Effect of Different Models of Educational Concerts on 4th Grade Students’ Musical Knowledge and Vocational Preferences

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Abstract
The aim of this study was to determine the effect of educational concerts, designed with different models, on musical knowledge levels of 4th grade primary school students, their attitudes towards music lessons and their vocational choices. The study followed a mixed-method approach using a pre-test/post-test design and a quasi-experimental study model, including two test groups and a control group. The participants were 769 4th grade primary school students (Test I: 326, Test II: 235 and Control: 208). The Musical Knowledge Test, the Attitudes Towards Music Lesson Scale, the Vocational Preference Form and an evaluation form were used as data collection tools. The results showed that students who watched live concerts exhibited the highest positive effect on interest in music and desire to become musicians. Nevertheless, students who watched concerts from recordings and took an informative lesson from the author also demonstrated positive effects. It was concluded that the effect of watching a live concert was strong on the students. However, a lasting effect cannot be attained without ensuring sustainability through repetitive educational concerts.

Keywords: Music Education; Music Projects, Educational Concerts; Primary Music Education; Orchestra School Partnership, Music Lesson Attitude.

1. Introduction
Music is as old as the history of mankind and has a significant impact on all developmental areas of individuals, and the music education process requires good planning, implementation and evaluation. Music education programmes have been developed for better management of this education process. In a general sense, education is a mechanism by which learners acquire certain experiences according to a plan through curricular or extracurricular activities. In order to ensure desired levels of education, the needs of individuals and the society should be identified scientifically and the educational environment should be arranged properly so as to allow the attainment of the learning outcomes, systematic guidance should be provided during this process and the level by which the intended behavioural changes have taken place should be reliably assessed (Ertürk, 1991; Demirel, 2007; Varış, 1988). To this end, elements of the educational programme should be planned in detail and implemented effectively.

A closer look at the elements of the educational programme reveals that it is educational attainments where teachers can enjoy the utmost freedom and make their own choices. The learning/teaching strategies, methods and techniques used vary depending on a number of variables, including teacher experience, classroom size and content and individual differences. The correct use of methods, techniques, materials and teaching methods speeds up the process of attaining the desired goals and facilitates the implementation of more effective teaching. For this reason, selecting the most appropriate methods and techniques for skills and attitudes to be learned taking the subject to be taught, student characteristics and physical conditions into consideration is crucial for the realization of the desired learning. Otherwise, the realization of learning outcomes may prove challenging.

In music education, it is evident that the selection of appropriate teaching methods and techniques is essential to obtain the desired learning outcomes. This is because music education is a process that affects all the development areas of a child, such as linguistic, social-emotional, physical and psychomotor development. It is common knowledge that music education is one of the most appropriate and most important areas for raising self-expressive, sociable, self-confident and creative individuals. Different teaching methods and techniques are used to overcome the problems encountered in music education and to ensure an effective learning process. Suzuki, Kodaly and Dalcroze are few of the performance and practice-based methods of teaching that are
utilised. There are different practices that are integrated with these methods. One of those is to collaborate with orchestras by including them in the education process. The schools in North American countries added learning activities that can be implemented through cooperation with orchestras to their music education programmes. Within the scope of such activities, orchestra musicians visit schools and classrooms to introduce the instruments they play to the students. They also attend music lessons to provide support to the music teachers. These activities aim to increase students’ interest and participation in music programmes (Myers & Brooks, 2002). The students who take part in a musical activity collectively or individually not only acquire the habit of working together but also discover their own individual characteristics and abilities. Additionally, they are motivated to play different musical instruments and their music interest may be shaped in this direction (Yıldız, 2002). It has been reported that as part of the music education syllabus in primary education, children who could establish contact with different musical instruments, chat with musicians and go to concerts or children who had family members who were interested in music exhibited an increased interest in music and a desire to receive training to this end and further their vocational interests shifted towards music-related professions (Moore, Burland, & Davidson, 2003, Wondemtegegn, 2018). It was demonstrated that short-term training that was planned and implemented well provided positive contributions to all development areas of children (Kamışlı & Ozonur, 2017; Kamışlı & S Yınan, 2018; Germen, 2013).

In developing countries, the education projects and activities are conducted using the funds (supports) collected, individual efforts of researchers and educators or short-term initiatives of frequently changing politicians. Such ‘unsustainable’, well-meaning efforts that may have an effect on students tend to be implemented only once prior to being put aside. The role of researchers in such applications should be to measure the effectiveness of such activities and report any positive results in order to mobilize the political elite for the sustainability of these activities.

In social sciences, however, concepts of sustainability are not that closely related to the environment and are, in fact, more closely related to the long-term outcomes of curriculum or projects (Pluye, Potvin, and Denis 2004). These outcomes have been described using four main categories by authors, such as Scheirer, Hartling and Hagerman. These categories are as follows: continuing project activities after implementation; sustaining benefits for intended clients; maintaining the capacity of a collaborative structure and paying attention to issues addressed by the programme.

The idea of sustaining benefits for students or participants focuses on the ability for a given programme to serve subsequent user groups. In this case, sustainability is not only about the temporal maintenance of programmes but also the ability for these activities to maintain relevance and impact for future participants (Scheirer, Hartling, and Hagerman 2008). Johnson et al. (2004) expands this idea of sustainability to ‘meeting the continual needs of stakeholders’, whereby relevance to existing users should also be maintained. They further concur with Shediac-Rizkallah and Bone (1998) that institutional and community factors be accounted for in planning and implementation phases to achieve this. In school settings, strategies include designing programmes that are flexible enough to adapt to new student groups and in-depth teacher training during implementation so that they adjust delivery to diverse groups without compromising core principles (Han and Weiss, 2005).

The research on vocational interest and vocational choice indicates that children develop interest and orientation towards the professions to which they are introduced during their primary education. For instance, a child whose father or mother is a musician may want to become a musician or develop an interest in this field. Therefore, it is important for music education programmes in schools to have activities involving orchestras so that students can be introduced to the profession of musicianship and take lessons on various musical instruments and their interest in music can be increased (Grinstad & Way, 1993; Middleton & Loughead, 1993).

Studies indicate that when they have a family member (i.e. parents, siblings) who deal with music or when they are raised in a family which has the habit of going to concerts, the children develop an increased interest in music, attend music-related programmes more frequently and are more willing to learn and continue to play a musical instrument. Moreover, children who continue to receive music education often come from such families (Davidson et al., 1996; Conway, 2000; Manturzowski, 1995; Moore, Burland, & Davidson, 2003; Zdzinski, 1992; Davidson, Howe, & Sloboda, 1997).

In addition to the family setting, the views of peers are also important for children because of the development of their interests and hobbies. Research has found that peer influence can be a major factor in a child’s participation in a music programme and willingness to continue this education (Conway, 2000; Howe & Sloboda, 1992; Kourajian, 1982; Fortnery, Boyle, & DeCarbo, 1993).

Apart from the family and peer influence, children may develop an interest for playing a musical instrument and participating in a music education programme when they are introduced to a musical instrument or a musician or have a concert experience during primary education (Davidson, Howe, & Sloboda, 1997). The studies also revealed that carefully designed instrument demonstrations may eliminate children’s prejudices about musical instruments and encourage them to select a musical instrument from a wider range (i.e. Byo, 1991).
A common finding in the above-mentioned studies is that the more children are exposed to music-related learning environments (i.e. going to concerts, meeting musicians or establishing contact with various musical instruments in line with a music education programme via the family, peers or the school), the higher their interest in music education may become, and they may also be motivated to play a musical instrument; further, their vocational interests may be shaped in this direction.

Music education plays a major role in the development of children in all areas. Thanks to this education, children can enjoy healthier, safer, more balanced and more harmonious development both emotionally and socially (Yildiz, 2002: 8). The analysis of the relationship between academic achievement and music showed that the students who attended musical activities or were involved in music programmes demonstrated increased academic achievements in other lessons, particularly in mathematics and science (Gregory, Worall, & Sarge, 1996; Bilhatz, Bruhn, & Olson, 2000; Butziaff, 2000; Winner & Hetland, 2000; Roberston, 2007; Gürpınar, 2019). In a study report in which they evaluated the education concerts by eight orchestras in Canada, Thomas et al. (2013) found that the school-orchestra cooperation proved beneficial to students in six areas. These areas are as follows: Enrichment of Music Curriculum, Enhancement of Non-Music Curriculum, Music as Metaphor, Etiquette Skills, Context for Learning and Supporting Arts Institutions. It can be argued that effectively taught music lessons are considerably fruitful in ensuring that students can express themselves, socialize, become more harmonious with their environment, develop healthy reasoning capabilities, exhibit their interests and skills and gain self-confidence. Taking into consideration its importance in a child’s development, failure to reach the desired learning outcomes in music education will have adverse effects on all development areas of the child.

Every child may not be fortunate enough to be encouraged by his/her family or peers to take interest in music. Every child’s parents cannot be musicians and the habit of going to concerts may not be adopted by all families. Ensuring interaction between children and musical instruments, concerts and musicians so that the desired music education can be realized is too important to be left to chance. In this regard, it is the duty of schools to plan learning environments and activities, such as going to concerts, cooperating with orchestras, organizing musician visits and talks and demonstrating musical instruments in the process of developing music education programmes. To this end, studies should be conducted to reveal the need for such activities as they will contribute to the dissemination of such practices in schools.

For this purpose, this study aimed to determine the effect of educational concerts, designed with different models, on 4th grade primary school students. The following research question was asked: ‘What is the level of the effect of education concerts, designed with different models, on 4th grade primary school students?’ The sub-problems of the study were as follows: ‘Is there a difference between the musical knowledge levels, attitudes towards music lessons and vocational choices of the 4th graders before and after the education concerts?’ and ‘What are the views of the students about the educational concerts?’

2. Method

2.1. Research Model

In this study, the aim was to examine the effect of the concert-supported music education programme on 4th grade primary school students. In this context, a mixed-method methodology was utilised in the study. Creswell (2003) argued that the complexity of social phenomena can be eliminated by studying and discussing them through a combination of different methods, and this ensures that the phenomena can be understood in the best possible way.

For the quantitative dimension of the study, a pre-test/post-test design, which is a quasi-experimental study model, was used. As the subjects are measured in connection with the dependent variable before and after the experiment, the related design is can be considered to be dependent and as the measurements of the test and control groups consist of different subjects, the design can be considered to be independent (Büyüköztürk, Kılıç, Çakmak, Akgün, Karadeniz, and Demirel, 2011). In this study, two test groups were compared both among themselves and with the control group.

For the qualitative dimension of the study, the views of the students in the Test I and Test II groups about the concert-supported education programme were collected.

The population of the study comprised of 4th graders at state and private schools in Nicosia.

The sample consisted of a total of 769 4th grade primary school students (Test I: 326, Test II: 235 and Control: 208).

2.2. Data Collection Tools

2.2.1. Musical Knowledge Test

The Musical Knowledge Test, used in the study, was prepared by the author and during the preparation process; the initial step was the creation of an item pool taking into consideration the learning outcomes
specified in the 4th Grade Music Lesson Curriculum by the Ministry of National Education in Turkish Republic of Northern Cyprus (to be referred to as TRNC hereafter). Field experts were consulted about the developed items and the Musical Knowledge Test was finalized. The Musical Knowledge Test included the following questions:

1) How many groups are musical instruments divided into?
2) To which group of instruments do the instruments in the photo (violin, clarinet and xylophone) belong?
3) Which dynamic markings are related to singing/playing with a loud voice?
4) Which tempo markings are related to singing/playing with a moderate speed?
5) What are the music genres other than those you learn in the music lesson?
6) Which is the two-movement song form?

2.2.2. Attitudes Towards Music Lessons Scale

The 20-item Attitudes Towards Music Lesson Scale, developed by Özmenteş (2005), was used to measure the attitudes of 4th grade primary school students towards music lessons. The five-point Likert scale consisted of a total of 20 questions, eight of which were negatively worded. The Cronbach’s alpha reliability coefficient of the scale was α = .86.

2.2.3. Vocational Preference Form

The Vocational Preference Form used in the study was prepared by the author to determine the vocational choices of students and contained 17 professions unrelated to music and randomly selected from among all professions, two music-related professions (violinist/flutist), an ‘other’ option to be filled for a profession unrelated to music and another ‘other’ option for a profession related to music. The form was created by making use of similar studies in the literature (i.e. Abeles, 2004).

2.2.4. Concert-Supported Education Programme Evaluation Form

Three open-ended questions were prepared for students in the Test I and Test II groups, and students in those groups who watched the concert live or from the recording were asked to write down their views, feelings and thoughts about the concert.

2.3. The Process of Developing the Concert-Supported Education Programme

Education programmes and learning environments that will facilitate learning and enhance retention are needed to raise individuals equipped with lifelong learning skills as needed by society. It is known that learning environments have a direct effect on student learning and academic achievement. In the learning environment to be designed, the activities prepared and the instructions for these activities should guide learners so that they can discover new concepts by doing and experiencing them and acquire thinking skills and produce new ideas and move towards the implementation phase.

Vygotsky had similar views on this issue and he argued that for effective learning to take place, the concept, situation, issue or problem introduced by the learning environment to the student should be in the ‘zone of proximal development’ of the student. Dewey considered the school as a natural learning environment rather than an artificial one that prepares the learner for life and maintained that learning would occur only by ‘doing and living’. The views of these scholars are characterized by the idea that experience is a very important factor for learning to take place.

Thus, the concept of experiential learning started to gain popularity in education. To provide a brief description, experiential learning is the process by which the individual builds something using his/her own knowledge and skills. Experiential learning is based on the work of scientists such as Dewey, who took experience as the basis of learning; Lewin, who stressed the importance of active involvement of individuals in the process of learning and Piaget, who saw intelligence not only as an innate quality but also as the result of interaction between people and the environment (Senemoğlu, 2009).

In order to achieve the learning outcomes set forth in the music education programme, which is the focus of this study and ensure that learning takes places at desired levels, it was believed that students would attain the basic concepts of music education more effectively following an experiential learning process. It was further assumed that the process of learning/teaching by doing and through experience would have a positive effect on attitudes towards music lessons and vocational interests of students.

The development of the education programme started with the review of literature and analysis of the problems related to music lessons. Interviews with school teachers, which were based on those problems,
revealed that the teachers faced similar challenges. In order to develop solutions to those problems, two music education experts were consulted and it was agreed that a concert-supported education programme, based on experiential learning, should be planned.

In order to further specify the focus, the teachers of the students were consulted to identify the topics included in teacher and student books, issued by the TRNC Ministry of National Education, for the 4th grade music lesson and subsequently, the Musical Knowledge Test was prepared. The topics in the knowledge test were restricted to instrument groups, dynamic and tempo markings, the form characteristics of musical works, polyphonic music and music genres. Prior to the implementation process of the concert-supported education, meetings with the members of Nicosia Municipality Orchestra were held. As a result of the meetings held to discuss the manner in which learning outcomes can be achieved through orchestra-assisted education, the following learning activities were planned for the above-mentioned learning areas:

- A demonstration of the instruments and instrument groups to be used during the concert activity was performed as the students had the opportunity to listen to the sound of each instrument.
- Appropriate musical works that showed the usage of the concepts and markings under the scope of the study and that would facilitate learning were selected, and they were included in the concert activity programme.
- The song ‘Kıbrıs’ım’ (My Cyprus) was sung by the students, accompanied with an oboe, in a monophonic manner, and then, it was sung in the company of the orchestra, in a polyphonic manner. This activity aimed to help student distinguish between monophony and polyphony/orchestration.
- A concert was held using the works that would help students understand various music genres.
- ‘The Educational Concerts Student’s Handbook’ was prepared that included the learning outcomes specified beforehand for the students. This book was distributed free of charge to the students during the concert.
- During all concert activities, an instructor constantly provided information to the students and answered their questions.
- The students were briefed about how the entire concert would take place, the relevant information was provided to them and interactive activities were performed with the students for each learning outcome based on the experiential learning principles.
- The experiential learning process was facilitated by ensuring that the students had experiences in relation to each learning outcome during this educational activity.

2.4 Implementation of the Concert-Supported Education Programme

The study groups determined within the scope of the study (Test I, Test II and Control) were subject to different education programmes.

The Test I Group received education through live concerts. Each student in this group was given an hour of in-class information and briefing about educational concerts.

The Test II Group watched the concerts in the classroom from the recordings using a projector and a sound system. This group also received the same in-class information and briefing provided to the Test I Group.

As for the Control Group, only the measurement tools prepared in line with the music lesson programme were applied.

2.5. The Evaluation Process

Prior to the start of the implementation, pre-tests (Musical Knowledge Test, Vocational Preference Form and Attitudes Towards Music Lesson Scale) were administered to all groups. After the implementation, t post-tests using the same measurement tools were administered. In addition, the Concert-Supported Education Programme Evaluation Form was filled by the members of the Test I and Test II groups.

3. Results

3.1. Quantitative Analysis Results

The results of the paired sample t-test for the comparison of the total scores of the students from the pre-test and post-test of the Musical Knowledge Test are presented in Table 1. Statistics presented in Table 1 shows that there was no statistically significant difference between the pre-test and post-test scores of the students in the Control Group for the Musical Knowledge Test ($p > 0.05$).

A statistically significant difference, in contrast, was found between the pre-test and post-test scores of the students in the Test I Group for the Musical Knowledge Test ($p < 0.05$). The post-test scores of the students in the Test I Group were higher than their pre-test scores.
A statistically significant difference was also found between the pre-test and post-test scores of the students in the Test II Group for the Musical Knowledge Test ($p < 0.05$). The post-test scores of the students in the Test II Group were higher than their pre-test scores.

It was found that there was no significant difference between the pre-test and post-test scores of the students in the Control Group for any of the questions in the Musical Knowledge Test.

Conversely, a closer examination of the pre-test and post-test scores of the students in the Test I Group for the Musical Knowledge Test showed that the pre-test and post-test scores of the questions related to instrument groups increased from 50.31% to 70.25%, the pre-test and post-test scores of the questions related to dynamic markings increased from 15.64% to 66.26%, the pre-test and post-test scores of the questions related to tempo markings increased from 32.82% to 77.61%, the pre-test and post-test scores of the questions related to music genres increased from 69.33% to 80.67% and the pre-test and post-test scores of the questions related to song forms increased from 14.42% to 49.39%.

Similarly, a closer examination of the pre-test and post-test scores of the students in the Test II Group for the Musical Knowledge Test showed that the pre-test and post-test scores of the questions related to instrument groups increased from 54.04% to 58.72%, the pre-test and post-test scores of the questions related to dynamic markings increased from 20.85% to 65.11%, the pre-test and post-test scores of the questions related to tempo markings increased from 27.23% to 68.09%, the pre-test and post-test scores of the questions related to music genres increased from 64.26% to 75.32% and the pre-test and post-test scores of the questions related to song forms increased from 14.04% to 44.68%.

The results of the paired sample t-test for the comparison of the total scores of the students from the pre-test and post-test of the Attitudes Towards Music Lesson Scale are presented in Table 2. Examination of Table 2 revealed a statistically significant difference between the pre-test and post-test scores of the students in the Control Group for the Attitudes Towards Music Lesson Scale ($p < 0.05$). The post-test scores of the students in the Control Group were significantly higher than their pre-test scores for the Attitudes Towards Music Lesson Scale.

No statistically significant difference was found between the pre-test and post-test scores of the students in the Test I Group and the Test II Group for the Attitudes Towards Music Lesson Scale ($p > 0.05$). The pre-test and post-test scores of the students in the Test I, Test II and Control groups for the Attitudes Towards Music Lesson Scale were found to be high. It was concluded that all students had positive attitudes towards music lessons.
Table 3. Comparison of the pre-test and post-test results of the students for wanting to be a musician

<table>
<thead>
<tr>
<th>Group</th>
<th>To be a musician (Wish/No Wish)</th>
<th>Pre-Test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No wish</td>
<td>Wish</td>
<td>p</td>
</tr>
<tr>
<td>Control</td>
<td>190</td>
<td>9</td>
<td>0.146</td>
</tr>
<tr>
<td>Test I</td>
<td>292</td>
<td>1</td>
<td>0.000*</td>
</tr>
<tr>
<td>Test II</td>
<td>213</td>
<td>3</td>
<td>0.057</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.05

The results of the McNemar test for the comparison of the pre-test and post-test results of the students for wanting to be a musician by groups are presented in Table 3. Examination of Table 3 indicates there was not a significant difference between the pre-test and post-test results of the students in Control and Test II groups with regards to wanting to become a musician (p > 0.05).

The difference between pre-test and post-test results of the students in Test I Group for wanting to become a musician was found to be statistically significant (p < 0.05). Those results indicated that there were more students wanting to become musicians at post-test stage in Test I Group.

3.2. Qualitative Analysis Results

Inductive content analysis, a qualitative analysis method, was used in the analysis of the student views obtained from the questionnaire consisting of open-ended questions. Inductive content analysis is performed to identify latent concepts in the data as well as the relations between these concepts via coding. The results reached after the coding, concept and category (theme) stages should be interpreted and be digitized to increase the reliability of the data (Yıldırım & Şimşek, 2005). Coding is the process by which meaningful sections in the data are named. Concept is the meaning attached to the meaningful sections and events in the data. Category (theme) is the classification of the concepts under specific themes. The concepts are examined to determine the relationships among each other and these relationships are hierarchically categorised under a theme (Yıldırım & Şimşek, 2005). The validity strategies used in qualitative research, namely Members’ Check, External Audits, Rich and Thick Description and Chain of Evidence, as listed by Creswell (2003) were used in the present study.

The students in the Test I and Test II groups were asked three open-ended questions in the personal information form during the administration of the post-test. Themes were formulated by analysing the answers to the questions. The themes were coded by four experts and their coded data were compared to calculate the reliability using the formula proposed by Huberman (1994): [Reliability = Number of Agreements / (Number of Agreements + Number of Disagreements)]. The reliability coefficients calculated by comparing the coded data four raters for the three open-ended questions and two test groups are presented below:

Question 1: How did you feel when you listened to the work entitled ‘Rondo alla Turca’? Please write down your feelings about the work.
   Question 1: Test I: 0.84.
   Question 1: Test II: 0.83.
   Overall reliability coefficient: 0.84.

Question 2: What were the differences you felt when you sang the song ‘Kıbrısım’ alone and in the company of the orchestra? Think about it and write it down.
   Question 2: Test I: 0.84.
   Question 2: Test II: 1.
   Overall reliability coefficient: 0.92.

Question 3: Can you tell us about your feelings and thoughts about the educational concert?
   Question 3: Test I: 1.
   Question 3: Test II: 0.92.
   Overall reliability coefficient: 0.96.

Miles and Huberman (1994) argued that the reliability of the coding should be compatible at the level of no lower than 80% for a good qualitative reliability. The results from the qualitative analysis indicate that the reliability of the qualitative part of the study was high.
4. Discussion

The analysis of pre-test results for the Musical Knowledge Test showed that the students’ level of recalling the concepts they learned in the music lesson at the knowledge level was low. It was observed that knowledge level—which is the lowest classification in Bloom et al. (1956) and the adapted version of which by Hanna (2007) to music corresponds to remember, recognize and recall music vocabulary level—increased following the administration of the post-test for those who watched the educational concert live or via recordings. Based on this finding, it can be argued that when the knowledge learned as a concept is not used in practice, its retention level decreases. It was additionally observed that supporting the knowledge of the students, who watched the concerts live or from the recording, through activities during the concerts and the practical in-class work was effective in the students' retention of the terms.

In light of the research data, statistically significant differences were found between the pre-test and post-test results of the students. In the pre-test results, students were found to have high positive attitudes towards the music lesson. It can be argued that this result is a major supportive factor for the reliability of the research findings. As it was assumed that the two-week implementation phase was too short to create a significant difference in the attitudes of individuals, this measurement sought to identify the direction of the orientation attitudes of the students towards music lessons.

The fact that the students who watched the live concerts had a concert experience, were introduced to the profession of musicianship and had a chance to see various musical instruments and listen to chat with musicians and go to concerts or the children who had family members who were involved in music exhibited an increased interest in music. The results of various studies in the literature support the findings of the present study (i.e. Moore, Burland, & Davidson, 2003; Myers & Brooks, 2002).

References


Bloom, B. S. Ed. (1956)


Nierman, 1990


