics.

In addition, Blair (2006) found that the process of musical mapping is better for students to perceive and understand music than for music. In this research, it has also been found that the melodies are better felt through song maps and have an effect on learning positively. In addition, as in Levy's (1983) graphic model, the sounds were visually embodied using graphics, symbols and pictures, and more music was kept in mind.

In the light of the above mentioned results, song maps it is possible to say that it is an alternative song teaching model that provides an effective learning environment, supports creative works, positively affects students and succeeds in the teaching of school songs.

Recommendations

The following recommendations have been developed within the framework of the results revealed by the research:

- For students learning songs by ear at primary school who are also in the concrete operational period in terms of cognitive development, songs to be taught in music course books can be mapped, and such maps can be included within the course books. To accomplish this, students' and teachers' books used in music classes can be edited and redesigned.

- Such activities as in-service training, seminars, conferences, etc., can be organized for classroom teachers and music teachers in the subjects of modern and creative music teaching methods and the employment of these subjects.

- Content can be reviewed to include the creation and employment of song maps in "Teaching Principles and Methods," "Special Teaching Methods" and "Teaching Technologies and Material Design" course content in the Primary School and Music Education departments at Teachers College.

- Students should be provided with the opportunity to create their own maps for the songs they learn in music lessons at primary school; through this means, their creativity can be highlighted. Map creation activities may also help students better understand elements that comprise the music and the relationships between the sounds.

- Students should be informed on how to convert music into a graphic prior to the introduction of teaching with song maps into the music lessons, and case studies should be conducted on this matter.

- This study was carried out only in the primary school fourth grade. It is believed that song teaching through song maps will be useful in terms of learning and permanence for the fifth and sixth grades, in which musical note teaching also takes place.

- Students should be presented with examples relating to this subject in a computer environment so that the graphical demonstration of sounds can be better understood.

- Group work activities for mapping the songs learned can be included in music lessons.

- Use of visual materials in music lessons can be promoted to ensure active participation by students in the lesson and an effective learning and to increase interest in the lesson, consistent with the requirements of the Music Lesson Curriculum.

This research should be supported by other research efforts, and the reflection thereof in the primary school music lesson curriculum can be considered after a pilot scheme has been implemented.

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Appendix 1. Photograps of Song Teaching with Song Maps

Appendix 2. Song Map Example

ATLI KARINCA

Appendix 3. Sample Texts Based on Course Observations of Experimental and Control Group Classroom Teachers