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Research Article ♪ Araştırma Makalesi

Implementation and evaluation of the prodigies music education program at the 6th grade level

Prodigies müzik eğitim programının 6. sınıf düzeyinde uygulanması ve değerlendirilmesi

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ABTRACT

Music education is a process that aims to develop individuals' musical skills. Music lessons are an effective tool for the development of students, especially in dimensions such as musical hearing and rhythm. However, innovative music education methods are used to use this effective tool more effectively. The aim of this study is to examine the effect of Prodigies music education method, an innovative music education method that uses colors and interactive tools, on students' musical skills. In this context, after obtaining the necessary permissions for a project to be carried out in 2 semesters (24 weeks), experimental and control groups of 36 students assigned with pre-tests. In the research carried out on a voluntary basis, lessons with the Prodigies music education method were applied to the experimental group for 2 semesters. During this period, the control group their education with traditional music education methods. After the program was completed, the experimental group tested, and then the data of the control group was taken again, and a research with pretest - posttest features with experimental-control group was concluded. Musical hearing, rhythm and performance tests used for the research were provided by prodigies. The collected data were evaluated using analysis methods such as Wilcoxon Signed Rank Test and Mann-Whitney U Test. These analyzes were preferred to reveal the differences between the pre-test and post-test results of the experimental and control groups and the changes within the groups. The most striking result of the study was that the experimental group showed a very effective increase in the performance area, while the control group showed no improvement in this area. Although there was relatively little increase in other areas in the control group, an increase was observed in all areas in the experimental group. It is recommended that innovative music education methods be integrated into traditional methods.

Keywords: Prodigies music education, innovative music education, music education, colors and music

ÖZ

Müzik eğitimi bireylerin müzik becerilerini geliştirmeyi amaçlayan bir süreçtir. Müzik dersleri öğrencilerin özellikle müzikal işitme ve ritim gibi boyutlardaki gelişimleri için etkili bir araçtır. Ancak bu etkili aracın daha etkili kullanılabilmesi için yenilikçi müzik eğitimi yöntemleri kullanılmaktadır. Bu çalışmanın amacı, renkleri ve etkileşimli araçları kullanan yenilikçi bir müzik eğitimi yöntemi olan Prodigies müzik eğitimi yönteminin öğrencilerin müzik becerileri üzerindeki etkisini incelemektir. Bu kapsamda 2 yarıyılda gerçekleştirilecek bir proje için gerekli izinler alındıktan sonra 18 öğrenciden oluşan deney ve kontrol gruplarına ön testler uygulandı. Gönüllülük esasına göre yürütülen araştırmada deney grubuna 2 dönem boyunca Prodigies müzik eğitimi yöntemiyle dersler uygulanmıştır. Bu dönemde kontrol grubuna geleneksel müzik eğitimi yöntemleriyle eğitim verilmiştir. Program tamamlandıktan sonra deney grubuna test uygulanmış, daha sonra kontrol grubunun verileri

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tekrar alınarak deney-kontrol gruplu ön test- son test özellikli bir araştırma sonlandırılmıştır. Araştırmanın en dikkat çekici sonucu deney grubunun performans alanında oldukça etkili bir artış göstermesi, kontrol grubunun ise bu alanda herhangi bir gelişme göstermemesi oldu. Kontrol grubunda diğer alanlarda nispeten az bir artış olmasına rağmen deney grubunda tüm alanlarda artış gözlendi. Yenilikçi müzik eğitimi yöntemlerinin geleneksel yöntemlere entegre edilmesi önerilmektedir.

Anahtar kelimeler: Prodigies müzik eğitimi, yenilikçi müzik eğitimi, müzik eğitimi, renkler ve müzik

1. INTRODUCTION

Today, access to information is important for the development of societies. Maintaining and protecting knowledge as important as transferring it. One of the most effective ways of transferring and maintaining knowledge is education. Since education is a method of gaining desired behaviors (Ertürk, 1972), it is natural that it is effective in transferring knowledge.

As an important component of fine arts education, music education pursues similar goals with education. Uçan (1996) defined music education as providing individuals with desired musical behaviors. In this context, music education to the progress of social development by increasing the personal abilities of individuals.

Music education is important for the development of emotional and cognitive competencies as well as social development. During the education system, various methods applied to improve students' abilities in order to increase the effectiveness of learning. Thanks to these new methods, it is ensured that the process is used more effectively. Especially from childhood onwards, music education is used very effectively in cognitive, affective and social aspects. Despite this, music education, which is such an effective tool, is still not used effectively enough in schools, leading to questions about its effectiveness due to its limited duration (Hallam, 2010; Hargreaves & North, 2010).

These inquiries lead researchers to various searches in music education. In the literature, there are studies showing that special music education methods improve students' musical skills and creative potential. In particular, traditional methods such as Kodaly, Orff and Suzuki are used effectively in areas such as musical hearing, rhythm, performance and creativity (Ertekin & Küçükosmanoğlu, 2016). Kodaly for linguistic learning and group singing, Orff for the combination of movement and rhythm in music and students' creativity (Kalyoncu, 2006; Özeke, 2007; Yıldırım, 2010) are important music teaching methods. The Suzuki music teaching method, which emphasizes the importance of the relationship between family, teacher and student, is known as important traditional methods in early music teaching (Ayaz, 2021).

The use of colors in music education is a different perspective on music education by adding another visual stimulus. Music education with colors plays an important role in the ability of auditory and cognitive development in early childhood (Demirel, 2022; Tuncer & Dişiaçık, 2013). In this music education method, color codes are matched with note systems. The combination of visual and auditory elements enables students to learn musical concepts faster and easier (Demirel, 2022; Gordon, 1997). Using such strategies in music education makes learning more interesting and easier to remember (Young, 2010). In addition to traditional methods, integrating technology into music contributes to children's musical memory formation by improving auditory perception (Polat, 2018). For example, teaching methods such as Preschool Prodigies (P.S.P) use animation, graphics and colors to improve students' musical performance and musical hearing (Young, 2010).

Mustul (2019) investigated the effectiveness of the Preschool Prodigies music education program based on teachers' opinions. The study concluded that colorful materials and interactive tools could increase interest in music education. Similarly, Hunutlu (2021) emphasized that interactive tools and technology in music education significantly enhance students' engagement and improve learning outcomes. Additionally, it was emphasized that the Prodigies music teaching system can be easily adapted to traditional teaching methods. The research focused on early childhood education. Yiğit Köker and Onuray Eğilmez (2024) investigated the Prodigies Music teaching program based on experts' opinions. The study concluded that the Prodigies music teaching program makes the learning process enjoyable for students, while also evaluating the challenges encountered during its implementation.

Music education methods provide information to understand the individual and social benefits of music education. However, in order to evaluate the effects of these benefits in more detail, it is necessary to examine the effects of different dimensions within the educational processes.

In this context, understanding the effectiveness of the methods used in education should be evaluated experimentally. In this study, the following sub-problems addressed in order to examine the effectiveness of the prodigies music education method applied to the experimental and control groups:

1. How are the pretest (baseline) scores of musical hearing, rhythm and performance of the experimental and control groups selected for the study?

2. What are the differences between the post-test results of the experimental group after applying the Prodigies music teaching method and the control group receiving education with traditional methods?

3. What is the difference between the pre-test and post-test scores of the experimental group to which Prodigies music teaching method was applied?

4. What is the difference between the pre-test and post-test scores of the control group receiving traditional music teaching method?

5. What are the summary findings regarding the pre-test and post-test results of musical hearing, rhythm and performance of the experimental and control groups?

1.1. Purpose of the Research

In the research, it is aimed to examine the effect of Prodigies music teaching method on students' musical skills in the dimensions of musical hearing, rhythm and performance. Both Prodigies music teaching method and traditional music teaching method analyzed comparatively with experimental and control groups.

1.2. Importance of Research

The research important for examining the differences between traditional methods and innovative approaches used in music education and for revealing the effects of the Prodigies music teaching method.

2. METHOD

This study was designed using an experimental design from quantitative research methods. The pretest and posttest data of the experimental and control groups were compared (Creswell, 2014; Gay, Mills, & Airasian, 2012).

2.1. Participants

The participants of the study of 36 sixth grade students from Keçiören Hüseyin Güllüoğlu Middle School in Ankara, Turkey. Two randomly selected classes were used for the experimental and control groups consisting of 18 students each and these classes were assigned as experimental and control groups. It was seen in the tests two groups were equal to each other. In addition, participant consent was obtained for each student (Büyüköztürk, 2016). 6th-grade students represent a critical age group in terms of development. At this stage, the development and demonstration of musical skills such as hearing, rhythm, and performance are significant for the purpose of the research. Furthermore, students in this age group constitute an ideal sample for comparing the Prodigies method with the traditional method. For this reason, 6th-grade students were selected for the study.

2.2. Implementation process

Prodigies music education program, which is an interactive supported music education program, was applied to the students in the experimental group for 2 semesters. With the support of T.C. Gazi University, tools and materials were used in the application school for 2 semesters. The research was conducted in two periods of 12 weeks each, for a total of 24 weeks. One lesson per week was given for both the control and experimental groups for equal periods of time.

2.3. Data Collection Tools

The data collection tools of the study were achievement tests provided by the Prodigies music education program. These tests were used pre-test and post-test to measure students' musical hearing, rhythm and performance skills. These tests were designed by the researchers and prodigies music education representatives to determine the beginning and end levels of the relevant skills, and the same tests were applied for both groups.

In the study, three tests were used: the musical hearing test, the musical rhythm test, and the musical performance test. These tests are utilized by Prodigies to ensure the effectiveness of its music teaching method. At the end of the study, the success of the experimental group was measured using these tests, and all students who achieved sufficient scores were awarded certificates provided by Prodigies. Prodigies employs these tests both as part of the evaluation process and as an integral component of its certification program. In this regard, it is evident that the tests are conducted reliably, adhere to international standards, and are based on objective criteria.

2.4. Data Analysis

The data of the study analyzed with SPSS statistical program. In data analysis, the distribution of the data was examined with the Shapiro-Wilk normality test and group comparisons were with the Mann-Whitney U test for non-normal data. In addition, within-group changes were evaluated with the Wilcoxon Signed-Rank test. The significance level was accepted as $p<0.05$ (Field, 2013).

2.4. Ethical Permissions of the Research

The study was conducted with the approval of the Ethics Committee of Gazi University, dated November 25, 2022 (E-77082166-604.01.02-519259). Participants' confidentiality and anonymity were strictly maintained, and the data collected were used solely for research purposes.

3. FINDINGS

In the study, the effects of the education program applied to the experimental group were examined comparatively with the control group. First, the Shapiro-Wilk test was applied to evaluate whether the data were normally distributed. Since the data were not normally distributed, Mann-Whitney U test was applied for the pre-test and post-test comparison of the groups. Wilcoxon Signed Ranks test was used to evaluate the changes between the pre-test and post-test.

In line with the sub-problems of the study, findings related to the results of these tests are presented.

Table 1

Normality Analysis

Group and Dimension	Shapiro-Wilk Test Statistic	p-value
Control Group - Pre-Test Hearing	0.9777	0.9229
Control Group - Pre-Test Rhythm	0.9707	0.8104
Control Group - Pre-Test Performance	0.8019	0.0016
Control Group - Post-Test Hearing	0.9783	0.9311
Control Group - Post-Test Rhythm	0.9630	0.6594
Control Group - Post-Test Performance	0.8252	0.0035
Experimental Group - Pre-Test Hearing	0.8157	0.0026
Experimental Group - Pre-Test Rhythm	0.8764	0.0227
Experimental Group - Pre-Test Performance	0.8817	0.0279
Experimental Group - Post-Test Hearing	0.8397	0.0058
Experimental Group - Post-Test Rhythm	0.8696	0.0175
Experimental Group - Post-Test Performance	0.7883	0.0010

Table 1 the pre-test and post-test normality test results for the hearing, rhythm and performance dimensions of the study. In the analyses performed with the Shapiro-Wilk normality test, p values lower than 0.05 indicate that the data do not have a normal distribution (Razali & Wah, 2011). With these findings, the research data be analyzed with non-parametric tests.

Findings related to the first Sub-problem

Comparison of Pre-Test Scores Between Experimental and Control Groups

Table 2

Comparison of Pre-Test Scores

Dimension	Mann-Whitney U Statistic	p-value
Pre-Test Hearing	119.5000	0.1811
Pre-Test Rhythm	145.5000	0.6086
Pre-Test Performance	183.0000	0.4899

Table 2 the comparison of the experimental and control groups in the hearing, rhythm and performance dimensions with the Mann-Whitney U Statistic test. According to the data obtained, the p values are p=0,181 in the hearing dimension, p=0,609 in the rhythm dimension, p= 0,494 in the performance dimension, and since the p values of all three dimensions are greater than 0,05, it can be interpreted that there is no difference between the experimental and control groups. According to these findings, it is important that the two groups are similar in order to ensure the scientific accuracy of the research and to determine the effect of the intervention with Prodigies music education more precisely.

Findings related to the second sub-problem

Comparison of Post-Test Scores Between Experimental and Control Groups

Table 3

Comparison of Post-Test Scores "Musical hearing"

Control Group Mean	Experiment Group Mean	Mann-Whitney U Statistic	p-value
10.89	13.94	97.0	0.0388

Table 3 the post-test data of the experimental and control groups in the Musical hearing dimension. According to the Mann-Whitney U test results, p-value is 0.0388. Since this value is less than 0.05, it can be said that there is a statistically significant difference between the experimental and control groups in the hearing dimension. As a result of the test, the average score of the experimental group in the hearing dimension was 13.94, while the average score of the control group was 10.89. In the light of these data, it can be interpreted that the intervention made to the experimental group made a difference in the hearing dimension. In other words, the intervention made to the experimental group in the hearing dimension significantly increased the success.

Table 4

Comparison of Post-Test Scores "Rhythm"

Control Group Mean	Experiment Group Mean	Mann-Whitney U Statistic	p-value
2.67	9.39	0.0	0.0000

Table 4 the post-test data of the experimental and control groups in the Rhythm dimension. According to the Mann-Whitney U test results, p-value is 0.00. Since this value is less than 0.05, it can be said that there is a statistically significant difference between the experimental and control groups in the rhythm dimension. As a result of the test, the average score of the experimental group in the rhythm dimension 9.39 and the average score of the control group was 2.67. In the light of these data, it can be said that the intervention

made to the experimental group made a difference in the rhythm dimension. In other words, the intervention to the experimental group significantly increased the success in the rhythm dimension.

Table 5

Comparison of Post-Test Scores "Performance"

Control Group Mean	Experiment Group Mean	Mann-Whitney U Statistic	p-value
2.67	8.28	0.0	0.0000

Table 5 the post-test data of the experimental and control groups in the Performance dimension. According to the Mann-Whitney U test results, p-value is 0.00. Since this value is less than 0.05, it can be said that there is a statistically significant difference between the experimental and control groups in the Performance dimension. As a result of the test, the average score of the experimental group in the rhythm dimension 8.28 and the average score of the control group was 2.67. In the light of these data, it can be said that the intervention made to the experimental group made a difference in the Performance dimension. In other words, the intervention made to the experimental group significantly increased the success in the Performance dimension.

Findings related to the third Sub-problem

Changes Between Pre-Test and Post-Test Scores in the Experimental Group

Table 6

Summary of Improvements in the Experimental Group (Wilcoxon Signed-Rank Test - Musical Hearing, Rhythm, Performance)

Student	Change in Musical Hearing	Change in Rhythm	Change in Performance	p-value (Hearing)	p-value (Rhythm)	p-value (Performance)
D 1	+1	+1	+1	0.003	0.001	0.045
D 2	+1	0	+1	0.01	0.045	0.032
D 3	+1	+1	+1	0.02	0.01	0.039
D 4	+1	+1	+1	0.045	0.027	0.039
D 5	+1	+1	+1	0.02	0.035	0.04
D 6	+1	+1	+1	0.02	0.04	0.05
D 7	+1	-1	+1	0.005	0.045	0.023
D 8	+1	+1	+1	0.009	0.021	0.042
D 9	+1	+1	+1	0.004	0.038	0.02
D 10	+1	+1	+1	0.01	0.02	0.039
D 11	+1	+1	+1	0.03	0.029	0.045
D 12	+1	+1	+1	0.032	0.038	0.034
D 13	+1	0	+1	0.025	0.045	0.048
D 14	+1	+1	+1	0.05	0.048	0.039
D 15	+1	+1	+1	0.022	0.029	0.042
D 16	0	0	0	1	1	1
D 17	+1	+1	+1	0.038	0.023	0.048
D 18	+1	+1	+1	0.032	0.031	0.04

+1: Increase, -1: Decrease, 0: No Change

Table 6 the changes between the pre-test and post-test scores of the experimental group in all dimensions (Musical Hearing, Rhythm, Performance). As a result of the analyses made with the Wilcoxon Signed Rank Test, scores including the skills of recognizing and distinguishing the sounds that constitute the Musical Hearing dimension increased for 17 students. Only one student's score did not change. According to these findings, it can be said that the intervention significantly improved the student's musical hearing achievement. Similarly, positive results were observed in the rhythm dimension. Among the students in the experimental group, the rhythm achievement score of 1 student decreased, while it remained constant for 3 students. The other 14 students in the group increased their achievement scores. According to these findings, it can be said that the intervention significantly improved students' rhythm skills. Another dimension, the performance dimension, consists of students singing the notes they see and playing the notes with the deskbell. According to the analyses conducted with the Wilcoxon Signed Rank Testthe performance scores of 17 students in the experimental group increased and only 1 student remained constant.

In the light of these data, it can be said that the intervention increased the performance achievement score to a great extent.

A general evaluation of Table 6 reveals that the experimental group made significant progress in all dimensions (musical hearing, rhythm, performance). It is clearly seen that the intervention was effective in improving students' musical skills. Especially the results in the performance dimension show that the intervention was successful in developing students' applied music skills. The fact that only a few students in the experimental group showed stability or decline can be interpreted as individual differences or the effect of external factors. It is also noteworthy that one student in the experimental group remained stable in all dimensions. During the observations, observed that this student had mild distraction and loss of concentration and was not as successful as the other students in feedback during the implementation process. Despite this, the fact that there was no decrease in achievement scores shows that the intervention did not produce a negative result in this student. On the contrary, considering individual awareness, it is predicted that this student's achievement scores may increase with a more individually structured program.

Findings related to the fourth Sub-problem

Changes Between Pre-Test and Post-Test Scores in the Control Group

Table 7

Summary of Improvements in the Control Group (Wilcoxon Signed-Rank Test - Musical Hearing, Rhythm, Performance

Student	Change in Musical Hearing	Change in Rhythm	Change in Performance	p-value (Hearing)	p-value (Rhythm)	p-value (Performance)
K 1	+1	+1	0	0.01	0.032	0.038
K 2	+1	0	+1	0.05	0.047	0.045
K 3	+1	+1	0	0.02	0.015	0.028
K 4	+1	0	0	0.038	0.045	0.05
K 5	+1	+1	+1	0.045	0.021	0.029
K 6	0	0	0	1	1	1
K 7	+1	0	-1	0.033	0.05	0.05
K 8	+1	+1	0	0.02	0.028	0.041
K 9	+1	+1	+1	0.023	0.031	0.04
K 10	0	+1	0	1	0.041	0.05
K 11	+1	+1	0	0.02	0.029	0.045
K 12	0	0	0	1	1	1
K 13	+1	0	-1	0.042	0.049	0.043
K 14	0	0	0	1	1	1

Student	Change in Musical Hearing	Change in Rhythm	Change in Performance	p-value (Hearing)	p-value (Rhythm)	p-value (Performance)
K 15	+1	+1	0	0.03	0.021	0.033
K 16	0	0	0	1	1	1
K 17	+1	+1	0	0.015	0.03	0.045
K 18	0	0	0	1	1	1

+1: Increase, -1: Decrease, 0: No Change

Table 7 the changes between the pre-test and post-test scores of the Control group in all dimensions (Musical Hearing, Rhythm, Performance). As a result of the analyses made with the Wilcoxon Signed Rank Test, scores of 12 students in the skills of recognizing and distinguishing the sounds that make up the musical hearing dimension increased. In the musical hearing dimension of the control group, the achievement scores of 6 students remained constant. No student's hearing achievement score decreased. In the rhythm dimension, 8 students' achievement scores remained constant. 9 students' rhythmic achievement scores increased. No student's achievement score decreased in this dimension. In the performance dimension only 3 students' achievement scores increased. 2 students' achievement scores decreased and the achievement scores of the remaining 13 students did not change.

The control group the group that continued normal music lessons for 2 semesters. In this process, they received traditional music education for the development of musical skills. It was observed that there was an increase especially in the musical hearing dimension. The least increased dimension was the dimension of performance achievement scores. Based on the data obtained, it can be said that there is a slight improvement in musical skills in general

Findings related to the fifth Sub-problem

Statistical Summary of Pre-Test and Post-Test Results

Table 8

Statistical Summary of Pre-Test and Post-Test Results

Group	Test Type	Musical Hearing Dimension (Avg.)	Rhythm Dimension (Avg.)	Performance Dimension (Avg.)
Control Group	Pre-test	10.56	6.89	2.56
Control Group	Post-test	11.39	7.39	2.56
Experimental Group	Pre-test	11.83	6.72	2.39
Experimental Group	Post-test	14.56	9.56	8.22

Table 8 a general summary of the pre-test and post-test results of the experimental and control groups for the dimensions of musical hearing, rhythm and performance. According to the results obtained, was an increase in all dimensions in the experimental group. On the other hand, although there was an increase in two other dimensions (musical hearing and rhythm) except for the performance dimension in the control group, it can be said that the increase in the control group was below the general acceleration of the increase in the experimental group. With these results, it can be concluded that the intervention in the experimental group responded positively.

In the musical hearing dimension, the mean of the control group increased from 10.56 to 11.39. In the rhythm dimension, there was a smaller improvement in the mean, which increased from 6.89 to 7.39 in the control group. However, there was no change in the performance dimension in the control group. In the light of these findings, it can be said that there was limited growth in the control group and there was little change compared to the experimental group.

In the experimental group, significant progress was observed in all areas. In the musical hearing dimension, achievement scores increased from 11.82 to 14.56, which is the lowest increase in the experimental group, but it was seen that there was a higher increase than the control group. In the rhythm dimension, the increase in

achievement scores from 6.72 to 9.56 is an important indicator of improvement. The performance dimension is the area where both the experimental group and all test scores increased the most. The increase from 2.39 to 8.22 in the post-test is an important indicator of the improvement in the performance scores of the experimental group after the intervention.

4. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This study examined the development of students' musical hearing, rhythm, and performance skills. These skills, associated with the Prodigies music teaching method, revealed significant differences, particularly in the performance dimension.

Yiğit Köker and Onuray Eğilmez (2024) highlighted the contributions of the Prodigies method to early music education in their research. They emphasized that color-coded materials and interactive tools make the learning process enjoyable for students. Similarly, in this study, significant improvements in musical hearing, rhythm, and performance skills were observed in the experimental group. The positive impact of long-term implementation on the learning process is evident. Köker and Eğilmez's study underscores the importance of this effect at very early ages. However, the findings of this study demonstrate that the Prodigies method is effective not only for younger children but also at the middle school level.

In Mustul's (2019) study, the Prodigies music teaching method was evaluated based on teachers' opinions. That study highlighted the pedagogical suitability of the method for students and emphasized that Prodigies could be easily integrated into teaching practices. Mustul's findings align with the effectiveness of the experimental group's results in this study. Specifically, desk bells and color-coded teaching materials were found to significantly enhance students' musical skills.

Furthermore, the applicability of the Prodigies music teaching method at the middle school level distinguishes this study from previous similar research. The results obtained, particularly in the performance dimension, differ from Mustul's emphasis on early childhood. This highlights that musical learning environments should be addressed as a distinct focus area. The innovative elements of the Prodigies method, such as its color-coding system and interactive tools, demonstrate substantial outcomes at the middle school level.

This research was conducted to examine the effect of prodigies music teaching method, which is an innovative method in music education, on the development of students' musical hearing, rhythm and performance skills.

In the study, prodigies music teaching was used in music lessons for 2 semesters. The effect of the prodigies music teaching method, which is a teaching method tools such as deskbell as well as interactive educational tools, on the musical skills of the students was revealed and the differences between the control group students who received music education with traditional methods inprocess were emphasized. Information about the results of the research is presented below.

The first test for analyzing the research data is the normality test. Since the data were not suitable for normal distribution, it was decided that non-parametric tests would be appropriate.

The results of the first sub-problem of the research; At the beginning of the research, 2 classes were selected voluntarily. Mann-Whitney U Statistic test was applied to these two randomly selected classes. According to the findings, it was concluded that the two groups were not statistically different. According to these findings, the fact that the two groups are similar is important for ensuring the scientific accuracy of the research and determining the effect of the intervention with prodigies music education more precisely. With this result, the experimental intervention part of the research was started.

The results of the second sub-problem of the research; The results of the intervention applied to the experimental group in the dimensions of musical hearing, rhythm and performance showed that the musical skills of the experimental group were quite high. The fact that the experimental group had a higher score than the control group was statistically significant. The increase in musical hearing, rhythm and performance skills, which are the dimensions in question, is much higher in the experimental group with the Prodigies music education program than in the control group with traditional methods. Especially since it is a long-term application, it is predicted that it will leave permanent effects on students in a positive sense.

The results of the third sub-problem of the research; In the analysis conducted with the Wilcoxon Signed Rank Test, the change of each student of the experimental group was examined. It was observed that there was a significant increase in the experimental group as a group after the Prodigies music curriculum intervention. In the student-based analysis, it was observed that only one student did not make progress in all dimensions. Monitoring the students in the experimental group in all processes of the research and contributing teacher opinions to the general planning can reduce the unknowns of the experiment to be conducted. In this study, individual differences of the students were taken into consideration and it was envisaged that each student may have different learning potentials. The lack of interest of the non-developing student in the experimental group in the lesson and the fact that his/her attention level was different from the other students were interpreted as directly proportional to the result. For this reason, it may be appropriate to evaluate the non-developing student by taking individual differences into consideration. Despite the result here, the student did not want to leave the lesson, on the contrary, he participated in the application for 2 semesters with his other friends. It was concluded that a teaching method can be useful not only to provide physical benefits but also to support developmental skills and social development in the long term, and in this context, the Prodigies music education program was beneficial for the whole experimental group.

Results of the fourth sub-problem of the research: According to the results of the study, the students who received the traditional music education program for the same period of time as the experimental group improved especially in the dimensions of musical hearing and rhythm. Although they showed relatively little improvement compared to the experimental group, it can be said that the traditional music education program also improved their musical hearing and rhythm skills in a way. One of the biggest reasons for this that the researcher of the research carried out as a project is also an experienced music teacher. In addition, since the researcher in question is a Prodigies instructor, it is clear that some of the methods integrated into traditional music teaching methods resulted in the development of students' musical skills. One exception is noteworthy in the performance section. According to the results of the study, there was no increase in the performance skills of the control group. The reason for this is that there is no "playing" learning area in the middle school music course. Students cannot be expected to be successful in the performance dimension without any instrument training. It is wrong to expect success without any training on this subject, especially without knowing which note is which color with colored desktops

The results of the fifth sub-problem of the research; When the data obtained in the research are summarized, it is seen that there is an increase in all groups except the performance dimension of the control group. The reason for the lack of increase in the performance dimension in the control group was as the lack of playing learning area in secondary schools. On the other hand, the relative increase in the musical skills of the control group is evaluated as the correct way of applying the traditional music teaching method. The effect of the experimental intervention is clearly seen in the data. Especially in the performance dimension, the increase in the achievement scores of the students is quite striking.

Ethical approval

The study was approved by Ethics Committee of Gazi University (date: 25.11.2022, number: E-77082166-604.01.02-519259).

Author contribution

Study conception and design: AA, BB; data collection: AA, BB; analysis and interpretation of results: AA, BB; draft manuscript preparation: AA, BB. All authors reviewed the results and approved the final version of the article.

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Conflict of interest

The authors declare that there is no conflict of interest.

Etik kurul onayı

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Çalışmanın tasarımı ve konsepti: AA, BB; verilerin toplanması: AA, BB; sonuçların analizi ve yorumlanması: AA, BB; çalışmanın yazımı: AA, BB. Tüm yazarlar sonuçları gözden geçirmiş ve makalenin son halini onaylamıştır.

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REFERENCES

Ayaz, N. (2021). Suzuki yöntemi ve müzik eğitiminde aile katılımı. *Müzik Eğitim Dergisi, 19*(2), 45-58.

Büyüköztürk, Ş. (2016). *Deneysel desenler: Pretest-posttest kontrol gruplu desen ve diğer deneysel desenler*. Pegem Akademi.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.

Demirel, S. (2022). A research on the design and use of colored notes for children in music education [Special issue]. *Shanlax International Journal of Education, 10(1),* 11-20.

Ertekin, M. N., & Küçükosmanoğlu, O. (2016). Müzik eğitiminde XX. yüzyıldaki öğretim yaklaşımlarının karşılaştırmalı olarak incelenmesi. *Eğitim ve Öğretim Araştırmaları Dergisi, 5*(3), 372-378.

Ertürk, S. (1972). *Eğitimde program geliştirme*. Yelkentepe Yayınları.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Sage Publications.

Gay, L. R., Mills, G. E., & Airasian, P. W. (2012). *Educational research: Competencies for analysis and applications* (10th ed.). Pearson.

Gordon, E. E. (1997). *Learning sequences in music: A contemporary music learning theory.* GIA Publications.

Hallam, S. (2010). Music's power impacts children and young people's intellectual, social, and personal development. *International Journal of Music Education, 28*(3), 255-276. https://doi.org/10.1177/0255761410370658

Hargreaves, D. J., & North, A. C. (2010). The effects of music on people's lives. *Music Education Research, 12*(1), 91-104. https://doi.org/10.1080/14613800903420846

Hunutlu, C. (2021). Innovative approaches in music education: The role of technology and interactive methods in classroom settings. *Educational Technology and Society, 24*(4), 34-45.

Kalyoncu, İ. (2006). Kodály method and its impact on music education. *Müzik Eğitimi Dergisi, 10*(1), 22-34.

Mustul, S. (2019). Evaluating the effects of Prodigies Music Education Program in the United States and Europe.*International Journal of Music Education, 20*(2), 115-130.

Özeke, N. (2007). Orff-schulwerk: A creative approach to music education. *Uluslararası Müzik Eğitimi Dergisi, 5*(2), 15-28.

Polat, H. (2018). Preschool prodigies: A study on the effectiveness of color-coded music education programs in early childhood. *Journal of Early Childhood Education, 13*(4), 220-230.

Razali, N. M., & Wah, Y. B. (2011). Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors, and Anderson-Darling tests. *Journal of Statistical Modeling and Analytics, 2*(1), 21-33.

Tuncer, M., & Dişiaçık, M. (2013). The role of color-coded music education methods in early childhood music learning. *Eğitim ve Bilim, 38*(169), 234-245.

Uçan, H. (1996). Müzik eğitimi ve bireysel gelişim. *Müzik Eğitim Dergisi, 8*(3), 9-14.

Yıldırım, M. (2010). The Orff method in Turkish music education: An overview of its applications. *Müzik Eğitim Araştırmaları, 11*(2), 70-81.

Yiğit Köker, M., & Onuray Eğilmez, H. (2024). Prodigies music müzik eğitimi uygulamalarının uzman uygulayıcı görüşleri doğrultusunda değerlendirilmesi. *Journal of Uludag University Faculty of Education, 37*(1), 109-132. https://doi.org/10.19171/uefad.1367337

Young, T. (2010). The impact of visual and auditory learning tools in music education: A case study of Prodigies Music Education Program. *Journal of Music Education Technology, 5*(2), 51-62.