

## EVALUATION OF TEACHERS' OPINIONS ON THE EFFECT OF TECHNOLOGY USE IN MUSIC EDUCATION

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### Abstract

The use of technology in music education plays an important role in improving students' interaction with music and learning experiences. Technology provides students with a broad perspective on different music genres, instruments and musical techniques. In this way, students develop their musical understanding and abilities in a broader way. The importance of technology in music education shows that it is an indispensable tool for deepening students' relationship with music, encouraging their creativity and enriching their learning experiences. Therefore, effective and creative use of technology in music education is of great importance. This study aimed to evaluate teachers' views on the use of technology in music education and for this purpose, interviews were conducted with 15 music teachers working at the high school level. The data obtained were subjected to qualitative analysis and it was determined that teachers generally had positive views on technology integration.

**Keywords:** *Music education, technology, use of technology in music education and digitalization.*

## MÜZİK EĞİTİMİNDE TEKNOLOJİ KULLANIMININ ETKİSİ İLE İLGİLİ ÖĞRETMEN GÖRÜŞLERİNİN DEĞERLENDİRİLMESİ

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### Özet

Müzik eğitiminde teknoloji kullanımı, öğrencilerin müzikle olan etkileşimini ve öğrenme deneyimlerini geliştirmek için önemli bir rol oynar. Teknoloji, öğrencilere farklı müzik türleri, enstrümanlar ve müzikal teknikler hakkında geniş bir perspektif sunar. Bu sayede, öğrencilerin müzikal anlayışı ve yetenekleri daha geniş bir şekilde geliştirir. Teknolojinin müzik eğitimindeki önemi, öğrencilerin müzikle olan ilişkisini derinleştirmek, yaratıcılıklarını teşvik etmek ve öğrenme deneyimlerini zenginleştirmek için vazgeçilmez bir araç olduğunu göstermektedir. Bu nedenle, müzik eğitiminde teknolojinin etkin ve yaratıcı bir şekilde kullanılması büyük önem taşır. Bu çalışmada müzik eğitiminde teknoloji kullanımına ilişkin öğretmen görüşlerinin değerlendirilmesi amaçlanmış ve bu amaç doğrultusunda lise eğitim kademesinde görev yapan 15 müzik öğretmeni ile mülakat gerçekleştirilmiştir. Elde edilen veriler nitel analize tabii tutulmuş ve öğretmenlerin genel olarak teknoloji entegrasyonu hakkında pozitif görüşlere sahip oldukları belirlenmiştir.

**Anahtar Kelimeler:** *Müzik eğitimi, teknoloji, müzik eğitiminde teknoloji kullanımı ve dijitalleşme.*

### Introduction

The use of technology in music education has become an important tool for improving students' musical skills, enriching their musical experiences, and teaching them more effectively. Studies on this subject show that teachers generally find the potential of technology in music education positive. However, there are differences in how teachers use technology and their experiences in this regard (Zhang, 2022). Teachers' views and experiences on using technology in music education often vary depending on their personal attitudes towards technology and learning styles. While some teachers think that technology is effective in attracting students' attention and increasing their motivation in music education, others are concerned that technology can make music a less personal and deep experience (Holliman, 2021). Teachers' attitudes towards using technology in music education also depend on their ability to understand the opportunities and limitations offered by technology and to develop strategies accordingly. For example, while some teachers use technology only for music recitals, others turn to more creative and interactive learning methods such as interactive applications or music production tools. In conclusion, the use of technology in music education varies depending on factors such as teachers' personal attitudes, experiences,

and how they use technology. However, technology has great potential in music education and can be used as an effective tool to develop students' musical abilities and make music more interesting.

### **Technology and Its Use in Education**

The use of technology in education has become an important tool to enrich learning experiences, increase student motivation, and provide teachers with more effective teaching. Especially in the digital age, the role of technology in education is increasing (Ardıç, 2021). Technology can provide a more effective learning environment in education. It can make learning more interesting by providing students with interactive course materials and help students maintain their attention for longer periods of time. In addition, it responds better to students' individual learning needs thanks to various educational software and applications. Technology also offers various opportunities to teachers. Teachers can track student progress, communicate with students more easily, and manage course materials more effectively through digital tools and applications (Tejada & Morel, 2019). This helps teachers work more efficiently and provide better education to their students. However, there are also some concerns about the use of technology in education. For example, it is thought that excessive use of technology in education can negatively affect students' social skills and deep thinking abilities. Another concern is that technology use can lead to inequalities and that students with limited access to technology may be disadvantaged (King and Himonides, 2016).

As a result, the use of technology in education is a complex issue that requires careful planning and balancing. Technology can be an important tool in education, but how it is used and how it responds to students' needs is important. In order for educators to use technology effectively, they need to be continuously trained and integrate technology in a balanced way.

### **General Purposes of Music Lessons**

The general purpose of music lessons is to provide students with basic knowledge and skills about music, develop their ability to understand and appreciate music, increase their musical expression, and develop students' aesthetic feelings and creativity by providing them with experiences related to music. Music lessons generally include the following purposes (Çörekçi, 2020; Karademir et al., 2018):

- Listening to and understanding music: To provide students with the skills to listen to and understand different types of music. This includes developing their ability to understand the historical, cultural, and social contexts of music.
- Developing instrument playing and vocal skills: To develop students' instrument playing or vocal skills and to increase their music making skills.
- Music theory and note reading: To deepen students' musical understanding by working on music theory and note reading skills.
- Musical expression and performance: To enable students to establish emotional and expressive connections with music and to develop their performance skills.
- Creativity and improvisation: To enable students to discover and develop their musical creativity.
- Music history and culture: To provide students with information about different musical genres, periods and cultures and to emphasize the universal and historical dimensions of music.

- Group work and collaboration: To develop students' skills in working in groups and to increase their ability to work together while making music.
- Aesthetic sensitivity: To increase students' aesthetic sensitivity regarding music and to provide them with artistic experiences.

The general purpose of music lessons is to increase students' knowledge, skills and experiences regarding music and to enable them to understand music more deeply. In line with these purposes, music lessons aim to enrich students' relationships with music and to make music a part of their lives (Carliste, 2014).

### **Use of Technology in Music Education**

The use of technology in music education is an important tool for teaching students music more effectively and enriching their musical experiences. Thanks to the opportunities provided by technology, students can explore different types of music, develop their instrument playing skills, and better understand music theory (Kasap, 2007).

Digital music production tools, in particular, offer students the opportunity to create and record their own music, which improves students' creativity. In addition, students can engage in fun activities while learning music theory and rhythm concepts through interactive applications and software. Technology also makes music education more accessible. Students can take music lessons over the internet, attend online music courses, and explore different musical styles and cultures around the world. This expands students' musical understanding and allows them to experience music more comprehensively (Ruokonen and Ruismäki, 2016; Scripp and Gilbert, 2016).

In light of this information, it is concluded that the use of technology in music education is an important factor that supports students' musical development and encourages them to participate in music more deeply. Using the opportunities offered by technology effectively increases the quality of music education and enables students to love and understand music more (Avcı, 2020).

### **Studies Conducted**

Since the topic selected in the research is national, only domestic studies are included in this section.

Beser (2010) examined the evaluation of technology use in music education from the perspective of educators in his study. The study revealed how many Turkish music teachers use technical tools and software in which environments and to what extent. During the data collection phase, a total of 50 pedagogues from all levels of education (preschool, primary school, gym, university, liberal education) provided their opinions to the survey. A database of technical tools and software that music educators can use (visual, auditory, written sources) was scanned. In light of all this information, it was reported in the study that music educators, from teachers to teaching staff, encourage them to use technology at an age-appropriate and dynamic level.

Namdar, Sarıkaya, and Sarıkaya (2017) examined teachers' opinions on the use of technology in drama, music, and visual arts courses. The aim of the study was determined as revealing the opinions of teachers regarding the use of technology in drama, music and visual arts courses. For this purpose, the researchers responded to an interview form consisting of open-ended questions regarding the use of technology in drama, music and visual arts courses.

A total of 12 teachers teaching drama, music and visual arts courses in primary schools were interviewed. In the content analysis, material codes and frequency tables were created and presented, while in the descriptive analysis, teachers' opinions were presented with direct quotes. When the research results were interpreted, it was seen that the teaching staff teaching drama, music and visual arts courses paid attention to the importance and necessity of using technology in these courses. Based on the research findings;

It was reported that in order to strengthen the teaching of drama, music and visual arts courses, the classes where these courses are held should have technical equipment and art teachers should be trained to use technical equipment effectively. Kaya (2019) examined the opinions of students receiving academic music education regarding the use of music technologies. The aim of the study was to investigate the opinions of music students regarding the use of technology in music lessons, and for this purpose, four open-ended questions were asked to 34 fourth-year students studying in the music department of a state university. A semi-structured interview format was used as the data collection tool. The data was analyzed using the descriptive data analysis method. According to the results of the research; it was determined that students used note-taking software, sound recording software and listening software; online databases and online videos with devices such as tuners, projectors, smart boards and the necessary technical elements. In addition, students mentioned disadvantages such as easy access to information, time saving, regular study, more effective study, ease of learning, development of visual memory and ease of use of instruments. In addition, it was determined that students drew attention to internet problems, high application fees, scarcity of Turkish products and resources, lack of technological knowledge, gaps in the education system, lack of tools and equipment, problems in the electrical infrastructure and various simple technological malfunctions.

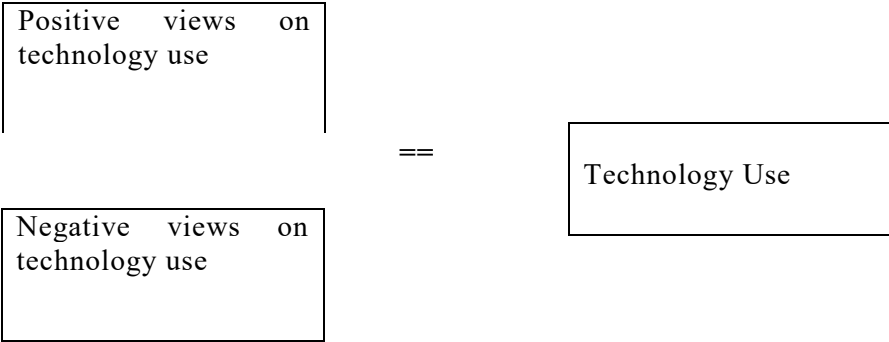
Ayhan and Aydınli Güler (2023) examined the opinions of music teachers on the use of technology in their study. The aim of the study was determined as revealing the use of technological devices by music teachers in music lessons. Phenomenological design, one of the qualitative studies, was used in the study. A nine-item semi-structured interview form was developed and applied to music teachers in order to collect data. Content analysis method was used in the analysis of the data obtained from the interview form. In the study, it was concluded that music teachers' knowledge about the use of technology in music lessons was not sufficient and that they had problems in using tools and equipment in music lessons. In addition, in the study, it was suggested that technological equipment support should be provided to the relevant educational institutions and additional training should be provided to teachers in this context in order for music lessons to be carried out effectively and efficiently in today's environment.

## **METHOD**

### **Research Design**

In this study, the survey method model, which is one of the qualitative data collection methods, was used. The survey model is generally used to develop an in-depth understanding of a broad topic or field. While this design is used to create a general understanding of a specific topic or problem, it can also form the basis for further research. In this respect, the study will be a qualitative research. The survey design is an effective method to develop an in-depth understanding of a broad topic and to create a basis for future research. This design can be used to understand complex issues and seek answers to complex questions.

**The research was designed as follows**



**Şekil Error! No text of specified style in document..1 Research Design**

**Universe and Sample Selection**

The universe of the research consists of individuals who work as music teachers in schools providing education at all levels affiliated with the Ministry of National Education. The sample consists of 15 music teachers who teach music in high schools in Erzurum. The demographic characteristics of the music teachers who voluntarily participated in the research are shared in Table 4.1.

**Table 4.1** Demographic Characteristics of Teachers Participating in the Research

Features	Frequency	Percentage (%)
Gender		
Female	9	60
Male	6	40
Age		
24-35years	3	20
36-47years	7	46,67
48 and over	5	33,33
Seniority		
1-10 years	4	26,67
11-20 years	7	46,66
21 and over	4	26,67
School Type		
Anatolian High Schools	5	33,33
Fine Arts High Schools	10	66,67

As seen in Table 4.1, the majority of the participants are female, between the ages of 36-47, have 11-20 years of seniority, and are music teachers working in Fine Arts High Schools.

### **Data Collection Tools**

In this study, the Interview Form consisting of 7 open-ended questions, which was created by the researcher and whose validity and reliability were ensured by obtaining expert opinions, was used as the data collection tool (Appendix 1).

### **Interview Questions (Problem Questions)**

1. What does the concept of digital learning in music education mean to you?
2. If a broad-context evaluation is needed from positive/negative aspects, how do digital technologies affect music education in your opinion?
3. What are the effects of technology integration in music education in the context of learning and teaching processes (curriculum, course functioning)?
4. What are the risks and opportunities in the use of digital technologies in music education?
5. In your opinion, how can digital technologies be used in terms of learning?
6. What do you think are the competencies of the teachers working in your school in terms of producing and using digital content?
7. In your opinion, what competencies should schools provide students with in the digital age in music education, in contrast to traditional ones?

### **Data Analysis**

In this study, data was collected face-to-face by the researcher and the obtained data was subjected to qualitative analysis. Themes and codes were created in the qualitative evaluation process and the qualitative evaluation procedure is explained below:

Phase 1 (Data transcription): The data in the interview forms were first converted into text in a computer environment without any changes.

Phase 2 (Data editing): The data set that had not yet been processed was turned into a "Processed text" by going through the processes of extraction, summarization and transformation. The processed text is a higher level text that contains answers appropriate to the research question compared to the raw text.

Phase 3 (Data coding): Coding skills are important in the data analysis process. After deciding which data would be excluded from the study, which data would be used, and how the data set would be classified according to the purpose of the study, coding was performed.

Stage 4: A separate code list would be created for each interviewee, and the codes obtained from all interviews were brought together.

Stage 5: Themes were created by finding common aspects between the classified meaningful wholes. After the themes were determined, the data was reported and evaluated.

Stage 6: Qualitative evaluation was performed on questions for which themes and codes could not be created (Gök and Erba, 2011; Burns and Grove, 2010).

### Validity and Reliability of the Data Collection Tool

The interview questions used in the study were listed by creating a question pool as a result of the literature review by the researcher on the subject and 7 of the existing questions were selected after being presented to 2 different expert opinions and the field research was started.

### FINDINGS

This section of the study includes the findings obtained from the interviews conducted with music teachers. The findings are listed under subheadings below.

#### The Concept of Digital Learning in Music Teaching

The first question of the interview form was determined as “What does the concept of digital learning in music teaching mean to you?” The themes and codes created from the responses given by the music teachers are shared in Table 5.1.

**Table 5.1** The Concept of Digital Learning

Thema	Code	Participant Number
Teknolojinin Etkisi ve Kullanımı	Technology enriches students' musical experiences and enables them to learn about different instruments and music genres.	6
	Digital learning increases students' motivation	2
Student Motivation and Participation	Making music more fun and engaging for students through interactive applications and games	3
	Digital learning expands the learning environment and provides students with more resources and opportunities.	1
Expansion of the Learning Environment	Deepening students' musical knowledge through online resources and course materials	3

As seen in Table 5.1, 3 different and 5 different codes were created from the data regarding the concept of digital learning by music teachers. The codes include definitions of digital learning concepts. It is seen that all of the definitions are positive.

#### Effects of Digital Technologies on Music Education

The second question of the interview form was determined as “If we need to make a broad-context evaluation in terms of positive/negative aspects, how do digital technologies



affect music education in your opinion?” The themes and codes obtained from the given answers are listed in Table 5.2.

**Table 5.2** Effects of Digital Technologies on Music Education

Thema	Code	Participant Number
Positive	Erişim ve Çeşitlilik	2
	Motivasyon ve Katılım	1
	Öğrenme Kolaylığı	2
	Yaratıcılığı Destekleme	4
Olumsuz Yönler	Bağımlılık ve Dikkat Dağınıklığı	3
	Kişisel İletişim Eksikliği	1
	Kalite ve Güvenlik Sorunları	2

The codes in Table 5.2 show that music teachers evaluate the effects of digital technologies on music education in a broad context and address them together with their positive and negative aspects. Regarding the positive aspects, teachers reported that digital technologies provide students with the opportunity to discover different musical genres and instruments, thus enriching their musical experiences, that digital technologies can make learning music easier and more fun, and that they can help students learn more quickly and efficiently. On the negative side, they reported that digital technologies can cause technology addiction in students and cause distraction, which can negatively affect learning; that there may be concerns about the quality and security of music materials accessed over the internet, which can prevent students from accessing accurate and reliable sources.

### Effects of Technology Integration on Learning-Teaching Processes in Music Education

The third question of the interview form was determined as “What are the effects of technology integration in music education in the context of learning and teaching processes (curriculum, course functioning)?” The themes and codes obtained from the answers given are listed in Table 5.3.

**Table 5.3** Effects of Technology Integration in Music Education on Learning-Teaching Processes

Tema	Kod	Katılımcı Sayısı
Müfredat ve Ders İşleyişi	Çeşitlilik ve Genişlik	5
	İnteraktiflik ve Katılım	1
	Özelleştirilmiş Öğrenme	4
Öğretmen Rolü ve Yönetimi	Yönlendirici ve Destekleyici Rol	2
	Yaratıcılık ve Yenilikçilik	3