



[www.dergipark.org.tr/rastmd](http://www.dergipark.org.tr/rastmd)



**Genç Bilge**  
yayıncılık

**ISSN**  
**2147**  
**7361**

**E-ISSN**  
**2147**  
**7531**

# RAST

**Rast Müzikoloji Dergisi**  
**Rast Musicology Journal**

**Vol 13**  
**No 3**

**DOI**  
**10.12975**

---

---

AUTUMN - 2025

---

---



<b>Editors-in-Chief</b>	
Fırat Altun - Türkiye	
<b>Advisory Board</b>	
Alicia Maravelia - Greece	Erhan Ozden - Türkiye
Turan Sağer - Türkiye	Walter Feldman - US
Scott McBride Smith - US	
<b>Section Editors</b>	
Özgecan Karadağlı Kuntz - Türkiye	Mehmet Alan - Türkiye
Krenar Doli - Kosovo	
<b>Editorial Board Members</b>	
Sehrana Kasimi - Azerbaijan	Pooyan Azadeh - Iran
Ralf Martin Jäger - Germany	Gamze Köprülü Yazıcı - Türkiye
Johee Lee - South Korea	Evangelia Chaldæaki - Greece
Emine Bilir Eyüpoğlu - Türkiye	Ayat Al Matani - Oman
Saad Khan - Oman	Herry Djahwasi - Malaysia
Jinho Kim, South Korea	Kamarsulu Ibrayeva, Kazakhstan
Pravina Manoharan, Malaysia	Michael Frishkopf, Canada
Margarethe Adams, US	
<b>Section Editors</b>	
Özgecan Karadağlı Kuntz - Türkiye	Mehmet Alan - Türkiye
Krenar Doli - Kosovo	
<b>Managing Editor</b>	
Gvantsa Ghvinjilia - Georgia	
<b>Editorial Assistant/Secretary</b>	
Orkun Zafer Özgelen - Türkiye	
<b>Layout/Design</b>	
İlhan Baltacı - Türkiye	

**Genç Bilge (Young Wise) Publishing****Address** : Bahcelievler District 3015 St. No:9/1 Isparta, Türkiye.**Website** : <http://gencbilgeyayincilik.com/>**Email** : [info@gencbilgeyayincilik.com](mailto:info@gencbilgeyayincilik.com)**Abstracting & Indexing**

Scopus, Sobiad, Ebsco, Rilm

## **Autumn 2025 Issue**

Dear authors, reviewers, editors, and readers,

The Rast Muzikoloji Dergisi (Musicology Journal) presents Volume 13, Issue 3, with contributions from the creative and diligent music researchers. In this issue, we feature six articles. We thank our authors for their patience during the peer review process. We also extend our heartfelt gratitude to the Rast Muzikoloji Dergisi (Musicology Journal) team for their efforts in this issue. Our editorial board members are updated with each issue. In this issue, we are proud to publish articles from three different countries: Indonesia, Türkiye, Kosovo. Thank you very much for your contributions.

In this issue, we also made some updates to the editorial board. We believe that being a member of the editorial board is related to actively contributing to the functioning of the journal. We invite researchers who want to contribute to the promotion, visibility, and policy development of the Muzikoloji Dergisi (Musicology Journal).

We wish you a pleasant and insightful reading experience.

Best regards,

Rast Muzikoloji Dergisi Editorial Team

## Contents

239 - 260

*Reflection of Islamic musical culture in an indonesian malay secular song as evidence of local identity* / Research Article

Suryati Suryati, Sevi Qurrotul A'yun & Andre Indrawan

261 - 282

*An investigation into the effects of breath coaching-based breath exercise practices on stage and exam performance* / Research Article

Gökçe Sarvan

283 - 305

*The face that speaks, the voice that sings: the triad of orthodontics, music, and aesthetics* / Research Article

Korab Shaqiri, Blerim Mehmeti, Armend Xhoni, Rina Caka, Rina Caka & Fidane Gjinolli

307 - 327

*An evaluation of the usability of Ahıska Lullabies as music educational material* / Research Article

Gülnihal Gül, Murat Mevlütoğlu & Tugay Bütün

329 - 353

*Implementation approaches and strategies in the use of equalizer in music production: A systematic review* / Research Article

Ali Delikara

355 - 388

*The evolution and impact of Karagöz plays' sound in Early Republican Türkiye: a focus on Hayali Küçük Ali* / Research Article

Elif Özen, Zeynep Gonca İncedere & Metin Balay



# Reflection of Islamic musical culture in an Indonesian Malay secular song as evidence of local identity

**Suryati Suryati**

Dr., Music Education Study Program, Yogyakarta Indonesian Institute of the Arts Yogyakarta, Indonesia.

Email: sumasnohadi@strudents.unnes.ac.id ORCID: 0000-0002-9229-715X

**Sevi Qurrotul A'yun**

Alumnus, Master of Performance Art Studies Program, the School of Graduate Studies, Gadjah Mada University, Indonesia. Email: seviqurrotuayun@mail.ugm.ac.id ORCID: 0009-0004-1856-838X

**Andre Indrawan**

Corresponding Author: Professor of Music, Faculty of Performing Arts, Yogyakarta Indonesian Institute of the Arts Yogyakarta, Indonesia. Email: indrawan\_andre@isi.ac.id ORCID: 0000-0002-8379-5536

DOI 10.12975/rastmd.20251331 Submitted December 23, 2024 Accepted July 10, 2025

## Abstract

This study explores the cultural production of Indonesian folk song performances, particularly those celebrated within the Malay community. It focuses on understanding the influence of Islamic musical culture on the musical structure and style of these songs. In regions where Islam is the dominant religion, music often reflects and inherits Islamic cultural values, even when the lyrical content is secular. This research employs qualitative musicology methods to analyze and interpret the interplay between musical phenomena and cultural identity, highlighting how Islamic influences manifest in local music traditions. The research centres on the melody of *Laksmiana Raja di Laut*, as performed by renowned Indonesian singer Iyeth Bustami. The study utilizes music transcription as a primary data collection method, supported by detailed observations of the song's music video. Analysis of the transcription reveals that despite the song's secular lyrics, it incorporates distinct elements of Islamic musical culture. These elements include using Arabic maqam scales, a prologue characterized by free improvisation that closely resembles the melodic style of Qur'anic recitation, and harmonic progressions similar to Flamenco musical traditions. The findings of this study underscore the inextricable link between music and cultural identity in Islamic societies. Music in these contexts often serves as a vehicle for expressing cultural heritage and locality, blending traditional Islamic elements with regional influences. This research contributes to Islamic music studies by providing musicological evidence of Islamic cultural influences within the Indonesian archipelago. Moreover, it highlights how these influences extend beyond the examined song to impact other Malay folk songs, enriching the broader discourse on the role of Islamic culture in shaping regional music traditions. By bridging musicology and cultural studies, this research offers valuable insights into the dynamic relationship between music, religion, and Southeast Asian identity.

## Keywords

*cultural identity, Islamic music, Malay folk song, maqam, musicological analysis*

## Introduction

This study is concerned with singing a popular Malay song as a cultural reflection of Islamic society in Riau, Indonesia. This study takes the case of the performance of a popular song titled *Laksmiana Raja di Laut*, which Iyeth Bustami, an Indonesian female singer, sang. The strong association between Malay culture and Islam is well-founded, as Riau—predominantly inhabited by ethnic Malays—has long been recognized

as a major centre of Islamic influence (Purnama, 2021). Up to 2024, the Muslim population was 78,29%, while the remaining 21,71% were Christian, Buddhist, Hinduism, and others (BNPT, 2024). The region's entire cultural products were Islamic in their characteristic. However, the popular Malay song, *Laksmiana Raja di Laut*, which musically has an Arabic presentation, seems characteristically 'Islamic'. Its content, however, is not a religious one. It presents

an epic message that could be considered a secular song, a unique blend that challenges our preconceptions and surprises us with its non-religious content. However, Laksmana Raja di Laut as one of the Malay songs should have an Islamic cultural influence.

The Laksmana Raja di Laut is a popular Indonesian Riau Malay ethnicity song. The song is also proudly regarded as an original piece of Malayan folk heritage in neighbouring Malaysia (see Ayderova, 2022). Geographically, Riau is in an area of Malay cultural societies. Riau is one of the Indonesian provinces with an area of 817,564.46 square km, located in the middle part of Sumatera and neighbouring Singapore, which the Strait of Malacca separates (BPS, 2024). The Strait of Malacca is a narrow, 550-mile-long stretch of water between the Malay Peninsula and the Indonesian island of Sumatera (Nofandi et al., 2009). It is one of the most important shipping lanes in the world, and its strategic location has made it a significant cultural and economic crossroads (Hariyanto & Ridwan, 2024; INCAS, 2015). Socio-culturally and politically, the location of Riau is among the countries that were once declared a cultural area of the Malayan archipelago called the Nusantara (Alexentseva, 2001; Evers, 2016; Kroef, 1951). Despite the controversy that arose over the claim, it shows that the song has Malay artistic characteristics with Islamic musical culture influence.

### **Conceptual and Theoretical Framework**

Popular Malay songs often carry associations with Islamic messages. This perception stems from the common assumption that ethnic Malays, particularly in Indonesia, are predominantly Muslim. However, what is less recognized is that Islamic influence permeates not only religious-oriented music but also secular Malay songs. This cultural blending is especially evident in Southeast Asia, where Indonesia and Malaysia, as part of the Nusantara region, share deep-rooted historical and cultural ties. The term Nusantara refers to the Malay Archipelago, encompassing countries and territories such

as Brunei, East Timor, Indonesia, Malaysia, the Philippines, Southern Thailand, and Singapore. Understanding the influence of Islam on secular Malay music requires recognizing the broader cultural landscape of the Nusantara region, where Islamic and local traditions have long intersected.

Islamic culture enriches not only religious-oriented music but also infuses secular Malay songs with its distinctive character. This perspective challenges the assumption that Islamic musical influence is limited to explicitly religious contexts and reveals a broader cultural integration in secular artistic expressions. Some may argue that popular Malay songs should inherently carry Islamic messages, based on the widely held belief that Malays in Indonesia are predominantly Muslim (see Laffan, 2006). However, this view often overlooks the nuanced presence of Islamic elements in secular compositions. Such influence reflects the historical and cultural interactions across the Nusantara region—comprising Brunei, East Timor, Indonesia, Malaysia, the Philippines, and Singapore—which forms a shared Malay cultural heritage (Alexentseva, 2001; Evers, 2016; Kroef, 1951). Recognizing Islamic cultural traces in secular Malay music invites a more inclusive understanding of how religion and tradition intertwine in Southeast Asian musical practices. It also encourages further exploration of cultural identity and historical exchange within the broader Nusantara context.

Islamic popular music studies in Indonesia have made valuable contributions through their focus on social dimensions, and further technical musicological research would enrich our understanding of its artistic elements. While examining music from a social perspective is essential, overlooking its musical and artistic structure limits a fuller appreciation of its cultural and aesthetic value. Historically, the emergence of musical genres outside religious contexts has sparked debates over their permissibility among certain Islamic groups (Yusof & Bidin, 2008).

To steer clear of prolonged controversies regarding what constitutes licit or illicit musical practices, many studies on Islamic popular music in Indonesia have centred on its role in da'wah—the Islamic mission (Akmaliah, 2014; Fahrudin & Barakbah, 2018; Mardiani, 2021; Rohmad, 2020; Wati, 2017). These studies primarily apply a socio-religious lens, emphasizing music's function rather than its form. A fuller understanding of Islamic music in Indonesia requires combining social analysis with musicological studies of its style, modes, and structure.

This study discusses the cultural impact of Islamic music on a Malay popular song performance. Until now, research on the influence of Islam on the presentation of traditional pop songs has been carried out, among others, related to folk music traditions in Türkiye and Kosovo. Studies in Türkiye have a theoretical focus, such as cases the analysis of aspects of art in folk music and the method of transmission of unmetered folk. In addition, other studies that examine the presentation of traditional songs, which among its focuses is on in the song lyrics. These studies show that the study of the influence of Islamic music on the presentation of traditional pop songs, especially in the Malay region, is still rarely conducted.

This study aims to examine the cultural influence of Islamic music on the performance of a Malay popular song. Although there are very few studies examining the influence of Islamic elements in traditional popular music—and despite the presence of many countries, such as Türkiye, that have cultural influence within their folk traditions—such studies remain limited in the Malay context. In countries with a high level of cultural influence, the transmission of traditional folk music elements to other countries may occur. However, there is a significant research gap regarding how Islamic musical elements shape secular song performances in the Malay world, and this study aims to address this gap.

## Islamic Musical Culture and the Malay Secular Tradition

Research on the Islamic world's production and consumption of Islamist cultural products remains incomplete and fragmented. Despite the growing visibility of Islamic culture in contemporary life, scholarly exploration has yet to fully capture the diversity and complexity of how Islamic values influence both the creation and reception of cultural products. Previous studies have mostly focused on fashion, linguistics, poetry, and music, leaving other areas underexplored. For instance, Juliana et al. (2024) conducted a survey on product consumption in Islamic societies and discovered that while altruistic values, egoistic values, and consumer attitudes influence purchase intentions, Islamic religiosity itself does not have a significant effect. On the production side, studies have leaned toward literary analysis. Yılmaz & Çiçek (2024), after analyzing Islamist poetry in contemporary Turkish literature, concluded that such poetry plays a key role in shaping Türkiye's cultural and literary discourse. To provide a more comprehensive understanding of Islamist cultural dynamics, future studies should broaden their scope to include other forms of cultural production and consumption, exploring how religious identity interacts with artistic expression across different media.

Studies on the reinterpretation of traditional music in applied and sustainable contexts often highlight how local music evolves through the intersection of global cultural influences. Understanding how traditional music absorbs and reinterprets external influences is essential for recognizing its adaptive, living nature and its cultural sustainability. Bayramova (2023) presents traditional Azerbaijani music as a national heritage shaped by historical experiences. Abeysekara & Meddegoda (2023) explore the musical representation of Sri Lanka's infidel minority, whose expressive forms trace back to enslaved Africans brought by Portuguese colonial powers. In the Indonesian context,

Setiawan (2023) investigates musical transformations in Javanese gamelan influenced by colonialism and nationalism, while Sunarto (2023) analyzes the impact of Hinduism and Buddhism on Indonesian music. A closely related example is Hatzikiriakos's study (2023), which explores the interaction between Mediterranean and local Tunisian music. While their focus lies in North Africa, this research investigates how Middle Eastern musical traditions intersect with Malay music in Indonesia. These comparative perspectives enrich our understanding of how traditional music reflects global-local interactions. This study contributes by situating Malay music within broader Middle Eastern cultural exchanges, offering insight into the dynamic formation of musical identity in Southeast Asia.

Research related to education often highlights the role of cultural identity preservation, especially in language and music. Education serves as a critical space for transmitting cultural heritage, and studies have shown that sustaining traditional language and music is essential to maintaining cultural identity across generations. Sanabria et al. (2024) investigated students at the Juliaca Public Pedagogical Higher Education School in Peru's Puno Region and found a prevailing preference for Spanish over regional languages like Quechua and Aymara. While Spanish is the official language, the study emphasized the need to maintain regional languages within family contexts to ensure their survival. In music education, Chambidme et al. (2024) discuss examined how traditional musical elements in Peru are altered in postmodern compositions. They observed a decline in melodic consistency due to the layering of various instrumental elaborations. Meanwhile, Lam (2024) explored light music in Vietnam and its role in reinforcing local identity through specific musical traits. These studies collectively underscore the importance of preserving linguistic and musical identity in education. They are conceptually aligned with this research's concern for sustaining cultural

characteristics through the reinterpretation of traditional elements, particularly in the musical practices of Malay communities.

The literature suggests that *maqam*, as a core concept in Islamic musical culture, has long influenced ritual music traditions and evolved alongside societal changes (Shaiakhmetova, 2022). During the Islamic Renaissance, musical knowledge expanded across regions through scientific and cultural advancements (Akhundova, 2023), including to Southeast Asia. Despite this diffusion, there remains limited research on how *maqam*-based aesthetics appear in secular Malay music. This gap highlights the need to explore the musical expressions of Islamic culture in non-religious genres. In this context, the present study focuses on the song *Laksmana Raja di Laut*, aiming to analyze its melodic and formal features for potential traces of Islamic musical influence.

In summary, the reviewed literature demonstrates that Islamic musical culture—particularly through the concept of *maqam*—has played a central role in shaping musical identity across various regions, including Southeast Asia. However, while studies have extensively explored Islamic influences in ritual or religious music, limited attention has been given to how these influences manifest in secular traditional genres, particularly within Malay musical practices in Indonesia. Building upon prior research that affirms the significance of *maqam* and '*handasat al sawt*' in Islamic musical expression, this study addresses a critical gap by examining how such elements are reflected in the melodic structure and musical form of a secular Malay song. Therefore, this research is positioned to uncover how Islamic cultural values are sonically preserved and expressed within non-religious musical traditions, using the song *Laksmana Raja di Laut* as a representative case.

## Problem Statement

Although *Laksmana Raja di Laut* is a heroic Malay song, its musical content appears to lack overt religious characteristics. This raises a cultural paradox—Malay musical traditions, particularly in the Riau region, are strongly associated with Islamic values, given the close ties between Malay identity and Muslim communities. The song's heroic narrative does not explicitly convey religious themes, yet as a traditional Malay composition, it is theoretically expected to reflect elements of Islamic culture. This discrepancy calls for a deeper examination of the song's musical components—such as its use of *maqam* (scale mode), melodic contour, musical form, and performance structure—to uncover possible reflections of Islamic influence beyond lyrical content. This study, therefore, aims to investigate how Islamic cultural elements are embedded in the musical features of *Laksmana Raja di Laut*, offering a broader understanding of how Islamic identity can be subtly expressed in secular Malay music traditions.

## Research Methodology: A Qualitative Musicological Approach

To understand and interpret the musical phenomena of its subject, this research uses a musicological qualitative method (Bradley, 1981; Brester & Stake, 2017; Gerring, 2017; Haslbeck et al., 2021). The qualitative method examines information and other non-numerical data from subjects that meet certain qualities and from an event or social phenomenon. This method, including politics, is commonly used in social sciences (see Gerring, 2017). Because musicological data have similar characteristics to the social sciences, namely tending to be non-numerical data, music research also uses qualitative methods (Bradley, 1981). For example, the application of qualitative methodologies in music studies includes the study of music education (Brester & Stake, 2017) and the study of music therapy (Haslbeck et al., 2021). Thus, the musicological qualitative method is appropriate for this research which analyses the singing style of a song as

a musical sample.

The material object of this study is the melody of *Laksmana Raja di Laut*, sung by a popular Indonesian singer, Iyeth Bustami. The performance became more recognised after the singer uploaded the traditional Malay song to YouTube. Although the performance features a mixture of traditional Malay music elements and modern arrangements, it displays the rich cultural heritage of the Malay Archipelago. Bustami has been known for her powerful vocals and ability to convey the emotional depth of the song. Many people appreciate the singer's performance due to its authenticity and respect for traditional songs. This song emphasizes the courage and leadership of the titular figures, often associated with regional folklore. The song was chosen as this study's material object not only due to its cultural significance, which reflects the maritime culture of the Malays and the history and legends related to the sea, but also the Arabian style of its musical performance. The style raises curiosity about the influence of Islamic music culture in this song.

Data was collected using a music transcription method based on a music video observation. Music transcription can be considered as one of the data collection methods in qualitative research on music. Nettel (1983) emphasized the importance of music transcription in documenting and analysing music from different cultures. Merriam (1964) explains how music can be studied through various anthropological methods, including music transcription as a tool for in-depth analysis. In addition, music transcription techniques have been teamed up as part of various theories and methods in ethnomusicology that are useful for analyzing and interpreting music (Herzog, 1964; Zamotin, 2020). In discussing various qualitative methods in music education, music transcription has also been used as an analytical instrument (Ayderova, 2022; Matsunobu & Bresler, 2014). Thus, music transcription in this study does not need to doubt its importance.

This study uses musicological qualitative analysis techniques through inductive reasoning. The disclosure of musicological elements of the song applies a theoretical analysis to confirm musical phenomena with maqam theories and analytical analysis to confirm musical forms. In musical form analysis theoretical approach is also applied to related the subject to such concepts a form and composition device (Watanabe, 1967:5). A theoretical approach in music research refers to an approach that uses musicological theories and theoretical concepts to analyze, interpret, and understand various aspects of music (Cook, 1987; Evans & Kerman, 1986; Krummel & Watanabe, 1968; Matsunobu & Bresler, 2014; Taruskin & Gibbs, 2013). This technique would be useful in proving the spread of Islamic musical culture through specific observations namely the musicological phenomenon on a sample target.

The influence of Islamic music culture on the performance of Malay songs can be revealed through several musical elements that show their uniqueness. The disclosure of these elements in this study uses a modification of the theoretical study procedure. In this regard, it begins with a selection of data to determine the material objects to be studied and conduct a theoretical review of Islamic music culture, namely the characteristics of the '*handasat al sawti*.' Henceforth, the implementation of this research takes place through several stages prevalent in musicological research. The first is transcribing the melody from a selected YouTube video view into standard notation. The transcription results then became the basis for revealing the application of key signatures, type of scale mode, musical form, and performance structure. The disclosure of the indications of the influence of Islamic culture is by comparing the elements indicated with the characteristics of the '*handasat al sawti*' (al-Faruqi & al-Faruqi, 1986; Al-Faruqi, 1986).

### Tracing Islamic Musical Elements in a Malay Song

Socio-culturally and politically, the location of Riau is among the countries with Islamic influences, especially the existence of maqam in songs, which is evident in the data attached to the melody and presentation of the studied song. To get a visualization of the vertical dimension, in this case, the pitch fluctuation of each note, including the harmony behind it, and the horizontal dimension, which is the variation in the length of the short-sounding value of each note, has been transcribed. The material object studied is a melody extracted from a music video of an album entitled: "*Zapin-Dut: Laksmana Raja di Laut*," originally produced in the form of a commercial audio cassette by the MGM recording company in Riau, Northern Sumatera, with production serial number C-0137. We can now find a copy of the recording online through the YouTube channel (Web 1). Based on melodic transcription, the result of this study includes the use of melodic mode and the pattern of both musical form and performance structure.

### Transcription and Analysis of Song Lyrics

The musical transcription in this study focuses on the main melody of the song *Laksmana Raja di Laut*, as it serves as the foundation for understanding the song's formal structure. This structure is not discernible through auxiliary musical elements, such as the instrumental introduction, interludes, or the improvised vocal prologue; rather, it is embedded in the principal melodic lines that carry the lyrical verses (see Stein, 1979:58-63, on auxiliary member types). A video performance by Iyeth Bustami illustrates this distinction clearly, presenting a combination of auxiliary and core sections. The auxiliary components include a brief improvised vocal prologue and several instrumental interludes, while the main section is marked by lyrical singing that adheres to a traditional Malay poetic form consisting of quatrains. The structure organizes the lyrics into two

types of quatrains: the first type consists of four distinct quatrains performed in two sets (two quatrains per session), and each session concludes with the second type—a repeated quatrain functioning as a refrain. From a musicological perspective, analysts would identify the core melodic material in these two quatrain types, each of which

spans one normative period. Therefore, this study prioritizes the transcription of these repeated melodic periods, as they represent the song’s most structurally and musically significant components, distinguishing them clearly from the auxiliary vocal and instrumental sections.

Prologue	
Zapin	Zapin
<i>Aku dendangkan lagu Melayu</i>	I’am singing a Melayu song
<i>Pelipur hati, pelipur lara</i>	Solace, solace

First Stanza	
(A)	
<i>Cahaya hari kilau gemilang</i>	The light of the glorious glitter
<i>Di Tanjung Tapir indah menawan</i>	In Tanjung Tapir beautiful charming
<i>Kubernyanyi lagu Zapin riang</i>	I am singing a happy Zapin song
<i>Moga hadirin (aduhai sayang) jadi terkesan</i>	May the audience, oh dear, be impressed

(A) repetition	
<i>Kembanglah manis atas kepala</i>	Sweeten over the head
<i>Lipatlah tangan sanggul dipadu</i>	Fold the hands of the buns together.
<i>Kita berdendang bersuka ria</i>	We are singing to have fun
<i>Lagulah Zapin, aduhai sayang, rentak Melayu</i>	Sings the Zapin, oh dear, the Malay beat.

(B) 2 x (repeated)	
<i>Laksmana Raja di laut</i>	Admiral, King of the Sea
<i>Bersemayam di bukit batu</i>	Sitting on a rock hill.
<i>Ahai hati siapa, ahai tak terpaut</i>	Oh, whose heart, oh unlinked
<i>Mendengar lagu Zapin Melayu</i>	Listening to a Malay Zapin song

Figure 1. The structure of the lyric reading in the first round preceded by a prologue

Figure 1 shows that the vocal part appearing first marks the beginning of the main verse section. This initial vocal phrase introduces the nature of the performance, distinguishing it from the structured main part. The opening vocal line declares that the upcoming piece is a Malay song featuring Zapin verses intended to entertain the audience. Unlike the main part, this prologue melody is an improvised introductory statement, as the rhythmic structure of traditional Malay poetry does not bind it. It also lacks the expected number of syllables and lines

required to be considered a formal verse within the main song form. In contrast, the lyrics in the main section follow a clear AA BB stanzaic pattern, reflecting the structure of Malay poetic tradition. This consistent form becomes evident through transcribing the main melody, which supports and expresses both quatrain types. The transcription reveals the formal characteristics of the song’s lyrical content and focuses on the structured main melody, distinguishing it from the improvised prologue.

Second Stanza	
(A1)	
<i>Membawa tepak hantaran blanja</i>	Bringing a shopping pass
<i>Bertata perak indah berseri</i>	Beautiful silver berries
<i>Kami bertanda menghidup budaya</i>	We're marked to live a culture.
<i>Tidak Melayu, aduhai sayang, hilang di bumi</i>	No Malay, oh dear, lost on earth
(A1) repetition	
<i>Petinglah gambus lantang berbunyi</i>	Plucks the Lute loudly and sounds
<i>Disambut dengan tingkah meruas</i>	Celebrated with stretching act
<i>Saya bernyanyi sampai di sini</i>	I'am singing just up to this stage
<i>Mudah-mudahan hadirin semua menjadi puas</i>	Hopefully, all the audience will all be satisfied.
(B) 2 x (repeated)	
<i>Laksmana Raja di laut</i>	Admiral, King of the Sea
<i>Bersemayam di bukit batu</i>	Sitting on a rock hill.
<i>Ahai hati siapa, ahai tak terpaut</i>	Oh, whose heart, oh unlinked
<i>Mendengar lagu Zapin Melayu</i>	Listening to a Malay Zapin song

Figure 2. The reading of the verse in the second round shows the structural clarity of this song

The application of Malay poetry in *Laksmana Raja di Laut* reveals distinctive structural features, particularly in the recurrence and variation of quatrain types across the first and second stanzas. This uniqueness lies in the song's repetition of melodic patterns while maintaining the integrity of its poetic form. The first type of quatrain comprises four distinct four-line verses, each line conforming to the traditional Malay poetic rule of ten syllables. These are delivered in two sessions, forming the core lyrical material. In contrast, the second type consists of a single quatrain but is repeated twice per session, serving as a refrain. Although its lyrics remain unchanged across stanzas, it holds significant weight due to its thematic alignment with the song's title. This quatrain also introduces metrical contrast, with each line containing eight syllables, thereby distinguishing it from the ten-syllable structure of the first type. Musically, the first type of quatrain begins and ends on the dominant, whereas the second type opens on the tonic (G minor) and concludes on the dominant, offering

a nuanced harmonic variation. Despite appearing after the first type, the second quatrain assumes a prominent role in shaping the song's identity. Through this interplay of repeated melodic material and contrasting poetic meters, the song demonstrates a sophisticated adaptation of Malay poetic forms that enhances both its musical structure and expressive depth.

The first and second types of quatrains in the song exhibit a flexible poetic structure that accommodates the insertion of additional words within certain lines. These insertions—typically expressive interjections or greetings—affect the syllabic count but do not disrupt the core meaning of the verse. For instance, the fourth line of the first quatrain (type one) reaches 15 syllables due to the addition of the greeting “*a-du-hai sayang*” (“oh dear”), which contributes five extra syllables. Without this embellishment, the line still conveys a complete message within the standard ten-syllable format. A similar case appears in the second quatrain of the first type during the second stanza

round, where the phrase “*se-mua ha-di-rin*” (“all the audience”) expands the line while preserving its semantic clarity. Although the second type of quatrain typically maintains an eight-syllable-per-line structure, its third line occasionally extends beyond this, as seen in the 12-syllable line “*Ah-ai ha-ti sia-pa, a-hai tak ter-pa-ut*” (“Oh, whose heart, oh unlinked”). The repeated interjection “*ahai*” adds four syllables, yet the underlying meaning remains intact when reduced to the essential eight syllables (*ha-ti sia-pa tak ter-pa-ut*) (“whose heart unlinked”). These instances illustrate that such insertions are stylistically acceptable and commonly employed in Malay poetic songs. They provide rhythmic and expressive flexibility while maintaining both poetic integrity and narrative clarity—suggesting a broader poetic convention across Malay musical traditions.

### Melodic Transcription

The song’s form can be effectively identified through the melodic structures found in the first type of quatrain (A) and the second type (B). These two quatrain types serve as the primary building blocks of the composition, offering sufficient musical material to represent the entire structure of the song. This identification is crucial, as the remaining verses in the performance reuse the same melodic patterns established in quatrains A and B, reinforcing their representative role in defining the overall form. A transcription of these two sections enables a precise analysis of the song’s formal construction. By focusing on these melodic units, the analysis can uncover key musical features, such as the scale system employed, the internal organization of musical phrases, and the approximate harmonic progressions that support the lyrical lines. These elements collectively illuminate how the composition achieves cohesion and variation within a traditional framework. Therefore, from a musicological perspective, the form of *Laksmāna Raja di Laut* becomes clearly traceable and interpretable through the detailed examination of these two quatrain

types. This focused approach not only highlights the song’s structural logic but also supports a deeper understanding of its compositional style within the context of Malay poetic song traditions.

**LAKSMANA RAJA DI LAUT**

Sung by Iyeth Bustami  
Transcribed by Sevi Q. A'yun  
Verified by Andre Indrawan

PART ONE  
(Antecedent)

Ca-ha-ya ma-nis ki-lai ge - mi - -lau. Ditan-jung Ta-pir, in-dah me-

V i

(Consequent)

na-wan. Ku ber-nya-nyi Za-pin ri - ang Smo-ga ha - di - rin a-du - hai

V iv i V

PART TWO

sa - yang ja-di ter ke - san. (Kem-bang-lah - yu. Laks-ma - na Ra-ja di La -

VI iv i V V i

(Consequent)

ut. Ber - se - ma-yan di bu - kit ba - tu. A - hai has - ti sia - pa, A - hai tak ter - pa -

V iv V iv V iv

ut men - de - ngar la - gu Za-pin Me-la - yu? Laks - ma - yu.

V iv VI iv i V V

Figure 3. Transcription of the main melody of the song *Laksmana Raja di Laut*.

The song *Laksmana Raja di Laut*, as performed by Iyeth Bustami, follows a distinctive two-part song form. This form becomes evident when focusing solely on the vocal part while excluding the instrumental sections and the improvised vocal prologue. The transcription of the main vocal lines reveals that the formal structure is built on complete lyrical stanzas, supporting a clear two-part division. While a complete listening experience might lead one to interpret the form as ABC—mainly when the improvised vocal prologue is perceived as contributing structurally to

the main section. Although the conjecture of the form is not wrong, the analysis in this study uses a theoretical approach, namely looking at the research subject by referring to theories about compositional forms that are prevalent in Western music (Krummel & Watanabe, 1968; Watanabe, 1967). According to this approach, the analysis focuses on compositional form rather than performance style. The recurring dominant chord movements in both sections may create ambiguity for analysts, as traditional Western forms typically move from dominant

to tonic (Stein, 1979). However, despite this unusual harmonic progression, the song exhibits a clear two-part structure. By applying a theoretical lens rooted in Western compositional form, this study identifies *Laksmana Raja di Laut* as a two-part song with unique chord progressions that challenge—but do not contradict—conventional form expectations.

This study confirms that the song *Laksmana Raja di Laut*, despite being a folksong, adheres to a normative period structure with slight deviations that reflect its expressive performance style. While folksongs typically follow predictable phrase structures, the musical transcription reveals that this song introduces subtle variations that expand the expected phrase length. Based on the theoretical model of a melodic period—comprising two four-beat phrases (antecedent and consequent), each made up of two two-beat sub-phrases (Stein, 1979:37-38)—the melody of this song was expected to span 16 measures or two full periods. However, transcription results show an apparent lengthening in the first period by one measure, extending it to 17 measures due to repetition and performance embellishments. Specifically, the lyrical phrase “...aduhai sayang...” (“...oh dear...”) occupies the second half of the seventh measure (as an anacrusis) and the first half of the eighth measure, effectively stretching the phrase into a nine-measure period. When this expressive insertion is omitted, the passage returns to eight measures, confirming its structural flexibility. Moreover, both parts of the entire form contain upbeat repetitions at their first ending measures (prima volta) that enhance the sense of closure and continuation. Thus, even with its ornamental nuances, the song’s form adheres to a standard binary structure with regular phrase groupings. These deviations reflect a creative adaptation of the normative period format, enriching the expressive delivery without disrupting its fundamental compositional logic.

The main song performance has a unique form that allows it to be considered a two-part or a three-part pattern. The difference between the two parts of the existing form is significant. Theoretically, a two-part song form should have the second half of the second part identical to one of the first part’s motives. However, in this transcription, the second part is entirely different from the first and does not even normatively close with a tonic but is concluded by a dominant harmony position. Unfortunately, suppose this song is allegedly considered as the three-part song form, which needs to return to the first part and finish. In that case, it is also less appropriate due to the dominant closing harmony of the first part. The phrase extension happened due to an additional bar before the end of the consequence used for a short grupetto ornament in Hijaz mode. The use of Hijaz maqam that impacts the dominant chord, although it is written in the tonic minor key, is similar to flamenco tradition, especially to the Soleares genre.

### Maqam Hijaz-Based Improvisation

The melodic structure of *Laksmana Raja di Laut* is built upon the *Hijaz* maqam, reflecting a strong influence of Islamic musical culture. The *Hijaz* maqam is one of the most recognizable modes in Arabic music and holds an important role in Islamic traditions, particularly in vocal expressions such as Qur’anic recitation and religious songs. Its presence in this song suggests a cultural and spiritual link between Malay musical expression and Islamic musical aesthetics. The *Hijaz* maqam is formed through the combination of three Arabic *jins* (tetrachords): *Hijaz*, *Nahawand*, and *Ajnas*. These characteristic intervals—especially the augmented second between the second and third scale degrees—give the maqam its unique and expressive flavor. In our transcription of *Laksmana Raja di Laut*, we identified this distinctive scale structure, confirming the use of the *Hijaz* maqam. This mode closely resembles the Phrygian Dominant scale in Western theory, though it functions differently in practice due to

its modal and ornamental context in Arabic and Islamic music. Therefore, the use of the *Hijaz* maqam in *Laksmāna Raja di Laut* not only shapes its melodic identity but also serves as a musical reflection of Islamic

cultural values embedded in Malay music traditions. This exemplifies how Islamic musical heritage has been adapted into local song forms, reinforcing the song's cultural depth and historical resonance.

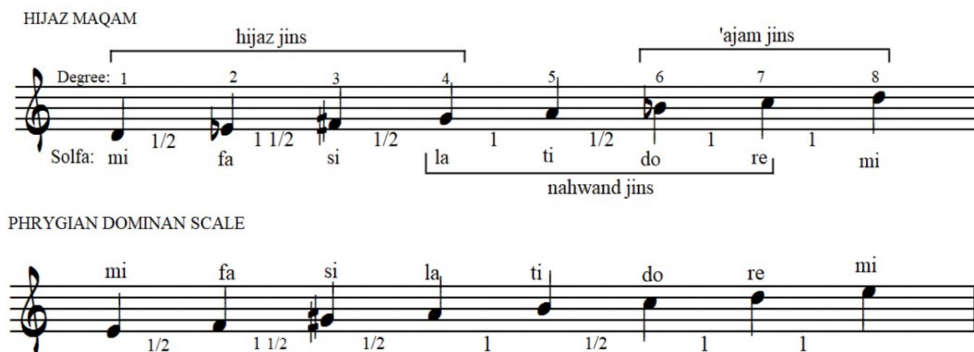


Figure 4. The similarity scales construction of the *Hijaz* and the Phrygian Dominant

Figure 4 illustrates the similarity between the *Hijaz* maqam and the Phrygian Dominant scale through their shared intervallic structure. Understanding the scale construction of both modes highlights how different musical cultures can produce similar tonal effects through distinct theoretical frameworks. This comparison is particularly relevant in analyzing *Laksmāna Raja di Laut*, which draws from Arabic musical traditions. Both the *Hijaz* and Phrygian Dominant scales share the same interval sequence: half tone - whole and a half tone - half tone - whole tone - half tone - whole tone - whole tone. In the transcription of *Laksmāna Raja di Laut*, the *Hijaz* maqam is tuned based on the actual pitch of the performance, as heard in the YouTube recording. In contrast, the Western Phrygian scale typically appears in a natural key signature, without accidentals. The difference lies not in the pitches themselves but in how the scales are constructed: the Western scale uses tetrachords (four-note segments), while the Arabic system uses *jins*, or modal building blocks. The *Hijaz* maqam in this song is built from three *jins*: *Hijaz* and *Nahawand*, each containing four notes (like tetrachords), and '*Ajam*', which consists of three notes. This shows a layered modal structure that differs in concept but parallels the tonal result of

the Western model. While both the *Hijaz* maqam and the Phrygian Dominant scale may sound similar to the ear, their underlying theoretical constructions reflect the distinct musical philosophies of Arabic and Western traditions. Recognizing these differences enriches our understanding of how *Laksmāna Raja di Laut* bridges musical systems while preserving its cultural roots.

The exploration of the *Hijaz* scale mode is prominently featured in the free vocal improvisation of the prologue section. This improvisatory opening, locally referred to as the "*raal*" in Indonesian Malay music, serves both an expressive and structural purpose, allowing the performer to establish the musical mode (maqam) and hint at the genre's stylistic character before the main melody begins. As shown in Figure 5 below, the "*raal*" functions as a non-metric, ornamented vocal passage that showcases the singer's vocal agility and interpretive creativity. It typically consists of three sub-sections, each emphasizing different facets of vocal technique and modal exploration. In *Laksmāna Raja di Laut*, the singer uses the *raal* to introduce the *Hijaz* maqam, weaving melismatic phrases and embellishments that reflect traditional Islamic musical aesthetics. Each sub-section culminates in a cadential

gesture, giving a sense of closure while simultaneously setting up the transition to the main lyrical content. This practice aligns with Malay performance traditions where the *raal* not only prepares the audience aurally but also affirms the singer's skill and emotional expression. Through the *raal*, the performer engages with the *Hijaz*

maqam in a fluid and expressive manner, using ornamentation and modal gestures to introduce both the musical scale and the genre. This improvisatory section functions as a vital prelude that bridges cultural identity, vocal artistry, and musical structure in Malay song tradition.

### (solo improvisation prologue)

Transcribed by Sevi Qurrotu A'yun (2021)  
Revised by Andre Indrawan (2022)

Sung by Iyeth Bustami (from Zapin Dut 2003 album)  
Recorded by Dreams Cape Productions, 2002

Figure5. The free melodic ad libitum with the *Hijaz* maqam mode in the vocal introductory section

The exploration of maqam in the solo vocal prologue is achieved through improvisation at the end of each sub-section, highlighting the performer's creative use of various *jins* (tetrachord units) within the broader *Hijaz* maqam framework. This vocal improvisation serves both an expressive and structural function, enriching the melodic delivery while introducing the maqam system that underlies the main song. Each sub-section varies in length and melodic treatment, showcasing different *jins* that reflect stylistic flexibility within a consistent modal context. The improvisation is concentrated at the ends of syllables within each sub-section. In the first sub-section, where the singer utters the word "Zapin", the melodic line begins with *Hijaz jins*, extends the final syllable using *Nahawand jins*, and concludes again with *Hijaz jins*—creating a layered and expressive descent. In the second sub-section, which consists of two short semi-phrases, the improvisation is more restrained. The first semi-phrase, "Aku dendangkan" (melodically

interpreted as an antecedent), begins in *Nahawand* and ends briefly in *Hijaz*. The second semi-phrase, "Lagu Melayu" (as the consequent), starts and ends with *Hijaz*, including a subtle ornament on the final syllable. The third sub-section, composed of a single word, "pelipur hati" that serves as a closing declaration, begins with 'Ajam *jins*. The final syllable is elaborated more extensively using *Hijaz*, then concludes briefly with a return to 'Ajam *jins*. This final movement creates a sense of closure while smoothly preparing the transition into the main body of the song, which is firmly rooted in the *Hijaz* maqam.

### Performance Structure and Modal Implication

The performance structure of *Laksmana Raja di Laut* is characterized by the integration of vocal and instrumental sections, each contributing distinctively to the song's overall form and expression. These components are strategically positioned to provide both

musical contrast and continuity, allowing for expressive vocal delivery and dynamic instrumental transitions that shape the flow of the performance. The vocal part consists of two major sections. The first is the prologue, locally known as the “*Raal*”, which is a free-

form vocal improvisation that introduces the song’s melodic mode and emotional tone. This section allows the singer to explore the *maqam* through ornamentation and vocal color, serving as a prelude to the main song.

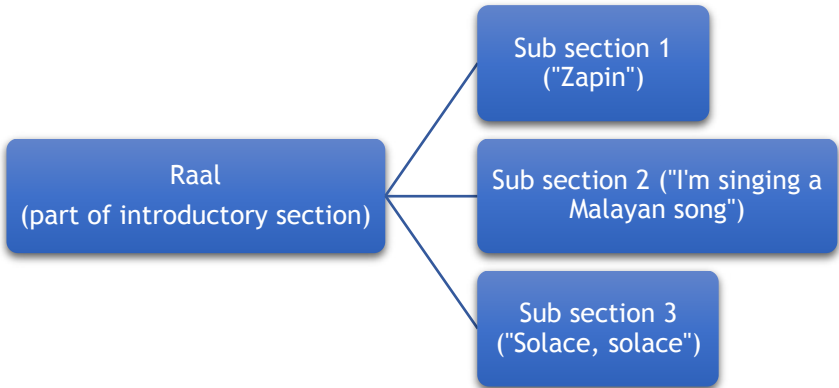


Figure 6. The construction of the “*raal*”, or the vocal introductory section

The *raal* section of the performance is structured into three distinct sub-sections, each carrying a specific function, beginning with the explicit mention of the term “Zapin”. This sequential structure reflects the performer’s intent to introduce not only the genre but also the cultural and emotional context of the song, aligning with traditions in Malay musical practice where vocal prologues serve to orient the listener. In the first sub-section, the singer introduces the term Zapin, identifying the performance as rooted in this well-known form of traditional Malay dance music. The mention of Zapin immediately signals the genre identity to the audience (see first line of the transcription). In the second sub-section, the singer clarifies her artistic intent—to sing a Malayan song within the Zapin tradition, establishing a framework that connects the musical form with cultural and regional expression. While Zapin is most commonly associated with Islamic Malay dance traditions (Hendra, 2023; Hidajat et al., 2021; Jailani et al., 2023; Suryani & Fitriah, 2019), several scholars also note that the term refers to the vocal genre that accompanies the dance (Setiawati et al., 2021), highlighting its dual

function. In the third sub-section, the singer delivers a personal message: her purpose in singing is to soothe and uplift the hearts of the audience. This statement reflects the traditional role of Malay music as a form of social and emotional connection, where music serves both aesthetic and communal functions. These three sub-sections of the *raal* not only establish the genre, cultural identity, and performer’s intention, but also demonstrate how Zapin functions as a holistic artistic expression—combining music, poetry, and spirituality—to engage and move the audience.

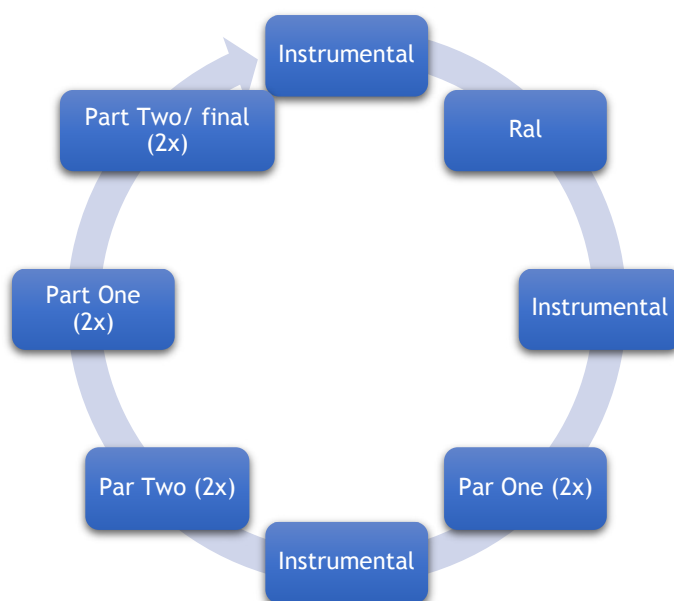


Figure 7. Round structure of lyeth Bustami's performance version

The second vocal section presents the song's main body, which is metrically structured and melodically complete, offering a striking contrast to the free-form prologue. While this section provides a clear musical form, instrumental inserts can obscure the recognition of the underlying structure and the relationship between its parts, especially for analysts unfamiliar with the performance style. Instrumental sections are strategically placed throughout the performance to shape its flow. The song begins with an instrumental introduction, which sets the tonal and rhythmic atmosphere before the vocals begin. Following the vocal prologue, an instrumental section appears and transitions into the metrically organized main song. As the main song unfolds, an additional instrumental bridge emerges between Part One and Part Two in the first stanza, serving as a unique divider in preserving a strong sense of thematic continuity. Notably, the performers consistently place interludes between the two parts of a stanza. However, they omit them after Part Two, where the song proceeds directly to the next stanza without an instrumental break. This structural choice suggests intentional variation. As an alternative to the hypothesis, analysts can

suspect that the structure starts from Part Two while Part One is like the middle part of the three-part song form structure. The arranger likely designed the placement of the seemingly unusual interlude to highlight Part Two, rather than Part One, as the thematic core of the song, mainly since the lyrics directly refer to the title, *Laksmana Raja di Laut*. This study confidently proposes that the song follows a two-part form, especially considering the previously discussed lyric structure—even if the order may initially appear unconventional. The interaction between the structured vocal section and the carefully placed instrumental parts enriches the overall performance. This thoughtful arrangement highlights the composition's uniqueness by positioning the song's central message in Part Two, offering a refreshing alternative to the more common placement in Part One.

The performance structure of the song "*Laksmana Raja di Laut*" by lyeth Bustami, as seen in the video, combines engaging vocal and instrumental elements with theatrical and dance movements. These instrumental segments, accompanied by dancers, provide contrast and create space

for audience anticipation and interaction within the context of Malay performing arts. Through the deliberate alternation of vocal and instrumental sections, the performance achieves a rich and balanced formal design. The video also features theatrical gestures and traditional Malay dances, which often appear during instrumental passages as a visual backdrop. These segments highlight the use of typical Malay instruments such as the gambus, tambourine, accordion, violin, and guitar. The dynamic interplay between improvisation and formal structure—blending solo vocals, instrumental interludes, and expressive movements—illustrates the complexity and depth of Malay musical and performative traditions.

Some critical audiences may question the placement of the instrumental interlude between Part One (Period A) and Part Two (Period B) instead of after Part Two or between the full song repetitions (A-B), which is more typical in many song forms. This structural decision may reflect an artistic choice by the arranger to draw special attention to Part Two as the primary thematic and emotional centerpiece of the composition. Since Part Two contains the exact textual phrase that appears in the song's title, its emphasis may be intended to signal its narrative or symbolic significance. From a textual perspective, the second period (Part Two) features the line "*Laksmana Raja di Laut*," directly referencing the title and thus possibly serving as the lyrical and thematic climax. Placing the interlude before this section helps to frame it as a musical arrival point, allowing listeners to reset and focus. From a harmonic perspective, the key of the song is G minor. Both Part One and Part Two end on the dominant chord (D major), without modulation or harmonic departure. This uniform cadence across sections suggests that the structural transition is not marked by harmonic contrast but rather by form and function—the interlude acts as a non-harmonic cue for formal separation and emphasis. Additionally, the positioning of the interlude maintains the flow of the

performance, offering a breath between narrative segments while keeping the tonal center intact. Thus, the placement of the interlude between Period A and Period B is a deliberate strategy to foreground Part Two as the central statement of the piece, both musically and textually. Rather than serving merely as a break, the interlude enhances the form by shaping the audience's perception of structural weight, drawing attention to the thematic heart of the song without altering its harmonic consistency.

This study highlights the structural and tonal characteristics of the song, revealing its foundation in the *Hijaz* maqam. The use of *Hijaz* maqam significantly shapes the song's tonal center and harmonic movement, influencing the perception of key and musical phrasing. Although the song is constructed on the *Hijaz* maqam, which resembles the G minor scale, it centers harmonically on the dominant, D major. This tonal orientation is evident in both sections of the song: the first part revolves around D major, while the second part, though beginning with a tonic chord, resolves again to the dominant. This pattern mirrors the characteristics of the Phrygian dominant scale and closely resembles the tonal behavior found in *Soleares*, a flamenco form that also emphasizes the dominant chord, despite being set in a minor key. Such similarities support the historical influence of Islamic musical culture on Spanish performing arts, particularly flamenco. These findings suggest that the song exhibits not only melodic but also harmonic traits associated with the *Hijaz* maqam, reinforcing its connection to broader Islamic musical traditions and their enduring influence on regional and global musical forms.

## Conclusion

In conclusion, the influence of Islamic musical culture on the song *Laksmana Raja di Laut* is clearly manifested in three interconnected aspects. These elements collectively demonstrate how Islamic musical aesthetics have shaped and enriched

the form and expression of this Malay song, both melodically and structurally. First, the song's melodic foundation is built upon the *Hijaz* maqam, an Arabic scale widely used in Islamic musical practices, including religious chanting and traditional song. Second, the prologue, performed as a free vocal improvisation known as *raal*, reflects a stylistic affinity with Qur'anic recitation, particularly in its modal exploration, vocal ornamentation, and unmetered delivery. Third, the harmonic structure of the main song features the use of dominant chords as pivotal tonal centers—a characteristic reminiscent of Flamenco, a Spanish tradition that itself bears historical traces of Islamic musical influence during the Andalusian period. These elements collectively demonstrate how Islamic musical aesthetics have shaped and enriched the form and expression of this Malay song, both melodically and structurally. This observation reinforces the broader notion that traditional Malay music, especially within the context of Islamic cultural exchange, is not insular but has evolved through centuries of transregional interaction.

## Recommendations

### Recommendations for Future Research

Future research could explore the broader influence of Islamic musical culture on other traditional genres across Southeast Asia, especially in regions where Islam has historically played a prominent cultural role. Additionally, considering that many Malay performers are already well-versed in local musical and literary conventions, future studies may examine how a deeper understanding of maqam theory could contribute to more authentic and expressive interpretations in performance.

### Recommendations for Practitioners

This research is especially relevant to practitioners—particularly popular singers—who perform repertoire rooted in the Malay musical tradition. While this study identifies elements of *Hijaz* maqam in one specific

Malay song, such features may not appear uniformly across the genre. When performers encounter repertoire influenced by *Hijaz* maqam, it is recommended they practice improvisation and ornamentation techniques rooted in maqam principles. Doing so can enhance the sonic authenticity and enrich the stylistic nuance of Malay songs shaped by Arabic musical idioms.

## Limitations of the Study

This study focuses on a single musical work and does not claim that all Malay songs bear identical Islamic musical characteristics. The hybrid nature of cultural exchange between Malay and Islamic music calls for further in-depth musicological research. Such studies are needed to better map the variations, stylistic traits, and degrees of Islamic influence across different repertoires and performance practices.

## Acknowledgments

We extend our sincere appreciation to the Coordinator of the Study Program at the Department of Music, Faculty of Performing Arts, Indonesian Institute of the Arts Yogyakarta, for their continuous support throughout the research and publication process. Our gratitude also goes to the Research Institute, as well as the leadership at both the Rectorate and faculty levels, for providing financial incentive programs that actively encourage and support academic staff in disseminating their research findings through scholarly publications.

## References

- Abeysekara, G., & Meddegoda, C. P. (2023). The musical representation of Sri Lankan Kaffirs. *Asian-European Music Research Journal*, 12. <https://doi.org/10.30819/aemr.12-6>
- Akhundova, E. (2023). Formation of musical culture during the Islamic Renaissance period. *Philology and Art Studies*, 01, 335. <https://doi.org/10.59849/2663-4368.2023.1.335>
- Akmaliah, W. (2014). When ulama support a pop singer fatin sidqiah and Islamic pop culture in post-Suharto Indonesia. *Al-Jami'ah*, 52(2). <https://doi.org/10.14421/ajis.2014.522.351-373>
- Alexentseva, T. (2001). Reviewed work: images of Nusantara in Russian Literature by Vladimir I. Braginsky and Elena M. Diakonova. *Journal of the Malaysian Branch of the Royal Asiatic Society*, 74(280), 127-129. <https://www.jstor.org/stable/41493447>
- al-Faruqi, I.R., & al-Faruqi, L.L. (1986). Handasah al Sawt or the art of sound. In *The Cultural Atlas of Islam* (Issue 1, pp. 441-480). Macmillan Publishing Company, A Division of Macmillan, Inc. <https://archive.org/details/culturalatlasofi0000alfa/page/n5/mode/2up>
- Ayderova, V. (2022). Recapitulation of Malay asli music genre transcriptions for a chamber trio employing music score analysis. *Rast Müzikoloji Dergisi*, 10(4). <https://doi.org/10.12975/rastmd.20221046>
- Ayderova, V., Lonsdale, K. A., Goh, Y.-L., & Majid, M. P. (2017). Exploring the Malay Traditional Genre 'Zapin' as Educational Material for a Western Classical Ensemble (Flute, Viola, Piano). *Asia-Pasific Symposium for Music Education Research*, July, 360-366.
- Bayramova, A. (2023). Azerbaijani Mugham in the Pushkin House. *Asian-European Music Research Journal*, 12. <https://doi.org/10.30819/aemr.12-1>
- BNPT, I.-K. (2024). Provincial Government Kepulauan Riau. Center for Information and Collaboration for Countering Terrorism and Violent Extremism. <https://ikhub.id/en/peta/47844766#tab>
- BPS, S. (2024, October 6). *Total Areas of Riau Province (KM2), 2022*. Provider of Quality Statistical Data for Advanced Indonesia: Riau Province. <https://riau.bps.go.id/en>
- Bradley, D. (1981). Music and social science: A survey. *Media, Culture & Society*, 3(3). <https://doi.org/10.1177/016344378100300302>
- Brester, L., & Stake, R. E. (2017). Qualitative research methodology in music education. In *Critical Essays in Music Education*. <https://doi.org/10.4324/9781315095257-8>
- Chambi-Idme, E. A., Mamani-Flores, A., Velazco-Agramonte, G., Justo-Clavitea, J., Ayma, L. J. A., Ahumada-Valdez, G., & Maraza-Vilcanqui, N. (2024). Traditional elements and artistic changes that occur in the music of the "Estudiantina Puneña" In Postmodernism in Puno, Peru: Studies on Behavior Change Towards Sustainability and Its Influence on the SDGs. *Journal of Lifestyle and SDGs Review*, 4(3), e02307. <https://doi.org/10.47172/2965-730X.SDGsReview.v4.n03.pe02307>
- Cook, N. (1987). *A guide to musical analysis*. J.M. Dent.
- Evans, P., & Kerman, J. (1986). Musicology. *Music Analysis*, 5(1), 97. <https://doi.org/10.2307/854343>
- Evers, H.-D. (2016). Nusantara: history of a concept. *Journal of the Straits Branch of the Royal Asiatic Society (JIMBRAS)*, 89(310), 3-14. <https://www.jstor.org/stable/26527734>

- Fahrudin, T. M., & Barakbah, A. R. (2018). Lyric text mining of dangdut: visualizing the selected words and word pairs of The Legendary Rhoma Irama's Dangdut Song In The 1970s Era. *Systemic: Information System and Informatics Journal*, 4(2). <https://doi.org/10.29080/systemic.v4i2.432>
- Gerring, J. (2017). Qualitative methods. *Annual Review of Political Science*, 20, 15-36. <https://doi.org/10.1146/annurev-polisci-092415-024158>
- Hariyanto, S. F., & Ridwan, I. (2024). Riau Province Government PPID. Pejabat Pengelola Informasidan Dokumentasi Riau (Information and Documentation Management Officer of Riau). <https://ppid.riau.go.id/pages/profil-daerah>
- Haslbeck, F. B., Schmidli, L., Bucher, H. U., & Bassler, D. (2021). Music is life—follow-up qualitative study on parental experiences of creative music therapy in the neonatal period. *International Journal of Environmental Research and Public Health*, 18(12). <https://doi.org/10.3390/ijerph18126678>
- Hatzikiriakos, A. M. (2023). 'Cantare alla greca con citere e violini': western musical transfers and localisations in Early Modern Crete. *Muzyka*, 67(4). <https://doi.org/10.36744/m.1539>
- Herzog, A. (1964). Transcription and transnotation in ethnomusicology. *Journal of the International Folk Music Council*, 16. <https://doi.org/10.2307/835093>
- Hidajat, R., Suyono, S., Sayono, J., Hasyimy, M. 'Afaf, Syahputri, D. R., Iskandar, S. A., Ismail, I. E. Bin, & Mohd Isa, N. B. (2021). Tafsir Tari Zapin Arab dan Melayu dalam Masyarakat Melayu (Interpretation of Arab and Malay Zapin Dance in Malay Society). *Journal of Education, Humaniora and Social Sciences (JEHSS)*, 4(2). <https://doi.org/10.34007/jehss.v4i2.935>
- INCAS. (2015). *Riau Province*. INCAS-The Ministry of Environment and Forestry Republic of Indonesia. <http://incas.menlhk.go.id/data/riau/>
- Juliana, J., Mahri, Aj. W., Fikri, M. K., Dahlan, D., Nusannas, I. S., Maulana, I., & Umar, A. (2024). Muslim intention to buy sustainable modest fashion: a value-attitude-behavior approach. *Journal of Lifestyle and SDGs Review*, 4(4), e02381. <https://doi.org/10.47172/2965-730X.SDGsReview.v4.n04.pe02381>
- Kroef, J. M. van der. (1951). The term Indonesia: its origin and usage. *Journal of the American Oriental Society*, 71(3), 166. <https://doi.org/10.2307/595186>
- Krummel, D. W., & Watanabe, R. T. (1968). Introduction to music research. *Notes*, 24(3). <https://doi.org/10.2307/893921>
- Laffan, M. (2006). Islam and the Malay-Indonesian World: Transmission and Responses. *Crossroads: An Interdisciplinary Journal of Southeast Asian Studies*, 17(2), 161-163. <https://www.jstor.org/stable/40860819>
- Lam, D. T. (2024). Some characteristics in light music performance towards sustainable development in vietnamese cultural identity. *Journal of Lifestyle and SDG'S Review*, 4(2). <https://doi.org/10.47172/2965-730X.SDGsReview.v4.n02.pe02464>
- Mardiani, R. (2021). Syiar Dalam Alunan Syair: Nasyid Seni Dakwah Islam di Bandung Tahun 1990-2004. *Al-Isnad: Journal of Islamic Civilization History and Humanities*, 2(2). <https://doi.org/10.22515/isnad.v2i2.4853>
- Matsunobu, K., & Bresler, L. (2014). Qualitative Research in Music Education. In *The Oxford Handbook of Qualitative Research in American Music Education* (pp. 21-39). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199844272.013.002>

- Merriam, A. P. (1964). *The anthropology of music*. Northwestern University Press.
- Nettl, B. (1983). *The study of ethnomusicology: thirty-one issue and concepts*. The Board of Trustees of the University of Illinois.
- Nofandi F., Widyaningsih, U., Rakhman, RA., Mirianto, A., Zuri, Z., & Harini, NV. (2009). Case study of ship traffic crowds in the Malacca Strait-Singapore by using vessel traffic system. *IOP Conf. Series: Earth and Environmental Science*, 1081(2022), 1-7. <https://doi.org/10.1088/1755-1315/1081/1/012009>
- Purnama, H. (2021). | Hukum Islam, Adat, dan Hukum Negara dalam Perkawinan Masyarakat Melayu di Pekanbaru, Riau: Keabsahan, Etika, dan Administrasi Perkawinan (Islami Law, Customs, and State Law in the Marriage Practice among Malay People in Pekanbaru Riau: Legalization, Aethics, and Marriage Administration). *Al-Ahwal: Jurnal Hukum Keluarga Islam*, 14(1), 1-10. <https://doi.org/10.14421/ahwal.2021.14101>
- Rohmad, M. A. (2020). The role of Islamic art in enhancing the spirituality of Indonesian young generation. *Teosofia: Indonesian Journal of Islamic Mysticism*, 9(1). <https://doi.org/10.21580/tos.v9i1.5376>
- Sanabria, Y. J. F. de, Apaza-Ticona, J., & Apaza-Chino, J. (2024). Linguistic Identity of students in the juliaca public pedagogical higher education school. *Journal of Lifestyle and SDGs Review*, 4(4), e01683. <https://doi.org/10.47172/2965-730X.SDGsReview.v4.n04.pe01683>
- Setiawan, A. (2023). Colonialism and nationalism in traditional Javanese gamelan music and some changing musical aesthetics. *Asian-European Music Research Journal*, 12. <https://doi.org/10.30819/aemr.12-3>
- Shaiakhmetova, A. K. (2022). Maqam in the context of Islamic musical culture. *Philosophy and Culture*, 8. <https://doi.org/10.7256/2454-0757.2022.8.37525>
- Sunarto. (2023). The impact of Hinduism and Buddhism on the music of Indonesia. *Asian-European Music Research Journal*, 11. <https://doi.org/10.30819/aemr.11-1>
- Taruskin, Richard., & Gibbs, C. Howard. (2013). *The Oxford history of Western music*. Oxford University Press.
- Wati, E. (2017). Musical Piety: Representation of Islam in Southeast Asia's Nasyid Boy-Band Music. *Journal of Culture, Arts, Literature, and Linguistics (CaLLs)*, 1(1). <https://doi.org/10.30872/calls.v1i1.706>
- Yılmaz, A., & Çiçek, M. (2024). A classification essay on Islamic poetry in contemporary Turkish literature. *Journal of Lifestyle and SDG'S Review*, 4(3). <https://doi.org/10.47172/2965-730X.SDGsReview.v4.n03.pe02581>
- Yusof, A., & Bidin, A. (2008). Perkembangan Seni Muzik dalam Peradaban Islam di Nusantara (The development of musical arts of Islamic civilization in Nusantara). *Journal of Al-Tamaddun*, 3(1), 48-67. <https://doi.org/10.22452/jat.vol3no1.3>
- Zamotin, M. (2020). Music as a research object of cultural anthropology by George Herzog. *Discourse*, 6(1), 49-61. <https://doi.org/10.32603/2412-8562-2020-6-1-49-61>

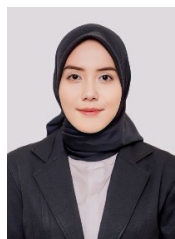
### Web Sites

**Web 1.** <https://museummusikindonesia.id/id/2021/11/19/iyeth-bustami-laksamana-raja-dilaut>

## Biodata of Authors



Assoc. Assoc. Prof. Dr. **Dra. Suryati**, M. Hum. was born in Kulon Progo, Special Region of Yogyakarta, Indonesia. She earned her Bachelor's degree in Music from the Department of Music, Faculty of Performing Arts, Indonesian Institute of the Arts Yogyakarta (ISI Yogyakarta), majoring in vocal performance. She continued her postgraduate studies at the Faculty of Cultural Sciences, Gadjah Mada University, where she received both her Master of Humanities and Doctoral degrees, specializing in performance and fine arts studies. Her research interests span a broad range of topics, including musicology, music education, vocal performance, and vocal ornamentation in Qur'anic recitation. She has actively contributed to the development of vocal music studies in Indonesia through numerous research projects and academic publications. Currently, she serves as a full-time lecturer in the Music Education Study Program at ISI Yogyakarta, with a particular focus on pop and jazz vocal instruction. In addition to her academic roles, she has held several key administrative positions at the university, including Secretary of the Department of Music and Dean of the Faculty of Performing Arts. Since 2023, she has been entrusted with a significant leadership role as the First Vice-Rector of the Indonesian Institute of the Arts Yogyakarta.



**Sevi Qurrotu A'yun**, S.Sn., M.A., recently completed her Master's degree at the School of Graduate Studies, Gadjah Mada University, in 2024. She holds a Bachelor's degree in Music Education from the Indonesian Institute of the Arts Yogyakarta (ISI Yogyakarta), where she studied from 2017 to 2021. During her undergraduate years, she was actively involved in various student organizations, particularly those focusing on jazz music. She frequently participated in jam sessions, music workshops, and other collaborative artistic events. In addition to her musical pursuits, she represented her university as a Qur'anic reciter in the National Musabaqah Tilawatil Qur'an for university students held in Aceh, Northern Sumatra Province. Under the supervision of Assoc. Prof. Dr. Suryati, she completed her undergraduate thesis on the application of maqam Hijaz in the popular Malay song *Laksmana Raja di Laut*, which forms the subject of this current publication. During her Master's program (2022-2024), she was actively engaged in community service projects, focusing on creating inclusive spaces for people with disabilities through the performing arts. Her activities included organizing live concerts for individuals with special needs and performing traditional gamelan music. Currently, she works as a professional vocal coach based in Yogyakarta, contributing to the local music scene through education and performance.

## **Biodata of Authors**



**Andre Indrawan** is a Professor of Music at the Indonesian Institute of the Arts Yogyakarta. He earned his Bachelor of Music with Honours in 1986 from the Department of Music, Faculty of Arts, Indonesian Institute of the Arts Yogyakarta. He holds two Master's degrees: a Master of Humanities in Performance Arts Studies (1994) from the Faculty of Cultural Sciences, Gadjah Mada University, Yogyakarta, and a Master of Music Studies (2000) from the Faculty of Music, University of Melbourne, Australia. In 2010, he was awarded a Doctor of Philosophy (Ph.D.) in Performing Arts and Fine Arts from Gadjah Mada University. In addition to his academic credentials, he holds high-level professional qualifications in classical guitar, including a Teaching Certificate from the Yamaha Music Foundation, Tokyo (1996), and the Licentiate of Music, Australia (L.Mus.A.) from the Australian Music Examinations Board (AMEB), Melbourne (1997). He has served as a full-time lecturer at the Indonesian Institute of the Arts Yogyakarta since 1987. He led the Department of Music as Head from 2011 to 2019, across two consecutive terms. In recognition of his long-standing academic and professional contributions, he was appointed Professor of Music in October 2023.

**Research Gate:** <https://www.researchgate.net/profile/Andre-Indrawan-3>

# An investigation into the effects of breath coaching-based breath exercise practices on stage and exam performance

Gökçe Sarvan

Assoc. Prof., Wind and Percussion Instruments Department, Kocaeli University State Conservatory, Kocaeli, Türkiye. Email: gokcesarvan@gmail.com ORCID: 0000-0001-5079-6041

DOI 10.12975/rastmd.20251332 Submitted February 9, 2025 Accepted July 21, 2025

## Abstract

An examination of the high school and undergraduate curricula in conservatory education reveals that breathing exercises are primarily incorporated as part of wind instrument and vocal instruction. There is no course content within the curricula of Turkish state conservatories that applies breathing exercises for stage anxiety or general well-being. Breath coaching has become formalized through the International Coaching Federation (ICF) and is approved by the Vocational Qualifications Authority (MYK). It has also started to be used as a therapeutic method within the discipline of psychology. The fact that these exercises can be applied to individuals across all professions and student populations—and that users have reported positive effects especially concerning anxiety and well-being—has generated the need to examine their impact on individuals pursuing a career in performing arts. A review of the literature shows that while there are descriptive studies on stage anxiety, the potential impact of exercises recommended in breath coaching on musicians' performance has not yet been scientifically studied. This gap constitutes the point of departure for this research. The study is designed using the case study method, one of the qualitative research methods. Participants were selected using purposive sampling and include 22 individuals who have graduated from or are currently studying at Turkish state conservatories and continue to perform. As a data collection tool, a scale titled "*Opinions on the Effects of Breathing Exercises on Stage and Exam Performance*"—developed by the researcher—was used. The Wilcoxon signed-rank test, one of the nonparametric statistical tests, was employed for data analysis. In practice, the researcher served as the breath coach and provided participants with online training in breathing exercises and respiratory physiology. The data collection tool was administered both as a pre-test and a post-test. As a result of the study, it was found that breath coaching-based practices had no significant effect on the number of breaths taken per minute ( $p > .05$ ) but had a significant positive effect on breath-holding duration ( $p < .05$ ), performance anxiety before and during performance, sweating, trembling, chills, and difficulty in breathing ( $p < .05$ ). It also positively affected shortness of breath during performance, breath-holding, throat tightness and dryness, saliva accumulation in the throat, muscular tension and clenching, muscular laxity and lack of control, breath control, and the ability to maintain focus during performance ( $p < .05$ ). In the future, the impact of breath coaching-based breathing exercise practices could be studied across different participant groups, in face-to-face settings, and using various experimental designs.

## Keywords

*breath coaching, breathing exercise, coaching, music, performance*

## Introduction

Anxiety, which every person experiences from time to time, is a frequent feeling among musicians and music students involved in stage performance. Musical performance encompasses numerous motor skills, aesthetics, coordination, and both mental and cognitive abilities (Kenny, 2006:5). Due to stage anxiety, performers may experience a decline in one or more of these abilities during live performance. The literature indicates that anxiety affects

performance and performers behaviorally, physically, and mentally (Clark, 2001; Miller, 2006). Performance anxiety is considered a form of occupational stress (Salmon & Meyer, 1992) and is categorized under social phobias since it occurs in a social context where the musician is subject to criticism by an audience (Davis, Merrith & Richards, 2001; Fehm & Schmidt, 2006; Osborne & Franklin, 2002). In social phobias, individuals develop assumptions and thought patterns about themselves

and their surroundings. This may result in physical symptoms such as trembling and sweating, cognitive distortions such as negative belief patterns, and behavioral responses such as avoidance of the stage.

As Miller (2004:1) states, the arts comprise two parts: mechanical proficiency and aesthetic competence. Even an artist who lacks the technical and mechanical skills of the first part cannot achieve excellence in the aesthetic dimension. Based on this perspective, while technical proficiency is essential for high performance, it is not sufficient alone; strengthening the performer's cognitive state may enhance performance in all areas affected by anxiety.

Numerous studies aiming to enhance cognitive skills, focus control, and anxiety reduction emphasize the importance of focusing the mind on the breath (Erdoğan & Yeygel, 2023:68). This is because breathing is a visible physiological activity. It can be said that consciously controlling and improving one's breathing plays a significant role in the regulation of mind and body (Çaylan & Otağ, 2020:88). This study aims to measure the concrete and cognitive effects of breathing exercises on musicians and to share methods that can be used lifelong. One of the study's contributions is recognizing that the breathing exercises used in performing arts education can be standardized.

## **Breathing**

Breath and breathing are defined as a healing prayer read to a patient, the inhalation of cigarette or pipe smoke, and a sign of vitality and life (Nefes). The World Health Organization defines proper breathing as filling the lungs completely with air and engaging the diaphragm during respiration (Diyafram). Healthy individuals breathe approximately 3,600 times per hour and 86,400 times per day. While it may be possible to survive for several weeks without food or water, the lack of respiration for approximately five minutes can result in death. According to Baydar (2003), oxygen

is transported to the blood via respiration, while waste carbon dioxide is expelled through the respiratory tract. Peter and Litchfield (2016) state that breathing behavior is behavioral in nature. One of the most effective and simple methods for healthy aging and living well is conscious and correct breathing. While the body operates unconsciously during passive respiration, breathing becomes active during activities such as singing, playing wind instruments, or exercising. The pattern of breathing can be activated depending on activity, health status, and emotional condition (Özgür, 2020:67). Just as we are mindful of the food we ingest, we should also pay attention to the quality of our breath. Lewis (2015) argues that thinking of breathing simply as inhaling and exhaling is akin to equating good nutrition with eating anything indiscriminately (Yalçın & Özbaşaran, 2021: 108). Proper breathing extends life expectancy and enhances quality of life. Every correct breath induces relaxation and mental liberation. During yawning—a reflex action—the entire respiratory system is open, and the diaphragm is active. For performance artists, breath is a liberating force that opens one emotionally and mentally.

Breathing exercises support the control of this power. According to Suner (2011:79), the aim of breathing exercises is to ensure that breath flows freely within the upper body without encountering any obstacles and to naturalize this action. Few people are aware that correct breathing positively affects the body's electrolyte balance, hemoglobin chemistry, and blood flow, as well as psychological aspects such as well-being, focus, and motivation. Breathing control and related exercises help stabilize and slow down conscious breathing. Exhalation duration extends. Unconscious breath-holding and pauses between breaths diminish. The individual gains competence in mind and concentration control (Erdoğan & Yeygel, 2023:68). In Italian, this control is

referred to as ‘appoggio’, meaning ‘support of the voice’. In his 1898 work, Shakespeare noted that even when a good singer exhales forcefully, they must still maintain air within the lungs using the appoggio technique. Miller also emphasizes that breathing should be quiet and deep through the nose, which enables the full use of lung capacity.

Tension and fear of making mistakes caused by stage fright can trigger anxiety in performers and block breath control. This can be resolved with expert assistance before it becomes chronic. Unconscious practices may cause bodily tension. According to Hopa (2013:114), such tension increases pressure in the vessels, slows blood circulation, and leads to accelerated respiration because organs are deprived of oxygen. Under stress and tension, individuals tend to fill only the upper part of the lungs. One of the most common mistakes is breath-holding. This habit can be corrected through proper exercises and increased awareness. Abdominal exercises that strengthen the diaphragm, as well as breath techniques used in yoga and meditation, may help overcome the tendency to hold the breath or breathe shallowly into the upper lungs (Ersöz, 2020:189).

Studies by Demirbilek et al. (2019:102) indicate that breathing exercises and inspiratory muscle training assist in the treatment of heart disease. A 2016 study by Janardan and Madhavi demonstrated that breathing exercises regulated cardiac parameters such as respiration, ejection fraction, aortic pressure, pulmonary artery pressure, and tissue oxygenation (Çaylan & Otağ, 2020:88). Önal’s (2023) study reported positive outcomes of breathing exercises in pregnancy, gynecological diseases, dialysis patients, and cardiovascular conditions.

To facilitate understanding of the physiology of conscious breathing, renowned flute virtuoso James Galway (1990:67) emphasized the importance of explaining correct breathing techniques in the most

concrete way possible. Similarly, Özgür (2020:67) argues that the technique should be explained using various visualizations based on the individual’s age and condition and that long-term, one-on-one training is beneficial.

### Diaphragmatic Breathing

In conscious breathing technique practices, the use of the diaphragm is explained in detail. Schindler et al. (2019) stated that dysfunctions of the diaphragm and other respiratory muscles compromise oxygen delivery and are among the causes of dyspnea in patients with heart failure (Çaylan & Otağ, 2020:86). Similarly, studies by Lage et al. (2018) and Seo et al. (2016) showed that diaphragmatic breathing and respiratory exercises altered thoracic cavity volumes in patients with heart failure. In a 2016 study by Janardan and Madhavi, it was found that diaphragmatic breathing decreased sympathetic activity and chemoreflex sensitivity, while enhancing baroreflex function (Çaylan & Otağ, 2020:89).

The diaphragm, located below the lungs, contracts downward and upward during respiration, a process commonly referred to as diaphragmatic breathing. In diaphragmatic breathing, air fills the lower lobes of the lungs. The ribs expand and stretch, and the abdominal area moves forward. In this case, the air is still inhaled into the lungs. Through breathing exercises and proper use of the diaphragm, lung capacity, normally around 2500-2700 cl, can be increased to 5500-7000 cl (Yalçın & Özbaşaran, 2021:108). In other words, it is biologically impossible to ‘breathe into the diaphragm’; it is a breathing technique named after the muscle tissue. According to Dünder (2019), diaphragmatic breathing refers to controlling respiration using the lower part of the lungs, the diaphragm, and abdominal muscles. In Garcia’s (1894) study, it was noted that in this technique, the lungs expand freely to the sides, back, and front, and that breathing should be slow and deep.

During inhalation, the ribs move upward and outward, the diaphragm contracts and flattens downward, and the abdomen expands outward and laterally. When the breath is held, the body is ready for exhalation: the diaphragm and abdominal muscles are expanded, and the throat is open. During exhalation, the ribs move downward and inward, the diaphragm rises, the abdominal wall contracts, and the pelvic floor lifts (Önder, 2013:162).

Breathing exercises can increase the lung volume accessible during respiration. In a study conducted by Mills (1949:110), one subject who practiced regular breathing exercises increased their air intake capacity by one liter in nine months, while another increased by half a liter in 18 days. Another desired positive outcome of breathing exercises is reducing the number of breaths taken per minute. In a study by Cevanşir and Gürel (1982:9-10), the respiratory rate—defined as the number of breaths per minute—was found to be 16-20 breaths on average for adults. This rate tends to be higher in individuals with respiratory and cardiac conditions. The goal of breathing exercises is to reduce this rate.

### **Breath Coaching**

A person who provides guidance on correcting improper breathing habits and instilling healthy breathing practices is known as a breath coach. To clarify this role, it is first important to define the coaching profession. Coaching is a process in which individuals address recurring challenges in their lives that can be resolved without assistance from the field of psychology. The professional boundaries of coaching were established with the founding of the International Coaching Federation (ICF) in 1995 (ICF, 2025). In Türkiye, coaching was officially recognized as a profession in 2016 (Vocational Qualification Authority—MYK, 2025).

According to Whitmore (2009) and Rosinsky (2003), coaching is a motivational approach

that helps individuals reach their highest potential (as cited in Armağan & Atıkan, 2022:326). A coach merely asks powerful questions, guiding individuals to discover their own solutions. Unlike mentoring or consultancy, coaching is non-hierarchical and non-directive. Coaches do not provide advice but instead trust in the client's potential. Matters that fall under the discipline of psychology—such as abuse, trauma, and assault—are not addressed by coaches and are referred to specialists. In therapy and psychological counseling, the recipient is called a 'client', whereas in coaching, they are referred to as 'customers'. The coaching process is solution-oriented, flexible, and aims to maintain high internal motivation by helping individuals discover their strengths (Talak, 2020:194). Organizations and individuals who receive coaching gain a competitive edge that cannot be easily replicated due to its skill-based nature.

As a subfield of coaching, breath coaching raises awareness about detrimental breathing habits that negatively affect a person's life (Karakuş, 2019:22). The goal is to help clients develop new breathing habits following sessions. During the coaching process, clients become aware of the harmful effects of unhealthy breathing and discover the benefits of correct breathing (Vardarlier, 2017:118-119). Breath therapy, by contrast, is administered in clinical or hospital settings by respiratory physiotherapists. In breath coaching, the coach helps the client identify their breathing patterns and suggests appropriate exercises and techniques to support improvement. It is not a form of medical care or treatment, and clients are informed of this during the initial session. The techniques and exercises recommended in breath coaching can be practiced for life and offer holistic benefits.

At this point, it is helpful to distinguish between breath coaching and breath therapy. Course notes from Istanbul NLP Academy—an ICF-accredited institution—explain the distinction as follows:

“A breath coach does not administer breath therapy. Breath therapy must be conducted in a hospital or clinical setting by respiratory physiotherapists. The techniques introduced and practiced in breath coaching sessions aim to enhance overall life quality and happiness levels, supporting physical, emotional, and mental well-being. They do not constitute medical care or treatment. It is ethically essential that this be communicated to clients during the first session” (Istanbul NLP Academy, 2023).

### Significance of the Research

A review of the literature on breathing exercises shows that Erdoğan and Yeygel (2023) studied their application in obstetrics, Çaylan and Otağ (2020) in heart failure, and Demirbilek et al. (2019) in reducing anxiety in dialysis patients. In the field of music, Şentürk and Türkmen (2024) investigated breathing techniques in vocal training, while Özgür (2020) examined them in singers. While proper breathing techniques have been studied in both medical and musical disciplines, no applied research has been found that explores the impact of breathing exercises specifically on reducing anxiety and improving performance quality among stage performers. In the field of coaching, Suner (2011) conducted research in theater, Demir and Doğanay (2009) in skill management, Karaman (2018) in sustainable individual performance, and Karabacak (2013) in academic coaching. Despite this, there is no academic resource focusing on breath coaching, nor an applied study on the subject. This research aims to fill that gap by exploring how breath coaching can enhance stage performance and reduce anxiety during live performances. The study originated from the idea that musicians who experience negative emotions before, during, or after a performance may achieve breath and emotional regulation through these exercises. When focus is successfully maintained on breathing and performance through the use of exercises, anxiety and all associated cognitive and physical symptoms are reduced, and performance improves.

Furthermore, breath exercises traditionally passed down from instructor to student in wind and vocal training can now be standardized through this research.

### Research Problem

Although the literature contains studies on coaching, breathing techniques, emotional control, and physical stabilization, no research has examined how specific exercises used in breath coaching may affect musicians before, during, and after a performance. Many musicians, despite playing wind instruments, are unable to regulate their breathing and emotional state during performances. Thus, the research question was formulated as follows:

- What is the effect of regularly practicing the breathing exercises recommended in breath coaching on musicians' anxiety levels and stage performance?

The impact of the suggested techniques and exercises has been analyzed using scientific data, and this is the first study in the literature of its kind. The study's sub-problems include:

- What is the effect of a breath coaching-based breathing exercise program on pre-performance and performance-time anxiety levels, and on behavioral, physical, and cognitive difficulties? and
- How do breathing exercises affect breath control and the ability to maintain focus during musical performance?

### Method

#### Research Design

According to Creswell (2014), the method to be developed for solving the research problem should be determined based on the nature of the problem, the aim of the study, and the individual characteristics of the researcher. In line with this definition, the current study is designed as a qualitative case study. Case studies aim to provide a detailed description of a specific phenomenon. “Case

study requires an in-depth and longitudinal analysis of data collected through participant observation and in-depth interviews” (Glesne, 2012:30).

The focus of this study is the implementation of breathing exercises based on breath

coaching. To investigate their impact on stage and exam performance, a one-group pretest-posttest experimental design was employed. Surveys administered before and after the exercises to the same group constitute the pretest-posttest structure of this design.

## Participants

Table 1. Participant characteristics

Variables		f	%
Gender	Women	16	%72.73
	Men	6	%27.27
Age	Under 18 years	7	%31.82
	Over 18 years	15	%68.18
Education level	Student	14	%63.64
	Graduate	8	%36.6

The study was conducted with 22 participants who were either graduates or currently enrolled students from state conservatories in Turkey. Among the participants, 8 were graduates and 14 were students. Seven were under 18 years old, and 15 were over 18. There were 6 male and 16 female participants. In developing the scale, participants were selected from individuals who had received conservatory education and were actively engaged in performance. In forming the hypotheses, physical and cognitive difficulties experienced before and during performances—when anxiety was most intense—were included in the survey. As the study aimed to measure the effects before and after the breathing exercises, a one-group pretest-posttest design was used. A follow-up survey was administered after the seminar and exercises, and item analysis was performed. Since the number of subjects was fewer than 30 and data were not collected using interval or ratio scales, non-parametric testing was preferred. The Wilcoxon test for two related samples was used to verify the hypotheses.

## Data Collection Tools

### Opinions scale on the effect of breathing exercises on stage and exam performance

This scale was developed by the researcher, in consultation with a certified breath coach, an academician who conducts breathing exercise seminars, and a wind instrument instructor. The scale consists of 19 items (Appendix 1). Yöndem’s (2012) study on anxiety response groupings was one of the reference sources in formulating the items. Validity and reliability analyses were conducted on the pretest data of the scale. The Cronbach’s Alpha internal consistency coefficient was calculated as  $\alpha = 0.946$ , indicating high reliability. The average item-total correlation was found to be 0.481, showing a moderate relationship with the overall scale structure. The Kaiser-Meyer-Olkin (KMO) sampling adequacy value was 0.409, which is below the recommended threshold of 0.50 for factor analysis. Bartlett’s Test of Sphericity was significant ( $\chi^2 = 396.329$ ;  $p < .001$ ), suggesting sufficient correlation between items for factor analysis. The total variance explained in the factor analysis was 54.153%, indicating that the factor structure of the scale is acceptable and items represent the construct adequately.

Validity and reliability analyses were also performed on the posttest data. The Cronbach's Alpha coefficient was calculated as  $\alpha=0.913$ , showing high internal consistency. The average item-total correlation was 0.356, suggesting a moderate relationship with the overall scale. The KMO value was found to be 0.575, and Bartlett's Test of Sphericity was significant ( $\chi^2=446.320$ ;  $p<.001$ ), confirming the data set's adequacy for factor analysis. The explained total variance was found to be 120.169%, indicating a strong factor structure and high explanatory power of the items. In conclusion, the scale demonstrated high reliability and structural validity in both pretest and posttest applications.

### Data Analysis

Since the number of participants was fewer than 30, data were analyzed using the Wilcoxon non-parametric test for two related samples. The level of significance ( $p$ ) was set at 0.05.

### Procedure

Before implementing the breath coaching-based exercises, the data collection tool was administered to assess participants' baseline conditions. An interactive online training session was conducted, in which all details of the research and breathing techniques were explained. Participants acquired knowledge and practical skills related to breathing exercises. Toward the end of the session, participants shared their immediate experiences regarding the effects of the exercises. After performing the breathing exercises regularly, participants completed the survey again following their next exam or performance. Comparative analysis of the scale data was conducted to evaluate the effect of the exercises on performance anxiety. The researcher also acted as the breath coach in the application phase and is a certified breath coach recognized by the International Coaching Federation (ICF). The application took place between December 15, 2024, and January 20, 2025.

### Recommended Breathing Technique

During the seminar, it was recommended that all breathing exercises be performed through nasal inhalation and exhalation unless otherwise specified. Participants were instructed to breathe quietly and deeply, fully utilizing their lungs and minimizing the number of breaths per minute through regular practice. They were asked to imagine a colorful balloon in their abdomen—inflating it while inhaling through the nose and deflating it while exhaling. This visualization technique was especially useful for participants unfamiliar with diaphragmatic breathing. Participants were asked to ensure that their shoulders remained relaxed and did not rise. This directive ensured that air was directed toward the lower rather than the upper lobes of the lungs. Participants placed their hands on their abdomen to feel the outward expansion during inhalation, thus concretizing diaphragmatic activation. Upon exhalation, they were instructed to deflate and lower the abdomen. Efforts were made to minimize chest movement during both inhalation and exhalation.

### Exercises Applied

3.3.1 Breath, breathing for stress, breath to enhance mental performance, 3.3.3.3 breath, emotion regulation breath, worry and anxiety breath (vagus breath), control pause measurement and two exercises to increase control pause duration, hot chocolate breath, ocean breath, dandelion breath, and starfish breath were applied.

### Ethics

Approval for the research was obtained from the Kocaeli University State Conservatory Directorate with document number 655261 dated 25.09.2024, confirming its compliance with scientific research and publication ethics.

## Findings

### Effect of breathing exercises on the number of breaths per minute at rest

Table 2. Wilcoxon Signed Rank Test results of the participants' views on the number of breaths per minute before and after breath coaching-based breathing exercises

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	8	6,94	55,50	1,323	0,186
Positive Ranks	4	5,63	22,50		
Ties	10				

As seen in Table 2, there was no statistically significant difference between the participants' scores on the number of breaths per minute before and after the exercises

( $z=1.323$ ,  $p>0.05$ ). Thus, the exercises did not significantly affect the number of breaths taken per minute at rest.

### Effect of breathing exercises on breath-holding duration

Table 3. Wilcoxon Signed-Rank Test results of participants' views on breath-holding duration before and after breath coaching-based breathing exercises

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	15	6,40	55,50	2,749	0,006
Positive Ranks	2	11,87	22,50		
Ties	22				

Table 3 shows a significant difference between pre- and post-exercise scores on breath-holding duration ( $z=2.749$ ,  $p<0.05$ ). Participants' breath-holding times clearly increased. "In medicine, hyperventilation refers to breathing that is too fast and/or too deep. It often leads to fainting sensations and other symptoms, usually associated

with panic attacks. Hyperventilation may also be a response to metabolic acidosis and may cause blood vessel constriction" (Hyperventilation, 2020). Breath coaching suggests breath-holding exercises to reverse and prevent hyperventilation. The exercises positively affected breath-holding duration.

### Effect on pre-performance anxiety

Table 4. Wilcoxon Signed Rank Test results of participants' views on pre-performance anxiety before and after breath coaching-based breathing exercises

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	17	10,53	179,00	2,771	0,006
Positive Ranks	3	10,33	31,00		
Ties	2				

As shown in Table 4, there is a significant difference between the pre- and post-exercise scores regarding pre-performance anxiety ( $z=2.771$ ,  $p<0.05$ ). The exercises positively influenced anxiety before performance and helped reduce it.

### Effect on pre-performance sweating

Table 5. Wilcoxon Signed-Rank Test results of participants' views on pre-performance sweating

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	15	10,23	153,50	2,974	0,003
Pozitive Ranks	3	5,83	17,50		
Ties	4				

As shown in Table 5, a significant difference was found in sweating before performance ( $z=2.974$ ,  $p<0.05$ ). Exercises reduced sweating that could negatively impact performers before going on stage.

### Effect on pre-performance trembling

Table 6. Wilcoxon Signed-Rank Test results of participants' views on pre-performance trembling

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	12	11,13	133,50	2,103	0,035
Pozitive Ranks	6	6,25	37,50		
Ties	4				

As indicated in Table 6, a significant difference was observed in trembling before performance ( $z=2.103$ ,  $p<0.05$ ). Exercises positively impacted and reduced trembling.

### Effect on pre-performance chills/cold hands and feet

Table 7. Wilcoxon Signed Rank Test results of participants' views on pre-performance chills/cold extremities

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	16	11,03	176,50	2,129	0,033
Pozitive Ranks	5	10,90	54,50		
Ties	1				

Table 7 shows a significant difference in the pre-performance chills or coldness in hands and feet ( $z=2.129$ ,  $p<0.05$ ). Chilling in the extremities can cause rapid muscle cooling, particularly reducing agility. The exercises helped reduce such symptoms before performance.

### The effect of breathing exercises on difficulty in breathing before performance

Table 8. Wilcoxon Signed Rank Test results regarding participants' views on difficulty in breathing before performance, before and after the breathing exercise experiment based on breath coaching

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	16	11,03	176,50	2,129	0,033
Pozitive Ranks	5	10,90	54,50		
Ties	1				

As shown in Table 8, a statistically significant difference was found between the participants' scores before and after the implementation regarding their difficulty in breathing before performance ( $z=2.883$ ,  $p<0.05$ ). Holding the breath alters the amount of oxygen reaching the brain and is a tendency that increases anxiety levels. It can be concluded that the breathing exercises had a positive effect on the difficulty of breathing before performance. Participants were able to maintain breath control more easily before the performance.

## The effect of breathing exercises on anxiety during performance

**Table 9.** Wilcoxon Signed Rank Test results regarding participants' views on anxiety during performance, before and after the breathing exercise experiment based on breath coaching

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	19	10,79	205,00	3,747	0,001
Positive Ranks	1	5,00	5,00		
Ties	2				

As shown in Table 9, a statistically significant difference was found between the participants' scores before and after the implementation regarding anxiety during performance ( $z=3.747$ ,  $p<0.05$ ). The

breathing exercises had a positive effect on anxiety during performance, and it was observed that anxiety levels decreased after the exercises.

## Effect of breathing exercises on sweating during performance

**Table 10.** Wilcoxon Signed Rank Test results regarding participants' views on sweating during performance, before and after the breathing exercise experiment based on breath coaching

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	14	10,43	146,00	2,644	0,008
Positive Ranks	4	6,25	25,00		
Ties	4				

As shown in Table 10, a statistically significant difference was found between the participants' scores before and after the implementation regarding sweating during performance ( $z=2.644$ ,  $p<0.05$ ). Sweating during performance may cause loss of control

over the instrument, concern about being judged by the audience, and performance difficulties. It was observed that breathing exercises had a positive effect on excessive sweating during performance and helped reduce sweating.

## Effect of breathing exercises on tremor during performance

**Table 11.** Wilcoxon Signed Rank Test results regarding participants' views on tremor during performance, before and after the breathing exercise experiment based on breath coaching

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	12	13,25	159,00	2,027	0,043
Positive Ranks	8	6,38	51,00		
Ties	2				

As shown in Table 11, a statistically significant difference was found between the participants' scores before and after the implementation regarding shaking during performance ( $z = 2.027$ ,  $p < 0.05$ ). Shaking significantly reduces physical control during performance. It was observed that breathing exercises had a positive effect on shaking during performance and helped reduce it.

## Effect of breathing exercises on feeling cold/freezing hands and feet during performance

**Table 12.** Wilcoxon Signed Rank Test results regarding participants' views on feeling cold/cold hands and feet during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	16	10,13	162,00	2,138	0,033
Pozitive Ranks	4	12,00	48,00		
Ties	2				

As seen in Table 12, a statistically significant difference was found between participants' pre-test and post-test scores regarding the feeling of cold/cold hands and feet during performance ( $z=2.138$ ,  $p<0.05$ ). A drop in

body temperature during performance can lead to muscular cooling. It is observed that the breathing exercises had a positive effect on reducing the feeling of cold/coldness in the hands and feet during performance.

## Effect of breathing exercises on shortness of breath and breath-holding during performance

**Table 13.** Wilcoxon Signed Rank Test results regarding participants' views on shortness of breath and breath-holding during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	14	13,75	192,50	2,688	0,007
Pozitive Ranks	7	5,50	38,50		
Ties	1				

As seen in Table 13, a statistically significant difference was found between participants' pre-test and post-test scores regarding shortness of breath and breath-holding during performance ( $z=2.688$ ,  $p<0.05$ ). The tendency to hold one's breath during performance both reduces oxygen intake,

thereby increasing anxiety, and decreases breath capacity, especially in wind instrument players and vocal performers. It is observed that the breathing exercises had a positive effect on shortness of breath and breath-holding during performance, and that this behavior decreased.

## The effect of breathing exercises on throat tension during performance

**Table 14.** Wilcoxon Signed Rank Test results regarding participants' views on throat tension during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	13	11,04	143,50	2,542	0,011
Pozitive Ranks	5	5,50	27,50		
Ties	4				

As seen in Table 14, a statistically significant difference was found between participants' pre-test and post-test scores regarding throat tension during performance ( $z=2.542$ ,  $p<0.05$ ). The breathing exercises were found to have a positive effect on reducing throat tension during performance. This reaction,

which directly affects performance—particularly for wind instrument players and vocal performers—was positively influenced by the breathing exercises.

### The effect of breathing exercises on dryness in the throat during performance

**Table 15.** Wilcoxon Signed Rank Test results regarding participants' views on dryness in the throat during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	17	10,56	179,50	2,791	0,005
Positive Ranks	3	10,17	30,50		
Ties	2				

As seen in Table 15, a statistically significant difference was found between the pre-test and post-test scores of participants regarding dryness in the throat during performance ( $z=2.791$ ,  $p<0.05$ ). The breathing exercises were found to have a positive effect on dryness in the throat during performance. Dryness in the throat is a condition that impairs performance in vocalists and wind

instrument players by disrupting the musical flow and triggering a reflex to generate saliva. This reflex can cause throat contractions or delays in musical expression due to the urge to create saliva. It is possible to state that breathing exercises had a positive impact on throat dryness in a way that supports musical performance.

### The effect of breathing exercises on saliva accumulation in the throat during performance

**Table 16.** Wilcoxon Signed Rank Test results regarding participants' views on saliva accumulation in the throat during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	15	9,57	143,50	3,183	0,001
Positive Ranks	2	4,75	9,50		
Ties	5				

As seen in Table 16, a statistically significant difference was found between the pre-test and post-test scores of participants regarding saliva accumulation in the throat during performance ( $z=3.183$ ,  $p<0.05$ ). Particularly for wind instrument players and vocalists, saliva accumulation during performance

interrupts musical flow and causes frequent swallowing. With this accumulation, throat flexibility and openness diminish. Breathing exercises were observed to have a positive effect on saliva accumulation in the throat during performance.

### The effect of breathing exercises on muscle tension and muscle clenching during performance

**Table 17.** Wilcoxon Signed Rank Test results regarding participants' views on muscle tension and muscle clenching during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	16	10,69	171,00	2,504	0,012
Positive Ranks	4	9,75	39,00		
Ties	2				

As seen in Table 17, a statistically significant difference was found between the pre-test and post-test scores of participants regarding muscle tension and muscle clenching during performance ( $z=2.504$ ,  $p<0.05$ ). Anxiety-induced muscle tension that occurs during stage performance makes it difficult for

performers to control their bodies and instruments, negatively impacting their performance. Breathing exercises were observed to have a positive effect on muscle tension and muscle clenching during performance.

## The effect of breathing exercises on muscle emptying and muscle uncontrollability during performance

**Table 18.** Wilcoxon Signed Rank Test results regarding participants' views on muscle emptying and muscle uncontrollability during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	15	11,73	176,00	2,664	0,008
Pozitive Ranks	5	6,80	34,00		
Ties	2				

As shown in Table 18, there is a statistically significant difference between participants' scores before and after the experiment regarding muscle relaxation or loss of muscle control during performance ( $z=2.664$ ,  $p<0.05$ ). Muscle relaxation due to anxiety that arises during stage performance makes

it difficult for performers to maintain bodily control and negatively affects their performance. The exercises were observed to have a positive effect in reducing muscle relaxation/loss of control during performance.

## Effect of breathing exercises on breath control during performance

**Table 19.** Wilcoxon Signed Rank Test results regarding participants' views on breath control during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	15	11,27	169,00	3,007	0,003
Pozitive Ranks	4	5,25	21,00		
Ties	3				

As shown in Table 19, there is a statistically significant difference between participants' scores before and after the experiment regarding breath control during performance ( $z=3.007$ ,  $p<0.05$ ). The ability to focus on breath is closely related to performers'

cognitive control. The breathing exercises were found to positively influence breath control during performance. Controlling the breath helps support the performer's physical control during their performance.

## The effect of breathing exercises on the ability to maintain focus during performance

**Table 20.** Wilcoxon Signed Rank Test results regarding participants' views on maintaining focus during performance before and after the breath coaching-based breathing exercise experiment

Comparison	n	Mean Rank	Rank Sum	z	p
Negative Ranks	16	11,78	188,50	2,549	0,011
Pozitive Ranks	5	8,50	42,50		
Ties	1				

As shown in Table 20, a statistically significant difference was found between pre- and post-experiment scores regarding the ability to stay focused during performance ( $z=2.549$ ,  $p<0.05$ ). Breathing exercises had a positive effect on maintaining focus during performance. The control of breath

was observed to support the performer's cognitive control.

A total of 374 responses were collected regarding participants' anxiety levels before performance. The first two of the 19 items had a different scale, so only responses to items 3 through 19 were included in the frequency analysis. According to the frequency distributions, most participants gave scores of 7 (16.3%) and 6 (15.2%). The lowest frequency was a score of 10 (2.1%). These results indicate that participants' anxiety levels were predominantly at a moderate-to-high level before the experiment.

As with the pre-test, after the experiment, the frequency analysis excluded the first two items due to scale differences and analyzed responses from items 3 through 19 (again totaling 374 responses). The highest frequencies were 3 points (25.1%) and 1 point (20.6%). In contrast, the lowest frequencies were 10 points (0.5%), 9 points (0.8%), and 8 points (2.9%). These results suggest that participants' anxiety levels after the experiment predominantly shifted to a low level. The frequency values generally confirm that the study effectively reduced anxiety levels.

## **Discussion**

When studies addressing stage anxiety are examined, it is observed that in the research conducted by Umuzdaş and Tök (2020:408) at the undergraduate level in music education, and similarly in the study by Güdek and Çiçek (2017: 6-8), anxiety was measured in relation to variables such as gender, grade level, instrument, and school (2017:408). However, no study was encountered that examined the root causes of anxiety or tested whether techniques supporting performers in coping with anxiety reduced anxiety levels. In the study conducted by Yöndem (2012), it was found that participants experienced the highest levels of anxiety prior to and during the performance. Based on this, it can be suggested that grouping the questions in this study's survey under pre-performance and during-performance categories is appropriate. In the same study, physical

symptoms of anxiety included sweating and trembling, while attention deficit and loss of focus were classified as behavioral symptoms. Similarly, the most intensely experienced physical and behavioral symptoms of anxiety among performers were also included in the questions of the current study. In Işkın's study (2018:7), breath-holding and shortness of breath were noted as physical responses to anxiety. In addition, Baydağ's research proposed breathing exercises as a strategy to reduce performance anxiety. However, since both Işkın's and Baydağ's studies were descriptive in nature, they did not evaluate the effectiveness of such exercises (2018:2208). Unlike the current study, Baydağ and Alpagut (2016:864) described sweating, loss of breath control, throat dryness, and muscle tension not as outcomes but as causes of stage anxiety. Still, the recommendation of breathing exercises as a method of coping with anxiety is consistent across the literature. Durak (2020:8,108) also stated that relaxing exercises are effective methods for coping with anxiety. These studies, which serve as precedents for the current one, explored topics related to stage anxiety and examined why conservatory-level students might need applications such as breath coaching. They reinforce the scientific rationale of the research problem. All previous studies were found to be evaluative in nature, and no research was found that implemented and measured intervention techniques for addressing the issue.

## **Conclusion**

This study was conducted with 22 participants who had either graduated from or were currently enrolled in state conservatories in Türkiye. Participants' experiences of anxiety and physical symptoms before and during stage performances were gathered through an initial questionnaire. During an online applied breath seminar held via Zoom, proper breathing techniques were explained, and the breathing exercises designed for the study were introduced to the participants. Over a 45-day period,

during which all participants performed at least once in an exam or stage setting, the exercises were practiced regularly. The effectiveness of the exercises and changes observed during performances were assessed through a follow-up questionnaire. The survey questions evaluated participants' anxiety levels before and during performance, sweating, trembling, chills/freezing of hands and feet, throat tension, throat dryness, saliva accumulation in the throat, muscle relaxation, muscle tension, breath control, and the ability to focus on the breath. Additionally, each participant's number of breaths per minute and control pause (the time they could hold their breath after a full exhalation) were measured. All surveys were completed through Google Forms, and the analysis was conducted on both individual and group levels. To better observe reductions in anxiety, the scoring system was designed so that lower scores generally corresponded to more favorable outcomes.

Based on the collected data, participants experienced positive changes across all measured areas. Breath-holding times increased and anxiety levels decreased. Improvement was observed in all questions related to physical difficulties experienced by participants, with the exception of the number of breaths taken per minute. In all other questions, the expected critical value was found to be less than 0.05. Therefore, the research hypothesis is considered to be accepted.

As a result of this study, it has been observed that, in addition to technical and academic training in music education, new methods that enhance well-being and elevate performance levels can be identified and implemented. A further noteworthy observation is that solutions to physical and cognitive challenges may lie not only in academic approaches but also in innovative techniques—such as breathing exercises—that help regulate the nervous system and offer rapid relief.

## Recommendations

### Recommendations for Researchers

The positive effects observed as a result of this study may be further disseminated and deepened through new research and studies in the field. The study can be replicated using an experimental design with control and experimental groups, with the practitioner being someone other than the author. The research can also be restructured by grouping all participants or by conducting one-on-one coaching sessions. In future research, the effectiveness of face-to-face breath coaching practices can be measured.

### Recommendations for Practitioners

Musicians who incorporate breathing exercises into their daily routines may also benefit from tools that strengthen respiratory function such as the *Breath Builder* developed by Harold Hansen, *Triflo respiratory exerciser*, or *Pneumo Pro*. They may consider working with a breath coach according to their individual needs. Collaborating with psychology professionals specialized in breath therapy can help performing artists who experience issues before or during performance by preventing these issues from becoming chronic, alleviating them, or keeping them under control. Topics such as anxiety management, breath control, performance enhancement, and practice efficiency can be included in conservatory curricula. Furthermore, the professional development of academic staff can be supported through in-service training to enhance their competence in this area.

### Limitations of the Study

This study was conducted with 22 participants who are currently studying or have graduated in the field of instrumental or vocal performance from state conservatories in Türkiye. The breath exercises used in breath coaching sessions focused on performance anxiety and concentration were included in the study. It should be noted that the number of participants was limited due to constraints. The effects of the breathing

exercises were examined over a short-term period. No control group was included in the study. The author also served as the practitioner during the research process.

### **Acknowledgements**

This study was supported by the Kocaeli University Scientific Research Projects Coordination Unit under project number SBA-2024-4141. I would like to express my sincere gratitude to Kocaeli University for their support throughout the project, to all participants, and to the parents of participants under the age of 18 for their consent and support.

## References

- Armağan, E., & Altınkan, D. (2022). Koçluk sürecinde bireylerin aktivite odaklı güdülenme, ilgilenim düzeyleri ve ağızdan ağıza iletişim eğilimlerinin incelenmesi (A Research on individuals activity focused motivation, levels of involvement and word of mouth communication tendencies in the coaching process). *Mehmet Akif Ersoy Üniversitesi Uygulamalı Bilimler Dergisi*, 6(2), 323-353. <https://dergipark.org.tr/tr/download/article-file/2438895>
- Baydağ, C. (2018). Müzik eğitimi perspektifinde performans kaygısına genel bir bakış (An overview of performance anxiety in music education perspective). *Journal of Social and Humanities Sciences Research*, 5(25), 2204-2212. <https://doi.org/10.26450/jshsr.600>
- Baydağ, C., & Alpagut, U. (2016). Müzik eğitimi bölümü ve konservatuvar öğrencilerinin sahne/performans kaygısı açısından karşılaştırılması (pilot çalışma) (Comparison of department of music education and conservatory students in terms of stage/performance anxiety (pilot study)). *Uluslararası Sosyal Araştırmalar Dergisi*, 9(44), 857-864.
- Baydar, A. (2003). *Bakır üflemeli çalgılarda nefes kontrolü ve geliştirilmesi (Breath control and development in brass wind instruments)*. Master thesis. Dokuz Eylül University. İzmir, Türkiye.
- Cevanşir, B., and Gürel, G. (1982), *Foniatiri*, İstanbul: İstanbul Üniversitesi Tıp Fakültesi Yayını.
- Clark, D.M. (2001). *A cognitive model of social phobia*. New York: The Guilford Press.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE Publications.
- Çaylan, K., and Otağ, A. (2020). Kalp yetersizliğinde nefes egzersizleri ve etkili egzersiz terapileri (Breath exercises and effective exercise therapies in heart failure). *Turkish Journal of Science and Health*, 1(2), 84-93. <https://dergipark.org.tr/en/download/article-file/1178067>
- Davis, P., Merrith, L., & Richards, A. (2001). Performance anxiety: loss of spoken edge. *Journal of Voice*, 15(2), 257-269. [https://doi.org/10.1016/S0892-1997\(01\)00026-1](https://doi.org/10.1016/S0892-1997(01)00026-1)
- Demir, Ö., & Doğanay, A. (2009). Öğretmen eğitiminde bilişsel koçluk yaklaşımı (Cognitive coaching approach in teacher education). *Journal of Uludağ University Faculty of Education*, 22(2), 717-739. <https://dergipark.org.tr/tr/pub/uefad/issue/16690/173468>
- Demirbilek, H., Nalçacı, S. O., Taş, D., Parmaksız, E., Akgüç, E., Durmaz, S., & Külah, E., (2019). Doğru nefes alarak, diyaliz kaygısını azaltabilir miyiz? (Can we reduce dialysis anxiety by proper breathing?). *NefroHemDergi*, 14(3), 97-102. <https://dergipark.org.tr/tr/download/article-file/818884>
- Durak, M. (2020). *Müzik eğitimi anabilim dalı öğrencilerinin piyano performansına yönelik öz yeterlik algıları ile sınav kaygıları arasındaki ilişki* (The relationship between music education department students' self-efficacy perceptions towards piano performance and their exam anxiety). Master thesis. Marmara University. İstanbul, Türkiye.
- Dündar, K. (2019). *Diyafram solunumu ile akciğer solunumu kullanımının özellikleri, herkes için spor ve wellness araştırmaları 2* (Features of diaphragmatic breathing and lung breathing, sports and wellness research for everyone 2). Ankara: Sonçağ Matbaacılık.

- Erdoğan, M., & Yeygel, Ç. (2023). Doğuma hazırlık sınıflarında uygulanan yoga nefes egzersizleri, yoga hareketleri ve meditasyon teknikleri (Breathing exercises, yoga movements and meditation techniques used in birth preparation classes). *Kadın Sağlığı Hemşireliği Dergisi*, 9(Özel Sayı-1), 67-72. <https://dergipark.org.tr/tr/download/article-file/3151713>
- Ersöz, B. (2020). Flüt çalma sanatında nefes tekniğini geliştirici çözümler (Solutions that enhance breathing technic in art of flute playing). *Sahne Ve Müzik*, (11), 187-209. <https://dergipark.org.tr/tr/pub/smead/issue/56125/772159>
- Fehm, L., & Schmidt, K. (2006). Performance anxiety in gifted adolescent musicians. *Journal of Anxiety Disorders*, 20(1), 98-109. <https://pubmed.ncbi.nlm.nih.gov/16325117>
- Galway, J. (1990). *Flute*, London: Kahn & Averill.
- Garcia, M. (1894). *Hints on Singing*, Ascherberg, New York: Hopwood Crew Limited.
- Glesne, C. (2012). *Nitel araştırmaya giriş*. Ankara: Anı Yayıncılık.
- Güdek, B., & Çiçek, V. (2017). Mesleki müzik eğitimi alan lisans öğrencilerinin müzik öğrencilerinin müzik performans kaygı düzeylerinin çeşitli değişkenlere göre incelenmesi (Investigating the music performance anxiety levels of undergraduate students who have professional music education according to various variables). *The Journal of Academic Social Science Studies*, 58 (Summer II), 1-10. <http://dx.doi.org/10.9761/JASSS7143>
- Hiperventilasyon. (2020). Wikipedia. <https://tr.wikipedia.org/wiki/Hiperventilasyon>
- Hopa, E. (2013). Tahta ve bakır üflemeli çalgı çalan müzisyenlerde nefes kontrolü (Breath control of woodwind and brass instrument players). *Sanat Ve Tasarım Dergisi*, 4(4), 109-116. <https://dergipark.org.tr/tr/pub/sanattasarim/issue/20648/220300>
- Işkın, S. (2018). *Mesleki müzik eğitimi veren kurumlarda performans kaygısı ve öz-yeterlik algısının çalgı başarısına etkisi* (The effects of performance anxiety and self-efficacy perception on instrument success in institutions providing vocational music education). Master thesis. Marmara University. Istanbul, Türkiye.
- İstanbul NLP Academy. (2023). İstanbul NLP International & Nefes Koçluğu Manuel (Istanbul NLP International & Breath Coaching Manual).
- Janardan, C., & Madhavi, K. (2016). Influence of music therapy and breathing exercises on anxiety in post-operative cardiac diseased individuals. *International Journal of Physiotherapy*, Vol 3(1), 22-28. <https://doi.org/10.15621/ijphy/2016/v3i1/88903>
- Karabacak, K. (2013). Akademik koçluk sisteminin öğrencilerin akademik başarısına etkisi (The effect of academic coaching on students academic performances). *Sakarya Üniversitesi Eğitim Fakültesi Dergisi*, (20), 81-94. <https://dergipark.org.tr/tr/pub/sakaefd/issue/11216/133949>
- Karakuş, K, H. (2019). *Okul yöneticilerinin koçluk rolleri ile öğretmenlerin örgütsel özdeşleşme düzeyleri arasındaki ilişki* (The relationship between the coaching roles of school principals and teachers' organizational identification levels). Master thesis. Pamukkale University. Denizli, Türkiye.

Karaman, D. (2018). Koçluk eğitimleri ile sürdürülebilir bireysel performans ve istihdamın sağlanması (Providing sustainable individual performance and employment with coaching trainings). *Sosyal Araştırmalar Ve Davranış Bilimleri Dergisi*, 4(6), 300-310. <https://dergipark.org.tr/tr/pub/sadab/issue/38907/454726>

Kenny, D.T. (2006). Music performance anxiety: origins, phenomenology, assessment and treatment. *Context: A Journal of Music Research; Music Performance Anxiety*, 1-11

Lage, S. M., Britto, R. R., Brandão, D. C., Pereira, D. A. G., Andrade, A. D., & Parreira, V. F. (2018). Can diaphragmatic breathing modify chest wall volumes during inspiratory loaded breathing in patients with heart failure? *Brazilian Journal of Physical Therapy*, 22(6), 452-458. <https://doi.org/10.1016/j.bjpt.2018.04.005>

Lewis D. (2015). *Nefes almayı bilmek-adım adım nefes teknikleri* (Knowing how to breathe - step by step breathing techniques). İstanbul: Şira yayınları.

Miller, R. (2004). *Solutions For Singers*, Oxford: Oxford University Press.

Miller, C.B. (2006). *A discussion on performance anxiety*. <https://www.mostlywind.co.uk/perf.html>

Mills, J.N. (1949) Variability of The Vital Capacity of The Normal Human Subject. *Journal of Physiology*, 110(1-2), 76-82. <https://doi.org/10.1113/jphysiol.1949.sp004422>

Osborne, M. S. & Franklin, J. (2002). Cognitive processes in music performance anxiety. *Australian Journal of Psychology*, 54(2), 86-93. <https://doi.org/10.1080/00049530210001706543>

Önal, G. F. (2023). Gündelik hayatta nefesin önemi ve mesleki nefes çalışmaları (The importance of breath in daily life and professional breathing works). *Uluslararası Toplumsal Bilimler Dergisi*, 7(2), 63-83. <https://dergipark.org.tr/tr/pub/toplumsalbilimler/issue/79970/1284706>

Önder, G.C. (2013). Flüt eğitiminde nefes tekniği (The technique of breath in flute education). *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (29), 153-163. <https://dergipark.org.tr/tr/pub/susbed/issue/61807/924728>

Özgür, C. (2020). Nefes tekniklerinin profesyonel şarkıcılar ve solunum yolu hastaları üzerindeki etkileri (Effects of breath techniques on professional singers and patients with respiratory diseases). *Asya Studies*, 4(12), 67-75. <https://doi.org/10.31455/asya.746207>

Rosinski, P. (2003). *Coaching across cultures: New Failure Reports*, 16, 98-107. <https://pubmed.ncbi.nlm.nih.gov/31161460/>

Salmon, P.G., & Meyer, R.G. (1992). *Coping with stress and anxiety in musical performance*. New York: Lexington Books.

Seo, Y., Yates, B., Laframboise, L., Pozehl, B., Norman, J.F., & Hertzog, M. (2016). A home-based diaphragmatic breathing retraining in rural patients with heart failure. *Western Journal of Nursing Research*, 38(3), 270-91. <https://doi.org/10.1177/0193945915584201>

Shakespear, W. (1898). *The Art of Singing*. Londra: Metzler.

Suner, L. (2011). Nefes ve oyuncu (Breath and the actor). *Tiyatro Araştırmaları Dergisi*, 31(31), 79-90. [https://doi.org/10.1501/TAD\\_0000000264](https://doi.org/10.1501/TAD_0000000264)

Şentürk, D., & Türkmen, E.F. (2024). Ses eğitiminde nefes kullanımına ilişkin yapılan çalışmaların incelenmesi (Investigation of studies on the use of breath in vocaleducation). *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 24(4), 2566-2585. <https://doi.org/10.17240/aibuefd.2024..-1425973>

Talak, K. (2020). Koçluk desteği alan çalışanların iş tatmin düzeylerinin incelenmesi (an examination of job satisfaction levels of employees receiving coaching support). *19 Mayıs Sosyal Bilimler Dergisi*, 1(3), 191-204. <https://dergipark.org.tr/tr/pub/19maysbd/issue/57635/787440>

Umuzdaş, M.S., & Tök, H. (2020). Müzik öğretmenliği lisans öğrencilerinin çalgı sınavındaki performans kaygı düzeylerinin çeşitli değişkenlere göre incelenmesi (Investigation of job satisfaction level of employees who receive coaching support). *IBAD Sosyal Bilimler Dergisi, Özel sayı*, 396-410. <https://doi.org/10.21733/ibad.798006>

Vardarlı, P. (2017). *Koçluk atölyesi* (Coaching workshop). İstanbul: Abaküs Kitap Yayın Dağıtım.

Whitmore, J. (2009). Business coaching international: unlocking the secrets and the power. *Coaching: An International Journal of Theory, Research and Practice*, 2(2), 176-179. <https://dx.doi.org/10.1080/17521880903102332>

Yalcin, E., & Özbaşaran, F. (2021). Nefes terapisinin genel sağlık ve kadın sağlığı üzerine etkileri (Effects of breath therapy on general health and women's health). *İstanbul Sabahattin Zaim Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 3(2), 106-111. <https://doi.org/10.47769/izufbed.866042>

Yöndem, Z. D. (2012). Müzik öğrencilerinde algılanan performans kaygısının fiziksel, davranışsal ve bilişsel özellikleri: nitel bir çalışma (physical, behavioral and cognitive characteristics of perceived performance anxiety in music students: a qualitative study). *Eğitim ve Bilim*, 37(166), 181-194. <https://eb.ted.org.tr/index.php/EB/article/view/1427/450>

### Web Sites

Diyafram (2025, Şubat 9). <http://tr.wikipedia.org/wiki/Diyafram>

International Coach Federation (2025, Şubat 9). <http://www.icfturkey.org/icf-hakkinda/icf-turkiye/icf-turkiye-hakkinda/>

Nefes (2025, şubat 9). <https://sozluk.gov.tr/>

Litchfield, P.M. (2006). Good breathing, bad breathing., breathing is behavior, a unique behavior that regulates body chemistry, pH. <https://www.breatheon.com/media/docs/Peter-Litchfield-on-goodbad-breathing-CapnoTrainer8.pdf>

Ulusal Meslek Standardı Koç Seviye 6. (2025, Şubat 9).-[https://www.myk.gov.tr/images/articles/editor/020713/koc\\_seviye\\_6.pdf](https://www.myk.gov.tr/images/articles/editor/020713/koc_seviye_6.pdf)

# Appendix 1. Scale of Opinions on the Effects of Breathing Exercises on Stage and Exam Performance

Opinions Scale on the Effect of Breathing Exercises on Stage and Exam Performance											
No	Items	in seconds (sn)									
1	How many breaths do you take in a minute? Please measure your breathing rate, making sure you are in a calm and normal breathing pattern.	1-10	10-20	20-30	30-40	40-50	50-60				
2	Please enter your control pause duration in seconds. How long did it take you to hold your breath before exhaling all the air from your lungs and taking another breath?	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90+
		1 = very little - 10 = very much									
3	How would you rate your level of anxiety before the performance?	1	2	3	4	5	6	7	8	9	10
4	If you experience sweating before going on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
5	If you experience trembling before going on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
6	If you experience chills/coldness in hands and feet at a level that negatively affects your performance before going on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
7	If you experience difficulty breathing before going on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
8	How would you rate your level of anxiety during the performance?	1	2	3	4	5	6	7	8	9	10
9	If you experience sweating on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
10	If you experience trembling on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
11	If you experience chilling/coldness in hands and feet on stage at a level that negatively affects your performance, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
12	If you experience shortness of breath or breath-holding during performance, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
13	If you experience throat tightness on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
14	If you experience dryness in the throat on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
15	If you experience saliva accumulation in the throat on stage, how would you rate your level of discomfort?	1	2	3	4	5	6	7	8	9	10
16	If you tense or contract your muscles during the performance, how would you rate the intensity of this tension?	1	2	3	4	5	6	7	8	9	10
17	If you experience muscular looseness or lack of control after the performance, how would you rate this sensation?	1	2	3	4	5	6	7	8	9	10
18	How would you rate your breath control during the performance?	1	2	3	4	5	6	7	8	9	10
		1 = I can't focus - 10 = I can focus well									
19	How would you rate your ability to maintain focus on your performance during the act?	1	2	3	4	5	6	7	8	9	10

## **Biodata of Author**



Associate Professor **Gökçe Sarvan** was born in Izmir, Türkiye. She completed her high school and undergraduate studies at Dokuz Eylül University State Conservatory, advancing a class with top honors. She earned her master's degree from Mimar Sinan Fine Arts University Istanbul State Conservatory and completed her Proficiency in Art (Doctorate) at Dokuz Eylül University State Conservatory. Since 2020, she has been working as a flute instructor, head of the Department of Performing Arts, and Deputy Director at Kocaeli University State Conservatory. She continues her artistic and scientific endeavors. Fine Arts, Music, Classical Western Music.

Email: [gokce.sarvan@kocaeli.edu.tr](mailto:gokce.sarvan@kocaeli.edu.tr)

ORCID: 0000-0001-5079-6041

ResearchGate: <https://www.researchgate.net/scientific-contributions/Goekce-SARVAN-2194448430>

Google Scholar: <https://scholar.google.com/citations?user=l8zvcsAAAAJ&hl=tr>

# The face that speaks, the voice that sings: the triad of orthodontics, music, and aesthetics

**Korab Shaqiri**

Asst.Prof.Dr., University of Prishtina, “Hasan Prishtina”, Pristina, Kosovo.

Email: korab.shaqiri@uni-pr.edu ORCID: 0009-0002-5397-7432

**Blerim Mehmeti**

Corresponding Author, Prof.Dr., University Clinical Center of Kosovo.

Email: blerim.mehmeti@universitetiaab.com ORCID: 0009-0002-0036-8115

**Armend Xhoni**

Teaching Asst., Faculty of Education, University of Prishtina, Kosovo.

Email: arm.xhoni@gmail.com ORCID: 0000-0002-3978-6237

**Rina Caka**

PhD. Candidate in Public Health in Ss. Cyril and Methodius University in Skopje (UKIM), Macedonia.

Email: rina.caka@gmail.com ORCID: 0009-0009-9976-6631

**Dardan Gjinolli**

Assoc.Prof., University of Peja, Faculty of Music, Kosovo.

Email: dardan.gjinolli@unhz.eu ORCID: 0009-0009-3946-8106

**Fidane Gjinolli**

Teacher, Lorenc Antoni High School of Music, Kosovo.

Email: gjinollifidane84@gmail.com ORCID: 0009-0004-1781-7372

DOI 10.12975/rastmd.20251333 Submitted May 29, 2025 Accepted August 17, 2025

## Abstract

This interdisciplinary study explores the triadic relationship between orthodontics, music, and aesthetics, with a central focus on how dental alignment influences musical articulation and stage presence. Grounded in embodied performance theory and articulatory phonetics, the research investigates how malocclusion affects vocal clarity and how orthodontic treatment contributes to the refinement of both speech and visual aesthetics—two crucial components in musical performance and media representation. Through a musicological lens, the study examines how pronunciation, resonance, and articulation—especially of fricatives such as /s/, /f/, and /z/—impact vocal performance quality. Emphasis is placed on the performer's body, particularly the mouth and face, as a site where musical expression, social aesthetics, and public image converge. In contemporary music culture—especially within media-driven environments—facial harmony and clear enunciation are vital not only for artistic output but also for the construction of professional identity. Using a qualitative comparative model, the study examines two case studies of performers from Kosovo who underwent multi-year orthodontic treatment. Audio recordings and clinical photographs were captured before and after intervention, using consistent conditions in a professional music studio and dental clinic. The data were analysed to identify phonetic improvements and changes in facial aesthetics relevant to performance. Findings reveal a marked improvement in vocal articulation, projection, and stage image post-treatment. Participants reported increased confidence and expressive ease, underscoring the dual role of orthodontics in enhancing both musical function and aesthetic presence. This supports the thesis that orthodontic treatment can directly affect artistic performance, especially in vocalists and wind instrumentalists whose craft depends on precise oral mechanics. The study contributes a novel interdisciplinary model that links dental health to music performance and public aesthetics. Future research should broaden sample sizes, engage phonetic and aesthetic experts, and examine long-term effects. Collaboration between orthodontists, phonologists, and music educators is essential for optimising artistic outcomes in a media-saturated cultural landscape.

## Keywords

*aesthetics, orthodontics, singing, sound analysis, stage performance*

## Introduction

The clear and beautiful pronunciation of words, as well as their musical intonation, constitute essential elements of expression and communication for every individual, playing a key role in establishing close connections with the audience. This aspect of verbal and musical articulation

significantly influences the dissemination of information and the way interpersonal and societal bonds are perceived. Pure and refined speech possesses a unique power to elevate both the aesthetic and social value of an individual, rendering them more appealing in the public eye. This impact is particularly evident in artists,

actors, and public figures who perform on stage or appear before cameras, where outward appearance holds substantial importance. Among the defining aspects of this appearance is the condition of the teeth, closely linked to the field of orthodontics. Proper orthodontic treatment is crucial for enhancing both articulation and speech clarity. In this context, it is worth emphasizing that orthodontists—often seen as designers of smiles—should be fully aware of the aesthetic implications their treatments have on patients' smiles. As highlighted in one study, following the completion of orthodontic procedures, when the final adjustments are made, the orthodontist must also consider the visual harmony of the patient's smile (Roy and 2005). This study underlines the fact that patients seek outcomes that go beyond physiological or mechanical health—they also desire aesthetic appeal. This is particularly important for individuals engaged in musical performance and public speaking, where the smile and the appearance of the mouth directly influence public perception and performance quality.

At this intersection, orthodontics plays a vital role in improving dental aesthetics and the overall appearance of the mouth. Such improvements not only enhance functional aspects like tooth alignment and speech clarity but also contribute to a more visually appealing image (Keyser et al. 2022). With the increasing societal emphasis on dental aesthetics, procedures like whitening, orthodontic correction, and veneering have expanded the possibilities for individuals—especially those in media and public roles—to enhance their appearance and presence (Roy et al. 2005). This relationship between orthodontics and visual image carries particular weight in the domains of music and public address. Clear articulation and vocal quality are essential for building a strong connection with audiences. Furthermore, orthodontics can contribute to both improved verbal communication and aesthetic presence, enhancing the clarity

of speech and the external appearance of individuals performing on stage or in media outlets. Public figures, often seen as role models and unconsciously imitated, have indirectly influenced a rising demand for aesthetic enhancements, including orthodontic interventions. Those aspiring to public visibility or media presence frequently conform to these standards, pursuing an idealized image and refined communication. Consequently, a social expectation has emerged toward cultivating a more attractive and professional appearance, wherein dental aesthetics and speech clarity are central components.

This growing emphasis indicates that orthodontics today is not merely a medical necessity but also an aesthetic imperative, closely tied to contemporary standards of public presentation. Elements such as the harmony of dental structure and the articulation of speech have become essential in shaping both personal and professional identity, especially for those in the public eye. Studies reveal that individuals with higher socioeconomic status, younger age, and greater educational attainment demonstrate increased awareness and demand for an aesthetically pleasing smile, much of which is driven by social media exposure (Hebbal, Helaby, and AlHefdhhi 2022). Within this framework, the current study explores how aesthetics and refined pronunciation are achieved through orthodontic treatment—a relationship of significant importance within the artistic communities of singers and presenters, for whom appearance and articulation are vital to personal and professional success. The interconnection between orthodontics and aesthetic performance is particularly relevant in an era dominated by visual and digital media, where self-presentation and public evaluation are strongly influenced by appearance.

This perspective aligns with findings from scientific research indicating a strong correlation between the need for orthodontic intervention and difficulties

in pronunciation. Some researchers argue that individuals requiring orthodontic care often express concerns regarding both the appearance of their teeth and their ability to articulate words. Hence, orthodontic treatment may serve not only to align teeth but also to enhance oral function and clarity of speech—elements that are indispensable for effective communication (Kumar Singh et al. 2019).

For the purpose of this study, professional vocal recordings were conducted at the “Barok Sound Studio,” utilizing the same advanced technological equipment for both the recording and analysis of vocal sounds. The recordings were made in two distinct phases—before and after orthodontic treatment—to facilitate a direct comparison of changes in articulation and vocal quality. This allowed for a detailed analysis of the impact dental improvements have on vocal performance, with particular emphasis on clarity, resonance, and vocal control during musical interpretation.

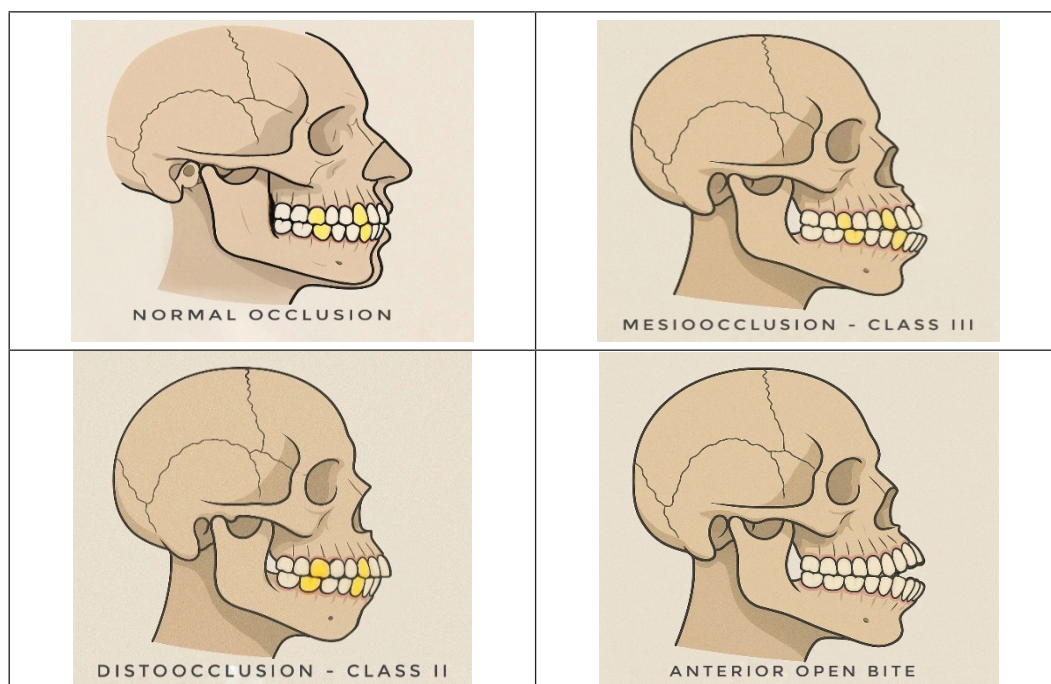
In addition to the vocal component, the research also involved an aesthetic assessment through the visual documentation of specific clinical cases. In collaboration with the Dental Clinic “Albadent,” patient photographs were taken before and after orthodontic treatment to visually record changes in appearance. These visual materials serve as tangible evidence of the role orthodontics plays in enhancing facial harmony and physical appearance—key elements in shaping the public image of individuals, especially in the fields of music and media communication.

At a time when aesthetics and articulate communication have become fundamental standards for media presence, music performance, and public speaking, the alignment of visual presentation and speech clarity is becoming increasingly vital for individuals seeking public exposure and professional credibility on stage. This research is of particular significance as it bridges three domains that are rarely explored

in conjunction: orthodontics, music, and aesthetics. It thus situates the topic within a broader cultural and media context. Offering an interdisciplinary approach, the study aims to highlight not only the functional outcomes of orthodontic treatment but also its aesthetic and social dimensions. Ultimately, this paper contributes to a broader discourse on the evolving importance of personal appearance in the age of visual and media communication.

## Literature Review

The articulation and production of sounds are extremely complex processes that require precise and precise synchronization between the respiratory, nervous, and articulatory systems. In this functional harmony, organs such as the lungs, larynx, tongue, lips, and teeth play inseparable and specialized roles. Any anatomical or functional change within the oral cavity has the potential to directly affect the process of clear and accurate articulation. It is in this context that malocclusion appears as a disturbing factor that affects not only the aesthetic or functional aspect of the mouth but also the quality of speech (Handoko and Yohana 2023). Malocclusion represents a deviation from normal occlusion, and classes of malocclusions refer to the relation of the lower dental arch to the upper dental arch. Angle has classified malocclusions from the antero-posterior dimension in Class I, Class II and Class III. As quoted by Dewey, M. (1915), Angle has defined class I as: “Class I is characterized by normal mesio-distal relation of the jaws and dental arches, as indicated by the normal locking on eruption of the first permanent molars, at least in their mesio-distal relations, though one or more may be in buccal or lingual occlusion.” Class II (disto-occlusion) refers to the posterior (distal) relation of the lower arch, and class III (mesioocclusion) is characterized by the anterior relation of the lower arch. From the vertical dimension, anterior open bite malocclusion is characterized by the no vertical incisor overlapping (Ng, Wong, and Hagg, 2008).



**Image 1.** Illustrates the appearance of various malocclusions from the anteroposterior perspective, including neutral occlusion, distocclusion, mesioocclusion, and anterior open bite

### Orthodontics and Phonetics

Deviations in the positioning of the teeth can lead to unnatural positioning of the tongue and lips, which, by stopping or changing the airflow during articulation, modify the resonance of the oral cavity and deform the sounds produced (Handoko and Yohana 2023). The impact of malocclusion on pronunciation is not general, but mostly affects some specific phonemes, which require a precise positioning of the tongue and a well-coordinated interaction with the teeth and lips. Sounds such as /s/, /z/, /t/, /d/, /l/, /r/, /j/, and /tʃ/ are particularly sensitive to these changes, as their articulation requires contact or controlled proximity between the tongue and dental structures. This articulatory sensitivity is reinforced by psycholinguistic findings which demonstrate that consonants are processed more independently from melodic information than vowels are, indicating that their intelligibility relies more heavily on precise articulatory configurations (Kolinsky et al., 2009). In the presence of malocclusions and dentofacial abnormalities,

especially anterior open bite, class II and III, this balance is disrupted, leading to various forms of deviation in pronunciation such as distortions, substitutions or even additions of sounds (Kumar Singh et al. 2019). It has been demonstrated that the degree of speech distortion for consonants is in a direct relationship with the severity of malocclusions. Patients with class III malocclusion have the highest prevalence of speech problems (Lathrop-Marshall et al. 2022). One of the most common distortions in patients with these malocclusions is the placement of the tongue tip too anteriorly from the alveolar ridge and the protrusion of the tongue tip between the teeth. This articulatory phenomenon shows that the connection between the arrangement of teeth and the ability to articulate accurately is much deeper than one might think at first glance (Kumar Singh et al. 2019).

Furthermore, the link between malocclusion and incorrect pronunciations has been highlighted in a study that analyzed the influence of oral structure on the articulation

of phonemes in the Arabic language. Using a standardized test, it was found that individuals with higher levels of malocclusion (according to the PAR index) exhibited a high number of distortions in sounds such as ص/ s<sup>h</sup>/, ز /z/, and س (s). This not only confirms the structural influence of malocclusion on sound production, but also highlights the sensitivity of the Arabic language to these deformations due to its phonological nature. The presence of 78 distortions within a limited sample emphasizes the seriousness of this influence and adds to the value of including phonetic analysis in the assessment of malocclusion (Tashkandi et al. 2025). The impact of malocclusion is not only technical or biological, but also has a psychological and emotional dimension. The OHIP-14 (oral health impact profile - 14) index, which measures the impact of oral health on daily life, has found that individuals with advanced malocclusions often experience feelings of shame, emotional tension, and difficulty in social interactions due to the inability to articulate correctly. Unclear pronunciation can be perceived as a barrier to communication and lead to self-isolation or dissatisfaction with oneself. This indicates that the impact of malocclusion goes beyond the boundaries of the dental clinic and directly affects quality of life (Kumar Singh et al. 2019).

Another interesting dimension of the connection between oral structure and pronunciation was observed in a study that analyzed how tongue and labial movements affect the articulation of sounds through an imitation task. In this case, the placement of the tongue during the pronunciation of certain sounds was carefully observed. Incorrect positions such as lingual protrusion or excessive retraction were identified, which often occur as a result of dental deformities, especially in cases of open bite or pronounced malocclusion. These incorrect positions affect the way air flows and where it collides in the oral cavity, deforming the sound that comes out. The interpretation of these findings leads us to the conclusion

that any change in oral anatomy has direct consequences on the neuromuscular process of speech, making interdisciplinary collaboration between orthodontics and speech therapy specialists necessary (Caruso et al. 2016).

### Orthodontics and Wind Instruments

Previous studies show that the oral structure along with jaw and tooth position can influence the musical performance of wind instrumentalists. The term “embouchure” refers to the anatomical structures around the mouth including the tongue, the teeth, and the muscles of cheek and lip. According to these observations, patients belonging to Class I malocclusions showed no difficulties in accurate and comfortable embouchure of the wind instruments. On the other hand, patients with severe anterior teeth crowding, open bite, severe Class II, and Class III malocclusions presented a greater interference with the wind instrumentalists’ performance and embouchure (Van der Weijden et al., 2018).

On the other end, wind instruments, when systematically used, affect teeth position as well. The applied forces during the embouchure mechanism tend to cause pro-inclination of the anterior teeth, accompanied by an increased overjet and overbite (Clemente et al., 2021). These findings enhance the interdisciplinary demanded connection of musicians and orthodontists. Early prevention, accurate diagnosis, and accurate treatment by orthodontists lead to successful performances with minimal negative oro-dental side effects.

A recent cohort study in Diagnostics (October 2024) has shown that practicing wind instruments is associated with significantly higher overjet, dental abrasion, and lip erosion among musicians compared to controls, especially among brass players, confirming that embouchure mechanics can produce measurable occlusal changes over time (Laparra Hernández et al., 2024). Additionally, neuroacoustic research

indicates that clarinet players adjust their vocal tract configurations substantially during embouchure tasks—alterations that can interact with dental structure to impact resonance and articulation behavior (Fritz & Wolfe, 2005).

### **Orthodontics and Stage Aesthetics**

Stage aesthetics and orthodontics, although seemingly unrelated disciplines, intersect meaningfully in the way they shape societal perceptions of beauty and self-presentation. Orthodontics focuses on correcting physical features—particularly dental structures—to align individuals with specific aesthetic standards, ultimately contributing to enhanced self-esteem (Jung 2010). Similarly, music and stage performance play a pivotal role in shaping aesthetic ideals through the promotion of idols who represent physical and spiritual perfection.

In the music industry, aesthetic appearance is often a determining factor in an artist's public image and success. International artists become visual and cultural icons, reinforcing societal ideals of beauty through media exposure and performance presentation (Schaap, Berghman, and Calkins 2023). From an inductive perspective, the music industry consistently promotes performers with flawless appearances, emphasizing a visual standard that complements their artistic output. The visual element of music—particularly in genres such as pop, K-pop, or even opera—has become central to audience perception and marketability, further reinforcing a homogenized aesthetic ideal.

Orthodontics, in a parallel manner, offers individuals the means to attain this desirable public image through dental correction, especially by improving the smile—a fundamental component of stage charisma and self-expression. This link between external appearance and self-presentation forms a complex dialogue between personal transformation and public expectations, deeply rooted in cultural

narratives of success. From a deductive angle, both music and orthodontics reflect broader societal pressures to achieve physical perfection. This pressure is not limited to the entertainment industry but extends to politics and leadership, where figures such as John F. Kennedy and Barack Obama have been celebrated not only for their intellectual and political achievements but also for their charismatic appearance and photogenic style. These examples illustrate how aesthetics—facial harmony, confident smiles, and eloquent expression—can be just as influential as content in shaping public perception. Beyond the visual dimension, orthodontics can also impact the auditory and verbal components essential to musical performance. As Lathrop et al. (2022) indicate, dental irregularities such as malocclusions can impair proper articulation and sound production, which are critical in both speech and singing (Lathrop-Marshall et al. 2022). These anatomical limitations may cause phonetic distortions, reducing clarity in verbal communication—an essential skill for vocalists, presenters, and public figures (Tashkandi et al. 2025). In this context, the relationship between orthodontics and music becomes not only visual but also functional. While music abstracts beauty through emotional expression and sonic experience, orthodontics concretizes this ideal through the physical modification and enhancement of stomatognathic functions such as speech, resonance, and articulation. This duality—abstraction versus concretization—reveals a shared goal in both fields: aligning the individual with society's aesthetic expectations and enhancing expressive performance. Musical and stage aesthetics do not only have an artistic function, they represent a powerful tool for building personal and social identity. For artists, who are constantly exposed to public and media spaces, physical appearance and stage presence become as important as the music itself for their success and social status (Berry 2008). In this formation process, orthodontics plays a special role,

offering the opportunity to follow the ideals of beauty that are present in the visual culture of the stage and screen.

In conclusion, the connection between music and orthodontics reflects the profound influence of societal beauty standards on individual identity, self-worth, and professional visibility. These standards not only affect how individuals are perceived but also how they perform—whether on stage, in public discourse, or in everyday social interaction. As demonstrated, the pursuit of aesthetic perfection—whether through musical iconography or orthodontic intervention—carries significant implications for personal success, social acceptance, and cultural influence.

### Psychological and Social Impacts

The artist's music and appearance are known to be two inseparable components in the creation of a complete and represented identity and positive evaluation by listeners (Parncutt and Sattmann 2018). As face is the initial determinant of attractiveness, its deformities, along with abnormal speech, hinder the quality of social activities and status due to a distorted self-image, and this could affect even more artists and public figures (Roman et al. 2021).

According to research on the development of artistic identity, aesthetic preference is not only a matter of personal taste but also a reflection of the individual's self-understanding and positioning in society. It is manifested through musical creation, performance, and interaction with other musicians (Long 2024:11). This means that the aesthetic choices an artist makes - whether in sound, appearance, or presentation - are closely linked to how he conceives of himself and his role in the world. Aesthetic preference is one of the most important components in the construction of artistic identity. Factors such as age, gender, personal taste, cultural background, and nationality strongly influence how an individual forms their musical and aesthetic

identity. This is especially evident in the world of stage performance, where through style, attitude, and appearance - often perfected through aesthetic interventions such as orthodontics - artists convey not only their artistic values but also social, cultural, and often political values. Music, as a personal and social experience, also helps to express individual values and to build connections with others. It serves as a means of communicating personal identity and reducing social insecurities through the exchange of personal information (Long, 2024:11).

On a global level, societies are becoming increasingly aware of the influence of the media and aesthetic dentistry including orthodontics in creating images of the "perfect" that can have detrimental effects on the emotional and psychological health of individuals, especially when these standards are unattainable for many individuals. In conclusion, while musical and performing aesthetics are a form of expression and identification for many individuals, it is important to understand and be aware of the consequences that this constant focus can have on the emotional and psychological health of individuals. The work of orthodontists and the impact of smile aesthetics are important in achieving these standards, but we must be careful that this process does not cause excessive stress and negatively impact the mental health of individuals, especially when these standards are formulated and promoted by the industry and the media.

### Research Objectives

This study seeks to answer the following research question: How does orthodontic treatment influence both vocal articulation and aesthetic self-presentation among individuals involved in public performance, particularly in music and media contexts?

To address this question, the study sets out the following objectives:

- To assess the impact of orthodontic intervention on the clarity and quality of vocal performance through comparative sound analysis before and after treatment.
- To document and evaluate the aesthetic transformation of patients undergoing orthodontic care, focusing on facial harmony and stage presence.
- To explore the broader cultural implications of orthodontic aesthetics in the formation of professional identity within public-facing professions such as music, acting, and media presentation.

### Research Problem

The accurate articulation of speech sounds, particularly fricatives and affricates, is a complex neuromuscular process that involves a precise coordination of oral structures such as the teeth, lips, and tongue. Professional singers, presenters, and public figures rely on a significant level on accurate articulation and aesthetic appearance for their successful performance. While orthodontics has long been recognized for its role in correcting malocclusions and improving speech clarity, there is a lack of comprehensive research exploring its specific impact on vocal performance within artistic and public domains. At the same time, visual presentation has gained increasing importance in performance industries shaped by digital and media exposure. Orthodontic treatment contributes not only to functional improvement but also to enhanced facial aesthetics, which can influence an individual's self-confidence, stage presence, and audience perception. Despite this, most existing literature addresses the clinical, phonetic, and aesthetic dimensions of orthodontics separately, without examining their combined effect on expressive performance and public visibility.

This study seeks to address this gap by investigating how orthodontic treatment affects both phonetic articulation and

physical appearance in the context of music and media performance. Through comparative analysis of professional vocal recordings and visual documentation before and after treatment, the research aims to determine whether improved dental alignment enhances vocal clarity, reduces the need for technical audio adjustments, and contributes to a more refined and credible public image. The absence of integrated studies in this area limits our understanding of the full scope of orthodontics in supporting artistic expression and professional communication.

### Method

#### Research Model

This study adopts a qualitative comparative research method to investigate the intersection of orthodontics, phonetic articulation, and aesthetics in the context of music and media. The research focuses on two patients diagnosed with malocclusions that resulted in articulation difficulties and inaccuracies in the pronunciation of specific consonant sounds (/s/, /ʃ/, /z/, /t/, /k/, /tʃ/). Both participants underwent full orthodontic treatment aimed at correcting dental alignment and improving oral physiology. To assess the phonetic impact of these interventions, the patients were involved in a professional studio recording process using modern sound technology. Speech samples were recorded in two phases: before the initiation of orthodontic treatment and after its completion. The collected audio data was then analyzed to evaluate improvements in the articulation and accuracy of sound production. This methodological approach provides insights into the functional benefits of orthodontics beyond aesthetics, particularly in enhancing verbal clarity—an essential aspect for performers and professionals in music and media.

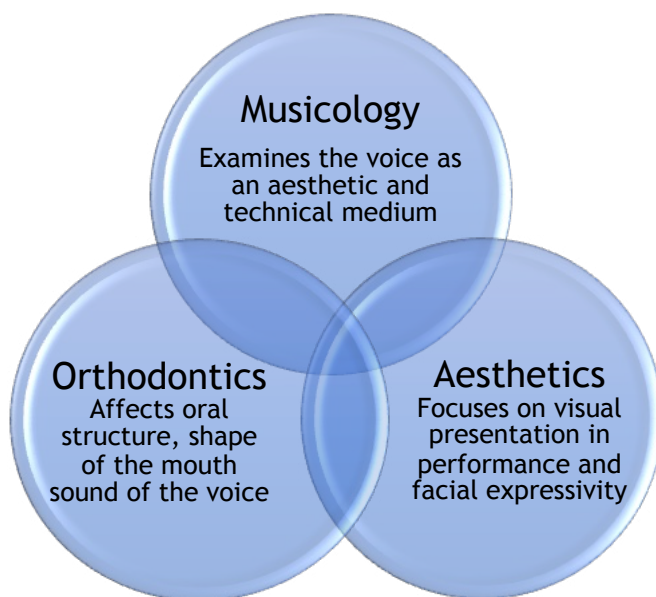


Figure 1. Interdisciplinary relationships between musicology, orthodontics, and aesthetics

### Participants

This study involved two participants who were undergoing orthodontic treatment at Alba Dent clinic under the supervision of a licensed orthodontist. The participants were selected based on their availability, consent, and the suitability of their treatment duration for longitudinal observation. To gather data, both participants were recorded at two distinct stages: before the orthodontic treatment and after its completion. These audio recordings were carried out in a professional setting at Barok music studio, using consistent technical conditions to ensure accurate comparative analysis. The recordings focused on the pronunciation of selected phonemes and vocal expression in controlled acoustic environments. This allowed for precise documentation of any phonetic or articulatory shifts resulting from the dental realignment process.

The choice of Alba Dent and Barok Studio was deliberate: the former for its clinical reliability and the latter for its capacity to provide high-fidelity audio recordings necessary for detailed acoustic and phonological analysis. These collected recordings constituted the core data set for the study and served as empirical material to

examine the intersections of orthodontics, voice articulation, and aesthetic vocal performance.

### Process

The research process was conducted over a six-year span, beginning in 2018 and concluding in 2024. The two participants, both citizens of Kosovo, underwent their orthodontic treatment at Alba Dent clinic, located in Prishtina, Kosovo. Recordings were carried out at Barok music studio, also based in Prishtina, under consistent technical conditions to ensure comparability across the two phases of the study. The first stage involved pre-treatment recordings captured in early 2018, prior to the initiation of any orthodontic intervention. During this session, participants were recorded while articulating specific phonemes and performing short vocal passages. These recordings served as baseline data for evaluating the acoustic impact of dental misalignment. Following a multi-year orthodontic treatment plan, post-treatment recordings were completed in 2024. The same participants were recorded using identical studio equipment, microphone placement, and acoustic environment. This procedural consistency was essential to

eliminate external variables and enhance the internal validity of the study.

All recordings were timestamped and archived. To maintain accuracy and eliminate bias, no automatic post-processing was applied prior to analysis. The comparative approach, spanning a significant temporal interval, was specifically designed to document the long-term acoustic and articulatory effects of orthodontic treatment, especially in the context of speech and vocal performance.

### **Ethics**

Although formal approval from a university ethics committee was not required for this study, all ethical protocols were strictly followed. Written consent was obtained from all participants involved, as well as from the institutions where the research was conducted.

Specifically, signed written permissions were secured from:

- Alba Dent clinic, confirming the inclusion of patients undergoing orthodontic treatment.
- Barok music studio, granting authorization for the use of their facilities for pre- and post-treatment audio recordings.
- Both participating individuals, who provided informed consent for being recorded and for the use of their data strictly for academic and research purposes.

All signed documents are archived and available upon request.

### **Findings**

The changes that occur in articulation after orthodontic interventions have a significant impact not only on the aesthetics of the physical appearance, but also on the ability to produce clear and accurate sounds. As previously noted, orthodontic treatment can help improve the articulation

of sounds that require precise positions of the teeth and mouth to achieve a clear and accurate vocal recording. This change is especially noticeable for sounds that require high precision in the movements of the articulatory organs, such as the tongue, lips, and teeth. Examples of such sounds are sounds such as “S” and “f”, which have an important role in producing a clear and clean vocal recording.

As emphasized in the work of the authors Handoko and Yohana (2023), the position of the teeth plays a key role in the articulation of fricative sounds, such as /s/, /z/, and /f/. Several other studies, such as those by Alhazmi (2022) and Chandrashekar et al. (2020), show that errors in tooth positioning can cause difficulties in articulating these sounds and negatively affect vocal recordings. For example, an individual with malocclusion may have difficulty articulating sounds such as /s/ and /z/, causing the vocal recording to have an inaccurate and unclear sound. In this context, orthodontic interventions improve the position of the teeth, facilitating the articulation of these sounds and improving the quality of vocal recordings. A particular example related to the influence of teeth and articulation is that of the famous singer Freddie Mercury, who believed that the shape and position of his teeth were closely related to his vocal capacities. At a time when dental aesthetics were popular and could be corrected, Freddie chose not to change his teeth, believing that they were linked to his wide vocal range, allowing him to transition from an operatic genre to a powerful alternative rock genre. This example shows how the shape and position of teeth can affect vocal capabilities, linking dental aesthetics to an individual's artistic and professional abilities (Dentakay, 2024). In this context, orthodontics can help achieve the right balance between aesthetics and vocal abilities, improving the articulation of certain sounds/pronunciation of letters and facilitating the production of clean and clear vocal recordings.

### Examples from Different Languages and the Impact of Orthodontics on Articulation

Another important example is the impact that the position of the teeth has on the articulation of sounds in different languages. In the Arabic language, the articulation of certain sounds such as /s/, /z/, /ʃ/, and /ʒ/ is sensitive to the position of the teeth and the dental structure. The study by (E. Tashkandi et al. 2025) has shown that malocclusion, as in the case of the JAT (Arabic Speech Development Test), directly affects the articulation of the sounds of the Arabic language, creating articulation errors that can result in distortions of sounds such as /s/ and /z/. Also, in the Bulgarian language, which she describes (Georgieva-Bozhkova et al. 2025), malocclusions can cause difficulties in articulating sounds such as /s/, /z/, /t/, and /d/, directly affecting the production of clear and accurate sounds, which are important for the composition of words and expressions. Studies show that, in this case, an orthodontic intervention can help improve the articulation of sounds such as /s/ and /z/, which are important for describing sounds and improving the quality of vocal recordings. Moreover, in many other languages, such as Russian, German, and Japanese, the position of the teeth has a significant impact on the production of certain sounds. For example, in German, the sounds /s/ and /ʃ/ are sensitive to the positioning of the teeth, and a malocclusion can cause incorrect articulation of these sounds. Likewise, in the Japanese language, the articulation of sounds such as /s/ and /tʃ/ is also dependent on the position of the teeth and mouth, and an orthodontic intervention can improve the articulation of these sounds to adapt to the demands of the language.

### Letters Considered within the Scope of the Research

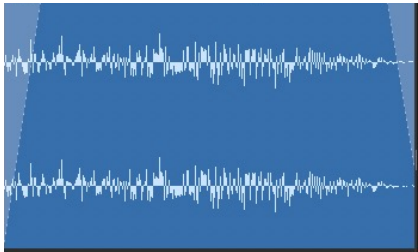
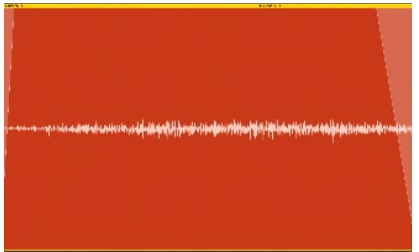
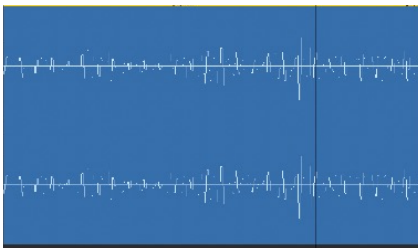
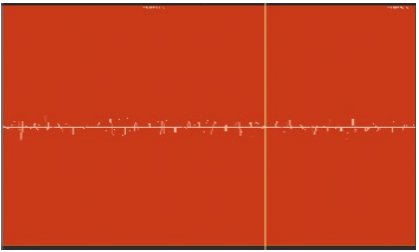
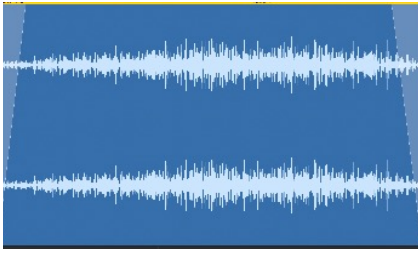
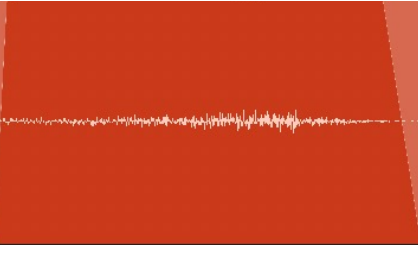
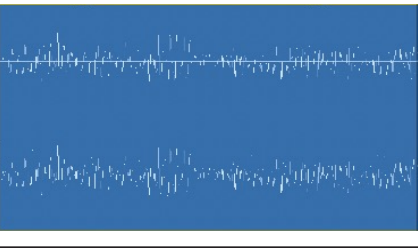
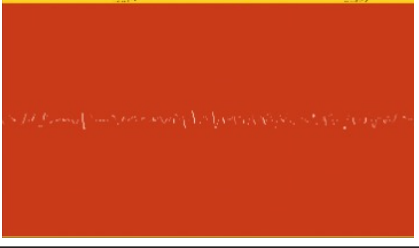
In the process of vocal recordings, such as the case of using the Brauner Phantom Classic microphone, many factors can affect the quality of the vocal recording, especially when dealing with letters that contain the

greatest assistance from the parts of the mouth, such as /s/, /ʃ/, /z/, /tʃ/, /t/, and /k/. These consonants, particularly fricatives and plosives, generate high-frequency energy that is highly sensitive to articulatory precision and oral cavity configuration (Stevens, 2000). These letters, when not pronounced correctly or when there are problems in the arrangement of the teeth, can create irregular resonance and obstacles in the recording. Such spectral irregularities often require manual post-processing techniques such as de-essing, equalization, and transient shaping to mitigate their impact on vocal clarity and mix balance (Zölzer, 2011). This can result in the need for manual interventions to adjust the volume, distortion, or scratching and balancing of the vocal, becoming a laborious and difficult process to fully correct, especially during the mix/mastering phase or even the treatment of notes within the lead vocal and backing vocals. The problem becomes even greater when we are dealing with the recording of vocal groups that do not have regular orthodontic treatment, teeth and jaw alignment, and the pronunciation of words that have the “problematic” letters mentioned above, making the next phase even more difficult. This research aims to document the changes and effects of dental prostheses and orthodontic appliances on the recording of these letters by comparing two periods: before and after the placement of the orthodontic appliances, using the same studio, microphone, and recording configuration. The first recording before the orthodontic appliance was made in 2018 when the patient was recorded in several different songs, of different styles such as: Pop, Rock, Rock Ballad, Dance, Folk music, etc.; and the second recording was made in 2024, after orthodontic treatment. It is also clearly seen in the screenshots taken from the Logic Pro X DAW system, where in both cases the vocals (letters) were recorded with the same microphone (Brauner Phantom Classic), with the same audio cable (Vovox Sonorus Direct S Balanced Microphone Cable), with the same sound card (Universal Audio Apollo 8), with

the same connection cable from the sound card to the computer (20Gbps Thunderbolt 2 Port to Thunder-Bolt 2), with the same DAW system (Logic Pro X). The only difference in this order is the changed computer, where in 2018 when the recordings before the orthodontic treatment were taken, it was (IMAC OS X with the Intel system and Yosemite version 10.10), and in 2024 when the recordings after the orthodontic treatment were taken, it was recorded with the computer (Mac Studio with M2 Max chips

and macOS Sequoia system version 15). The recordings before orthodontic treatment taken and imported into the Logic Pro X DAW system, as can be seen in the screenshot at (Recording before treatment), appear in stereo phase because this system, when importing audio (especially old ones), transfers their appearance to stereo, but the listening remains mono phase, as is the rule for recording and treating vocals and instruments, which are in mono.

Table 1. Comparison of recordings before and after orthodontic treatment with photographs

Letter	Pre-treatment recording (Screenshot)	Post-treatment recording (Screenshot)
/s/ , (in Albanian: S)		
/s/ , (detailed wave) (in Albanian: S)		
/ʃ/ , (in Albanian: SH)		
/ʃ/ , (detailed wave) (in Albanian: SH)		

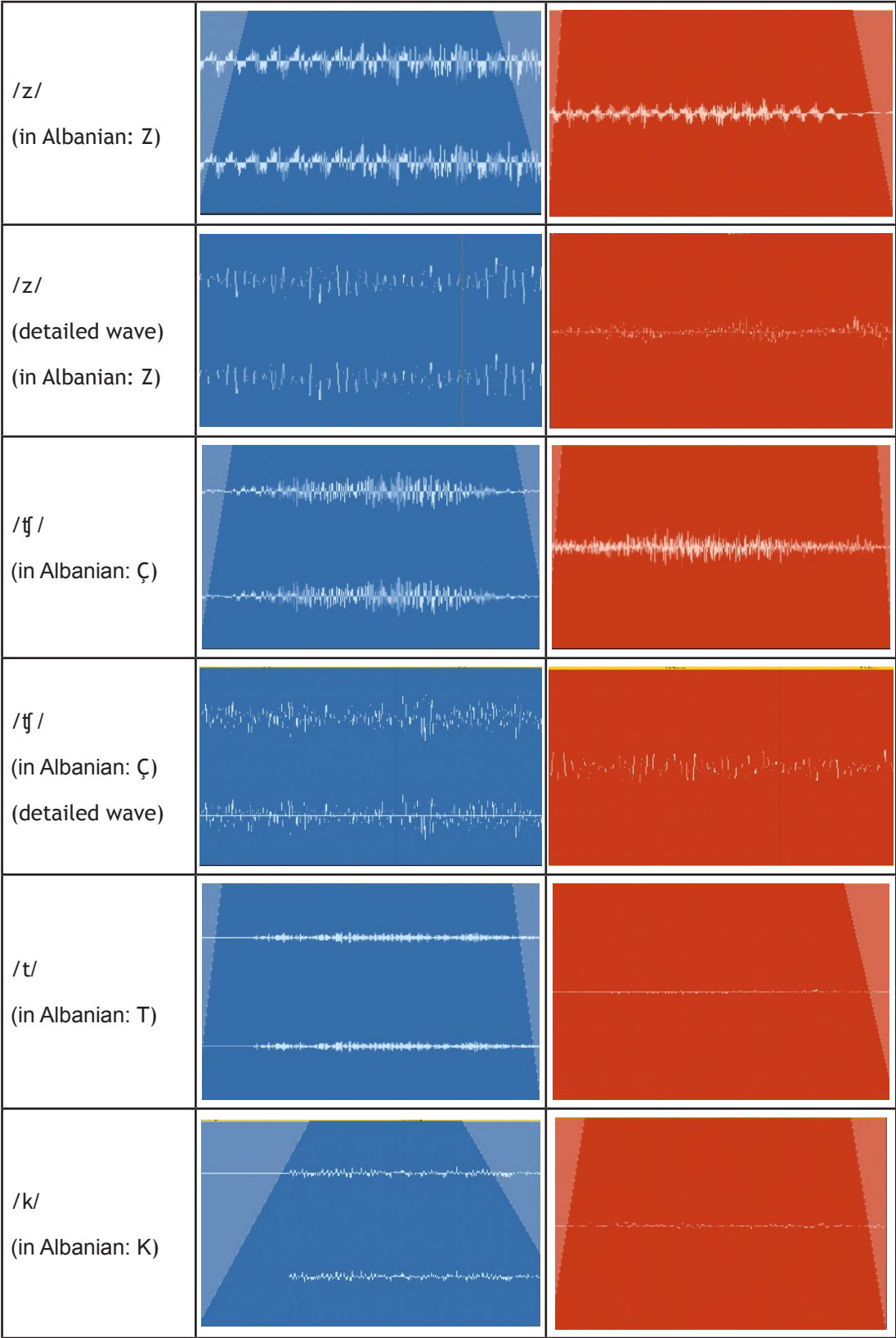


Table 2. Comparative acoustic analysis of selected phonemes before and after orthodontic treatment

Phoneme	Peak dB (2018 - Before)	Waveform Shape (Before)	Audio Processing Required (Before)	Peak dB (2024 - After)	Waveform Shape (After)	Audio Processing Required (After)
/s/	+5 dB	Irregular, harsh, spiky	-5 dB attenuation, De-Esser plugin	+2 dB	Smooth, consistent	None
/j/	+5 dB	Unstable, noisy resonance	-5 dB attenuation, De-Esser plugin	+2 dB	Controlled, defined	None
/z/	+5 dB	Sharp, uneven harmonics	-4 dB attenuation, De-Esser plugin	+2 dB	Clear, phonetically aligned	None
/tʃ/	+5 dB	Burst-like, brittle	-5 dB, sibilance filtering	+2 dB	Evenly dispersed	None
/t/	+5 dB	Transient, clipped attack	-4 dB, transient smoothing	+2 dB	Clean, precise transient	None
/k/	+5 dB	Explosive, diffused	-4 to -5 dB, compression	+2 dB	Stable attack, no peaks	None

Table 3. Technical setup (constant across both sessions)

Component	Specification
Microphone	Brauner Phantom Classic
Audio Interface	Universal Audio Apollo 8
Microphone Cable	Vovox Sonorus Direct S Balanced
DAW	Logic Pro X
Connection Cable	Thunderbolt 2 (20 Gbps)
Computer (2018)	iMac OS X (Intel, Yosemite 10.10)
Computer (2024)	Mac Studio (M2 Max, macOS Sequoia 15)
Import Note	Pre-2024 recordings appear in stereo but remain mono

Interpretation

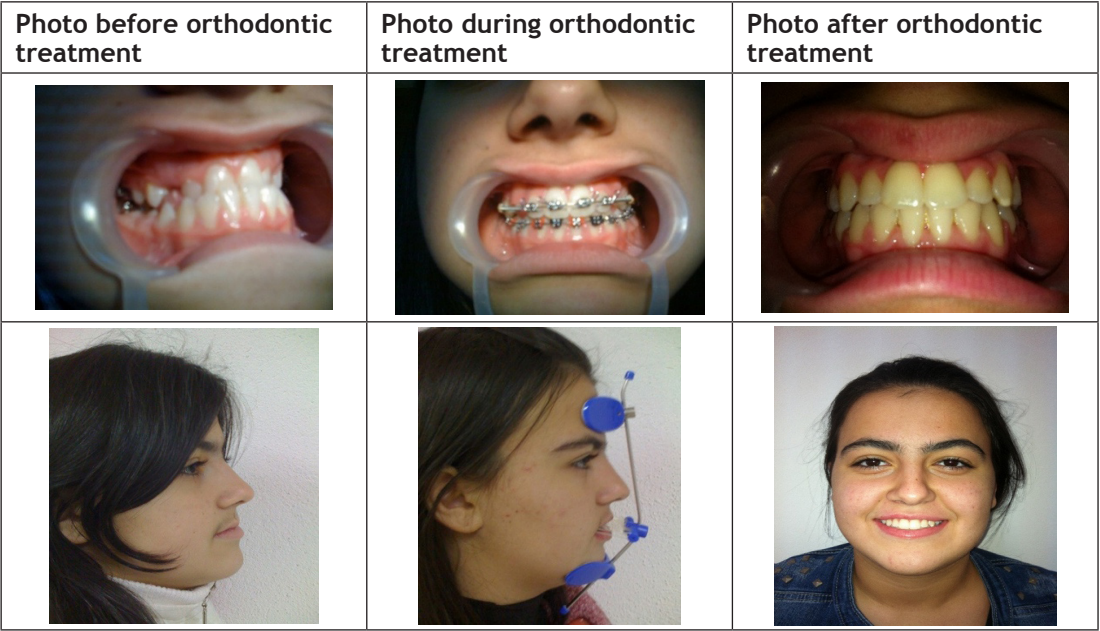
- Phonemes prior to orthodontic treatment appear acoustically unstable, generating “unscaled acoustic phenomena” that required intervention to make the recordings audible and usable.
- After treatment, the improved dental structure enhanced articulatory accuracy, eliminating the need for technological corrections during recording and post-processing.

Table 2 presents the changes in the recordings of selected phonemes /s/, /f/, /z/, /t/, /k/, /tʃ/ before and after the placement of a fixed orthodontic appliance. The recording made before the placement of the orthodontic appliance shows a more inaccurate picture of each letter, with irregular resonance and often with the need for manual intervention during the mix/mastering phase. After the placement of the orthodontic appliances, the changes that were made in the structure of the teeth have influenced a clearer and more accurate articulation of these letters. This has facilitated the recording process and reduced the need for further technological interventions. The differences between the two periods are visible and have contributed to improving the efficiency of the recording process, allowing for a better balance of the vocals without causing further damage to the breakdown of the words. Studio recordings conducted using a high-sensitivity microphone both before and after the application of orthodontic appliances reveal significant variations in the articulation and acoustic quality of specific phonemes, particularly the consonants /s/, /f/, /z/, /t/, /k/, /tʃ/. Before orthodontic intervention, these sounds exhibit irregular and poorly coordinated acoustic features, primarily due to the misalignment of the teeth. In such cases, the resulting articulations can be classified as unstructured acoustic phenomena, as they tend to produce noise and distortion rather than clear, resonant phonemes.

In the pre-treatment recording from 2018, it is evident that the waveform peaks for these consonants reach a volume of +5 dB, both in the recorded signal and during monitoring. However, the visual representation of the waveform is notably irregular. The inconsistencies in the wave structure indicate a lack of uniformity in the articulation, making the consonants appear noisy and sharp rather than phonetically precise. These characteristics presented challenges during the mixing and mastering stages of the vocal tracks, especially for speakers and

singers. To compensate, manual processing was required, typically involving attenuation of these phonemes by -4 to -5 dB to achieve a more pleasant auditory experience and a more balanced waveform. A comprehensive approach was also employed using a De-Esser plugin, commonly used in audio production to soften sibilant sounds (Hestermann & Deffner, 2020). While effective in reducing the harshness of problematic consonants, the use of De-Esser introduced unintended side effects, such as degrading the quality of surrounding phonemes and distorting words that were originally well-articulated during recording.

In contrast, the post-treatment waveform, captured in 2024 following the completion of orthodontic therapy, demonstrates a notable improvement in both the visual and auditory quality of the targeted phonemes. The waveform now peaks at a more controlled +2 dB, and the sound waves are visually consistent and smooth. The listening experience is significantly improved, with the articulation of the problematic consonants blending harmoniously with both other consonants and vowels. Importantly, there is no longer a need for manual volume adjustments or the application of De-Esser plugins. This case clearly illustrates how dental alignment plays a crucial role in phoneme production and acoustic clarity (Tashkandi et al., 2025). Proper orthodontic treatment contributes not only to oral health and aesthetics but also to the intelligibility and fidelity of recorded speech or vocals. This is particularly significant in collaborative vocal performances, such as musical works involving multiple speakers or singers, where simultaneous articulation of the aforementioned phonemes requires consistency and precision. Properly aligned teeth thus facilitate cleaner recordings and reduce the need for post-production corrections.



Case 1. Young female with under bite (class III malocclusion): before, during and after orthodontic treatment.



Case 2. Young male with open bite and tongue posture problem: before and after

**Conclusion and Discussion**

Finally, orthodontic interventions have a significant impact, not only on the physical aesthetics of individuals, but also on improving articulation and vocal recording, enabling a cleaner and clearer performance. Examples from studies performed for different languages show that the position of the teeth and dental structure play a key role in the production of accurate sounds and in the assistance that orthodontics provides for improving articulation and vocal performance. This aspect is particularly important in the context of music and vocal

recording, where the quality of articulation and sounds can directly affect the aesthetics and effectiveness of musical performance. A fundamental aspect that this study addresses is the relationship between music, the physical appearance of individuals, and their influence on the creation and development of social aesthetics. While music has a strong influence on the cultivation of aesthetics and the creation of individual and collective identity, orthodontics is a tool that helps improve physical appearance, thus contributing to self-esteem and meeting social aesthetic standards. As highlighted

in the literature, orthodontic interventions, such as fixed and mobile orthodontic appliances, can ultimately improve the appearance of individuals, enabling them to achieve an aesthetic appearance that is consistent with social aesthetic norms established by the media and culture. In this context, it is also important to assess the impact of social media and the music industry on social aesthetics, which often reflect ideals of beauty that are closely linked to physical standards, such as white and well-groomed teeth. Orthodontics, by helping individuals achieve a significant part of these standards by focusing on dental and facial harmony and accurate teeth alignment, offers opportunities to improve self-esteem and increase self-confidence. This is especially important at a time when media and social influences often create great pressure on individuals to conform to their appearance with social ideals.

An important aspect closely related to this discussion is the influence of tooth position, particularly maxillary incisal display at rest (MIDR) during smiling and other facial expressions. One study highlights the difficulty in developing an accurate and reproducible method for measuring the presentation of the upper teeth during smiling that can be used universally. However, MIDR has been used to assess the dental component of physical aesthetics and is closely related to dental presentation during function, such as smiling, and has a direct impact on facial aesthetics. This indicator is important for orthodontic treatment, as it helps determine compliance with socially established aesthetic norms and can influence the perception that individuals have of themselves and others. In this context, it can be noted that orthodontic interventions, which improve the position of the teeth and their compliance with accepted aesthetics, can provide an opportunity for individuals to fulfill these ideals and improve the image they want to present, thus helping to improve their self-esteem and self-confidence (Jeelani and Shaikh 2016).

In addition, the musical aspect must be addressed in greater depth. Orthodontics not only affects aesthetics and articulation but can also influence the performative capacities of singers and wind instrumentalists. A study by Wismeijer et al. (2019) suggests that certain types of malocclusion can create difficulties in embouchure for wind instrument players, affecting their tone and performance stability. This demonstrates that proper dental alignment can enhance comfort and accuracy for these performers (Wismeijer, Bronkhorst, & Kuijpers-Jagtman, 2019).

Moreover, vocalists benefit directly from improved articulation, as clearer pronunciation of consonants such as /s/, /j/, and /z/ contributes to a cleaner vocal line and more accurate lyrical delivery. This not only improves musical quality but also strengthens the emotional expression and communicative power of the performer (Handoko & Yohana, 2023). A well-aligned smile and proper dental aesthetics can also increase a performer's confidence on stage, which is vital for a compelling and expressive presence (Alhazmi, 2022; Chandrashekhar et al., 2020). This integrative view highlights that orthodontics plays a role not only in conforming to societal standards of beauty but also in enhancing artistic expression and functionality in music. It becomes a bridge between form and function—between aesthetics and the sound that is projected into the world.

### Recommendations for Researchers

*Develop Interdisciplinary Studies;* Researchers are encouraged to explore further the intersection between music, orthodontics, and social psychology to better understand the impact of aesthetic improvements on self-confidence and performance.

*Use Measurable Methods in Music and Orthodontics;* There is a need for precise tools that can measure the effects of dental interventions on articulation and sound quality in performance settings.

*Linguistic and Phonetic Studies;* Researchers should deepen investigations into how tooth position affects the pronunciation of phonemes across different languages, especially those with rich phonetic systems, such as Albanian.

*Expand Sample Populations;* Establish databases of data from singers and wind players before and after orthodontic treatments to enable in-depth statistical analysis.

*Study Psychological Impacts;* Evaluate changes in self-esteem and stage presence after aesthetic dental treatments through interviews and direct observation.

### **Recommendations for Applicants**

*Consult with Orthodontists Before Treatment;* Artists should consult with dental professionals to understand how interventions might affect articulation and vocal performance.

*Track Changes During Treatment;* During orthodontic treatment, artists should keep a journal to monitor changes in articulation, breathing, and performance comfort.

*Continue Vocal and Technical Training;* After orthodontic intervention, artists are encouraged to work closely with vocal coaches or instrument instructors to adapt their technique to new dental configurations.

*Reflect on Stage Image;* Artists should reflect on how aesthetic changes influence their confidence and stage presence, and seek aesthetic or psychological counseling if needed.

*Be Critical of Social and Industry Beauty Standards;* Artists should maintain a critical stance toward media and industry pressures regarding aesthetics, striving to balance health, functionality, and artistic authenticity.

### **Limitations of the Study**

This study is exploratory in nature and is based on a limited number of participants (two individual case studies). As such, the findings cannot be generalized to broader populations or applied universally across all vocal performers or orthodontic patients. The small sample size restricts the statistical power and external validity of the conclusions.

Moreover, the phonetic evaluations rely on the researcher's interpretive analysis rather than independent phonetic experts, which may introduce subjectivity in the assessment of voice clarity and articulation.

Additionally, the study combines artistic and clinical perspectives, which, while innovative, may result in challenges when attempting to standardize or quantify aesthetic outcomes such as facial expression or stage presence.

Future studies should consider larger participant pools, include control groups, and utilize third-party phonetic and aesthetic evaluators to enhance reliability and generalizability.

### **Acknowledgements**

After this study, we would like to express our deep gratitude to our colleagues and experts in their respective fields who provided valuable support and advice throughout the research process. Special thanks go to the team at Barok Sound Studio, whose assistance and dedication were crucial to the realisation of this study. We are also grateful to our colleagues and professors from the University of Prishtina and UBT College for their valuable guidance and support. Our sincere appreciation extends to our associates from AAB College, as well as to the wonderful staff of the Dental Clinic "ALBADENT" for their continuous support. Finally, we warmly thank all the participants in our research - the patients - whose participation made this study possible.

## References

- Berry, B. (2008). *The power of looks: Social stratification of physical appearance*. Routledge.
- Caruso, M. A. E. S., de Almeida, C. A. B., de Lima, F. T., & de Oliveira, M. V. R. A. (2016). Malocclusion and its relationship to speech sound production: Redefining the effect of malocclusal traits on sound production. *International Journal of Pediatric Otorhinolaryngology*, 82, 27-32. <https://doi.org/10.1016/j.ijporl.2015.12.011>
- Clemente, M. P., Moreira, A., Morais, C., Amarante, J. M., Ferreira, A. P., & Mendes, J. (2021). Tooth position in wind instrument players: Dentofacial cephalometric analysis. *International Journal of Environmental Research and Public Health*, 18(8), 4306. <https://doi.org/10.3390/ijerph18084306>
- Dentakay. (2024). *What's the story behind Freddie Mercury's teeth?* <https://dentakay.com/story-behind-freddie-mercury-teeth/>
- Dewey, M. (1915). Classification of malocclusion. *International Journal of Orthodontia*, 1(3), 133-147. [https://doi.org/10.1016/S1072-3471\(15\)80024-8](https://doi.org/10.1016/S1072-3471(15)80024-8)
- Fritz, C., & Wolfe, J. (2005). How do clarinet players adjust the resonances of their vocal tracts for different playing effects? *The Journal of the Acoustical Society of America*, 118(5), 3306-3315. <https://doi.org/10.1121/1.2041287>
- Georgieva-Bozhkova, K., Konstantinova, D., Nenova-Nogalcheva, A., & Nedelchev, D. (2025). The impact of diastema on the articulation of speech sounds. *Folia Medica*, 67(1). <https://doi.org/10.3897/folmed.67.e144621>
- Handoko, H., & Yohana, N. (2023). Speech production and malocclusion: A review. *Jurnal Arbitrer*, 10(1), 107-115. <https://doi.org/10.25077/ar.10.1.107-115.2023>
- Hebbal, M. I., Helaby, B. S., & AlHefdh, M. A. (2022). Reasons for widespread aspiration of esthetics veneers 'Hollywood Smile': A survey among five Gulf countries. *Journal of Pharmacy and Bioallied Sciences*, 14(1), S923-S927. [https://doi.org/10.4103/jpbs.jpbs\\_680\\_21](https://doi.org/10.4103/jpbs.jpbs_680_21)
- Hestermann, S., & Deffner, N. (2020). Enhanced de-essing via neural networks. In A. Holzinger, K. Deb, & L. Schmidt-Thieme (Eds.), *Machine learning and knowledge discovery in databases* (pp. 624-636). Springer. [https://doi.org/10.1007/978-3-030-43887-6\\_49](https://doi.org/10.1007/978-3-030-43887-6_49)
- Jeelani, F. W., & Shaikh, M. A. (2016). The duration of pubertal growth peak among three skeletal classes. *Dental Press Journal of Orthodontics*, 21(5), 67-74. <https://doi.org/10.1590/2177-6709.21.5.067-074.oar>
- Johnson, N. C., & Sandy, J. R. (1999). Tooth position and speech—Is there a relationship? *Angle Orthodontist*, 69(4), 306-310. [https://doi.org/10.1043/0003-3219\(1999\)69\(4\)306:TOPS1.0.CO;2](https://doi.org/10.1043/0003-3219(1999)69(4)306:TOPS1.0.CO;2)
- Jung, M.-H. (2010). Evaluation of the effects of malocclusion and orthodontic treatment on self-esteem in an adolescent population. *American Journal of Orthodontics and Dentofacial Orthopedics*, 138(2), 160-166. <https://doi.org/10.1016/j.ajodo.2008.08.040>
- Keyser, M. M. B., Lathrop, H., Jhingree, S., Giduz, N., Bocklage, C., Couldwell, S., & Jacox, L. A. (2022). Impacts of skeletal anterior open bite malocclusion on speech. *FACE (Thousand Oaks)*, 3(2), 339-349. <https://doi.org/10.1177/27325016221082229>
- Kolinsky, R., Lidji, P., Peretz, I., Besson, M., & Morais, J. (2009). Processing interactions between phonology and melody: Vowels sing but consonants speak. *Cognition*, 112(1), 1-20. <https://doi.org/10.1016/j.cognition.2009.02.014>

- Laparra Hernández, R., Arias-Luxán, S., Sauro, S., & Lanuza, A. (2024). The influence of wind musical instruments on the orofacial system. *Diagnostics*, 14(20), 2342. <https://doi.org/10.3390/diagnostics14202342>
- Lathrop-Marshall, H., Keyser, M. M. B., Jhingree, S., Giduz, N., Bocklage, C., Couldwell, S., Edwards, H., Glesener, T., Moss, K., Frazier-Bowers, S., Phillips, C., Turvey, T., Blakey, G., White, R., Mielke, J., Zajac, D., & Jacox, L. A. (2022). Orthognathic speech pathology: Impacts of Class III malocclusion on speech. *European Journal of Orthodontics*, 44(3), 340-351. <https://doi.org/10.1093/ejo/cjab067>
- Long, W. (2024). *The aesthetic preference in music-making: A case study of self-production processes influencing the exploration of artistic identity*. Master's thesis. Sibelius Academy of the University of the Arts Helsinki.
- Ng, C. S. T., Wong, W. K. R., & Hagg, U. (2008). Orthodontic treatment of anterior open bite. *International Journal of Paediatric Dentistry*, 18(2), 78-83. <https://doi.org/10.1111/j.1365-263x.2007.00877.x>
- Owsinski, B. (2009). *The recording engineer's handbook* (2nd ed.). Canada.
- Parncutt, R., & Sattmann. (2018). The role of music performer gesture in creating expressive sounding music. Centre for Systematic Musicology, University of Graz.
- Roman, M. B., Cybulska, A. M., Dowgierd, K., Wójcik, G., Stanisławska, M., & Grochans, E. (2021). Quality of life of young adult patients after orthognathic surgery. *European Review for Medical and Pharmacological Sciences*, 25(24), 7903-7912. [https://doi.org/10.26355/eurev\\_202112\\_27640](https://doi.org/10.26355/eurev_202112_27640)
- Roy, S. (2005). The eight components of a balanced smile. *Journal of Clinical Orthodontics*, 39(3), 155-162.
- Schaap, J., Berghman, M., & Calkins, T. (2023). Attractive people make better music? How gender and perceived attractiveness affect the evaluation of electronic dance music artists. *Empirical Studies of the Arts*, 41(1), 284-303. <https://doi.org/10.1177/02762374221118526>
- Singh, T. K., Bhagia, P., Gupta, U., Passi, D., Goyal, J., Yadav, G., Gautam, B., & Jain, S. (2019). Effect of orthodontic treatment needs on oral health-related quality of life among the young population in Delhi NCR-region of North India. *Journal of Family Medicine and Primary Care*, 8(2), 550-555. [https://doi.org/10.4103/jfmpc.jfmpc\\_431\\_18](https://doi.org/10.4103/jfmpc.jfmpc_431_18)
- Stevens, K. N. (2000). *Acoustic phonetics*. Penguin Random House LLC. ISBN 9780262692505.
- Tashkandi, N. E., AlDosary, R., Zamandar, H., Alalwan, M., Alwothainani, M., Aljoaid, H., Alghazhmri, D., Allam, E., Marya, A., & Adel, S. M. (2025). The relationship between malocclusion and speech patterns: A cross-sectional study. *BMC Oral Health*, 25(65), 1-7. <https://doi.org/10.1186/s12903-025-05437-0>
- Van der Weijden, F. N., Kuitert, R. B., Berkhout, F. R. U., & Van der Weijden, G. A. (2018). Influence of tooth position on wind instrumentalists' performance and embouchure comfort: A systematic review. *Journal of Orofacial Orthopedics/ Fortschritte der Kieferorthopädie*, 79(3), 205-218.
- Wismeijer, D., Bronkhorst, E. M., & Kuijpers-Jagtman, A. M. (2019). Malocclusion and embouchure in wind instrument players: A systematic review. *Journal of Orofacial Orthopedics*, 80(3), 153-163. <https://link.springer.com/article/10.1007/s00056-018-0128-2>
- Zölzer, U. (Ed.). (2011). *DAFX: Digital audio effects* (2nd ed.). John Wiley & Sons. <https://doi.org/10.1002/9781119991298>

## Biodata of Authors



Dr. sc. **Korab Shaqiri** currently holds the position of Assistant Professor in the Master's and Bachelor's programs at the Faculty of MMDPM, UBT College in Prishtina, and serves as a lecturer at the Faculty of Music at the University of Prishtina "Hasan Prishtina" in Kosovo. He completed his doctoral studies at the Ss. Cyril and Methodius University, Faculty of Music, specializing in Composition and Interpretation. His main research interests include aesthetics, semiotics and semantics, culture, identity, education, and interculturalism. Currently, he teaches the following courses: Fundamentals of Composition, Modern Musical Forms, Orchestration, Vocal Styles, Songwriting for Singers, Sound Design for Film, and Score Reading for Choir and Orchestra. He has published a significant number of artistic articles in various international platforms and has authored a book in the field of culture. Furthermore, he was awarded third place in the competition for the National Anthem of the Republic of Kosovo and has contributed to important national and international artistic projects.

**Affiliation:** UBT College & University of Prishtina, Prishtina, Kosovo

**Email:** korab.shaqiri@ubt-uni.net / korab.shaqiri@uni-pr.edu

**ORCID:** 0009-0002-5397-7432

**Academia.edu:** <https://independent.academia.edu/KorabShaqiri>

**ResearchGate:** <https://www.researchgate.net/profile/Korab-Shaqiri>



Dr. **Blerim Mehmeti** was born in Pristina, Kosovo on 26th of April 1978. In 1993 he finished elementary school in Pristina, and in 1997 gymnasium in Tetovo, Macedonia. The same year he registered Faculty of Medicine, Department of Dentistry in University of Prishtina and graduated in 2005 attaining the title Doctor of Dental Medicine. From 2007 until 2010 he made specialization in the field of Orthodontics, in University Dental Clinical Centre of Kosovo, attaining the title Specialist of Orthodontics. In 2014 he registered PhD studies in University of Zagreb School of Dentistry, where he finished in 2018. After graduating he started working in private practice, and in 2008 he was chosen as Young Assistant in Orthodontics, Medical Faculty-School of Dentistry, University of Pristina, where in 2011 he advanced as Assistant, and Lecturer in 2019. In 2012 he started working as Specialist in the Department of Orthodontics, University Dental Clinical Centre of Kosovo, in Pristina. Actually, he works as Professor in Dental Faculty of AAB College. From 2023 he is President of Kosovo Orthodontic Society (KOS) and active member of World Federation Orthodontics (WFO) and European Orthodontic Society (EOS). He was in the organizing and scientific committee of several conferences of KOS, Albanian Orthodontic Association, Prishtina Dental Weekend and others. He also attended many other conferences passively and actively. He is author of several highly cited publications.

**Affiliation:** AAB College, Kosovo

**Email:** drblerim@gmail.com / blerim.mehmeti@universitetiaab.com

**ORCID:** 0009-0002-0036-8115

**Academia.edu:** <https://independent.academia.edu/MehmetiBlerim>

**ResearchGate:** <https://www.researchgate.net/profile/Blerim-Mehmeti>

## Biodata of Authors



PhD.Cand. **Armend Xhoni** is a musicologist and educator with a diverse academic background in music and pedagogy. He began his studies in musicology, followed by a degree in music pedagogy. He holds a Master of Science in Musicology and Music Teaching, and has also completed a second master's degree in Modern Music with a specialization in Composition. Currently, he is pursuing a PhD in Musicology. He is the author of the book "Arti i Muzave", and has contributed to several other edited volumes as a reviewer, opponent, and children's song composer. He is also the author of multiple peer-reviewed scientific articles in the fields of musicology, aesthetics, education, and interdisciplinary studies. He has actively participated in numerous national and international scientific conferences, presenting original research on topics such as pop music, voice aesthetics, public performance, interdisciplinary approaches to music, and the philosophy of sound. His scholarly interests lie at the intersection of music, culture, identity, and pedagogical innovation. He speaks English, Spanish, Turkish, and Serbian.

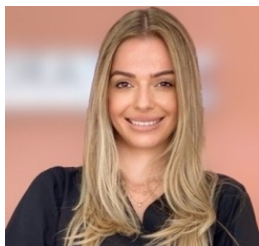
**Affiliation:** University of Prishtina, Faculty of Education

**Email:** arm.xhoni@gmail.com / xhoni51@hotmail.com

**ORCID:** 0000-0002-3978-6237

**Academia.edu:** <https://independent.academia.edu/xhoniarmend>

**ResearchGate:** <https://www.researchgate.net/profile/Armend-Xhoni-2>



**Dr. Rina Caka**, born on August 16, 1991, in Pejë, is a dental professional with an academic and clinical background. She holds a Doctor of Dentistry degree (2016) and a Bachelor's degree in English Language and Literature (2015) from the University of Prishtina "Hasan Prishtina", Prishtina, Kosovo. Since 2017, she has worked as a general dentist at several private clinics. In 2021, she established and has since served as the co-owner and doctor at Oxa Clinic. In 2024, she earned the title of Orthodontist from the University Dental Clinical Centre of Kosovo. Currently, she is a PhD candidate in Public Health at Ss. Cyril and Methodius University (UKIM) in Skopje, North Macedonia, with a focus on healthcare through interdisciplinary research and practice.

**Affiliation:** Orthodontist

**Email:** rina.caka@gmail.com

**ORCID:** 0009-0009-9976-6631

**ResearchGate:** <https://www.researchgate.net/profile/Rina-Caka>

## Biodata of Authors



Prof. Asoc. **Dardan Gjinolli** was born in Gjilan on January 3, 1984, and is one of the most renowned artists and educators in the field of music in Kosovo. He completed his music studies at the University of Prishtina, where he also earned his master's degree. Currently, Dardan serves as an Associate Professor at the Faculty of Arts, University of Prishtina, and as a visiting professor at the University of Peja, where he leads students in saxophone performance. As a musician, Dardan has had a rich international career, performing in many European countries as well as the United States. He has appeared both as a soloist and as a member of international music ensembles, contributing to the development and promotion of classical music and improvisational music styles. In addition to his concert work, Dardan leads the saxophone program at the Faculty of Communication Sciences at the University of Prishtina, where he provides students with opportunities to grow artistically and participate in diverse musical activities. He is also a passionate mentor, having guided many generations of young artists in their musical journeys. With passion and dedication, Dardan Gjinolli continues to be a key figure in music education in Kosovo, actively contributing to the advancement of the music and arts scene in the country.

**Affiliation:** University of Peja, Faculty of Music

**Email:** dardan.gjinolli@unhz.eu

**ORCID:** 0009-0009-3946-8106



Prof. **Fidane Gjinolli** is a professor of solfeggio and music theory at the "Lorenc Antoni" Music School in Prizren, where she has been an active contributor since 2005. With extensive experience in music education, she has played a key role in shaping the artistic development of young musicians, focusing on solfeggio, ear training, and music theory. She completed her studies at the Faculty of Arts, University of Prishtina, earning her Bachelor's degree in Music Theory and Music Pedagogy in 2008, and her Master's degree in 2016. Throughout her career, Prof.

Gjinolli has participated in numerous professional development trainings and seminars, particularly those emphasizing contemporary teaching methodologies in music education. In addition to her teaching, she is engaged in the development and revision of music curricula, mentoring students for competitions and university admissions, and organizing school concerts and cultural-educational events. Prof. Gjinolli has advanced skills in harmonic analysis, the use of music notation software such as Sibelius, Finale, and MuseScore, and excellent communication and collaboration abilities. She is fluent in Albanian and also speaks English and Turkish.

**Affiliation:** Lorenc Antoni High School of Music, Prizren, Kosovo

**Email:** gjinollifidane84@gmail.com

**ORCID:** 0009-0004-1781-7372



# An evaluation of the usability of Ahıska Lullabies as music educational material

**Gülnihal Gül**

Assoc. Prof. Dr., Department of Fine Arts, Division of Music Education, Bursa Uludağ University, Bursa, Türkiye.  
Email: gulnihal@uludag.edu.tr ORCID: 0000-0001-9437-2419

**Murat Mevlütoğlu**

Master's Student, Department of Fine Arts, Division of Music Education, Bursa Uludağ University, Bursa, Türkiye.  
Email: 802241032@ogr.uludag.edu.tr ORCID: 0009-0005-5083-4921

**Tugay Bütün**

Corresponding Author, Researcher, Department of Fine Arts, Division of Music Education, Bursa Uludağ University, Bursa, Türkiye. Email: tugaybutun@uludag.edu.tr ORCID: 0000-0002-6970-1003

DOI 10.12975/rastmd.20251334 Submitted January 29, 2025 Accepted August 20, 2025

## Abstract

Lullabies, with their lyrics, musical structures, and functions, are musical elements shaped directly by the psychology, customs, traditions, and tastes of their respective societies. They contribute significantly to fulfilling the emotional needs of both parents and children. This research aims to identify lullabies within the culture of Ahıska Turks, examine their melodic and lyrical structures, and evaluate their potential use as materials for music education. It is essential in Turkish music research to explore significant cultural elements such as Ahıska folk songs, particularly lullabies, which reflect a comprehensive range of cultural characteristics, and transform them into educational materials. An exploratory sequential mixed-method design was employed in this study. In the first stage, qualitative data were collected from 13 Ahıska women residing in Türkiye, Russia, Kyrgyzstan, and the USA. The lullabies gathered were analyzed through descriptive analysis. In the second stage, two field experts evaluated the lullabies' usability as music educational material using the Scale of Opinions on the Educational Usability of Lullabies. The findings revealed that the 14 lullabies collected from the Ahıska region exhibited rhythmic patterns in 4-time, 9-time, 11-time, 12-time, and free rhythm; melodic ranges spanning intervals of 4, 5, 6, and 8 notes; and syllabic structures with free verse, heptasyllabic (7), octosyllabic (8), and decasyllabic (10) meters. Additionally, these lullabies were identified as belonging to maqams such as Hicaz, Uşşak, Hüseyinî, Segah, Rast, and Çargah, encompassing themes including wishes and aspirations, affection and tenderness, religious motifs, poverty and lamentation, complaints about customs and traditions, longing for children, praise, and love. Specifically, 28.5% included themes of wishes-aspirations/affection-tenderness, 14.2% contained complaints about customs-longing for children, another 14.2% expressed wishes-aspirations alone, 7.1% covered wishes-aspirations/praise-affection, 7.1% religious elements, 7.1% affection-tenderness, 7.1% praise-affection, 7.1% wishes-aspirations/affection-tenderness/religious elements, and 7.1% poverty/lamentation. Expert evaluations confirmed that these lullabies possess high efficacy for use as music educational materials.

## Keywords

*Ahıska lullabies, Ahıska Turks, cultural symbols, music education materials, lullabies*

## Introduction

Lullabies, as elements of oral tradition encompassing the essence of folk traditions, reflect the literary, aesthetic, and cultural language of oral heritage. They are performed not only to lull children to sleep but also as a means of education (Sertdamir, 2018; Çek, 2015; Güneş, 2010; Orhan, 2018). Although the exact origins of lullabies as a form of folk literature remain

unknown, historical records indicate that in Anatolia—dating back to the Sumerians—children's earliest education was provided by mothers and that they were nurtured through lullabies and hymns (Özgül, 2011).

In Japanese, the term *komoriuta*, translated into Turkish as “child-protection song,” refers to lullabies (Şahin & Göher, 2021). These are regarded as essential elements

that contribute to the establishment of an emotional bond between mother and infant. Through lullabies, mothers convey their feelings, thoughts, dreams, and affection to their children (Özdemir, 2020; Arslan Kılıçoğlu et al., 2022).

The lyrics and musical structure of lullabies are directly associated with their functions and shaped by the psychology, customs, traditions, and aesthetic preferences of the society to which they belong (Bogomolava, 2020; Ilyina & Sumsova, 2019). As cultural artifacts, they serve to meet the emotional needs of both child and parents while supporting the child's social and educational development (Saadanbekova, 2022). Beyond their primary functions—such as soothing, comforting, inducing sleep, and awakening—they also transmit national and spiritual values, as well as social norms like sensitivity toward people and nature. Furthermore, lullabies aim to ensure that the child enjoys a sense of security and experiences restful sleep, free from fear (Bogomolova, 2020; Shabdanbaeva, 2021; Şen, 2010).

A review of national and international literature reveals numerous studies examining the effects of lullabies on children. These include research on their contributions to child education (Gelişli & Yazıcı, 2016; Güneş, 2010; Kabadayı, 2009; Uğurlu, 2014; Nadakumara, 2018) as well as studies exploring lullabies across different cultures (Aydoğmuş, 2020; Koçkar et al., 2018; Özgün, 2021). Additionally, the literature also features research addressing the use of lullabies as instructional music materials (Davis, 2005; Özeren, 2006).

### **Theoretical Framework**

Music education is an interdisciplinary field that contributes not only to the cognitive, social, and emotional development of individuals but also to their cultural and aesthetic growth. In this context, it is of great importance that the materials employed during the educational process are both pedagogically and culturally appropriate. Accordingly, the use of lullabies

as instructional music materials, given their potential to support children's musical, linguistic, and cultural development, is considered essential. It is well-documented that many approaches to music education encourage the incorporation of lullabies into educational practices.

Within this framework, the Kodály Method—recognized as one of the contemporary music education approaches—advocates for individuals to learn music through materials derived from their own cultural roots and emphasizes the inclusion of local folk melodies in the educational process (Yiğit, 2000). Similarly, the Orff-Schulwerk approach highlights the significance of using rhythmic patterns in improvisational training (Özbay & Can, 2020). In this respect, the simple melodic and rhythmic structures of lullabies render them highly suitable for such educational applications.

Lullabies are acknowledged for their crucial role in enhancing emotional perception and fostering musical awareness at an early age. Furthermore, they serve as cultural artifacts that shape the language, values, and musical sensibilities of societies. From this perspective, incorporating lullabies belonging to communities whose cultural continuity is perceived to be at risk—such as the Ahıska Turks, whose historical trajectory has been marked by forced migrations and deportations—into music education can contribute to the preservation of this intangible cultural heritage.

The Ahıska Turks, who are considered an integral part of the Anatolian Turkish cultural sphere, occupy a significant position in terms of Turkish culture and its associated elements, including lullabies. Ahıska, located in the northeastern part of Turkey within the borders of Georgia, represents one of the oldest Turkic homelands (Akpınar, 2016). Geographically, Ahıska is bordered by Georgia to the north and east, Armenia to the south, Turkey to the southwest, and the Autonomous Republic of Adjara (Georgia) to the west (Kurt, 2017).



Figure 1. The Ahıska Region and its surroundings (web 1)

Until 1828, the Ahıska Turks resided within the borders of the Ottoman Empire. Following the Ottoman-Russian War, they were displaced from their ancestral homeland as a result of forced migration policies (Poyraz & Güler, 2019; Karabulut & Gençer, 2022). The community has since experienced the long-lasting political and social consequences of the “1944 Ahıska Deportation” and the “1989 Fergana Events”, and today they remain scattered across ten different countries.

Historically, the Ahıska Turks have maintained a robust oral tradition, which has been transmitted across generations. The survival of individuals who were born and raised in Ahıska and subsequently deported provides valuable opportunities for ethnographic documentation and observational studies of Ahıska cultural heritage (Aliyeva Çınar, 2020).

Despite exposure to diverse cultural environments, the Ahıska Turks have preserved their cultural identity by sustaining a relatively closed social structure. This strategy has facilitated the retention of cultural distinctiveness and ensured the continuity of intergenerational cultural transmission (Aydingün, 1998).

Oral cultural forms—such as proverbs, epics, folktales, narratives, and lullabies—constitute a core component of Ahıska

ethnopedagogy and continue to hold an essential role in the community’s educational practices. Furthermore, Ahıska Turks residing in diaspora communities outside their homeland actively share and perpetuate this oral and written heritage (Aliyeva Çınar, 2020).

Music occupies a particularly significant position within Ahıska cultural life, reflecting both the geographical contexts inhabited by the community and the historical circumstances they have endured. The repertoire embodies collective experiences, encompassing expressions of grief, joy, and resilience (Karabulut & Gençer, 2022).

Throughout history, Ahıska musical culture has emerged as a key element in preserving cultural identity. In terms of genre, it is classified into four primary categories: “*Laments and Lullabies*,” “*Epics and Quatrains*,” “*Folk Songs*,” and “*Wedding Music*.” Research further indicates that, due to regional interactions, Ahıska music exhibits notable similarities with the musical traditions of Azerbaijan as well as those of the Kars, Erzurum, and Artvin regions of Turkey (Devrisheva, 2006; Şen & Delice, 2014). Particularly after the 1944 deportation, the migration of Ahıska Turks to different regions and their subsequent interaction with local cultures resulted in discernible changes within their traditional musical repertoire.

This process has led to distinct differences between earlier and contemporary forms of Ahıska musical expression (Dönmez, İlgar, & Polat, 2020).

Given their geographical displacement, the Ahıska Turks are assumed to have become increasingly distanced from their folkloric, cultural, and literary traditions (Dinç, 2021; Dönmez et al., 2020). Nevertheless, lullabies originating from this community are regarded as integral components of the Turkish cultural heritage within Anatolia, as they embody the cultural characteristics of the Ahıska Turks. In this respect, these lullabies possess significant potential for use as educational music materials, both musically and literarily.

### **Literature Review**

When examining national and international studies, it is evident that research focusing on the effects of lullabies on children is widely represented. In their study, Gelişli and Yazıcı (2016) emphasized that lullabies are versatile tools that support children's linguistic, social, emotional, and cognitive development while also reinforcing a sense of security and enhancing communication. Similarly, Güneş (2010) pointed out that lullabies increase sound and word awareness during early childhood, forming the foundation of language skills, and highlighted their contribution to both mental and emotional development. Kabadayı (2009) noted that lullabies contribute to children's mother tongue development as well as to cultural and cognitive awareness, underscoring the importance of parents making conscious choices when selecting lullabies. Uğurlu (2014), on the other hand, described lullabies as a powerful medium for the transmission of cultural memory, drawing attention to their functional role in constructing social identity and conveying values to future generations. Likewise, Nandakumara (2018) asserted that lullabies play an influential role in children's language acquisition, particularly in recognizing sound features and expanding vocabulary.

In addition to these studies that demonstrate lullabies as multidimensional educational tools supporting linguistic, cognitive, and cultural development, research on lullabies from different cultures is also available in the literature. Aydoğmuş (2020), in his study, highlighted that Kazakh lullabies not only nourish the child's inner world but also serve as an effective means of cultural identity transmission. Similarly, Koçkar et al. (2018) revealed that the lullaby-singing traditions of Karachay-Malkars living in the diaspora continue to be passed down through generations, even amid migration and cultural transformation processes, as a fundamental element of oral tradition. Özgün (2021) examined the vocabulary of Uzbek lullabies, emphasizing their significance in terms of linguistic richness and cultural authenticity, and noted that lullabies are valuable resources not only for child development but also for language preservation and the continuity of cultural identity.

The literature also includes studies on the use of lullabies as instructional music material. Davis (2005) argued that lullabies could serve as a fundamental material for transmitting cultural identity through education and as a significant component in music education that supports children's identity development. Similarly, Özeren (2006) investigated the role of musical works created for children in shaping social musical awareness and language development, indicating that the use of lullabies as educational material effectively enhances children's language skills and reinforces cultural musical consciousness.

### **Significance of the Study**

It is considered that the Ahıska (Meskhetian) Turks, who are among the Anatolian Turks, hold an important position in terms of Turkish culture and its elements, including lullabies. Having lived within the borders of the Ottoman Empire until 1828, the Ahıska Turks were displaced from their homeland as a result of compulsory migration policies

following the Ottoman-Russian War (Poyraz & Güler, 2019; Karabulut & Gençer, 2022). The “1944 Ahıska Deportation” and the “1989 Fergana Events,” whose political and social consequences persist to this day, have led them to live in a dispersed manner across ten different countries. Due to their distance from their homeland, it is assumed that the Ahıska Turks have also been separated from their folkloric, cultural, and literary traditions (Dinç, 2021; Dönmez et al., 2020). The lullabies belonging to this community are considered part of the cultural heritage products of Turkish culture in Anatolia and reflect the cultural characteristics of the Ahıska Turks. For these reasons, such lullabies are regarded as potentially valuable musical and literary resources that can be utilized as educational music materials.

### Research Purpose and Problem

Ahıska (Meskhetian) lullabies, which are considered a “*cultural symbol*” of the society to which they belong (Yavuz, 2019), are thought to embody values that contribute to shaping a child’s future life (Gül, Mintaş & Engür, 2020; Hökelekli, 2010) as well as characteristics that can influence their linguistic, social-emotional, cognitive, and physical development (Şahin & Göher, 2021; Kumtepe, 2015; Chen-Hafteck, 1997). Based on this perspective, the present study aims to identify the lullabies within the cultural context of the Ahıska Turks and to determine the extent to which these lullabies can be utilized as educational music material. This research is considered significant as it provides a holistic perspective on Turkish cultural lullabies, evaluates the usability of Ahıska lullabies as instructional music resources, and thus contributes to the field.

- In line with this purpose, the following research questions were addressed:
- What are the themes of the lullabies sung by the Ahıska Turks?
- What are the modal and rhythmic characteristics of these lullabies?

- What are the pitch ranges of the lullabies sung by the Ahıska Turks?
- What are the syllabic meter structures of these lullabies?
- To what extent can Ahıska lullabies be used as educational material in music education?

### Method

This section provides information regarding the research design, study group, data collection, and data analysis procedures.

### Research Design

This study employed an *exploratory sequential mixed methods design* (Ayden & Gündoğdu, 2022; Creswell & Plano Clark, 2018). In the first phase of the study, lullabies collected from Ahıska (Meskhetian) women through a narrative research approach were analyzed. The modal, melodic, and literary structures of these lullabies were identified using descriptive analysis. Based on the qualitative findings and the relevant music education literature, five fundamental criteria were established, and an assessment tool was developed accordingly.

In the second phase, 14 Ahıska lullabies were evaluated by two field experts using a four-point Likert-type scale designed around these criteria. This procedure generated quantitative data that complemented the qualitative process.

The application of the exploratory sequential mixed methods design in this study is illustrated in Figure 1.

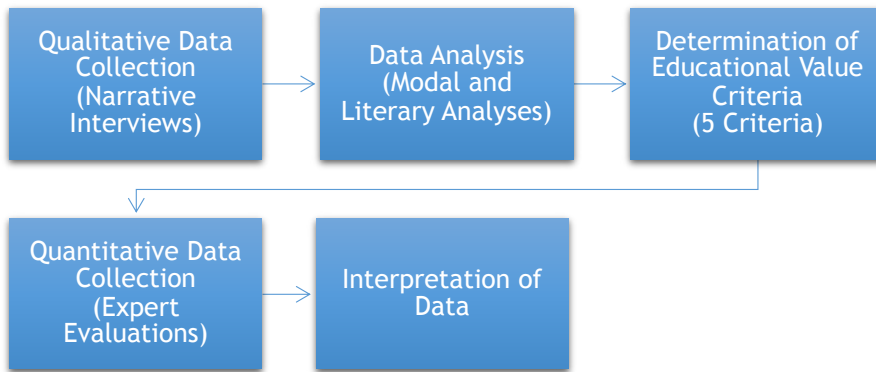


Figure 1. Flowchart of the research methodology

### Study Group

In determining the study group for this research, the snowball sampling method, one of the purposeful sampling techniques, was employed. This method is commonly used in cases where access to the population is difficult and information about the population is limited; it facilitates reaching the population and obtaining rich data. In snowball sampling, the researcher aims to

explain different phenomena by accessing individuals through other individuals and, subsequently, related cases (Baltacı, 2018; Creswell, 2014; Patton, 2001).

For the study, interviews were conducted either face-to-face or online with 13 Ahıska (Meskhetian) Turkish women residing in Turkey, Russia, Kyrgyzstan, and the United States. The demographic information of the participants is presented in Table 1.

Table 1. Demographic information of the participants

Participant	Country of Residence	Number of Children	Age
P1	Russia	6	86
P2	Russia	2	50
P3	Türkiye	4	66
P4	Türkiye	5	60
P5	Türkiye	5	60
P6	Türkiye	4	50
P7	Russia	3	51
P8	Türkiye	3	95
P9	Türkiye	4	67
P10	Türkiye	4	53
P11	USA	2	43
P12	Kyrgyzstan	8	84
P13	Türkiye	4	66

As shown in Table 1, the participants were found to reside in Russia (n = 3), Turkey (n = 8), the United States (n = 1), and Kyrgyzstan (n = 1). Additionally, it was determined that the participants had two children (n = 2), three children (n = 2), four children (n = 5),

five children (n = 2), six children (n = 1), and eight children (n = 1). Their age distribution was as follows: 40-49 years (n = 1), 50-59 years (n = 4), 60-69 years (n = 5), 80-89 years (n = 2), and 90 years and above (n = 1).

## Data Collection

In the first phase of the study, data on the lullabies sung by the Ahıska Turks were collected using an interview guide. The interview guide consisted of a structured list designed to remind the interviewer of essential rules, include the interview questions in a specific order, and facilitate the recording process when necessary. Within the scope of the research, participants were asked the question: “Could you provide examples of lullabies sung in Ahıska?” The data were collected through audio recordings.

## Scale for Opinions on the Usability of Lullabies in Music Education

In the second phase of the study, a measurement tool developed by the researchers was used to evaluate the usability of Ahıska lullabies as instructional material in music education. The criteria included in this tool were derived from a review of the relevant literature. The criterion “Rich content that enhances musical skills” was based on studies by researchers such as Hallam (2010) and Campbell and Scott-Kassner (2013), which emphasize the importance of melodic structures that support children’s rhythmic,

melodic, and auditory awareness skills. The criterion “Educational appropriateness of semantic structure” was grounded in the works of Chen-Hafteck (1997) and Hökelekli (2010), which highlight the contribution of the verbal content of lullabies to children’s cognitive and emotional development.

Within the scope of the role of lullabies in the learning process, the criterion “Verbal, melodic, and rhythmic repetitions supporting learning” was supported by the Kodály (1974) approach and Hallam’s (2010) findings on the impact of repetition on learning. The criterion “Educational appropriateness of melodic and rhythmic structure” was established based on Vygotsky’s (1978) theory of the zone of proximal development and Ilari’s (2002) studies on early childhood music perception, which explain the effect of musical structures appropriate to children’s age and developmental levels. Finally, the criterion “Transmission of cultural identity and memory” was developed with reference to studies by researchers such as Uğurlu (2014) and Davis (2005), who examined the function of lullabies as cultural transmission tools. The instrument was finalized based on expert opinions from two specialists in the field.

Table 2. Criteria for evaluating the usability of lullabies as music education materials

Criterion	Criterion Name	Theoretical Basis
1	Rich content that enhances musical skills	Studies by Hallam (2010) and Campbell & Scott-Kassner (2013)
2	Educational appropriateness of semantic structure	Chen-Hafteck’s (1997) studies on lullabies and Hökelekli (2010)
3	Verbal, melodic, and rhythmic repetitions supporting learning	Kodály (1974) approach and Hallam’s (2010) findings
4	Educational appropriateness of melodic and rhythmic structure	Vygotsky’s (1978) theory of the zone of proximal development and Ilari’s (2002) early childhood music perception studies
5	Transmission of cultural identity and memory	Studies by Uğurlu (2014) and Davis (2005) on lullabies as tools of cultural transmission

The scale was designed to be rated by experts on a 4-point scale ranging from 1 (inadequate) to 4 (excellent) (see Appendix 1).

## Data Analysis

The lullabies obtained through the interview guide were analyzed both musically and literarily using content analysis, one of the document review techniques. Content analysis, which involves examining recorded forms of human communication, systematically and quantitatively identifies specific characteristics of expressions in a document, allowing for inferences about the text (Gönç Şavran, 2012).

The collected lullabies were classified according to their themes, based on classifications found in the relevant literature (Dilek et al., 2019; Şimşek, 2016). Musical analysis of the lullabies was conducted according to Turkish Music Theory, focusing on pitch range characteristics, while literary analysis examined poetic structure, meter, and thematic content.

In the second phase of the research, the scale developed by the researchers was used to assess the usability of 14 Ahıska lullabies as instructional music material based on five fundamental criteria. Two field experts evaluated each lullaby against these five criteria using a rating system from 1 (inadequate) to 4 (excellent). For each criterion, average scores were calculated for every lullaby, thereby determining their overall level of usability. Inter-rater reliability between the two experts was calculated using the ICC(3,2) model, resulting in 0.73, which indicates a good level of agreement (ICC(3,2) = 0.7278).

## Findings

### Analysis of Ahıska Lullabies in Terms of Melodic and Verbal Structures

In this section, the lullabies obtained from the interviews were analyzed in terms of their melodic and verbal structures.

## General Characteristics of Ahıska Lullabies

Table 3. General Characteristics of Ahıska Lullabies

Lullaby	Syllabic Meter	Rhythmic Pattern	Modal Structure	Pitch Range	Theme
Lullaby 1	7-syllable	Free	Hicaz	5 notes	Wish/Desire - Love/Affection
Lullaby 2	Free	Free	Segah	5 notes	Wish/Desire - Love/Affection
Lullaby 3	7-syllable	11/8 (2+3+3+3)	Uşşak	6 notes	Religious Elements
Lullaby 4	7-syllable	4/4	Hicaz	4 notes	No Theme
Lullaby 5	7-syllable	Free	Hicaz	5 notes	Poverty - Complaint
Lullaby 6	10-syllable	Free	Hüzzam	4 notes	Praise - Love
Lullaby 7	7-syllable	12/8 (2+3+3+2+2)	Hicaz (Hümayun)	6 notes	Wish/Desire - Love/Affection
Lullaby 8	Free	Free	Hüseyini	5 notes	Wish/Desire - Praise - Love
Lullaby 9	8-syllable	Free	Uşşak	6 notes	Complaint about Customs - Longing for Child
Lullaby 10	7-syllable	Free	Rast	4 notes	Love/Affection
Lullaby 11	7-syllable	4/4	Hicaz	5 notes	Wish/Desire - Love/Affection - Religious Elements
Lullaby 12	8-syllable	4/4	Hüseyini	8 notes	Wish/Desire
Lullaby 13	Free	Free	Çargah	5 notes	Complaint about Customs - Longing for Child
Lullaby 14	Free	9/8 (2+2+2+3)	Segah	6 notes	Wish/Desire - Love/Affection

As shown in Table 3, the 14 lullabies collected from the Ahıska region were found to have rhythmic patterns in 4/4, 9/8, 11/8, 12/8 meters as well as free rhythm; pitch ranges spanning 4, 5, 6, and 8 notes; syllabic meters including free, 7-syllable, 8-syllable, and 10-syllable structures; and modal structures

based on Hicaz, Uşşak, Hüseyini, Segah, Rast, and Çargah scales. The thematic content of these lullabies included wishes and desires, love and affection, religious elements, poverty and complaint, complaints about customs, longing for a child, and praise combined with love.

### Rhythmic Characteristics of Ahıska Lullabies

Table 4. Distribution of Ahıska Lullabies by rhythmic patterns

Rhythmic Pattern	f	%
4/4 Meter	3	21.42
9/8 Meter	1	7.10
11/8 Meter	1	7.10
12/8 Meter	1	7.10
Free Rhythm	8	57.14
<b>Total</b>	<b>14</b>	<b>100</b>

As shown in Table 4, 57% of the 14 lullabies that constituted the research data were in free rhythm, while 21% were in 4/4

meter. Lullabies in 9/8, 11/8, and 12/8 meters each accounted for 7.1%.

### Modal Characteristics of Ahıska Lullabies

Table 5. Distribution of Ahıska Lullabies by modal structures

Modal Structure	f	%
Hicaz	5	35,7
Hüzzam	1	7,1
Hüseyini	2	14,2
Çargah	1	7,1
Uşşak	2	14,2
Rast	1	7,1
Segah	2	14,2
<b>Total</b>	<b>14</b>	<b>100</b>

As shown in Table 5, 35.7% of the 14 lullabies analyzed in the study were based on the Hicaz mode. Hüseyini, Uşşak, and Segah each

accounted for 14.2%, while Hüzzam, Çargah, and Rast were represented at 7.1% each.

### Pitch Range Characteristics of Ahıska Lullabies

Table 6. Distribution of Ahıska Lullabies by pitch range

Pitch Range	f	%
4 notes	3	21.42
5 notes	6	42.85
6 notes	4	28.57
8 notes	1	7.10
<b>Total</b>	<b>14</b>	<b>100</b>

As shown in Table 6, 42.8% of the 14 lullabies analyzed had a pitch range of 5 notes, 28.5%

had 6 notes, 21.4% had 4 notes, and 7.1% had 8 notes.

## Syllabic Meter Characteristics of Ahıska Lullabies

Table 7. Distribution of Ahıska Lullabies by syllabic meter

Syllabic Meter	f	%
7-syllable	7	50.0
8-syllable	2	14.2
10-syllable	1	7.1
Free	4	28.5
<b>Total</b>	<b>14</b>	<b>100</b>

As shown in Table 7, 50% of the 14 lullabies analyzed were written in a 7-syllable meter, 28.5% were in free meter, 14.2% in 8-syllable meter, and 7.1% in 10-syllable meter.

Table 8. Examples of Ahıska Lullabies by Syllabic Meter

Turkish	English
<i>Nanni dedim bu baştan Yüzün örtem kumaştan Nanni balama nanni Nanni yavruma nanni (Ninni 4)</i>	I called you “nanni. Let me cover your face with cloth. Nanni, my darling child, nanni, Nanni, my little one, nanni (Lullaby 4)
<i>Pencerenin yan şuşası Yandı bağrımım köşesi On bir ayın manavşası Nanni (da) balam nanni nanni (Ninni 9)</i>	The side windowpane Ignites the corner of my heart Violet of the eleven months Nanni, my darling, nanni nanni (Lullaby 9)
<i>Tagdaki atlar çamani otlar Tembel avratlar yavruma kurban Tağın maralı sümbül saralı Dünyanın vari balama kurban (Ninni 6)</i>	The horses on the mountains graze on the grass; Let the lazy girls be sacrificed for my baby; The deer on the mountain are hyacinth gold; Let the whole world be dedicated to my baby (Lullaby 6)
<i>Nanni yavruma nanni yavruma Yuhlasın da güller kohlasın balam Nanni diyem da yuhlasın Gözal rüvalar görsün banım balam Abasının tatlı yavrusı, abasının güzel melegi Yuhlasın da güzel güller kohlsın banım yavrum Yuhlasın da rüvasında güzel şeyler görsün banım balam Nanni nanni nanni (Ninni 8)</i>	Nanni to my baby Nanni to my baby Smell the roses, my child. I can call her Nanni and she will boo Let your eyes see your dreams, my dear. His sister’s sweet baby, his brother’s beautiful angel Smell the beautiful roses, my child. May you see beautiful loves in your dreams, my dear. Nanni nanni nanni (Lullaby 8)

## Distribution of Ahıska Lullabies by Themes

Table 9. Distribution of Ahıska Lullabies according to themes

Themes	f	%
Wish/Desire	2	14.2
Wish/Desire / Praise-Love	1	7.1
Wish/Desire / Love-Affection	4	28.5
Religious Elements	1	7.1
Love-Affection	1	7.1
Praise-Love	1	7.1
Wish/Desire / Love-Affection / Religious Elements	1	7.1
Complaint about Customs / Longing for Child	2	14.2
Poverty / Complaint	1	7.1
<b>Total</b>	<b>14</b>	<b>100</b>

As shown in Table 9, 28.5% of the 14 lullabies in the sample contained themes of wish/desire and love/affection; 14.2% addressed complaints about customs and longing for a child; another 14.2% focused solely on wish/desire. Themes such as wish/desire combined

with praise-love, religious elements, love-affection, praise-love, wish/desire with love-affection and religious elements, and poverty/complaint were each represented by 7.1%.

### Examples of Ahıska Lullabies by Theme

Table 10. Examples of Ahıska Lullabies according to their themes

Turkish	English
<i>Allahın verdugisin Gönlümün sevdugisin Muhammed ummatisin Hayatın kıymatisin (Ninni 11)</i>	You are God's own gift to me, Beloved darling of my heart, A member of Muhammad's Ummah, The very treasure of my life (Lullaby 11)
<i>Geceden yurdundan gettim Acep ben yavrumı neyttim Kaynatamdan hicab ettim Nanni (de) balam nanni nanni (Ninni 9)</i>	I slipped away from home under cover of night; Oh, where have I lost my baby so dear? From my father-in-law's gaze I veiled in my fright; Nanni, my darling, nanni nanni (Lullaby 9)
<i>Tagdaki atlar çamani otlar Tembel avratlar yavruma kurban Tagın maralı sümbül saralı Dünyanın vari balama kurban (Ninni 6)</i>	The horses on the mountains graze on the grass; Let the lazy girls be sacrificed for my baby; The deer on the mountain are hyacinth gold; Let the whole world be dedicated to my baby (Lullaby 6)
<i>Nanni dedim yaz geldi Çarşıya kiraz geldi Aldım beş-on paralıh O (da) yavruma az geldi (Ninni 5)</i>	I sang "nanni" when summer came, To market came cherries ripe and fair; I bought but five or ten small coins' worth, Yet even that was little for my dear (Lullaby 3)
<i>Nanni balama nanni, Nanni yavruma nanni Nanni diyem avudem Ah sütta verem büyüdüm (Ninni 1)</i>	Ninni, ninni for my child, Ninni, ninni for my baby dear, Softly I sing "nanni" to soothe and beguile, White milk I give to nourish you here (Lullaby 1)

### Usability of Ahıska Lullabies in Music Education

Table 11 presents the expert evaluations regarding the usability of Ahıska lullabies in music education.

Table 11. Expert evaluation scores on the usability of Ahıska Lullabies in music education

Lullaby	Expert 1	Expert 2	Avg. Score
Lullaby 1	20.0	20.0	20.0
Lullaby 2	20.0	19.0	19.5
Lullaby 3	15.0	18.0	16.5
Lullaby 4	20.0	20.0	20.0
Lullaby 5	18.0	19.0	18.5
Lullaby 6	17.0	20.0	18.5
Lullaby 7	16.0	15.0	15.5
Lullaby 8	20.0	19.0	19.5
Lullaby 9	19.0	20.0	19.5
Lullaby 10	20.0	20.0	20.0
Lullaby 11	19.0	19.0	19.0
Lullaby 12	20.0	19.0	19.5
Lullaby 13	18.0	20.0	19.0
Lullaby 14	18.0	18.0	18.0

As shown in Table 11, the scores assigned by two field experts to 14 Ahıska lullabies were based on five predetermined criteria assessing their usability as instructional material in music education. Among the expert evaluations, Lullabies 1, 4, and 10 received the highest scores, while Lullaby 3 had the lowest score. Considering the expert assessments overall, it can be stated that the Ahıska lullabies included in the study largely meet the criteria for use as educational music material at a high level.

## **Discussion and Conclusion**

Based on the findings of the study, it was determined that eight of the Ahıska lullabies were written in free rhythm, while three were composed in 4/4 meter. In addition, the lullabies exhibited modal structures characteristic of Hicaz, as well as Segah, Hüseyini, Uşşak, Rast, Çargah, and Hüzam. Furthermore, the lullabies analyzed in this study were found to have pitch ranges of 4, 5, 6, and 8 notes and to employ syllabic meters of 7, 8, and 10 syllables, as well as free forms. Similar studies in the literature also provide musical analyses of lullabies. For instance, Yılmazoğlu (2020) reported that Anatolian lullabies are often performed in 7- and 8-syllable meters and predominantly utilize modes from the Hüseyini, Uşşak, and Hicaz families, particularly Hicaz Hümayun. Similarly, Kumtepe (2015) found that most lullabies examined in his study remained within one octave and consisted of intervals of sevenths, sixths, fifths, fourths, tenths, and elevenths. Based on these findings, it can be stated that Ahıska lullabies share similar musical characteristics with Anatolian lullabies.

The thematic analysis of the lullabies revealed that they primarily include elements of wish/desire, praise and affection, complaints about customs, and religious motifs. Consistent with these results, other studies have shown that lullabies often reflect traditions, kinship relationships, and expressions regarding a child's future (Yılmazoğlu, 2020; Kumtepe, 2015; Şahin

& Göher, 2012). Likewise, Özdemir and Sarı (2020) reported that lullabies reflect familial love. From this perspective, it can be suggested that Anatolian lullabies, which contribute to the infant's emotional and cognitive development and foster emotional bonding with the family, share similar thematic characteristics.

Expert evaluations conducted using the developed assessment tool revealed that Ahıska lullabies generally contain rich content supportive of musical skills, demonstrate pedagogical appropriateness in terms of verbal and melodic structures, and include repetitive elements that facilitate learning. Additionally, their simple melodic structures make them highly applicable in educational contexts. Beyond their educational potential, the lullabies were also found to serve as strong carriers of cultural identity and collective memory. Supporting these findings, Kumtepe (2015) concluded that lullabies should be incorporated into music education. Similarly, Karakaya (2004) and Ungan (2009) emphasized that lullabies are not only emotional and social tools but also valuable educational materials. Therefore, it can be concluded that Ahıska lullabies, evaluated as generally falling between the "adequate" and "excellent" levels in terms of usability as educational music material, will make significant contributions to music education from both pedagogical and cultural perspectives.

## **Recommendations**

It is considered essential and important to use songs that develop children's musical sensitivity and strengthen their language and communication skills as instructional materials, particularly in early childhood education (Raposo & Vieira, 2012). Ahıska lullabies, regarded as a rich part of Anatolian heritage and, consequently, Turkish culture, reflect the traditional musical culture of the Ahıska people and the characteristics of Turkish music (Avci, 2012). For this reason, these lullabies are believed to contribute to the transmission of social values,

traditions, and belief systems, and they are recommended for use as educational music materials due to these features.

Gaining knowledge about different musical genres is of great importance for the musical acculturation of students, as well as the development of their aesthetic sense and musical understanding. In this regard, music teachers and prospective teachers should acquire knowledge of Turkish musical culture and the diversity of music cultures from different countries, incorporating this diversity into their educational practices to ensure a more effective and productive music education process in their professional lives.

Lullabies, as memory carriers that reflect the beliefs, traditions, customs, and values of their respective cultures, represent a repertoire that contributes to preserving national cultural characteristics. From this perspective, compiling and documenting lullabies from different Turkic communities and analyzing them both musically and textually to identify similarities and differences is considered necessary for safeguarding the cultural memory of Turkish heritage.

### Research Limitations

The study was limited to examining the usability of Ahıska lullabies as instructional material in music education. A total of 14 lullabies obtained through the narrative research method were analyzed.

### Disclosure Statement

There is no conflict of interest in this study. The authors worked collaboratively throughout the research process. This study was conducted with the approval of the Ethics Committee of Bursa Uludağ University, Social and Human Sciences Research and Publication Ethics Board, dated 23.06.2023, decision number 29. All authors contributed equally to the research. No financial support was received for this study.

## References

- Aliyeva Çınar, M. (2020). *Ahıska bölgesindeki Gürcülerin konuştuğu Türk ağızı (Turkish dialect spoken by Georgians in the Ahıska region)*. (1. baskı). Astana.
- Arslan Kılıçoğlu, E., Aral, N., Aysu, B., & Gürsoy, F. (2022). Annelerin ninnileri kullanma durumlarının incelenmesi (*Examination of mothers' use of lullabies*). *Sosyal Politika Çalışmaları Dergisi*, 22(57), 775-795. <https://doi.org/10.21560/spcd.vi.1029352>
- Avcı, O. (2012). Understanding the culture of Ahıska Turks in Wheaton, Illinois: A case study. *The Qualitative Report*, 17(44), 1-23. <https://doi.org/10.46743/2160-3715/2012.1711>
- Ayden, C., & Gündoğdu, G. (2022). Toplumsal e-sağlığa hazırbulunuşluğu ölçme aracı: bir keşfedici sıralı karma yöntemler araştırması (*A measurement tool for societal e-health readiness: an exploratory sequential mixed-methods study*). *Hacettepe Sağlık İdaresi Dergisi*, 25(3), 533-548.
- Aydingün, A. B. (1998). A deported nationality: the Ahıska Turks. perceptions: *Journal of International Affairs*, 3(4). [https://dergipark.org.tr/en/download/article-file/817149?utm\\_source=chatgpt.com](https://dergipark.org.tr/en/download/article-file/817149?utm_source=chatgpt.com)
- Aydoğmuş, E. (2020). Kazak ninnilerinden örnekler (*Examples from Kazakh lullabies*). *Gazi Türkiyat*, (27), 85-100. <https://dergipark.org.tr/en/download/article-file/2181115>
- Baltacı, A. (2018). Nitel araştırmalarda örnekleme yöntemleri ve örnek hacmi sorunsalı üzerine kavramsal bir inceleme (*A conceptual examination of sampling methods and sample size issues in qualitative research*). *Bitlis Eren Üniversitesi Sosyal Bilimler Dergisi*, 7(1), 231-274.
- Bogomolova, M. İ. (2020). Народные колыбельные песни в жизни людей разных национальностей, их виды и разновидности [Farklı Milletlerin Halk Ninnileri, Türleri ve Çeşitleri] (*Folk Lullabies in the Lives of Different Nationalities: Their Types and Variants*). 14(2), 31-39.
- Campbell, P. S., & Scott-Kassner, C. (2013). *Music in childhood: From preschool through the elementary grades (4th ed.)*. Cengage Learning.
- Chen-Hafteck, L. (1997). *Music and language development in early childhood: Untegrating past research in the two domains*. *Early Child Development and Care*, 130 (1), 85-97. <http://doi.org/10.1080/0300443971300109>
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research (3rd ed.)*. SAGE Publications.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches*. New York: Sage Publications.
- Çek, S. (2015). Türk halk ninnilerinde kadın diline ait metaforlar üzerine bir değerlendirme (*An evaluation on metaphors of women language in Turkish folk lullabies*). *Uluslararası Türkçe Edebiyat Kültür Eğitim Dergisi*, 4(2), 717-732.
- Davis, R. A. (2005). Music education and cultural identity. *Educational Philosophy and Theory*, 37(1), 47-63. <http://doi.org/10.1111/j.1469-5812.2005.00097.x>
- Devrisheva, K. (2019). Ahıska Türklerinin bitmeyen göçü (*Unending Migration of the Ahıska Turks*). *Selçuk Üniversitesi Türkiyat Araştırmaları Dergisi*, (45), 333-352. <https://doi.org/10.21563/sutad.636251>
- Dilek, A., Arslan, B., Mercan, N., Çapa, T., & Çolakoğlu, E. (2019). Rize ilinde söylenen ninnilerin konularına göre incelenmesi: "Pazar, Fındıklı ve Çamlıhemşin" örneği. XII. *Uluslararası Eğitim Araştırmaları Kongresi Bildiriler Kitabı* (s. 315-325). Rize.

Dinç, M. (2021). Ahıska Türklüğüne destan penceresinden bakmak: Mircevat Ahıskalı'nın "Gurbetten İnilteler Destan"ı üzerine bir inceleme (*Looking at Ahıska Turkishness from the Window of the Epic: A Study on Mircevat Ahıskalı's "Gurbetten İnilteler Destan"*). *Avrasya Uluslararası Araştırmalar Dergisi*, (9), 123-156. <https://doi.org/10.33692/avrasyad.943005>

Dönmez, M. B., İlgar, K., & Polat, S. (2020). Kültürlenme olgusu bağlamında Erzurum'da yaşayan Ahıska Türklerinin müzik kültürü. *Motif Akademi Halkbilimi Dergisi*, (13), 155-175. <https://doi.org/10.12981/mahder.690951>

Gelişli, Y., & Yazıcı, E. (2016). Ninniler ve çocuk eğitimindeki önemi (Lullabies and Their Importance at Child Education). *Uluslararası Türk Kültür Coğrafyasında Sosyal Bilimler Dergisi*, 1(1), 1-7. <https://doi.org/10.1234/turksosbilder.v1i1>

Gönç Şavran, T. (2012). Nicel ve nitel araştırmalarda kullanılan araştırma teknikleri (*Research techniques used in quantitative and qualitative research*). In T. Gönç Şavran (Ed.), *Sosyolojide araştırma yöntem ve teknikleri* (pp. 64-104). Anadolu University Web-Ofset.

Gül, G., Mintaş, S., & Engür, D. (2020). Şarkılarla değerler eğitiminin okul öncesi çocukların farkındalık düzeyine etkisi (*The Impact of Values Education with Songs on the Awareness Level of Preschool Children*). *Değerler Eğitimi Dergisi*, 18(39), 9-31. <https://doi.org/10.34234/ded.597237>

Güneş, F. (2010). Ninnilerin çocukların dil ve zihinsel gelişimine etkisi (*Effects of Lullabies on Linguistic and Mental Development of Children*). *ZfWT (Zeitschrift für die Welt der Türken)*, 2(3), 27-38.

Hallam, S. (2010). The power of music: Its impact on the intellectual, social and personal development of children and young people. *International Journal of Music Education*, 28(3), 269-289. <https://doi.org/10.1177/0255761410370658>

Hökelekli, H. (2010). Modern eğitimde yeni bir paradigma: Değerler eğitimi (*A New Paradigm in Modern Education: Values Education*). *Eğitime Bakış Dergisi*, 6(18), 4-9.

Ilari, B. (2002). Music cognition in early childhood: Methodological challenges and research trends. *Update: Applications of Research in Music Education*, 21(2), 32-40. <https://doi.org/10.1177/87551233020210020701>

İlyina, L. E., & Sumsova, T. Yu. (2019). Христианские колыбельные песни [Hristiyanların ninnileri] (Christian Lullabies). <https://orends.ru/wp-content/uploads/2021>

Kabadayı, A. (2009). Ninnilerin çocuğun gelişim alanlarına katkılarının içerik açısından incelenmesi: Konya örneği (*Analyzing the contributions of the lullabies to the development of the infants' domains via content analysis: Konya sample*). *Uluslararası İnsan Bilimleri Dergisi*, 6(1), 276-289. <http://www.insanbilimleri.com>

Karabulut, M., & Genç, B. (2022). Türkiye'de yaşayan Ahıska Türklerinin halk müziği kültürleri üzerine bir inceleme (*A study on the folk music cultures of Ahıska Turks living in Turkey*). *ZfWT (Zeitschrift für die Welt der Türken)*, 2(14), 131-154. <https://doi.org/10.46291/ZfWT/140207>

Karakaya, Z. (2004). Ninnilerin işlevleri ve eğitsel yönleri (*Functions and educational aspects of lullabies*). *Türk Kültürü İncelemeleri Dergisi*, 11(1), 55-72.

- Koçkar, M. T., Koçkar, R., & Koçkar, A. A. (2018). Diasporada yaşayan Karaçay-Malkarlıların ninni söyleme gelenekleri ve kültürel değişim (*Lullaby-singing traditions of Karachay-Malkar people in the diaspora and cultural change*). *Uluslararası Folklor Akademi Dergisi*, 1(1), 91-104.
- Kodály, Z. (1974). The selected writings of Zoltán Kodály. Boosey & Hawkes.
- Kumtepe, D. G. (2015). Ninninin çocuk gelişimindeki yeri ve müzikal öğeleri açısından incelenmesi (*The Place of the Lullaby in Child Development and Examination in Terms of Musical Elements*). Master thesis. Gazi University. Ankara, Türkiye.
- Kurt, E. (2017). *Ahıska Türklerinin tarihsel süreçte yaşadıkları sürgün ve göçler (Forced Migrations and Exiles Experienced by the Ahıska Turks in the Historical Process)*. *Uluslararası Sosyal ve Ekonomik Bilimler Dergisi*, 7(2), 101-110.
- Nandakumara, U. A. (28 Mayıs 2018). *Lullabies enrich child linguistic development*. [https://www.researchgate.net/publication/325389888\\_Lullabies\\_Enrich\\_Child\\_Linguistic\\_Development](https://www.researchgate.net/publication/325389888_Lullabies_Enrich_Child_Linguistic_Development)
- Orhan, D. (2018). Arap edebiyatında ninniler ve dil-toplum ışığındaki yansımaları (*Lullabies in Arabic Literature and Their Reflections in the Light of Language-Society*). *Kahramanmaraş Sütçü İmam Üniversitesi İlahiyat Fakültesi Dergisi*, 32, 113-136.
- Özbay, G., & Can, H. (2020). *Orff-Schulwerk yaklaşımıyla müzik öğretiminde ritim eğitimi (Rhythm Education in Music Teaching Through the Orff-Schulwerk Approach)*. *Eğitim ve Öğretim Araştırmaları Dergisi*, 9(2), 45-60.
- Özdemir, M., & Sarı, H. (2020). Ninnilerde aile sevgisi (*Family Love in Lullabies*). *PESA Uluslararası Sosyal Araştırmalar Dergisi*, 6(2), 121-130.
- Özeren, A. (2006, 04-06 Ekim). Çocuklar için yaratılan müzik yapıtlarının toplumsal müzik bilinci ve dil gelişimi açısından rolü ve önemi (The Role and Importance of Musical Works Created for Children in Terms of Social Musical Awareness and Language Development). *II. Ulusal Çocuk ve Gençlik Edebiyatı Sempozyumu* (s. 411-422). Ankara, Türkiye.
- Özgül, O. (2011). Sümer sosyal hayatında eğitimin yeri ve önemi (*Place of education and teaching in the social life of Sumerian*). *Erzincan Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 4(2), 401-414.
- Özgün, Y. (2021). Özbek ninnilerinin söz varlığı (*Vocabulary of Uzbek lullabies*). Master's thesis. Afyon Kocatepe University. Afyonkarahisar, Türkiye.
- Patton, M. Q. (2001). *Qualitative research & evaluation methods*. Sage Publications.
- Poyraz, T., & Güler, A. (2019). Ahıska kimliğinin göç sürecinde inşası: Amerika'ya göç eden Ahıska Türkleri (*The construction of Ahıska identity in the migration process: Ahıska Turks migrating to the United States*). *Türk Dünyası Sosyal Bilimler Dergisi*, 91, 187-216.
- Raposo, M., & Vieira, M. H. (2012). Traditional Portuguese lullabies: what do they sing about? *Revista Música Hodie*, 12(1), 204-214. Retrieved from <https://revistas.ufg.br/musica/article/view/21595>
- Saadabekova, Ç. İ. (2022). Колыбельные песни Центральной Азии на примере творчества киргизского народа (*Lullabies of Central Asia on the Example of Kyrgyz People's Creativity*). *Общество: философия, история, культура*, (4), 60-65. <https://doi.org/10.24158/fik.2022.4.9>
- Sertdemir, A. (2018). *Ninniler, masallar, mitos ve söylencelerle Türk toplumsal hafızasında muhalefet (Opposition in Turkish Collective Memory through Lullabies, Tales, Myths, and Legends)*. Master thesis. Karabük University. Karabük, Türkiye.

Shabdanbaeva, Zh. K. (2021). Бешик ырлары - гармониялуу өнүгүүнүн башаты (*Besik Yrlyary - The Beginning of Harmonious Development*). *Эл Азартуу*, 9-10, 34-40.

Şahin, Ç. E., & Göher, F. (2021). Türk ve Japon ninnilerinin sözel ve müzikal analizi (*Verbal and Musical Analysis of Turkish and Japanese Lullabies*). *Uluslararası Müzik ve Sahne Sanatları Dergisi*, (5), 1-15. <https://doi.org/10.15294/imsad.2021.84463>

Şen, Ü. (2010). Türk ninnileri üzerine (*On Turkish Lullabies*). *ZfWT (Zeitschrift für die Welt der Türken)*, 2(2), 259-261. <https://dergipark.org.tr/en/pub/zfwt/issue/47547/586020>

Şimşek, E. (2016). Anonim halk şiiri içerisinde ninnilerin yeri (*The Place of Lullabies in Anonymous Folk Poetry*). *AKRA Kültür Sanat ve Edebiyat Dergisi*, 4(8), 33-64. <https://dergipark.org.tr/en/pub/akra/issue/30363/327206>

Uğurlu, E. K. (2014). Kültürel bellek aktaricisi olarak ninni (*Lullaby as a Transmitter of Cultural Memory*). *Milli Folklor*, 26(102), 43-52. <https://dergipark.org.tr/en/pub/millifolklor/issue/24279/258478>

Yavuz, D. (2019). Çocuk edebiyatı ve kültürel semboller (*Children's Literature and Cultural Symbols*). *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi (ASEAD)*, 6(4), 175-184. <https://doi.org/10.29228/asead.44645>

Ungan, S. (2009). Geleneksel ninnilerin çocuk eğitimi açısından işlevleri (*The Functions of Traditional Lullabies in Child Education*). *Milli Folklor*, 21(83), 64-73. <https://dergipark.org.tr/en/pub/millifolklor/issue/21434/228353>

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Yılmazoğlu, B. (2020). *Geleneksel türk müziğinde ninni olgusunun yeri ve ninnilerin müziksel çözümlemesi* (The place of lullaby in traditional Turkish music and the musical analysis of lullabies). Master thesis. Hacettepe University. Ankara, Türkiye.

### Web Sites

**Web 1.** <https://www.aa.com.tr/tr/gundem/atalari-ahiska-surgununu-yasayan-prof-dr-askeroglu-bu-sadece-bir-surgun-degil-turkleri-bitirme-planliydi/3053202>

# Appendix 1. Scale for Opinions on the Usability of Lullabies in Music Education

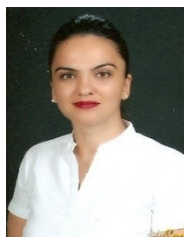
Scale for Opinions on the Usability of Lullabies in Music Education																					
<b>Description:</b> This scale was developed to determine your opinions regarding the usability of lullabies as educational material.																					
<b>Criterion 1:</b> Rich content that enhances musical skills; <b>Criterion 2:</b> Educational appropriateness of semantic structure; <b>Criterion 3:</b> Verbal, melodic, and rhythmic repetitions supporting learning; <b>Criterion 4:</b> Educational appropriateness of melodic and rhythmic structure; <b>Criterion 5:</b> Transmission of cultural identity and memory.1 Inadequate, 2 Partially adequate, 3 Adequate, 4 Excellent.																					
	Criterion 1				Criterion 2				Criterion 3				Criterion 4				Criterion 5				Total
Lullabies	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Lullaby 1																					
Lullaby 2																					
Lullaby 3																					
Lullaby 4																					
Lullaby 5																					
Lullaby 6																					
Lullaby 7																					
Lullaby 8																					
Lullaby 9																					
Lullaby 10																					
Lullaby 11																					
Lullaby 12																					
Lullaby 13																					
Lullaby 14																					

## Appendix 2. Lullabies Included in the Study

Lullabies Included in the Study					
Lullabies	Modal Structure	Source Person	Age	NC	CR
Lullaby 1	Hicaz	Zarbiyye Davruşeva	86	6	Russia
Lullaby 2	Segah	Maynaz Dursunova	50	2	Russia
Lullaby 3	Uşşak	Bağda Eminova	66	4	Türkiye
Lullaby 4	Hicaz	Faminaz Hasratova	60	5	Türkiye
Lullaby 5	Hicaz	Faminaz Hasratova	60	5	Türkiye
Lullaby 6	Hüzzam	Bağdagül Hasanova	50	4	Türkiye
Lullaby 7	Hicaz(Hümayun)	Heyriye İskenderova	51	3	Russia
Lullaby 8	Hüseyini	Güller Kurbanova	95	3	Türkiye
Lullaby 9	Uşşak	Genime Rıdvanova	67	4	Türkiye
Lullaby 10	Rast	Zerniç Aliyeva	53	4	Türkiye
Lullaby 11	Hicaz	Şaide Burhanova	43	2	USA
Lullaby 12	Hüseyini	Gülşan Burhanova	-	-	-
Lullaby 13	Çargah	Ayşe Ziyaeva	84	8	Kyrgyzstan
Lullaby 14	Segah	Faminaz Hasratova	60	5	Türkiye

NC: Number of Children CR: Country of Residence

## **Biodata of Authors**



Assoc. Prof. **Gülnihal Gül** was born in Gümüşhane, Türkiye, and completed her primary and secondary education in Bursa. She graduated from Uludağ University, Faculty of Education, Music Department, in 1997. In 1999, she started working as a lecturer in Vocal Education at the Department of Music Education in the same faculty. She completed her master's degree at Uludağ University, Institute of Social Sciences, in 2000. Between 2001 and 2005, she continued her vocal studies with Hülya Kazan, an artist from the Ankara State Opera and Ballet. In 2012, she earned her Ph.D. from Uludağ University's Institute of Social Sciences. Currently, she is an Associate Professor in Vocal Education and serves as the Head of the Music Education Department at Bursa Uludağ University.

**Institution:** Bursa Uludağ University, Faculty of Education, Department of Fine Arts Education, Division of Music Education

**Email:** gulnihalgul@gmail.com

**ORCID:** 0000-0001-9437-2419

**ResearchGate:** <https://www.researchgate.net/profile/Guelnihal-Guel>

**AcademiaEdu:** <https://independent.academia.edu/GÜLGÜLNİHAL>



**Murat Mevlütöğlu** was born on April 24, 1994, in Jalal-Abad, Kyrgyzstan. In 2010, he completed his piano education at Oktyabrskoye Music School. In 2011, he began vocal training under Anara Jusupbekovna Tajibayeva in the voice class at Murataly Kurenkeev Fine Arts High School in Bishkek. After successfully completing his high school education in 2015, he graduated. In 2018, he was admitted to Bursa Uludağ University, Faculty of Education, Department of Fine Arts Education, Division of Music Education. During his undergraduate studies, he continued his vocal training with Assoc. Prof. Dr. Gülnihal Gül. Throughout his undergraduate education, he performed works by notable composers such as Puccini, Leoncavallo, Mozart, Tchaikovsky, and Saygun, participating in various university events. He graduated in 2022 and, in the same year, was accepted into the master's program in Music Education at Bursa Uludağ University, Institute of Educational Sciences, Department of Fine Arts Education. He has participated in numerous concerts and events throughout his education and is currently continuing his graduate studies at Bursa Uludağ University in the Department of Music Education.

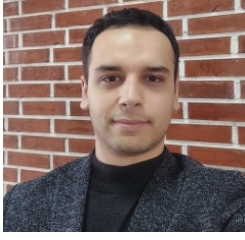
**Institution:** Bursa Uludağ University, Institute of Educational Sciences, Department of Fine Arts Education, Music Education Division

**Email:** muratmevlutoglu1994@gmail.com

**ORCID:** 0009-0005-5083-4921

**ResearchGate:** <https://www.researchgate.net/profile/Murat-Mevluetoglu-2>

**AcademiaEdu:** <https://independent.academia.edu/MuratMevlütöğlu>



Resercher, **Tugay Bütün** was born in 1996 in Bursa, Türkiye. He graduated from Zeki Müren Fine Arts High School and the Turkish Folk Music Department of Bursa Metropolitan Municipality in 2014. He completed his bachelor's degree in music teaching at Bursa Uludağ University in 2019 and his master's degree in 2021. He is currently pursuing his Ph.D. in the same department.

In 2008, as a member of the Bursa Science and Art Center Polyphonic Choir, he received a bronze medal at the International Choir Competition in Bratislava, Slovakia. In 2014, he passed the entrance exam for the TRT Ankara Radio Turkish Folk Music Youth Choir as a bağlama performer. In 2017, 2018, and 2019, he participated in the European Jazz School Project in Marburg, Germany, performing with bağlama and kaval. In 2020, he won the "Achievement Award," the highest honor in the category of Bağlama Performance at the Ministry of Culture and Tourism Young Instrumentalists Competition. He also worked as director and performer in three regional folk music albums titled *Songs from the Foot of Uludağ I-II-III*, as part of the Intangible Cultural Heritage Project. Since 2022, he has been working as a research assistant in the Department of Music Education at Bursa Uludağ University.

**Institution:** Bursa Uludağ University, Faculty of Education, Department of Fine Arts Education, Division of Music Education

**Email:** tugaybutun@uludag.edu.tr

**ORCID:** 0000-0002-6970-1003

**Personel web site:** <https://avesis.uludag.edu.tr/tugaybutun>

**ResearchGate:** <https://www.researchgate.net/profile/Tugay-Buetuen>

**AcademiaEdu:** <https://independent.academia.edu/BütünTugay>

**GoogleScholar:** <https://scholar.google.com/citations?user=w8i2eWUAAAAJ&hl=tr>



# Implementation approaches and strategies in the use of equalizer in music production: A systematic review

Ali Delikara

Assistant Professor, Department of Fine Arts Education/Music Education, Niğde Ömer Halisdemir University, Niğde, Türkiye. Email: delikara@hotmail.com ORCID: 0000-0003-0239-1933

DOI 10.12975/rastmd.20251335 Submitted April 12, 2025 Accepted August 25, 2025

## Abstract

The equalizer, a fundamental tool in the disciplines of music production and audio engineering, is one of the most important elements that shape the timbral qualities of sound, its perceptual clarity, and its hierarchical balance within the mix. With the proliferation of digital audio processing technologies, access to this tool has become easier, but this technological democratization has also brought about a serious competency problem. When inexperienced users, in particular, use equalizers without the necessary technical and theoretical background, this leads to fundamental production errors such as frequency masking, timbral muddiness, and the loss of natural qualities of the processed sound. The literature demonstrates that amateurs interested in the field experience cognitive difficulties in the face of the complexity presented by digital interfaces and tend to perceive equalizers as a magical tool promising instant solutions. The main motivation for this study is the paucity of academic studies that present a systematic synthesis of technical and practical information found scattered in the relevant literature and transform these elements into teachable pedagogical approaches. The aim of this research is to fill this academic-pedagogical gap. To this end, a systematic review model of qualitative research designs was designed based on the PRISMA 2020 guidelines. 49 academic and technical documents, selected based on a comprehensive literature review and predetermined criteria, were analyzed through content analysis. The analyses revealed that approaches to equalizer use in the literature can be structured under three fundamental frameworks: a corrective approach aimed at resolving technical issues, a shaping approach aimed at enriching the aesthetic character of sound, and a creative approach that transforms sound into a means of artistic expression. The practical application of each approach is illustrated with schematic diagrams. These frameworks are supported by key concepts from the literature, linking them to the “problem-solving” philosophies of experts such as Owsinski and Senior and the “tone perception” studies of researchers such as Dobrowohl. In conclusion, this research fills an important gap in the field by offering a holistic perspective that removes the use of equalizer, a multi-layered competency, from random trials and makes it more understandable, conscious, and teachable.

## Keywords

*equalizer, music production, music technology, signal processors, sound engineering*

## Introduction

Music production is a complex process that combines the artistic and technical aspects of sound, and one of the fundamental tools at the heart of this process is the equalizer. The basic function of an equalizer is to alter the frequency content of an audio signal by boosting or cutting specific frequency ranges. The equalizer plays a critical role in shaping the timbral character of the sound, its clarity, and the overall balance within the mix. While the proliferation of digital audio workstations (DAWs) has made this powerful tool accessible to users of all skill levels (Pakarinen et al., 2011; Ramola, 2022), this technological

democratization has brought with it a new challenge: the inadequacy of pedagogical resources needed for a wide range of users to use these powerful tools consciously and effectively.

Unconscious interventions can negatively impact sound quality by causing serious technical problems such as frequency overlap, masking, and loss of naturalness in productions. Indeed, Mycroft and Paterson (2011) state that the complexity of digital interfaces creates cognitive difficulties for novice users, while Senior (2019) emphasizes that amateurs tend to view the equalizer as a magical “miracle

drug” that provides an instant solution, which leads to erroneous interventions. This situation, combined with ever-rising listener expectations (Spotify Audio Labs, 2024), presents a significant competency challenge for both amateur and professional users.

The basis of this problem lies in the structure of the literature in the field. While numerous valuable resources exist (industry journals, professional blogs, books) that explain the technical principles and practical use of equalizers, these resources are generally in the form of “how-to” guides that teach the use of specific software or specific strategies for advanced professionals. The literature indicates that most existing guides target professional studios and ignore the practical issues faced by amateur users (Izhaki, 2008). However, there is a marked lack of academic studies that synthesize this scattered knowledge through systematic analysis and transform the underlying principles into teachable pedagogical models. This research aims to fill this academic-pedagogical gap.

This study offers unique value by reconstructing corrective, formative, and creative equalization approaches within the literature as replicable and teachable pedagogical practice methods within the framework of a systematic literature analysis. In line with this overall objective, the study seeks to answer the following fundamental research questions:

- What are the basic principles and systematic steps that constitute the corrective equalization approach used to solve technical problems in music production?
- What basic principles and practical strategies can be used to structure the shaping equalization approach to enrich the diagnostic and aesthetic character of sound sources?
- What basic techniques and application strategies are based on the creative approaches using the equalizer as a means of artistic expression?

The study, which seeks answers to these questions, first details the theoretical framework and research method of the subject, and then discusses these findings by presenting the findings and pedagogical models obtained from the literature analysis.

## **Theoretical Framework and Related Literature**

The equalizer is considered a fundamental element of modern audio engineering and music production processes, playing a critical role in optimizing tonal balance, clarity, and aesthetic qualities by regulating the frequency spectrum of audio signals (Dewey, 2014; Rämö and Välimäki, 2014). The widely accepted notion in the literature emphasizes the important function of the equalizer in optimizing the sound quality and ensuring the integrity of the various sound elements within the mix (Owsinski, 2017). The use of an equalizer is not only a technical necessity but also functions as a creative instrument that determines the emotional and artistic impact of the sound. As Välimäki and Reiss (2016) point out, the equalizer is not only a tool based on objective principles of sound physics and signal processing, but is also considered a subjective field of application reflecting the sound engineer’s aesthetic judgments, experience, and artistic vision. This dual structure explains the complexity of using the equalizer and why mastering it requires both technical knowledge and advanced listening skills (Corey, 2016).

## **History of the Equalizer**

While the concept of equalizers is synonymous with modern electronics, the pursuit of understanding and consciously shaping the frequency content of sound dates back much further. For example, ancient theaters were structures “designed for perfect acoustics”, and in these designs, each architectural element, such as the backstage wall or the orchestra area, had a special acoustic role in directing the sound (Bo et al., 2016: 83-84). This demonstrates that the effects of spatial designs on sound frequencies were already well understood

in the past. The scientific manipulation of frequencies, however, was made possible in the 19th century by resonators, named after Hermann von Helmholtz and used to isolate specific frequencies (Sabat et al., 2022).

The first practical applications of frequency-specific signal manipulation emerged in the late 19th century with harmonic telegraphs designed in the 1870s. These systems, by sending multiple signals over a single line via vibrating reeds tuned to specific frequencies, laid the foundation for the modern idea of frequency-division multiplexing. Soon after, wave filters were used in telephone lines to compensate for high-frequency attenuation in long cables (Välimäki and Reiss, 2016: 83), a process called “equalization” (Önen, 2011).

With the proliferation of phonographs and gramophones in the early 20th century, “a standard mastering process was needed in which levels, equalizer settings and dynamics were adjusted” to ensure the consistency of recordings (Tanyeri, 2024: 15). The emergence of the first adjustable equalizers was accelerated by the sound industry’s need to compensate for high-frequency losses in sound passing through perforated cinema screens. In this field, the external equalizer designed by John Volkman is considered one of the first examples, with selectable frequencies and cut-off features. These developments also carried over

outside the studio, and following the bass and treble controls for gramophones in 1949, “potentiometer tone controls that give the user full control” were developed by Peter Baxandall in 1952 (Välimäki and Reiss, 2016: 83).

In the studio environment, equalizers became more sophisticated during the 1950s and 1960s, with pioneering designs such as the Langevin Model EQ-251A.

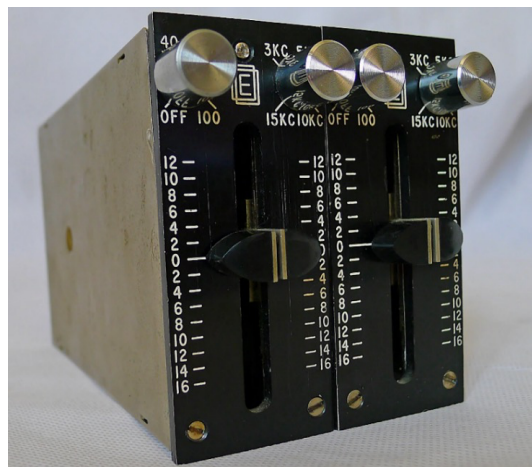


Photo 1. Langevin Electrodyne Model: 251A EQ-1956 (Web 1)

The invention of parametric equalizers in the 1970s, pioneered by engineers such as George Massenburg, laid the foundation for modern audio engineering by providing precise control over frequency, gain and bandwidth (Q).



Photo 2. The first parametric equalizer developed by Burgess MacNeal and George Massenburg. ITI Audio MEP-130 Console EQ-1969 (Web 2)

The popularization of digital equalizers, beginning in the 1980s, ushered in a new transformation in music production with

groundbreaking features such as automation and dynamic control (Duggal, 2024). By the late 1990s, the global popularity of free,

user-friendly media players such as Winamp had removed the graphic equalizer from the monopoly of professional studios. This became part of a broader consumer trend toward customizing audio experiences, allowing millions of home users to tailor audio frequencies to their personal preferences (Leyshon, 2009).

Nowadays, frequency and phase analysis can be performed automatically with artificial intelligence-supported equalizers, and more transparent and natural sound processing can be achieved thanks to advanced algorithms.

These systems find the most appropriate equalizer settings with convolutional neural networks and genetic algorithms (Christensen, 2003; Engel et al., 2020; Başay et al., 2024), while preserving fine details in the signal and reducing noise with techniques such as MUSIC and Wiener filters (Proakis and Manolakis, 2007). Semantic control systems, particularly those that model human perception, produce natural results aimed at goals like “brightness” (Stasis et al., 2016), bringing together technical precision and artistic expression in music production.

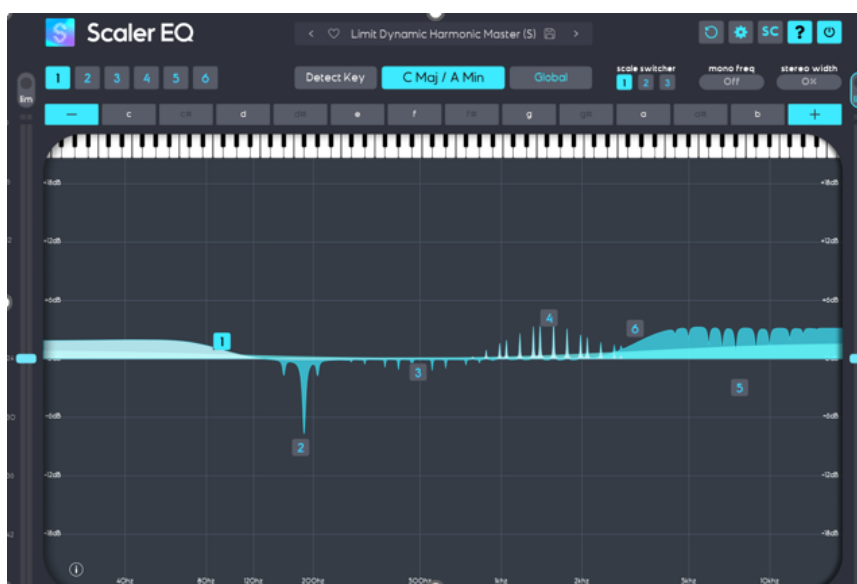


Figure 1. Plugin Boutique Scaler EQ

### Psychoacoustic and Perceptual Effects

The use of an equalizer is not only a technical process that alters the physical properties of the audio signal, but also a psychoacoustic intervention that shapes the listener's perceptual and aesthetic experience. Quantitative changes in the frequency spectrum create an effect that is defined as “perceptual features” in the literature and that translates into qualitative concepts such as “loudness” and “brightness” in the listener's mind (Zölzer, 2011). As a matter of fact, it is stated that due to the natural sensitivity of the human ear, especially in the 1-5 kHz range, interventions made at

these frequencies can make the music be perceived as “louder” or “stronger” (Tanyeri, 2024: 923). Therefore, sound engineers aim to create the desired timbral character and emotional effect by manipulating certain frequency ranges. This skill is a proven competence that can be improved in a short time with systematic training of the listener's timbre discrimination ability (Corey, 2016).

It is accepted in the literature that interferences in certain frequency ranges create specific perceptual qualities. For example, it is stated that an increase in high frequencies causes music to “sound very ‘bright’ and ‘scratchy’” (Rumsey and

McCormick, 2009: 331). Similarly, it is stated that the sensation of “warmth” and “body” arises from the balanced distribution of the energy constituting the timbre in the lower and lower-mid frequencies (Tanyeri, 2024). Uncontrolled accumulation in these areas leads to a problem called “muddiness”, where clarity between frequencies is lost; It is emphasized that in cases of excessive intensity, especially in the 100-400 Hz range in vocals, “the vocal sound loses its clarity and turns into a heavy and muffled sound like mud” (Kim, 2018: 58).

A “muddy” sound in modern music production stems not only from flawed mixing decisions but also from an industrial trend known as the “Loudness War,” which has led to music recordings “increasingly containing compressed, loud, and static sounds” (Tanyeri, 2024: 50). Narrowing the dynamic range in an attempt to sound louder eliminates the nuances and details within the music, reducing the separation between frequencies and causing an overall monotony. It is also stated that the characteristic sound of modern recordings is “compression” and that the effects it creates, such as phase shift, are now considered natural, but those who defend traditional sound aesthetics are uncomfortable with this situation (Owsinski, 2017). Addressing this issue and preserving the timbral integrity of the sound relies on critical listening skills that mastering engineers develop through years of perceptual training (Corey, 2016).

### Equalizer working principle and basic components

The operating principle of an equalizer is based on fundamental concepts such as frequency, harmonics, and filters. Frequency is the fundamental parameter that determines the pitch of sound and is measured in Hertz (Hz). The human ear can generally hear frequencies between 20 Hz and 20 kHz. Equalizers divide this frequency range into different bands and offer the option of controlling each band separately (Pasinlioglu and Pasinlioglu, 2016). While

analog equalizers provide a warm and organic auditory experience due to distinctive harmonic distortions and phase deviations, digital equalizers provide precise, adaptable and repeatable frequency control (Välimäki and Reiss, 2016). Understanding these fundamental components is crucial for informed equalizer use.

### Frequency ranges and diagnostic implications

To understand the functions of the filters used in equalizers, it's first necessary to define their frequency ranges. In music production, the 20-20,000 Hz frequency range, which represents the human hearing threshold, is generally examined under six headings: Sub-Bass, Bass, Low-Mid, Mid, High-Mid, and High.

Audio frequencies are important components that shape the overall character of music and sound. The sub-bass (20 Hz-60 Hz) range provides the perceived power and depth of a sound; boosting in this region adds weight and depth, while attenuation prevents unnecessary rumble and makes the sound lighter. The bass (60 Hz-250 Hz) provides the rhythmic foundation and fullness of the music; boosting provides a full and powerful sound, while attenuation improves clarity and reduces low-frequency buildup. Lower-mid (250 Hz-500 Hz) frequencies affect the warmth and body of instruments; excessive boosting can result in muddy or muffled sounds, while balance with sub-bass frequencies is important. The mid-range (500 Hz-2 kHz) range determines the fundamental tonal character of the human voice and many instruments and is critical to sound clarity. Upper-mid (2 kHz-4 kHz) frequencies increase sound detail and clarity; While boosting makes the sound “lively” and “clear,” excessive boost can create a harshness that tires the ear. The upper frequencies (4 kHz-20 kHz), on the other hand, provide brightness, clarity, and clarity. In particular, between 4 kHz and 6 kHz, it increases the expressive power of the sound, while between 6 kHz and 20 kHz,

it adds “sizzle” and realism to the sound; however, excessive boost can create a “brightness” or “hiss” that tires the ear (Alm and Walker, 2002; Corey, 2016; Loni, 2013; Özkeleş and Arapgirlioğlu, 2024).

In music production, understanding and

interpreting the frequency ranges of instruments and human voices is crucial for correctly determining which interventions to perform at which stage using equalizers. Figure 2 shows the fundamental frequency ranges and harmonic boundaries of instruments and human voices.

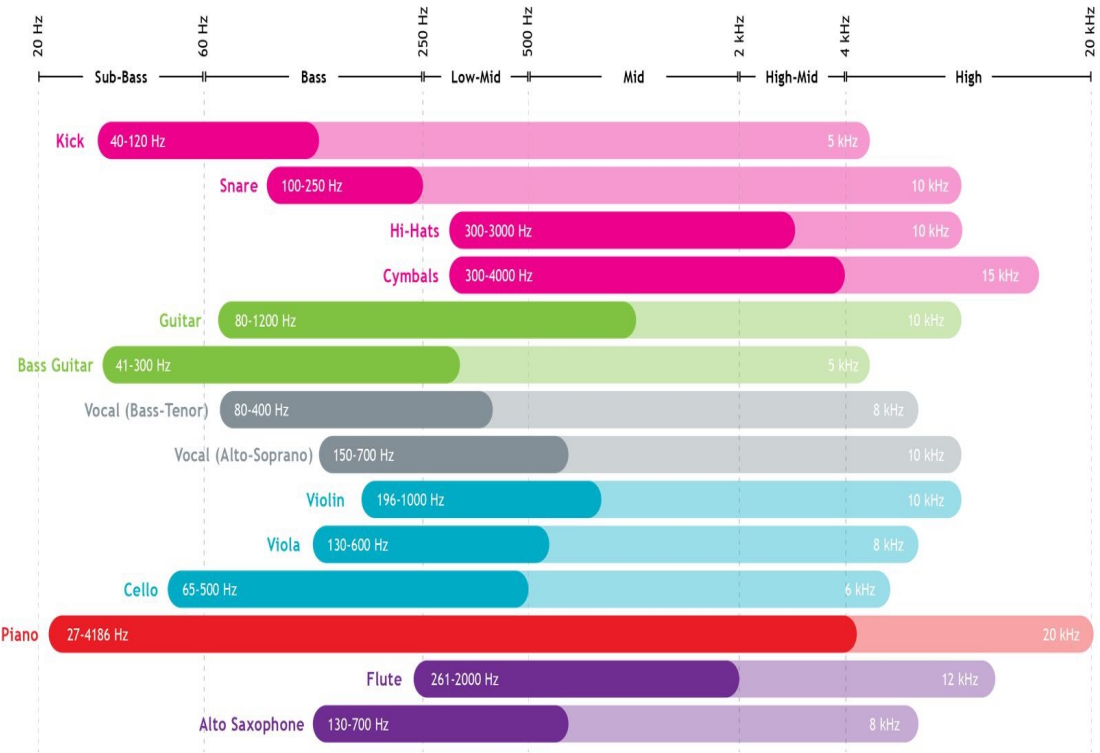


Figure 2. Instrument and human voice frequency ranges (adapted from Owsinski, 2017; Senior, 2019)

### Filter types

Filters, the fundamental building blocks of equalization, offer different characteristic curves to precisely shape specific sections of the audio spectrum. These filters are divided into basic categories: frequency-pass filters (HPF/LPF), which primarily clean unwanted frequency ranges; band-pass filters (Band-Pass/Notch), which isolate or eliminate a specific frequency band; and shelf filters, which adjust the overall tonal balance of a sound (Proakis and Manolakis, 2007; Rumsey and McCormick, 2009; Zölzer, 2011). In addition to these basic filters, the peaking filter, which allows for surgical interventions on the timbral characteristics of a sound, and the advanced all-pass filter, which alters

the phase relationships of a signal, also hold an important place in modern production techniques (Dutilleux et al., 2011, p. 52). Each filter has its own definition, function, and primary application. These basic filter types, commonly used in music production, are summarized in detail in Table 1.

Table 1. Basic filter types and functions used in equalizer

Filter Type	Filter Name	Definition and Function	Basic Usage Area
Frequency Pass Filters	High-Pass (HPF) Low-Pass (LPF)	HPF: Cuts below the specified frequency and passes above it. LPF: Cuts above the specified frequency and passes below it.	Cleaning of unnecessary low-end noise (HPF) or high-pitched hum (LPF).
Bandpass Filters	Band-Pass and Notch	Band-Pass: Passes only a narrow range of frequencies. Notch: Cuts only a narrow range of frequencies.	Creating special effects (Band-Pass), eliminating a certain resonance or noise (Notch).
Shelf Filters	High-Shelf Low-Shelf	Collectively boosts/lowers all frequencies above (High) or below (Low) the specified frequency.	Adjusting the overall tonal balance, adding an overall brightness or fullness to the sound.
Peak Filter	Peak (Bell)	It precisely amplifies or attenuates a bell-shaped area around a center frequency.	Emphasizing certain instrument timbres or controlling problematic resonances.
All Pass Filter	All-Pass	It only changes the timing (phase) of the frequencies without changing their volume (amplitude).	Correcting phase shift issues and advanced sound design applications.

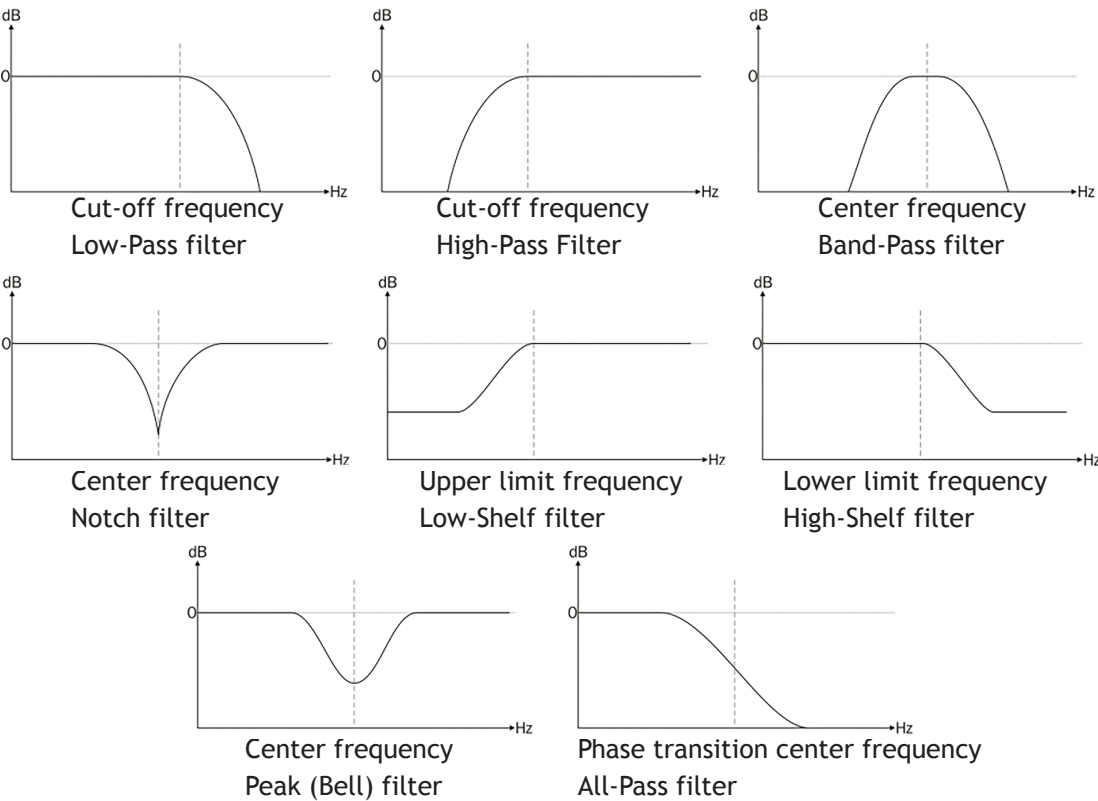


Figure 3. Equalizer filter graphs

## Equalizer types

Various equalizer types are used in music production, each offering different levels of control and flexibility. Graphic equalizers, distinguished by their visual interfaces for live sound and quick tonal adjustments (Rämö et al., 2014; Rämö and Välimäki, 2014); Parametric equalizers, which offer the most flexible and surgical control in the studio environment (Välimäki and Reiss, 2016); and Dynamic equalizers, which

intelligently respond to the dynamics of the audio signal and offer solutions where traditional equalizers fall short (Owsinski, 2017; Stasis et al., 2016), are cornerstones of today's production systems. These types differ based on their adjustable parameters and basic operating logic, providing the sound engineer with a wide range of tools for specific purposes. The most common basic equalizer types, their features, and common areas of use are presented in Table 2.

Table 2. Basic features of equalizer types

Equalizer Type	Basic Features	Main Areas of Use
Shelving Equalizer	It shapes the frequency ranges in the audio signal that are below (Low Shelf) or above (High Shelf) a specific cutoff frequency. It is used to broadly adjust the overall tonality of the sound.	It contributes to the perception of spatial distance in the mix.
Graphic Equalizer	It consists of a series of peaking filters with fixed center frequencies and bandwidths. The gain of each frequency band can be adjusted independently.	Ideal for precisely targeting specific resonances or sculpting the tone of instruments in detail.
Parametric Equalizer	It provides full control over one or more frequency bands. Users can freely adjust the center frequency, gain, and bandwidth (Q factor) for each band.	Ideal for precisely targeting specific resonances or sculpting the tone of instruments in detail.
Semi-Parametric Equalizer	It is a simpler version of the parametric equalizer. It usually only offers center frequency and gain control, while the bandwidth setting remains fixed.	Used for simple and quick frequency and gain adjustments.
Dynamic Equalizer	It automatically adjusts the gain of specified frequency bands based on the level of the audio signal. Parameters are adjusted over time based on signal characteristics.	It is a powerful tool for resolving frequency conflicts in the mixer and improving signal clarity.

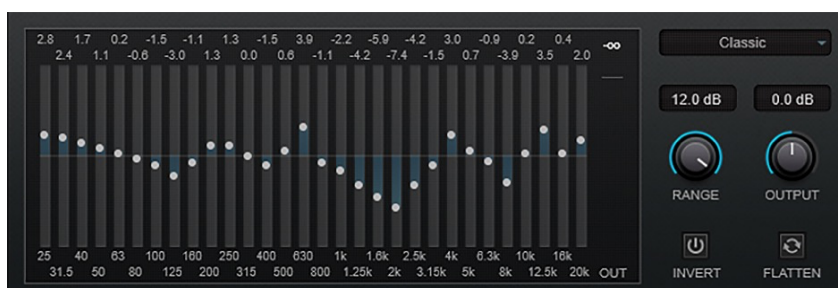


Figure 4. Graphic equalizer (Steinberg Cubase Pro 14. GEQ-30)



Figure 5. Parametric equalizer (Steinberg Cubase Pro 14.Studio EQ)

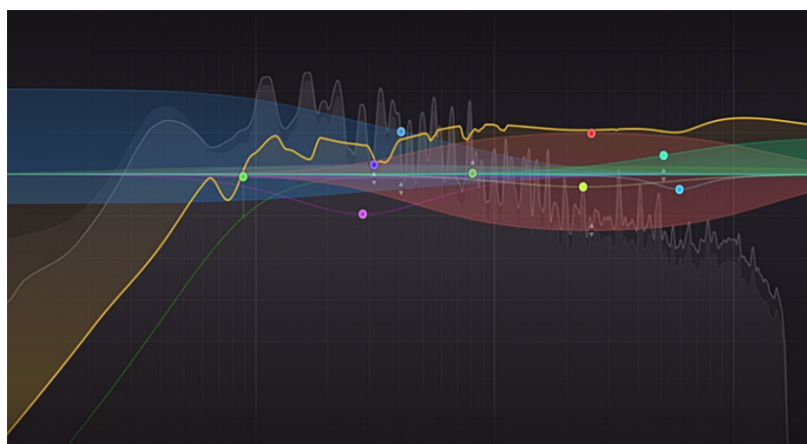


Figure 6. Dynamic equalizer (Plugin Boutique. FabFilter Pro-Q 4)

### Equalizer parameters

Equalizers use several basic parameters to precisely shape the frequency spectrum of audio signals. Frequency determines which range of sound to intervene in, while gain adjusts the strength of this intervention (Kim, 2018; Başay et al., 2024). The most important complement of these two parameters, bandwidth (Q Factor), determines how wide or narrow the effect will be around the selected center frequency. This control allows sound engineers and producers to manipulate frequencies in more detail (Childs, 2012, as cited in Aras and Temuçin, 2022, p. 130). In addition to this basic trio, other critical settings include the slope, which determines the filter's characteristics, and the cutoff frequency, which limits its

effect (Dewey, 2014; Kim, 2018). These key parameters and their functions, which form the basis of equalizer use, are explained in detail in Figure 7 and Table 3.

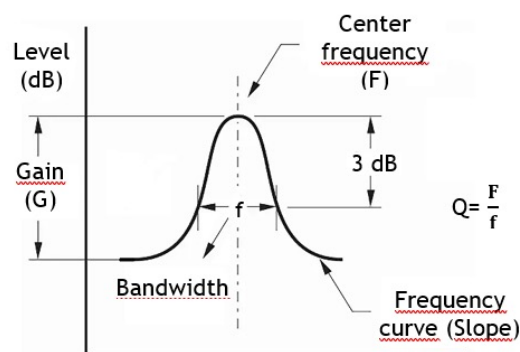


Figure 7. Equalizer parameters

**Table 3.** Functions of equalizer parameters

Parameter	Definition and Function	Effect
Frequency	The center frequency determines the filter's effect. The filter is effective not only at this frequency but also at frequencies surrounding it.	Defines the frequency region (bass, middle, treble, etc.) to be intervened.
Gain	Determines how much the intensity of the audio signal in the selected frequency band will be increased (boost) or decreased (cut).	Increases or decreases the volume of specified frequencies.
Bandwidth / Q Factor	It determines the width of the filter's response. The Q factor controls how narrow or wide this frequency range is, and therefore the filter's frequency selectivity.	Narrow bandwidth: Ideal for troubleshooting or fine-tuning specific frequencies. Wide bandwidth: Better for general tone shaping or more general adjustments.
Cutoff Frequency	The frequency at which a filter begins to pass or block signals is the point. 3dB, used as the cut-off frequency for a signal, represents the point at which signal strength is halved.	It allows you to reduce unwanted frequencies or emphasize certain frequency ranges.
Slope	It refers to the slope of the filter at the edges of the frequency band. This slope determines how smooth or sharp the filter transitions across the frequency spectrum.	Higher dB/octave values represent sharper slopes, while lower values represent smoother transitions.

### Equalizer application approaches and current discussions in the literature

In the literature, equalization application approaches are generally classified under three main headings: corrective, shaping, and creative (Aras and Temuçin, 2022; Kim, 2018; Stasis et al., 2016). Current technological advances, particularly artificial intelligence (AI) and machine learning-based “smart” equalization systems, play a significant role in the implementation of these approaches. These systems can optimize the sonic quality of a musical piece based on ideal frequency spectra learned from commercial recordings and prevent the overcompression problem known as the “Loudness War” by automatically adapting a track to the loudness standards of different platforms (Spotify -14 LUFS, Apple Music -16 LUFS) (Tanyeri, 2024).

At the heart of these capabilities lie Digital Signal Processing (DSP) techniques, which separate signals into frequency components using algorithms such as the Fast Fourier Transform (FFT), and machine learning architectures such as Deep Neural Networks (DNNs), which interpret this data and estimate parameter settings (Oppenheim et al., 1999). More advanced models, such as Generative Adversarial Networks (GANs), are opening new horizons by enabling these systems to undertake creative mastering tasks (Canyakan, 2025). However, despite these technical capabilities, it is also emphasized that current systems cannot fully emulate a sound engineer’s artistic vision and context-specific aesthetic decisions. While AI models generally aim for technical “accuracy,” they are limited in understanding the cultural nuances required by the music, unexpected

creative preferences, or the artistic goals of a project (Canyakan, 2025). Therefore, current research in the field investigates more integrated and user-centered approaches to overcome these limitations, such as systems that personalize voice based on biometric data and interfaces with haptic feedback.

## Method

This section includes information about the research model, data collection process and data analysis.

### Research Model

This study utilized the systematic review model, a qualitative research design. A systematic review is a qualitative research design that aims to integrate existing knowledge in a specific field with a structured methodology and subject it to critical evaluation. Within this model, relevant literature is scanned according to predetermined inclusion and exclusion criteria, the methodological quality of selected studies is meticulously examined, and the findings are synthesized (Karaçam, 2013). This process, as emphasized by the American Psychological Association (APA, 2020) for review articles, not only summarizes published material but also offers an original contribution to the field by organizing and integrating existing knowledge. Accordingly, the current study adopted this methodological framework. The primary purpose of this model is to systematically analyze the extensive and fragmented literature on equalizer use and to integrate theoretical knowledge in this field with practical applications. In this context, the research goes beyond summarizing the existing literature and aims to synthesize the analyzed approaches. The final finding of the study, based on this synthesis, is to present a structured framework that shows how theoretical approaches are embodied in practical scenarios. PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines were followed in the planning and reporting of the study.

### Eligibility Criteria

Source selection for this systematic review was based on predetermined inclusion and exclusion criteria. Studies for inclusion were selected based on the following criteria:

### Inclusion Criteria

For a study to be included in the review, it must meet all of the following criteria:

**Publication Type:** The study must be published in one of the following types:

- Research article published in a peer-reviewed journal
- A scientific book or book chapter
- Postgraduate thesis (PhD, Master's)
- Academic conference paper (Audio Engineering Society, DAFx)
- Online articles or product manuals that provide specific technical information from authoritative industry sources.

**Subject Scope:** The study addresses the use, techniques, principles, or historical development of equalizers directly in the context of music production, audio engineering, or mixing.

**Language:** The main text of the study must be in English or Turkish.

**History:** To ensure coverage of primary sources covering the historical foundation and classical approaches to the subject, no initial date limitation was applied. However, to capture modern approaches and current debates, special priority was given to works published within the last 10 years.

### Exclusion Criteria

Publications with at least one of the following characteristics were not included in the qualitative synthesis phase of the review:

- Informal publications (general blog posts, forum discussions, popular magazine articles) that do not carry academic or verifiable technical reference value.

- Studies that focus solely on abstract signal processing theory, without any applied examples.
- Publications for which full text is not available.
- Personal video transcripts that do not offer a repeatable methodology based on the transfer of opinion or experience.

### **Information Sources and Search Strategy**

A comprehensive, multi-stage literature review was conducted to identify the publications that comprise the research dataset. The review process utilized international and national academic databases such as Google Scholar, Scopus, Web of Science, AES e-Library, DergiPark, and ULAKBİM TR Index, as well as Scispace software and Niğde Ömer Halisdemir University Library resources. In addition to academic resources, industry publications such as Sound on Sound and studies by qualified professionals in the field were also reviewed to understand current industrial applications and practical discussions on the topic. However, only studies that met the eligibility criteria defined in the previous section were included in the final analysis.

The search strategy is structured to include Turkish equivalents of key keywords such as “equalizer”, “music production”, “audio mixing”, “frequency masking”, “audio engineering” and “signal processors”. The search was further deepened with more specific term groups such as “equalizer filter types,” “equalizer in mixing stages,” and “equalizer parameters.” These terms were systematically combined using Boolean operators and other filtering techniques (“ “, -”) to broaden or narrow the search scope. Furthermore, by utilizing AI-supported literature search tools such as Scispace, queries using natural language sentences and advanced filtering options (year, subject, similar publications, etc.) were used beyond keyword-based searches. Finally, to supplement database searches,

additional sources were accessed using the “snowballing” method by examining the bibliographies of key studies.

### **Data Collection Process**

The research dataset consists of academic, scientific, and technical documents on equalizers and music production. Document analysis was used as the primary method in the data collection process. Studies identified through the literature review were subjected to a four-stage selection process, following the PRISMA 2020 flowchart presented in Figure 8. In the first stage, records from various sources were combined, and duplicates were eliminated. In the second stage, the titles and abstracts of the remaining studies were screened according to the eligibility criteria, and irrelevant ones were excluded. In the third stage, the eligibility of the studies reviewed in full text was reassessed. In the final stage, the studies to be included in the qualitative synthesis were identified.

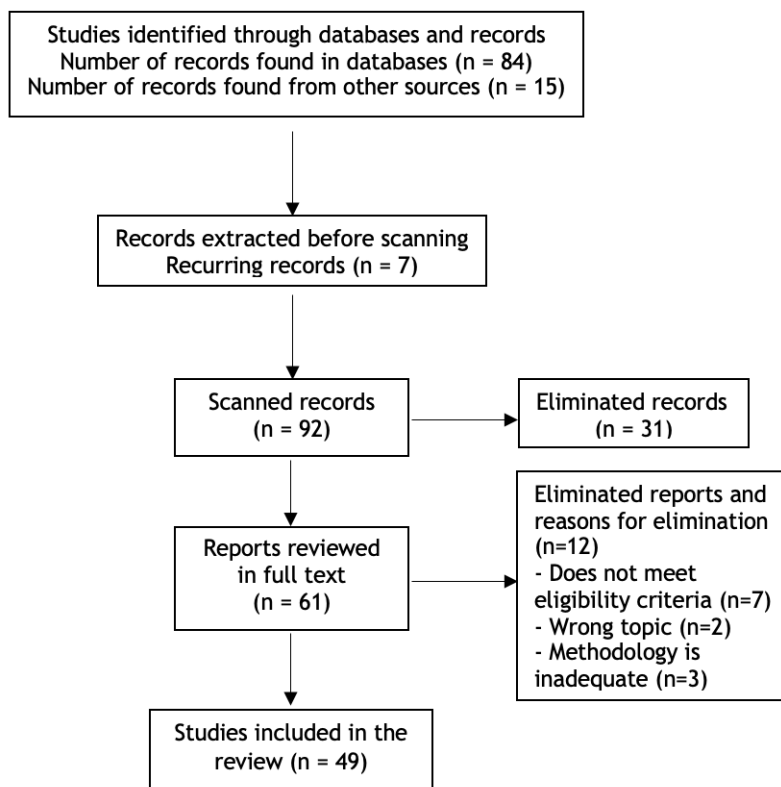


Figure 8. PRISMA 2020 flow chart

### Data Analysis

Data obtained from the documents included in the compilation, in accordance with the PRISMA flowchart, were analyzed using content analysis, a qualitative research method. The analysis process included the following steps to ensure a systematic structuring of the findings:

**Coding:** All studies included in the compilation were carefully read and coded by identifying meaningful sections and concepts such as the principles of equalizer use, practical strategies, technical approaches and perceptual dimensions.

**Creating a Theme:** The codes generated in the first stage were grouped and compared according to their relationships. This process identified high-level patterns that recur in the literature and reflect different purposes for using equalizers.

**Structuring Approaches:** In the final phase of the analysis, the identified themes were synthesized to structure three fundamental application approaches that answer the fundamental research questions and generate its findings. These approaches are as follows:

- Corrective approach aimed at eliminating technical problems,
- A shaping approach that aims to enrich the aesthetic character of the sound,
- A creative approach that transforms sound into a means of artistic expression.

This synthesized thematic structure enabled the transformation of scattered information into concrete and applicable findings, which are the original contribution of the research.

Findings

A systematic literature analysis revealed that approaches to equalizer use in the literature can be structured under three fundamental approaches: corrective, formative, and creative. These structured models, the core findings of the research, transform the field’s scattered theoretical knowledge and practical strategies into a concrete and teachable framework. The implementation steps for each approach are illustrated with schematic diagrams illustrating the underlying principles.

Corrective equalizer implementation approach: Troubleshooting technical issues

Content analysis of the literature included in this review reveals that the first and most fundamental approach to using equalizers is corrective or surgical. This approach focuses on resolving specific spectral issues found in audio channels (Dewey, 2014). Mastering engineers specifically use digital equalizers for this “surgical” purpose to eliminate problem areas such as “unwanted frequencies” and “anomalies” (Nilsson, 2024). The primary goal of these interventions is to control frequency responses that affect the “tonal quality and clarity” of the audio

(İmik and Uçar, 2024). Strategies to address issues such as unwanted noise, resonance, and “muddying” include techniques such as filtering high frequencies for sibilance or scanning for resonant frequencies and reducing their gain (Oppenheim et al., 1999). Strategies to prevent frequency masking include more advanced methods such as dynamic equalizers, multi-band dynamic processors, and cross-adaptive architectures to ensure inter-channel spectral balance (Uriostegui-Hernandez et al., 2025). The corrective application approach developed from this synthesis demonstrates how these principles can be applied in practice through a concrete scenario.

**Aim:** To obtain a clean and processable audio signal for subsequent production stages by removing unwanted background noise from the microphone signal.

**Scenario:** A microphone signal is detected with a distinct “hum” noise around 60 Hz, presumably from the power grid, and a general hum in the lower regions of the spectrum. This is represented by a narrow, distinct peak around 60 Hz, shown schematically in Figure 9.

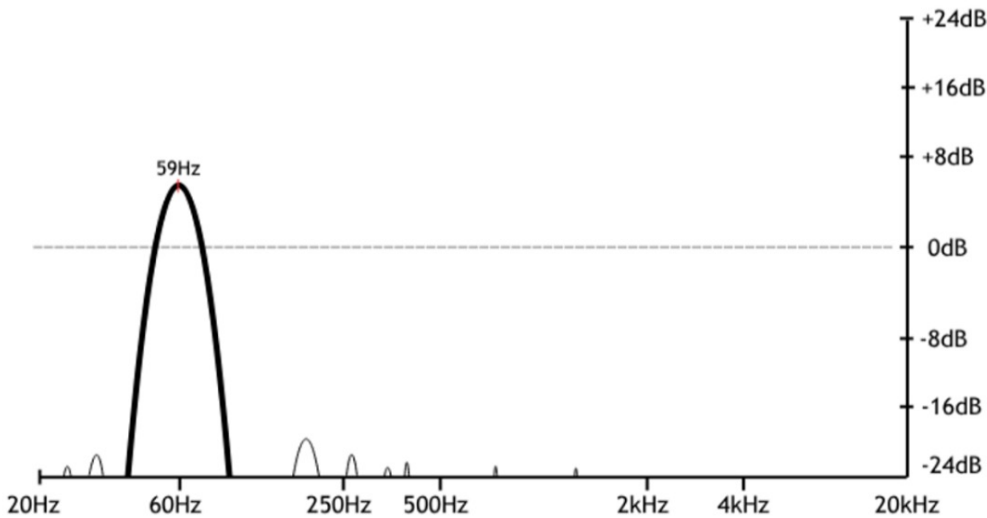


Figure 9. Signal spectrum before correction

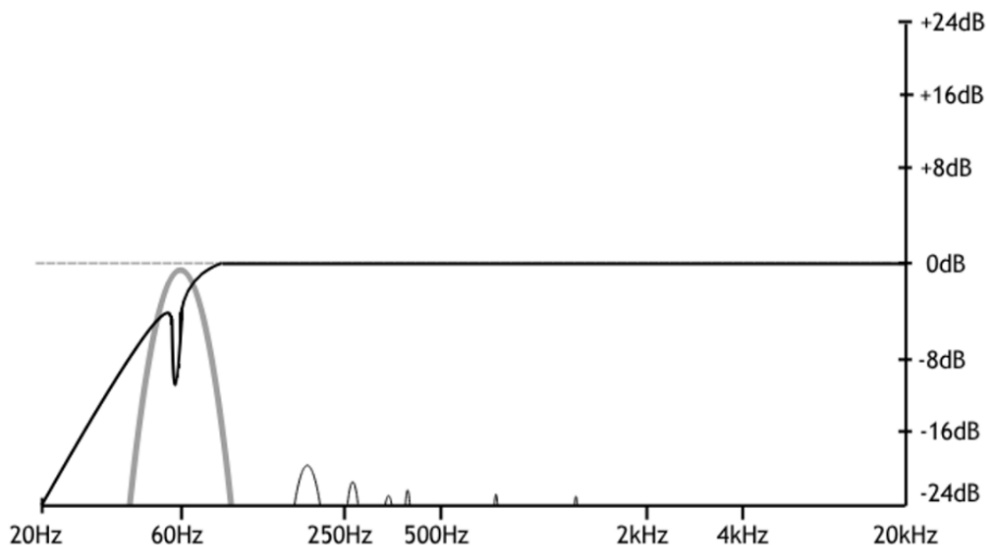


Figure 10. Corrective equalizer application

### Approach to applying a shaping equalizer: Enriching the timbral character

Literature analysis reveals the existence of a shaping application in which the equalizer is used for aesthetic purposes. At the heart of this approach is the idea that timbre shaping plays as important a role as pitch and loudness in modern music production, and that listeners' judgments of a mix are largely based on timbre perception (Corey, 2016; Dobrowohl et al., 2019). In this approach, equalization is used for artistic purposes, such as controlling the timbral balance of the music (Aras & Temuçin, 2022), refining vocal tone (Kim, 2018), or, as George Massenburg puts it, "refining and maturing tones" (Owsinski, 2017), rather than solving a technical problem. Translating these subjective goals into technical parameters has also been the focus of academic research aimed at mapping perceptual descriptors like "warm" or "treble" to specific equalizer settings (Cartwright and Pardo, 2013). In professional practice, this translates into specific strategies, such as using the 10-15 kHz range to add "air" to the sound, or lower-mid frequencies like 300-500 Hz to add "warmth" and "body" (Owsinski, 2017). The sculpting equalizer approach is explored

below through the scenario of making a vocal recording more prominent in the mix.

**Aim:** To enrich the aesthetic and timbral character of a vocal lost among instruments by increasing its clarity, brightness and presence in the mix.

**Scenario:** The production process addressed a vocal signal that was recorded cleanly, but lacked clarity and brilliance among the other instruments in the mix. This situation represents a need for timbral balance rather than a significant technical flaw and is schematically illustrated in Figure 11.

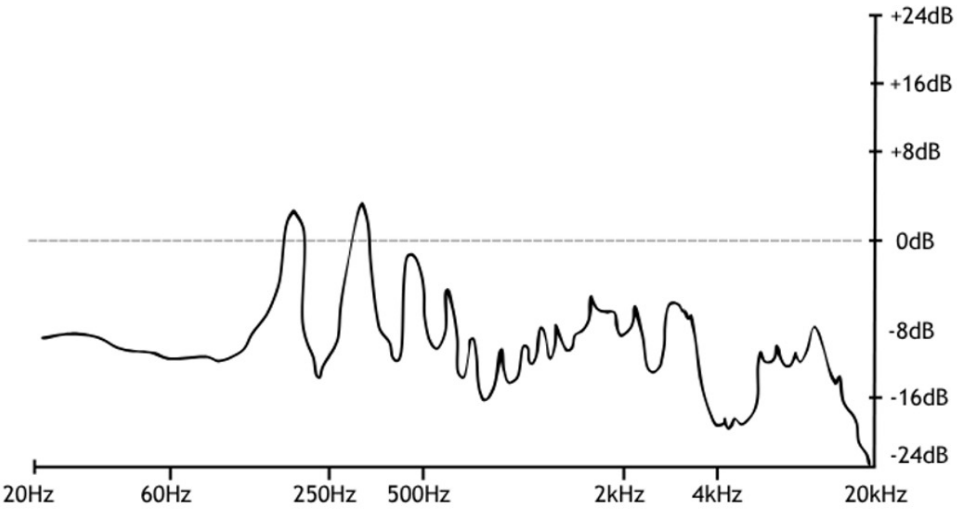


Figure 11. Vocal signal before shaping

**Sample Application:** In this scenario, the shaping approach consists of three complementary steps. The first step is to apply a gentle high-pass filter at approximately 100 Hz to remove unnecessary low-frequency intensity from the vocal. The second step is to apply a gentle +3 dB gain increase with a wide-band (low-Q) Bell filter in the 2-5 kHz

range to increase the vocal’s intelligibility and presence in the mix. Finally, a gentle +2 dB gain increase with a gentle high-shelf filter at 8 kHz and above is added to add a sense of “brightness” and “air” to the sound. The final shaping equalizer curve resulting from the combination of these three processes is schematically presented in Figure 12.

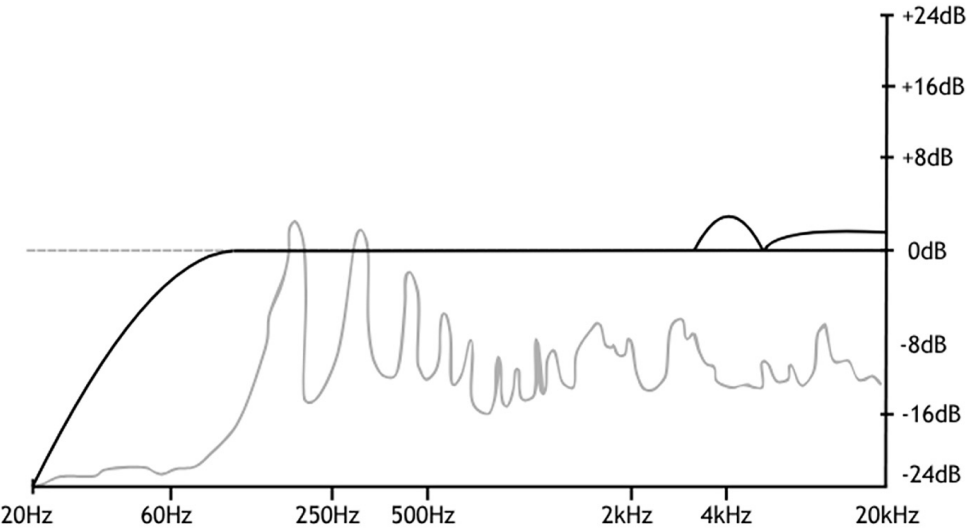


Figure 12. Shaper equalizer application

### Creative equalizer application approach: Use as a means of artistic expression

The analyzed literature reveals the existence of a third approach, where the equalizer is used as a creative effect and sound design tool that goes beyond problem-solving and aesthetic enrichment, and radically transforms the sound. In this approach, the aim is not to achieve a natural timbre, but to consciously manipulate the sound spectrum to achieve a desired new timbral aesthetic (Stasis et al., 2016). This philosophy manifests itself in the “Mixing as a Performance” approach, where some sound engineers view the mixing process as a “performance” and use tools such as equalizers for artistic expression and improvisation. In this context, engineers such as Lee DeCarlo use the equalizer to “add” something new to the sound rather than “remove” something, while Tony Maserati makes equalizer decisions according to the energy of the

song and the story it tells (Owsinski, 2017). The most well-known examples of this creative use in practice are; This can occur by using a narrow band-pass filter to create a telephone or radio effect, or by moving the filter’s center frequency to achieve dynamic effects such as “filter sweep” and “wah-wah” (Dutilleux et al., 2011). In advanced applications, the character of the sound can be transformed into a completely unique and hybrid structure using techniques such as “vocoding” or timbral transformation (Verfaillie et al., 2011).

**Aim:** To provide an atmospheric change by creating a nostalgic AM radio effect during certain sections of a song.

**Scenario:** The goal is to create an atmospheric change in certain sections of a fully mixed, full-spectrum piece, such as the intro or bridge. The spectrum of the unaffected signal is shown in Figure 13.

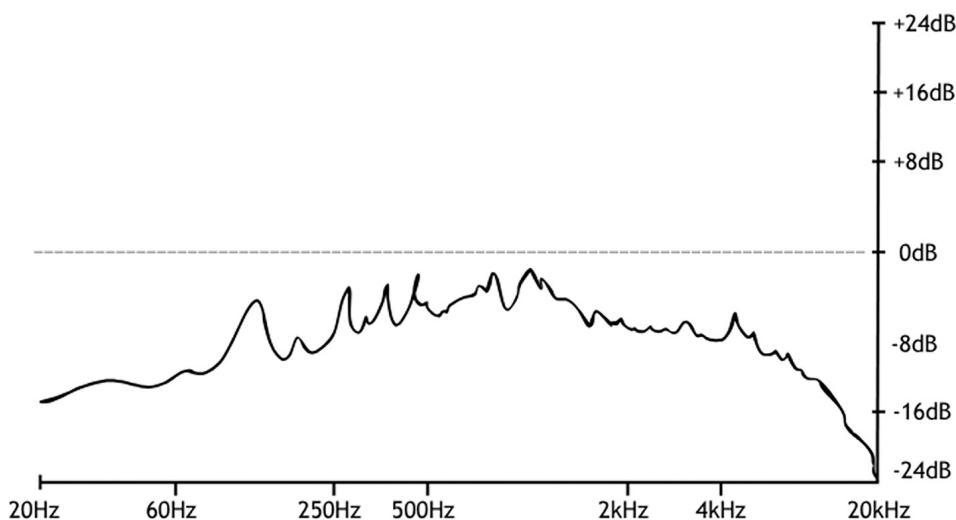


Figure 13. Mixed signal before application

**Sample Application:** In this scenario, the creative approach combines multiple advanced audio processing techniques. First, a steeply sloped Band-Pass filter is applied to mimic the narrow frequency range of AM radio broadcasts, cutting off the entire spectrum except for sounds between approximately 300 Hz and 4 kHz. To enhance the effect’s

character and mimic the mono nature of older radios, this filtering is applied only to the signal’s mid-channel. Furthermore, a Dynamic Equalizer, which responds to the energy of the mix, adds a slight emphasis to the mid-frequencies, adding vibrancy to the effect. The equalizer curve with this radical filter is shown in Figure 14.

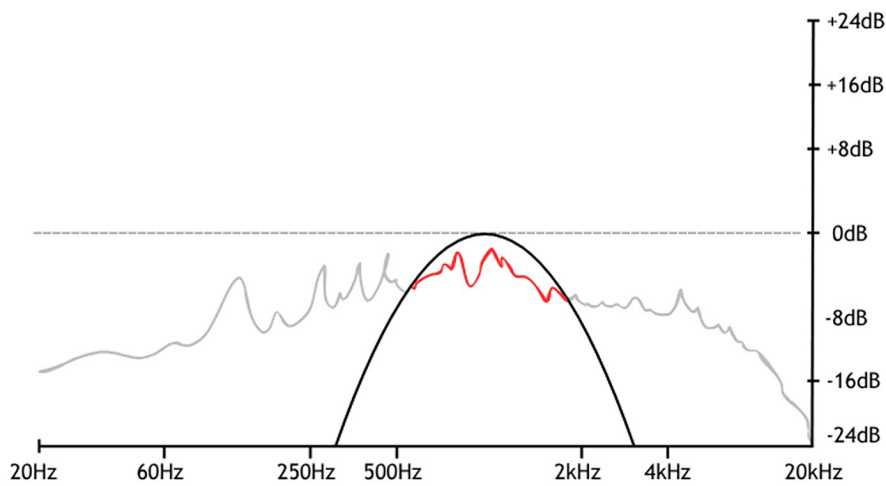


Figure 14. Band-Pass filter application for “Radio Effect”

Finally, to ensure this effect is heard only in the desired sections, rather than throughout the entire song, the “Bypass” and “Volume” automations are used in the DAW. This time-based implementation is schematically illustrated in Figure 15.

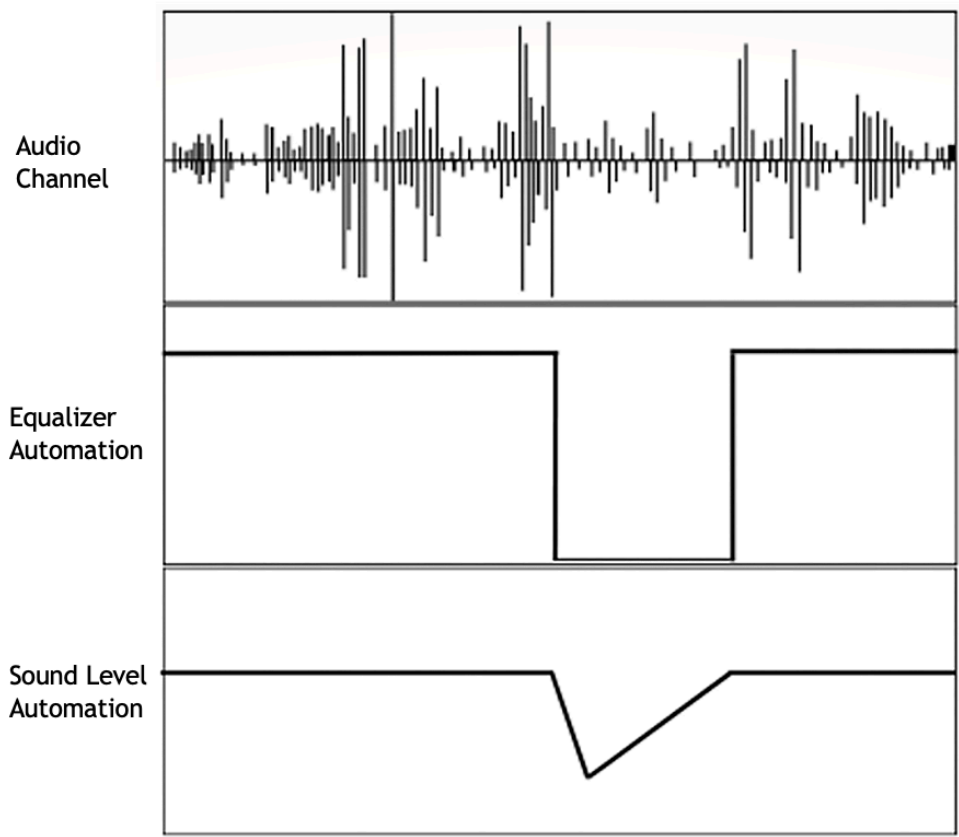


Figure 15. Schematic representation of equalizer and volume automations

## Discussion

The key finding of this study is that the use of equalizers in music production can be categorized into three systematic approaches: corrective, formative, and creative, synthesizing scattered information in the literature. This classification offers a conscious and targeted methodology to address the problem of “unconscious use,” which has become particularly prevalent with the democratization of technology (Mycroft & Paterson, 2011) and the tendency of amateurs to view equalizers as a magical “miracle drug” (Senior, 2019). This study aims to transform the use of equalizers from a haphazard trial-and-error process into a teachable process by not only naming the approaches but also turning them into structured frameworks that include specific purposes, scenarios, and process steps.

The corrective approach synthesized in this research is based on the “problem-solving” philosophy emphasized in the literature by experts such as Owsinski (2017) and Senior (2019). This philosophy dictates that the primary function of an equalizer is to eliminate frequency imbalances in an audio signal and solve specific sonic problems. These problems range from simply eliminating acoustic feedback (Rämö and Välimäki, 2014) to compensating for the loss of dynamic nuance caused by the “Loudness War” trend (Tanyeri, 2024). At the heart of this approach lies the advanced auditory evaluation skills of audio engineers, defined as “critical listening,” developed over years of practice (Corey, 2016; Owsinski, 2017). This “problem-solving” process, often described empirically in the literature, is concretized by breaking it down into systematic and repeatable steps, as presented in the “Findings” section. This structured framework offers an important pedagogical solution to the problem of “unconscious use” in the field by providing a clear and well-founded methodology that both novice users and students can follow.

The shaping approach framework presented

in this study demonstrates the aesthetic and artistic potential of the equalizer. The theoretical basis of this approach is the idea that listeners’ judgments of a mix are largely based on timbre, and that timbre shaping plays as important a role as pitch and loudness in modern music production (Dobrowohl et al., 2019). Neuroscientific studies have also shown that timbre manipulations can evoke tangible physiological and emotional responses in listeners. Managing this powerful perceptual effect requires the competence of “critical listening,” which Corey (2016) describes as “technical ear training” and Senior (2019) emphasizes as a holistic listening skill that distinguishes experts from novices. The presented formative framework serves as a bridge, translating this abstract skill of “critical listening” and the goal of “shaping tone” into concrete and actionable steps, such as adding “brightness” or “warmth.” This is evidence of how abstract artistic intentions translate into their concrete and technical counterparts across the frequency spectrum, as demonstrated by Aras and Temuçin (2022).

The creative approach framed in this research represents the point at which the equalizer is used beyond problem-solving and aesthetic enhancement to radically transform sound as a sound design tool. The philosophical foundation of this approach lies in the concept of “Mixing as Performance,” which views the mixing process as an intuitive and artistic act (Anthony, 2017; Izhaki, 2008). The presented creative framework offers a structure that combines this abstract, performance-based philosophy with concrete techniques found in the literature. For example, the “radio effect” scenario in the “Findings” section is a practical application of the “aging of audio files” technique described by Dutilleul et al. (2011). Therefore, the framework presented in this study defines the use of the creative equalizer as a teachable artistic process with specific goals and techniques, rather than a merely random and intuitive act.

## Conclusion

This study analyzes the scattered literature on equalizer use in music production using a systematic review method and presents it within a holistic framework. The study determined that equalizer use serves three fundamental purposes: corrective, formative, and creative, and that these approaches can be structured within systematic frameworks. These findings reveal that equalizer use is not merely a technical troubleshooting tool; it is also a multilayered competency that shapes the aesthetic character, timbral value, and artistic expression of sound. The structured approaches and schematic visualizations presented in the study make this complex competency more understandable and teachable, filling an important gap in the literature, especially for audio engineering educators and novice users.

## Recommendations

Based on the results of the study, the following recommendations were developed for practitioners, educators, and future researchers in the field:

### Recommendations for Practitioners and Educators

**Use of Structured Pedagogical Approaches:** Structured training programs and practice guides based on the three fundamental approaches (corrective, formative, and creative) synthesized in this study should be developed in both institutions providing audio engineering education and for individual studies. Such structured frameworks can accelerate the learning process by making complex information more understandable.

**Developing Critical Listening Skills:** Instead of over-relying on the visual aids offered by digital tools when using equalizers, the development of critical listening skills—a core competency of sound engineers—should be encouraged. One of the key characteristics that distinguishes professional sound engineers from novices is the ability to translate perceptual impressions into sound technical decisions (Corey, 2016).

### Contextual Adaptation and Creativity:

Every musical production is unique in its own right. The approaches presented in this study should be viewed as a foundation, not a set of strict rules. Users should adapt and creatively utilize these frameworks based on their own artistic vision and the context of the project, as noted by master engineers (Owsinski, 2017).

## Recommendations for Future Research

**Analysis of Specific Approaches to Music Genres:** Considering that different musical genres (classical, electronic, rock, jazz, etc.) have unique timbral goals and technical needs when using equalizers, more research should be conducted on genre-specific equalizer strategies.

**Experimental Investigation of Psychoacoustic Effects:** As noted in this study, timbre manipulations have tangible physiological and emotional effects on the listener. Experimental studies examining these effects of different equalizer manipulations will help us gain a deeper understanding of the tool's artistic potential.

**Comparison of Human and Artificial Intelligence Interaction:** Quantitative and qualitative studies should be conducted to compare the results of the human-centered approaches presented in this study with those of AI-powered automatic equalization systems. Such studies could contribute to the development of future hybrid systems by revealing the strengths and weaknesses of both approaches, as noted by Canyakan (2025).

**Deepening Practice with Qualitative Research:** Qualitative studies (interviews, case studies, etc.) examining the decision-making processes of music producers and tonemeisters in the recording, mixing and mastering stages and their philosophies regarding the use of equalizers will allow the introduction of experiential knowledge in this field to the academic literature.

### Limitations of the Study

The findings and conclusions of this research should be evaluated within the framework of certain limitations. First, this study is inherently a theoretical synthesis, and the practical application of the presented approaches depends on many variables, including the hardware and software used, and the context of the production. The schematic drawings presented in the “Findings” section are idealized representations intended to illustrate fundamental principles and may not fully reflect the complexity of a real-world production.

Secondly, although the three approaches structured in this study constitute a systematic synthesis of the literature, their pedagogical effectiveness across different user groups has not been tested empirically. This remains an important topic for future research.

Finally, due to the nature of this review, the findings are limited by the scope of the 49 sources included in the analysis. The generalizability of the presented frameworks across different musical genres or production conditions requires further study.

### Acknowledgment

This research received no financial support from any institution. This research does not require ethics committee approval and has no conflicts of interest. I would like to thank Mr. Ender Birer for his valuable technical contributions in the preparation of Figure 2.

### Artificial intelligence use transparency statement

The “Scispace” artificial intelligence software was used in the literature review phase of the research. Additionally, the “Jenni ai” software’s paraphrase feature was used to analyze sentence structure suggestions for simplifying complex sentence structures. Direct quotes were not used.

## References

- Alluri, V., Toiviainen, P., Jääskeläinen, I. P., Glerean, E., Sams, M., & Brattico, E. (2012). Large-scale brain networks emerge from dynamic processing of musical timbre. *NeuroImage*, 59(4), 3677-3689. <https://doi.org/10.1016/j.neuroimage.2011.11.019>
- Alm, J. F., & Walker, J. S. (2002). Time-frequency analysis of musical instruments. *SIAM Review*, 44(3), 457-476. <https://doi.org/10.1137/s003614450038222>
- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7nd ed.). <https://doi.org/10.1037/0000165-000>
- Anthony, A. R. (2017). *Mixing as a performance: Creative approaches to the popular music mix process* [Doctoral dissertation, University of Hull]. Hull University Research Archive.
- Aras, T., & Temuçin, S. (2022). Logic yazılımının varsayılan EQ eklentisi ile harici EQ eklentilerinin ses sinyaline olan etkilerinin karşılaştırılması (*A Comparison of The Effects of Logic Software's Internal Equalizer Plug-In and External Equalizer Plug-Ins on Audio Signals*). *Eurasian Journal of Music and Dance*, (21), 125-140. <https://doi.org/10.31722/ejmd.998995>
- Başay, V., Coşkun, O., & Yılmaz, G. (2024). Optimization of parametric equalizer filters in in-vehicle audio systems with genetic algorithm. *Preprints.org*. <https://doi.org/10.20944/preprints202406.0447.v1>
- Bo, E., Kostara-Konstantinou, E., Lepore, F., Shtrepi, L., Puglisi, G. E., Mangano, B., Mangano, F., Barkas, N., & Astolfi, A. (2016, July 10-14). Acoustic characterization of the ancient theatre of Tyndaris: Evaluation and proposals for its reuse. In *Proceedings of the 23rd International Congress on Sound and Vibration (ICSV 2016)*, Athens, Greece
- Canyakan, S. (2025). Machine learning in audio mastering: a comparative study. *Journal for the Interdisciplinary Art and Education*, 6(1), 47-65. <https://doi.org/10.5281/zenodo.15074948>
- Cartwright, M. B., & Pardo, B. (2013). Social-EQ: Crowdsourcing an equalization descriptor map. *Proceedings of the 14th International Society for Music Information Retrieval Conference (ISMIR)*, 395-400.
- Christensen, K. B. (2003). *A generalization of the biquadratic parametric equalizer*. 115th Convention of the Audio Engineering Society, New York, NY, USA, Paper 5916. Retrieved from <https://aes2.org/publications/elibrary-page/?id=12429>
- Corey, J. (2016). *Audio production and critical listening: Technical ear training* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315727813>
- Dewey, C. P. (2014). *Towards a new equalisation user interface for mixing multi-track recordings of musical instruments* (Doctoral dissertation, University of Huddersfield). University of Huddersfield Repository. <http://eprints.hud.ac.uk/id/eprint/23685>
- Dobrowohl, F. A., Milne, A. J., & Dean, R. T. (2019). Controlling perception thresholds for changing timbres in continuous sounds. *Organised Sound*, 24(1), 76-88.
- Duggal, S. (2024). Equalisers. S. Duggal (Ed.), *Audio production principles* (pp. 133-147). Springer. [https://doi.org/10.1007/978-3-031-40067-4\\_11](https://doi.org/10.1007/978-3-031-40067-4_11)
- Dutilleul, P., Holters, M., Disch, S., & Zölzer, U. (2011). Filters and delays. In U. Zölzer (Ed.), *DAFX: Digital Audio Effects* (2nd ed., pp. 47-81). John Wiley & Sons.

- Engel, J., Hantrakul, L., Gu, C., & Roberts, A. (2020). DDSP: Differentiable digital signal processing. In Proceedings of the International Conference on Learning Representations (pp. 26-30). International Conference on Learning Representations. <https://doi.org/10.48550/arXiv.2001.04643>
- Izhaki, R. (2008). *Mixing audio: Concepts, practices and tools*. Focal Press. ISBN 978-0-240-52068-1.
- İmrik, H., & Uçar, E. (2024). The effects of holding positions on the frequency response of dynamic vocal microphones. *Rast Muzikoloji Dergisi*, 12(4), 375-391. <https://doi.org/10.12975/rastmd.20241241>
- Karaçam, Z. (2013). Sistematik Derleme Metodolojisi: Sistematik Derleme Hazırlamak İçin Bir Rehber (*Systematic Review Methodology: A Guide for Preparation of Systematic Review*). *Dokuz Eylül Üniversitesi Hemşirelik Yüksekokulu Elektronik Dergisi*, 6(1), 26-33. <https://dergipark.org.tr/tr/pub/deuhfed/issue/46815/587078>
- Kim, J. S. (2018). A study on vocal EQ'ing method. *Journal of the Korea Academia-Industrial cooperation Society*, 19(12), 569-574. <https://doi.org/10.5762/KAIS.2018.19.12.569>
- Leyshon, A. (2009). The software slump?: digital music, the democratisation of creativity, and the decline of the recording studio sector. *Environment and Planning A: Economy and Space*, 41(6), 1309-1331. <https://doi.org/10.1068/a40352>
- Loni, D. Y. (2013). Implementation of music equalization Simulink model on DSK6713. *Science Journal of Circuits, Systems and Signal Processing*, 2(2), 74-77. <https://doi.org/10.11648/j.cssp.20130202.16>
- Mycroft, J., & Paterson, J. (2011). Activity flow in music equalization: The cognitive and creative implications of interface design. *Journal of the Audio Engineering Society*, 59(1/2), 29-41.
- Nilsson, L. (2024). Mastering Engineers' Preferences and Usage of Equalizers in Music Mastering: an Investigation on Application, Sonic Characteristics and Electronic Components (Dissertation). Retrieved from <https://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-105476>
- Oppenheim, A. V., Schaffer, R. W., & Buck, J. R. (1999). *Discrete-time signal processing* (2nd ed.). Prentice Hall.
- Owsinski, B. (2017). *The mixing engineer's handbook* (4th ed.). Bobby Owsinski Media Group. ISBN 978-0-9888391-9-9
- Önen, U. (2011). *Ses kayıt & müzik teknolojileri (sound recording & music technologies)* (5th). Çitlembik.
- Özkeleş, M., & Arapgirlioğlu, H. (2024). Comparison of analog processors and digital signal processors. *Journal for the Interdisciplinary Art and Education*, 5(1), 15-30. <https://doi.org/10.5281/zenodo.10577122>
- Pakarinen, J., Abel, M., Valimäki, V., & Smith, J. (2011). Musical applications of real-time signal processing. *Journal of the Audio Engineering Society*, 59(1-2), 12-28.
- Pasinlioğlu, T., & Pasinlioğlu, K. (2016). *Ses uygulamalarında efekt & sinyal işlemciler (Effects & signal processors in sound applications)* (1st ed.). Cinius.
- Proakis, J. G., & Manolakis, D. G. (2007). *Digital signal processing: Principles, algorithms, and applications* (4th ed.). Pearson Prentice Hall.
- Ramola, J. (2022). A Low-Cost, High-Performance Digital Signal Processor (DSP) for Audio Applications. *Mathematical Statistician and Engineering Applications*, 71(1), 303-312. <https://doi.org/10.17762/msea.v71i1.2123>

- Rämö, J., & Välimäki, V. (2014). Optimizing a high-order graphic equalizer for audio processing. *IEEE Signal Processing Letters*, 21(3), 301-305. <https://doi.org/10.1109/LSP.2014.2301557>
- Rämö, J., Välimäki, V., & Bank, B. (2014). High-precision parallel graphic equalizer. *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, 22(12), 1894-1904. <https://doi.org/10.1109/TASLP.2014.2354241>
- Rumsey, F., & McCormick, T. (2009). *Sound and recording: An introduction* (5nd ed.). Focal Press.
- Sabat, R., Pennec, Y., Lévêque, G., Torrent, D., Ding, C., & Djafari-Rouhani, B. (2022). Single and coupled Helmholtz resonators for low frequency sound manipulation. *Journal of Applied Physics*, 132, Article 064505. <https://doi.org/10.1063/5.0096630>
- Senior, M. (2019). *Mixing secrets for the small studio* (2nd ed.) Routledge.
- Stasis, S., Stables, R., & Hockman, J. (2016). Semantically controlled adapti& equalisation in reduced dimensionality parameter space. *Applied Sciences*, 6(4), 116. <https://doi.org/10.3390/app6040116>
- Steinberg Media Technologies GmbH. (2024). *Cubase Pro* (Version 14) [Computer software]. <https://www.steinberg.net/cubase/>
- Tanyeri, B. (2024). 1990'lardan 21. YY'ın ilk çeyreğine kadar olan süreçte müzik üretimindeki gürlük evrimi (*The evolution of the bushness in music production from the 1990s to the first quarter of the 21st century*). *Yegah Musicology Journal (YMJ)*, 7(4), 916-934. <https://doi.org/10.51576/yymd.1583157>
- Uriostegui-Hernandez, D., Posadas-Durán, J. P. F., Gallegos-Funes, F. J., Rosales, A., & Aláquez-Lozada, E., Sánchez, L. C., & Miranda-González, A. A. (2025). Method for Resonant Frequency Attenuation in Dynamic Audio Equalizer. *Applied Sciences*, 15(6), 3038. <https://doi.org/10.3390/app15063038>
- Välimäki V., & Reiss, J. D. (2016). All about audio equalization: Solutions and frontiers. *Applied Sciences*, 6(5), 129. <https://doi.org/10.3390/app6050129>
- Verfaille, V., Arfib, D., Keiler, F., von dem Knesebeck, A., & Zölzer, U. (2011). Adaptive digital audio effects. In U. Zölzer (Ed.), *DAFX: Digital Audio Effects* (2nd ed, pp. 319-394). John Wiley & Sons. <https://doi.org/10.1002/9781119991298.ch9>
- Zölzer, U. (Ed.). (2011). *DAFX: Digital audio effects* (2nd ed.). John Wiley & Sons.
- Websites**
- Web 1.** <https://reverb.com/item/12206372-pair-of-langevin-electrodyne-251-a-eq-passive-equalizers-very-rare-selectable-frequencies>
- Web 2.** <https://matlefflerschulman.com/articles/a-brief-history-of-my-iti-mep-130-mastering-parametric-equalizer-modules>
- Web 3.** Spotify Audio Labs. (2024). *Culture Next 2024: The trends report*. Spotify. <https://ads.spotify.com/en-AU/culture-next/gen-z-trends-report/>
- Web 4.** FabFilter. (2025). *FabFilter Pro-Q 4 user manual*. <https://www.fabfilter.com/help/pro-q/using>
- Web 5.** Mellor, D. (1995, Nisan). EQ: How ve when to use it. *Sound On Sound*. <https://www.soundonsound.com/techniques/eq-how-when-use-it>
- Web 6.** PRISMA 2020 bildirisi. <https://www.prisma-statement.org/prisma-2020>
- Web Scaler EQ Manual.** (t.y.). *Scaler EQ Manual*. <https://scalermusic.com/products/scaler-eq>

### Biodata of Author



Dr. Lecturer **Ali Delikara** started his music education in 1993 with part-time Classical Guitar education at Hacettepe University State Conservatory. He graduated from Gazi University's Faculty of Education, Department of Music Education, in 1994. He received his master's degree from Bolu Abant İzzet Baysal University and his doctorate from Gazi University. In addition to his academic career, he has worked as a musician at various institutions, particularly Turkish Radio Television (TRT), throughout his education and has played an active role as a violinist in academic orchestra formations. Dr. Delikara also conducts research in the field of music technology, holds a Steinberg certificate, and is working on the use of virtual instruments and digital technology in music education. The music he produced for documentaries, TV series and promotional films has achieved various successes both at home and abroad. His book, "Köprü-Orkestra-Oda Müziği İçin Halk Ezgileri" was published in 2021. Dr. Delikara teaches undergraduate violin, orchestra, Western music history, and harmony, and graduate chamber music and music technologies. He currently works at Niğde Ömer Halisdemir University.

**Email:** delikara@hotmail.com

**ORCID:** 0009-0003-0239-1933

**ResearchGate:** <https://www.researchgate.net/profile/Ali-Delikara>

**AcademiaEdu:** <https://independent.academia.edu/alidelikara>



# The evolution and impact of Karagöz plays' sound in Early Republican Türkiye: a focus on Hayali Küçük Ali

Elif Özen

Research Assistant, Musicology Department, Istanbul Technical University, Turkish Music State Conservatory, Istanbul, Türkiye. Email: ozeneli@itu.edu.tr ORCID: 0000-0002-9948-0205

Zeynep Gonca İncedere

Assoc. Prof. Dr., Musicology Department, Istanbul Technical University, Turkish Music State Conservatory, Istanbul, Türkiye. Email: zgoncat@itu.edu.tr ORCID: 0000-0003-3076-6763

Metin Balay

Prof. Dr., Faculty of Fine Arts, Theater Department, Yeditepe University, Istanbul, Türkiye.  
Email: mbalay@yeditepe.edu.tr ORCID: 0000-0003-4634-3191

DOI 10.12975/rastmd.20251336 Submitted March 9, 2025 Accepted September 7, 2025

## Abstract

This article examines the process through which Karagöz plays became recognized as cultural heritage in the early years of the Republic of Türkiye, arguing that Karagöz should be regarded not only as a visual but also as an auditory form of heritage. By analyzing the role of auditory components in cultural continuity and transformation, the study aims to reconsider definitions of heritage through the lens of sound. It investigates how state policies, technological developments, and ideological shifts reshaped Karagöz performances in the transformation of their musical and sonic elements into cultural heritage, and how these changes influenced the case of the puppeteer Hayali Küçük Ali. As part of the research, two musical pieces selected from the Karagöz repertoire and Küçük Ali's performances of Aşıklık and Salıncak plays were taken as case studies; transcriptions of archival recordings from Turkish Radio and Television (TRT) were compared with Cevdet Kudret's written texts. The analysis was conducted within the framework of parameters such as character voicing, musical elements, auditory environment, improvisation, comedic devices, ideological reflections, and contextual relations. The findings reveal that sound functions both as a medium of transmission and reproduction, and that cultural memory is shaped within these auditory sites of remembrance. The modernization of Karagöz unfolded through a sound-centered logic of adaptation, evolving into a multilayered auditory heritage extending from radio broadcasts to digital platforms. Thus, the plays have undergone a sound-oriented reinterpretation in terms of both performance and preservation. In conclusion, this study foregrounds the auditory and musical dimensions of Karagöz to examine the relationship between performance memory, ideological transformation, and technological mediation, inviting a reconsideration of the notion of an "auditory Karagöz heritage" in relation to cultural transmission and representation.

## Keywords

*Early Republican Türkiye, heritagization, Karagöz, musical functions, modernization, transmission of Karagöz music, shadow play*

## Introduction

Although Karagöz plays have undergone changing characteristics from past to present, they have continued to exist as an important part of cultural life. Various academic studies have been conducted on this tradition in both theater and literature; Karagöz has been evaluated as a literary text, a performing art, and a form of cultural representation (And, 1969; Kudret, 1992; Sevilen, 1969). In this field, alongside

And's (1969) academic studies on Karagöz, the sources compiled and published by Kudret (1992) and Sevilen (1969) also occupy a significant place. Carrying auditory, visual, and oral elements, the heritage of Karagöz is today transmitted as tangible data in digital environments and archives, thus establishing a bridge between traditional and modern modes of transmission (Özçörekçi Göl, 2008).

Karagöz plays can be considered not only as a performing art but also as a dynamic sphere of representation in which cultural transmission processes are shaped through both traditional and modern means (Varışoğlu Sarpkaya, 2022). From the perspective of cultural transmission theories, the intergenerational transmission of Karagöz, through classical methods based on the master-apprentice relationship and the oral narrative tradition, as well as through modern communication channels such as digital archives and online broadcasting, demonstrates not only the continuity of cultural memory but also how this memory is transformed according to historical contexts. In this regard, the theoretical foundation of the study is informed by various approaches that explain processes of cultural transmission, representation, and performance. Tylor's evolutionary approach, which defines culture as "everything learned by humans," emphasizes the transmission of cultural elements across generations (Tylor, 1958). Boas, with his concept of cultural relativism, argued that cultural forms are shaped according to each society's unique historical and sociological context (Boas, 1940). Raymond Williams, meanwhile, conceptualized and defined culture not as a fixed sum of symbols, but as a form of meaning-making that is continuously negotiated and reproduced within historical processes (Williams, 1976).

In the early Republican period, the cultural sphere was restructured in line with the ideology of modernization, and forms of folk culture were adapted to align with new social values (Koçak, 2008, pp. 45-47). Within this transformation process, Karagöz plays were repositioned not only as a traditional performance form but also as a functional tool in the construction of national identity. Pierre Bourdieu's concept of *field* provides an important theoretical framework for interpreting this transformation (Bourdieu & Wacquant, 1992, p. 97). According to Bourdieu, a field is a dynamic structure determined by specific forms of capital,

power relations, and struggles over social positions (Bourdieu, 1993). In the context of the early Republic, a new type of capital, ideological values such as modernity, public education, and national culture, came to the forefront in the cultural sphere. In this context, Karagöz was adapted to the norms of this new cultural field and was reproduced through modern communication tools such as radio, stripped of its traditional codes. Particularly, the changes observed in Karagöz's repertoire of voice and music can be interpreted as direct reflections of its struggle for positioning within this new cultural field (Kınışoğlu, 2021).

Jan Assmann emphasizes that cultural memory reproduces identity and social continuity through sites of memory (Assmann, 2001). Stuart Hall's theory of representation likewise argues that cultural products not only reflect the past but also play an active role in ideological processes of production (Hall, 1997). According to Assmann, cultural memory extends beyond individual memory, being reproduced through rituals, traditions, and sites of memory. Traditions, in this sense, fall within the domain of cultural memory as forms through which cultural meaning is transmitted and revitalized. Within this framework, Karagöz plays can also be regarded as sites of memory where cultural memory materializes and is reproduced with each performance. In traditional Karagöz performances, elements of voice, music, and narrative function not as static representations of the past but as dynamic forms through which cultural identity is renegotiated in contemporary contexts. Particularly during the ideological modernization process of the Early Republican Period, the content and modes of transmission of these sites of memory were transformed; Karagöz plays were adapted to new media such as radio, becoming not only part of the national identity project but also evolving into a hybrid form of heritage in which cultural continuity was sustained through modern means. When interpreted within Assmann's understanding of cultural

memory, this situation demonstrates that Karagöz is not merely a passive carrier of the past, but rather a cultural sphere in which meanings are actively reproduced within changing ideological and technological contexts.

In addition, Richard Bauman's studies on the concept of performance constitute an important theoretical foundation of this research. Bauman defines performance not merely as an aesthetic act but as a dynamic process through which cultural values, norms, and social relations are reproduced in ritual, oral expression, and communicative contexts (Bauman, 2022, p. 275). This approach makes it possible to analyze the function of Karagöz plays in cultural transmission processes from a more holistic perspective.

While cultural transmission theories allow for an understanding of the continuity and forms of transformation that Karagöz has maintained across generations, the perspectives offered by modernization theories are needed to discuss under which historical conditions this transmission has been reconstructed. However, this transmission is not merely a natural continuity between individuals; rather, it is seen to have been directed in line with certain ideological frameworks, particularly during the modernization process. With the increasing practices of modernization in the 20th century, the influence of the dominant ideology supported by the state was reinforced through certain active arrangements in the cultural sphere, and this process became directly associated with the concept of modernization.

This study aims to reveal the dynamic nature of cultural transmission by focusing on the auditory and musical dimensions of Karagöz plays. The analysis conducted through the example of Hayali Küçük Ali demonstrates how the traditional repertoire was reshaped by modernization and ideological transformations; it evaluates the impact of state ideology, modernization

steps, and technological innovations on the musical and auditory structures of Karagöz. While concepts such as Westernization and self-Orientalism support the theoretical framework, questions of how sound production-consumption technologies transformed Karagöz performances and which elements were preserved or altered are discussed within the framework of Hayali Küçük Ali's performances. The examination carried out through methods of musical analysis reveals the processes by which the song and sound repertoire of Karagöz plays were reinterpreted within the entertainment culture of the period. Accordingly, the originality of this study lies in analyzing Karagöz plays not only through staging and character analyses but also through the axis of auditory performance elements and cultural transmission processes, thereby providing a detailed examination of how the ideological and technological transformations of the early Republican period were reflected in the form and function of Karagöz.

In line with Bauman's emphasis on communicative performance, Karagöz plays are understood both as a medium that ensures cultural continuity and as a space open to negotiation in the face of social change. This performance-oriented process of cultural transmission has taken shape not only as an aesthetic activity but also as a sphere receptive to ideological interventions. Within this framework, the concepts of Occidentalism and Orientalism offer significant analytical tools for explaining the transformation of cultural traditions in non-Western societies. Arlı (2018) notes that Orientalism and Occidentalism carry distinct historical and sociological meanings. While Orientalism systematizes the power relations embedded in the West's perception of the East, Occidentalism tends to emerge in non-Western societies through more superficial discourses of perceiving the West. Ahıska (2019), on the other hand, discusses Occidentalism through the concept of "political subjectivity," analyzing how power discourses are structured in non-Western

contexts. The transformations in content, music, and sound elements in Karagöz plays can likewise be evaluated within this conceptual framework. Through the example of Hayali Küçük Ali's performances, the changes Karagöz underwent during the early Republican era illustrate the impact of modernization ideology on artistic forms. As Marvin (1990) argues, modernity embodies an ambivalent attitude toward the preservation of the past: while attempting to unify the past, it constructs new narratives that erase plurality. The transformation of Karagöz within the modernization process may thus be viewed as an instance of this ambivalent reflex of preservation.

Since the Ottoman Empire, the concept of modernization in non-Western societies has been consistently associated with a sense of "belatedness." Beginning with the Tanzimat period, modernization, Westernization, and self-Orientalism became central themes shaping cultural life (Başar, 2021). In this regard, the adaptation of Karagöz plays in the 20th century was shaped around diverse perspectives. While reformist ideologies were internalized, debates centered on how traditional forms could be preserved and repositioned within a modernizing society. The potential modern forms of Karagöz and the shifting function of music within these forms were brought into discussion in the context of heritage-making processes. With modernization, significant transformations also took place in the culture of urban entertainment: Karagöz, once performed in tangible spaces such as coffeehouses, was transferred into intangible domains such as radio through the possibilities of new technologies. In this way, a traditional form of performance was re-produced in new cultural arenas under the influence of technology. The concept of modernization has, in turn, been explained for non-Western societies through alternative approaches (Yücedağ, 2010, p. 74).

The debates surrounding this concept have also left multiple imprints on traditional elements. As a traditional performance form rooted in the Ottoman past, the adaptation of Karagöz to the 20th century has given rise to diverse viewpoints. Considering the technological developments of the era, several questions emerge: How could tradition be preserved while reformist ideologies were being internalized? What possible modern modes of performance could Karagöz take on? Did sounds acquire a shifting function within these modern forms? The answers to these questions have been sought through the lens of heritage-making, focusing on Karagöz plays and their musical components.

With the onset of modernization, significant transformations occurred in the sphere of popular entertainment, particularly as urban spaces expanded and diversified. The modernization process reshaped urban infrastructure, social dynamics, and cultural practices, paving the way for the emergence of new and independent forms of entertainment. These forms were no longer confined to traditional activities but began to spread across different urban venues. This shift marked a departure from a previously centralized model of entertainment toward a differentiated and culturally diversified one.

In this transformation of urban life, coffeehouses occupied a distinctive position. As Cemal Kafadar observes, the rapid proliferation of coffeehouses was emblematic of the early steps of urban modernization, serving as venues for new practices of socialization (Kafadar, 2014, p. 245). Karagöz performances, staged in these new social spaces, became more deeply intertwined with urban life. Over time, with the advancement of technology, Karagöz plays that were once performed in concrete urban venues such as coffeehouses were transferred to more abstract and mass-oriented domains such as radio.

## Research Problem

The impact of modernization on cultural life, particularly during the early Republican period, led to significant transformations in both the form and content of traditional performing arts. In this process, Karagöz plays were directly influenced by the ideological and technological dimensions of modernization, forcing a reconstruction of their traditional narrative structures and auditory components. This study aims to examine how Karagöz plays were transformed into cultural heritage during the early Republican period within the framework of modernization's ideological and technological effects. To this end, it analyzes the transformations that occurred in the content of the plays, the music employed, and the modes of sound production.

The cultural changes within the social structure of the period inevitably affected forms of entertainment, and Karagöz performances were no exception to this transformation. In particular, one of the most prominent Karagöz artists of the time, Hayali Küçük Ali, disseminated traditional Karagöz nationwide through radio broadcasts, adapting its sound and musical elements to the conditions of a new medium. This process of adaptation not only broadened the reach of the plays but also brought about significant changes in their traditional performance format. Some researchers, however, have interpreted these changes as a disruption of Karagöz's original form (Öztürk, 2006). Within this context, the article aims to explore, from a cultural transmission perspective, how the transformations in the sound and musical elements of Karagöz during early Republican Türkiye were shaped under the influence of state ideologies and modernization initiatives.

## Methodology

This study examines how Karagöz plays are recognized as cultural heritage, with a particular focus on music, sound, and textual

structures. To conduct this examination, historical and sociological frameworks have been employed, allowing for an evaluation of changes in content, musical elements, and sound features in the new Karagöz plays of the early Republican period. The study is supported by a literature review to interpret the historical and cultural contexts. Drawing on the data obtained from the literature review, one of the prominent figures of the early Republican period, Hayali Küçük Ali, is treated as a case study demonstrating how the heritage of Karagöz was shaped by modern transformations. In this context, publicly accessible audio recordings attributed to Hayali Küçük Ali have been analyzed within the framework of cultural representation. These analyses take into account melodic structure, character-specific accents, dramatic usage, and rhythmic patterns in dialogues. After providing a general overview of relevant terms in the literature, the scope of the article focuses in greater detail on the reflections of modernization initiatives during this specific period. Additionally, the musical structures used in Karagöz plays are analyzed through particular characters, assessing the function of sound elements within the play and their contribution to the overall structure.

## Results

### From Tradition to Heritage Form: The Reconstruction of Karagöz in the Modernization Process of Early Republican Türkiye

How does a tradition become heritage? This transformation can occur in various ways, including organically evolving into social heritage or through state-directed processes of heritage-making. Moreover, there are instances in which traditions are consciously "invented" for political or ideological reasons rather than being transmitted through a natural process (Hobsbawm, 1983). In the case of organically evolving heritage, traditions naturally become heritage as they are continuously practiced and valued within communities, without deliberate

intervention. In contrast, state-directed heritage-making refers to a deliberate transformation facilitated through state policies or institutional frameworks, often aligning with national narratives.

The literature presents several interpretations of tradition. In its simplest form, tradition, derived from the Latin word *traditum*, refers to something transmitted from the past to the present. This definition does not specify what is transmitted; it may be a physical object, a cultural structure, or a form of heritage, whether written or oral. The essence of tradition lies in its creation through human thought and action and its transmission from past to present. According to Shils (2003), there are structures that facilitate the understanding of tradition, represent it, or preserve it. From this perspective, heritage is defined as that which is left to us, independent of our desire or choice.

In Turkish, the word *gelenek* (“tradition”) is etymologically derived from the verb *gelmek* (“to come”), and this verb carries a semantic reference to the concept itself. It denotes something that has come from the past and contains additional layers of meaning. These additional features may relate to the present, yet they still originate in the past. The derivational suffix *-ek* stems from the word *gelen* (“that which has come” or “that which has been added”), signifying “something that has come or been appended.” According to the logic of this linguistic circulation, tradition is derived from something that has emerged from the past, with roots extending far beyond the present. In his article, Çalışkan (2024) explains the etymology of this term and the derivational suffix *-ek* in conjunction with politicized narratives that arise in the context of historiography. Similarly, Atay (2004) states that the concept of tradition represents a society’s struggle to sustain its culture. In other words, its inherent feature of inevitable change ensures the survival of culture.

In Turkish, the word *miras* (“heritage”), when conjugated as *miraslaştırmak* (“to turn into heritage”), does not refer to something that becomes heritage naturally, but rather to a process by which something is recognized as heritage within ideological or cultural frameworks. In any case, both the terms tradition and heritage encompass a time prior to the present. The bridge between these temporalities cannot be considered apart from the ideologies and discourses of their respective periods. In the context of dance heritage-making, Petkovski (2021) argues that dance itself is not heritage; rather, it becomes heritage through discourses that significantly shape its dissemination and practices. The debate surrounding heritage and tradition has been analyzed in relation to the music, sound elements, and content of Karagöz plays, and the transformations identified in these analyses have been evaluated alongside the ideological approaches of the historical process.

Shadow theatre traditions can be found in various regions around the world, including China, India, Indonesia, Thailand, Medieval Egypt and Europe. As Chen (2013) notes, although these traditions possess distinctive characteristics of their own, they are not entirely independent genres and exhibit significant interaction and interconnection. While the Karagöz play does not show direct similarity, it bears technical resemblances to these traditions.

Today, certain institutions and the state demonstrate their support and recognition of Karagöz. Examples include membership in UNIMA (Union Internationale de la Marionnette) and the inclusion of Karagöz plays in state school curricula. Such practices reflect the evolving nature of the state’s approach to selecting, preserving, and recognizing traditional cultural elements as heritage. The transformation, adoption, and preservation of traditions can be considered an integral part of the heritage-making process. According to Subaşı (2003), early

proponents of modernization displayed an ambivalent stance: while acknowledging traditional elements as cultural heritage, they simultaneously legitimized some aspects of culture while rejecting others. Similarly, İhsanoğlu (2003) emphasizes the Republic's contradictory attitudes toward Ottoman heritage, noting that the concept of modern Türkiye began to take shape during the late Ottoman period. Smith (2006) argues that heritage discourse developed to serve the construction of national identity amid the wave of 19th-century nationalism, and as a result, only select elements from the past were granted heritage status. According to him, this discourse renders alternative sub-identities invisible, reducing heritage to a narrow conception of experience (Smith, 2006, pp. 29-30). From this theoretical perspective, traditional elements such as Karagöz were selectively redefined in the early Republican period according to specific ideological objectives, thereby becoming part of the national culture.

During the early Republican period, Karagöz was selected and preserved as an element of popular culture within the framework of the state's cultural modernization policies, yet it was redefined through transformations in content and form. This selective preservation represents a significant example of the Republic's heritage regime. In the context of cultural heritage, Karagöz, which is believed to have a history of approximately six centuries, underwent various transformations over time. From the perspectives of tradition and heritage, Karagöz has maintained its character as a cultural element transmitted from the past to the present. Furthermore, differing narratives about its origins reinforce its classification as a tradition (Sevilen, 1969).

However, during the heritage-making process, Karagöz experienced formal changes, particularly through various state-directed interventions. These interventions occurred in multiple ways; for example, the inclusion of Karagöz plays in radio broadcasts

has been considered a concrete instance of state intervention. Direct interventions include the establishment of Karagöz stages in the *Halkevleri* (People's Houses) (Özhan, 2011), the 1941 Karagöz book published by the CHP containing seven scenarios in which non-imaginary intellectuals such as Rahmi Balaban, İsmail Hakkı Baltacıoğlu, and Esat Sabri Siyavuşgil translated regime ideology into shadow play form, and the 1937 circular issued by the Directorate of Press and Publication under the Ministry of the Interior (Erdoğan, 1998). These examples indicate that Karagöz was endowed with new social functions, becoming an instrument of state policy.

Evaluated within Shils' (2003) concept of "guardianship," these initiatives aimed to ostensibly preserve tradition while simultaneously reshaping it in accordance with state ideology. In this regard, Hobsbawm's (1983) concept of the "invention of tradition" provides a useful framework for understanding the transformation of Karagöz in the early Republican period. Traditionally characterized by improvisation and flexibility, Karagöz was codified into written texts, narrowing the space for improvisation, and stabilized through new media (radio), transforming it from a tradition inherited from the past into one reconfigured according to modern ideological objectives. To analyze the structural transformation of Karagöz and its impact, particularly on sound and musical elements, more comprehensively, the following section of this study will provide a historical and sociological evaluation of its musical repertoire.

### **Sound in Karagöz: Musical Structure and the Acoustic Transformation of Performance**

The use of music and sound in Karagöz is of great significance, functioning as a fundamental component of narration by guiding the stage flow, establishing atmosphere, and facilitating characterization. In traditional Karagöz performances, sounds are diversified not only through songs but also via character-specific

dialogue patterns, accents, and effects. Therefore, in this study, the transmission of auditory heritage is considered within a broader framework, encompassing not only musical performance and the analysis of musical works but also sound effects and character voicings used in the play. Each character's musical representation integrates with their cultural identity and comic traits, enhancing audience perception. This musical characterization allows the audience to grasp both the narrative and the characters more quickly.

For the Karagöz performer, changes in sound determine the tempo and emotional tone of the scene, while supporting humorous or dramatic moments through vocal modulation. In plays where a single performer embodies multiple characters, distinctions between characters are emphasized through variations in accents, vocal tones, and songs. Sound effects and music keep the audience's attention consistently engaged and inject dynamism into the performance's tempo. The onset of music, the rhythm of songs, or specific sound effects set the emotional tone of the scene, for example, effects such as the *cazu* are used in mysterious scenes to create atmosphere. Additionally, the Karagözcü remains behind the screen, existing solely through their voice; this enhances the audience's perception of the scene's reality and increases the play's overall credibility.

The role of sound and music in Karagöz extends beyond providing auditory richness, directly contributing to the dramatic structure of the narrative. Among the primary instruments used, the *tef* (tambourine) and *nareke* (small wind instrument) are prominent. Played from behind the screen, these instruments serve as unseen sources of sound for the audience, performing functions such as signaling the start of the play, marking character entrances and exits, or adding emotional qualities like mystery or fear to the scene. Through these sounds originating from behind the screen, the

audience is subjected to dramatic cues while being unable to see the source, resulting in a more intense emotional engagement.

At the beginning of the play, the *nareke* accompanies the *göstermelik*, a depiction of puppet performed for show, while the *tef* provides rhythmic accompaniment during moments such as Karagöz's slap gestures, character transitions, and dramatic accents. In addition to these two primary instruments, classical Turkish musical instruments such as the *ud*, *kanun*, *kemençe*, *lavta*, *bendir*, and *tanbur* support the rhythmic flow of the performance and contribute to the creation of stage atmosphere (Ünlü, 2008). Examples of the music used in Karagöz plays can be accessed not only through live performances but also today via various digital platforms (Golden Horn Ensemble, 2012).

The heading "Karagöz Music" refers to the musical works performed during the traditional Turkish shadow play, Karagöz, composed or selected to align with the play's dramatic structure and stage flow. These pieces are drawn from both the Classical Turkish Music and Turkish Folk Music repertoires and encompass a variety of forms (Üngör, 1989). This musical structure incorporates performative elements open to improvisation while also allowing for the repeated performance of specific pieces within the repertoire. Therefore, Karagöz music should be considered both as a living performance tradition and as a systematic musical culture. According to the observations of Ethem Rûhi Üngör, approximately 211 musical pieces are performed across roughly 30 different plays in the existing Karagöz repertoire. This finding indicates that Karagöz music is not merely an auxiliary element within the dramatic structure but can also be evaluated as an independent musical formation. Examples of the music used in Karagöz plays are now accessible via various platforms. It should also be noted that the designation "Karagöz Music" is somewhat debatable due to the limited repertoire specific to

the plays. While there are sporadic pieces associated with characters such as Beberuhi or Tuzsuz Deli Bekir, the majority of works categorized under Karagöz Music are drawn from the broader Turkish classical and folk music repertoire.

Within this framework, the sonic landscape of the Karagöz play must be examined not only at the level of musical repertoire but also in terms of performance practices and the use of sound on stage. In particular, revealing changes in the structure or performance of music over time is essential for understanding the evolution of this traditional form, especially in the context of cultural heritage continuity. Therefore, in the following section, songs specific to certain character types will be analyzed, offering insights into both the fixed/living nature of the repertoire and the functions of intra-performance sound layers. The analysis will encompass not only music but also the voice of the *hayâlî*, the use of accents, effects, and auditory transmission practices, demonstrating how sound on the Karagöz stage transforms into a multi-layered carrier of meaning.

In this context, discussions regarding the origins and functions of songs used in Karagöz plays are critical for defining the content encompassed under the heading “Karagöz Music.” The inclusion of these songs in various repertoires raises the question of whether this music is specific to the plays or reflects broader cultural memory. As emphasized by Cömert (2023), the documentation of these pieces began in the late 19th century, with notable contributions from figures such as Hayâlî Memduh Bey, Sefer Mehmet Efendi, and particularly Hayâlî Küçük Ali. In the 20th century, studies such as Ferruh Arsunar’s *Karagöz Musikisi*, Reşat Oğuz’s *Karagöz’de Halk Türküleri ve Halk Hikayeleri*, and Ethem Ruhi Üngör’s work on Karagöz Music, alongside the growing field of musicological and cultural heritage research, aimed to reveal how these songs transformed both in performance and content. This positions

the musical content of Karagöz not merely as an aesthetic component but also as an ideological and sociocultural vehicle. In other words, alongside the global rise of nation-building initiatives during the Republican period, there is a discernible impact on cultural forms. This provides an important indication of how a long-established cultural form has been heritage-ified. In this context, the existence of a musical repertoire specific to Karagöz plays offers insight into how a form tied to national culture is preserved and claimed.

Within this historical and cultural framework, it is possible to focus on the songs associated with character types in the plays. At this point, the concept of the *leitmotive* becomes particularly significant (Çolakoğlu, 2006). Each type appears on stage with music appropriate to the geographical or social identity it represents. In particular, the *semâi* pieces performed by Hacıvat upon his entrance not only convey musical content but also symbolically represent his socially knowledgeable position. Musically, they reinforce Hacıvat’s portrayal as an intellectual figure closely associated with palace circles. The pieces frequently chosen for Hacıvat’s stage entrance, such as “Ah Bir Elif Çekti Yine”, “Sineme Canan Bu Gece”, “On Kere Demedim mi Sana”, and “Benim Âfet-i Cihanım Aman”, express the character’s social and cultural status, not merely in musical terms but also on a representational level. Musical analyses conducted through such examples aim to demonstrate how sound in Karagöz functions not only auditorily but also as a representative element.

The score of the first of these pieces is provided below, followed by a musical analysis. Following the musical structures associated with Hacıvat, the pieces used for Karagöz and other character types primarily feature local accents, humorous wordplay, and regional melodies, revealing the auditory strategies that signify the characters’ cultural backgrounds.

Karagöz plays consist of four main sections as *mukaddime* (introduction), *muhavere* (dialogue), *fasıl* (main episode), and *bitiş* (conclusion). The *mukaddime* section features Hacıvat's entrance, including the recitation of the *perde gazeli* and a *semai* performance. This section concludes when Hacıvat calls Karagöz, marking the beginning of the *muhavere*, the segment in which Hacıvat and Karagöz engage in dialogue. The *fasıl* section follows, encompassing the main events of the play and serving as the portion where characters enter the stage. In the *bitiş* section, Karagöz and Hacıvat engage in a fight, bringing the play to its conclusion. Music is employed throughout all four sections of the performance (Kudret, 1968).

### **Makam and Functional Analysis of Musical Pieces Used in the Plays**

In this study, two performance examples from Hayali Küçük Ali's TRT radio broadcasts, as well as two musical pieces from the Karagöz play repertoire, were examined. In addition to the musical works used in the selected plays, one piece, the *Beberuhi* song, was chosen, very likely composed specifically for Karagöz plays, while the other, "*Ah Benim Afet-i Cihanım*", composed by Dede Efendi and included in the Turkish Music repertoire, was also analyzed.

The musical analysis included in this article aims to provide a more comprehensive understanding of how auditory functions within the play affect its overall performance. Theoretical analyses were used as a tool to more precisely determine the qualities possessed by the songs within the auditory heritage layer. In this context, although various approaches and studies have been developed today, the theoretical framework employed is based on the method developed by Arel-Ezgi-Uzdilek and later revised by İsmail Hakkı Özkan, which is also frequently used in Turkish makam music education. Another dimension of the analysis concerns dramaturgical function, evaluating the role of the pieces on stage across multiple aspects, from establishing

atmosphere and reinforcing a character's emotions to punctuating comic timing or intensifying dramatic moments.

The first piece selected as an example for musical analysis in Karagöz plays is "*Benim Afet-i Cihanım*" by Dede Efendi, one of the last palace musicians of the Ottoman period. Although Dede Efendi made significant contributions to the Classical Turkish Music repertoire, it is difficult to assert that this piece, like many others in the Karagöz music repertoire, was composed specifically for the play. The work requires considerable musical proficiency for performance due to its *makam* modulations and *usul* (rhythmic) structure. This aligns with Hacıvat's portrayal as a knowledgeable and educated character, indirectly reflecting his musical sophistication. The second piece analyzed is *Vardım Halep'e*, associated with the Karagöz character Beberuhi. This piece is particularly noteworthy for understanding character-specific performance codes.

The piece whose score is presented in Figure 1 was composed by Dellâlzade İsmail Dede, a nineteenth-century composer, in the *Yegâh makam* and *aksak semai* rhythmic mode. In the general assessment of this piece, one can observe the characteristics of the *Yegâh makam* as well as the melodic transitions employed within its simple melodic structure. Furthermore, the rhythmic character, designed to support the emphatic delivery of the lyrics, indicates that the theoretical function of the music within the play is also reinforced.

**YEGÂH ŞARKI**  
**Benim Afet-i Cihânım**

USÛL: Aksak Semai Müzik: Dellâlzâde İsmail Ef.

BE NİM Â\_ FE\_ Tİ Cİ HÂ\_

NİM A MAN BE NİM Â FE Tİ Cİ HÂ

NİM A MAN YO LU NA FE DA BU CÂ

NİM Dİ Lİ DOST KAL Bİ DÜŞ MA

NİM A MAN A ĞAM ET ME BU E DA

Yİ PA ŞAM ET ME BU CE FÂ Yİ

BENİM AFET-İ CİHANIM  
YOLUMA FEDA BU CANIM  
DİLİ DOST, KALBİ DÜŞMANIM  
AĞAM ETME BU EDAYI  
PAŞAM ETME BU CEFAYI

Figure 1. Benim Âfet-i Cihanım score

The lyrics also include formulaic expressions used by Hacivat during the performance, such as “servi bülendim”. From a melodic perspective, the musical flow of the piece features *İsfahan* transitions, particularly in the first and second *portee* (Figures 2 and 3). According to Özkan’s explanations (Özkan, 1999, p. 134), developed based

on the Arel-Ezgi-Uzdilek (AEU) studies, the *İsfahan* transition is realized through the use of the Rast tetrachord on Dügâh, one of the common cadential structures in the *İsfahan makam*.

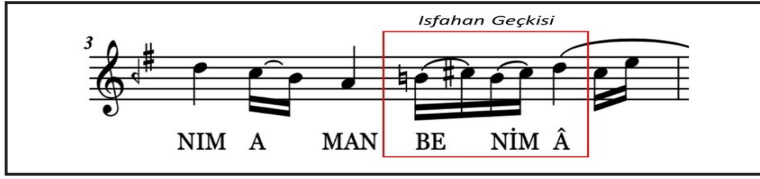


Figure 2. Isfahan transition in the first portee

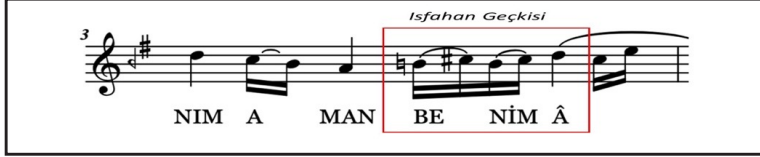


Figure 3. Isfahan transition in the second portee

Following the natural progression of the makam and based on Özkan's explanations, it can be observed that the cadances are

realized using the notes of the *Buselik* pentachord on Yegâh (Figür 4).

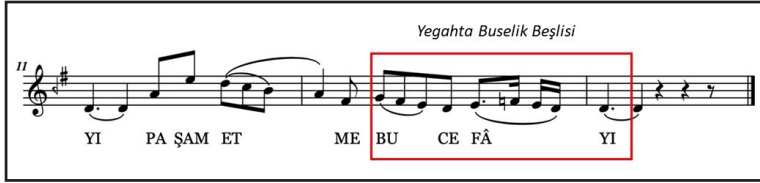


Figure 4. Buselik Pentachord on Yegâh

Similarly, in *Neva*, the *Rast* mode can be said to transition to *Buselik* mode as *Eviç* note

of the tetrachord moves to the *Acem* note within the piece. (Figür 5 a ve b).

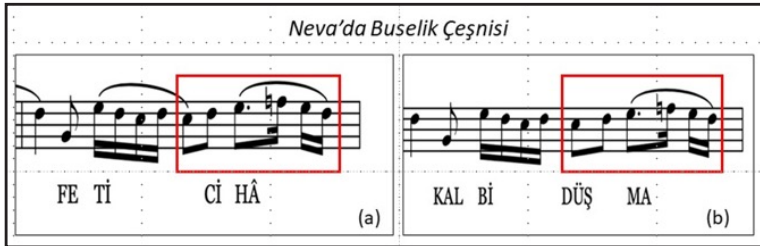


Figure 5. Buselik on Neva (a) ve (b)

The musical structure of this piece, in terms of both melody and rhythm, is such that it can be performed by someone with formal musical training or a high level of musical skill. Considering Hacivat's role in the play as a knowledgeable character who instructs Karagöz, his entrance with pieces of greater musical sophistication aligns with his social status. In other words, the musical structure associated with the character, and thus the

sounds integrated with his persona, function as symbols of the upper class. The second example for musical analysis is Beberuhi's song, the score of which is presented in Figure 6. The function of this music is characterized by a melody that does not encompass all the notes of the *makam* in the scale, maintaining a simple and easily singable structure. This makes it suitable for performance by a folk character such as Beberuhi.

**SABA**

Düyek

Var dım ha le be gir dım do la ba pa ra la rı ver dik

ra kı sa ra ba ya lel ya lel ya le l le l li

le l le l li

Vardım Halebe girdim dolaba  
Paraları verdim rakı şaraba  
Yalel yalel yalel ya  
Dimeto dimeto Beberuhi

Figure 6. Beberuhi song's score

Beberuhi is a childlike and innocent character, whose simplicity also serves as a source of comedic effect. The reason for selecting his song as a musical analysis example is that it provides a clear reflection of his pure and simple personality traits in the music. Furthermore, the fact that Beberuhi's song does not exist outside the Karagöz play repertoire contributes to the discussion regarding the existence of songs specifically composed for the plays. In other words, while this is not the case for every

song, some pieces appear to have been composed specifically for the play or are currently found only in this context. In the musical analysis of the piece whose score is presented in Figure 7, it is composed in the *Sabâ makam* and features frequent repetitions. According to the approach developed by Özkan based on the Arel-Ezgi-Uzdilek (AEU) studies, the Sabâ tetrachord is present within the scale at its designated position.

Dügâh'ta Sabâlı Karar

le l le l li

Figure 7. Sabâ tetrachord on Dügâh

Its *usûl*, based on the Nim-Sofyan rhythmic cycle, contributes to the memorability of the piece and facilitates repetition. The lyrics of this song, which appear with different variations in the collections of

researchers such as İsmail Hakkı Bey, Georg Jacob, Sefer Mehmed Efendi, Selim Nüzhet Gerçek, and Metin And, are presented in the plays published by Nurettin Sevilen as follows (Cömert, 2023, p. 107).

“Dimeto, dimeto, Beberuhi...  
Dimeto, dimeto, Beberuhi...  
Vardım Haleb’e bindim dolaba,  
Paraları verdim rakı şaraba  
Yâlel yâlel yâlel yâlel...  
Kaplumbağanı nalladılar,  
Sırtına semer bağladılar,  
Yâlel yâlel yâlel yâlel... “

As evident in the lyrics, the song emphasizes the character’s name and, compared to the previous piece, contains a much simpler structure with fewer phrases. It includes nonsensical words that reinforce the recitation, similar to the playful expressions found in tongue twisters. Words such as *yâlel*, borrowed from Arabic and with no clear function beyond a possible regional connection to the city of Aleppo, further support this approach. The melody’s rhythmic alignment with short words in the lyrics reinforces the placement of syllables and the playful language constructed through these brief repetitions. This playful language, established through repeated short phrases, emphasizes Beberuhi’s comedic role and maintains musical coherence. Moreover, it is thought to reflect the innocent and childlike temperament of the character.

Following Beberuhi’s humorous and verbally playful song, another example can be highlighted, which, although without lyrics, stands out through its characteristic structure that introduces a character to the stage. The *Polka* provides a significant example of the inclusion of Western musical forms in the Karagöz stage and demonstrates how a character’s ethnic identity, particularly the *Frenk* or *Rum* types, is represented through sound. The polka, a dance originating in Poland, is performed instrumentally in both the Karagöz and *Orta oyunu* repertoires (Cömert, 2023). In various play texts, no information regarding *makam* or composer is provided for the polka performed prior to the entrance of Rum and Frenk characters

in Karagöz, or the Balama character in *Orta oyunu* plays. However, as noted by Cömert, in the collection of Muallim İsmail Hakkı Bey, the composer of this piece is identified as the pianist Ahmed Bey (Cömert, 2023). Considering the dominance of the *alafranga* trend in 19<sup>th</sup>-century Ottoman society, the presence of the polka in entertainment forms can be interpreted as a reflection of this historical phenomenon in music.

In terms of symbolizing the geographic region from which the character originates, this piece differs from other songs by representing affiliation with a different nationality. Its presence in the *Orta oyunu* repertoire as well indicates that it is a musical work shared within traditional theatre, rather than being exclusive to Karagöz plays. From this perspective, and considering that it is not a *makam* piece, the work can be understood as a musical representation of a different nationality. Being an instrumental composition, it also facilitates performance, as it does not pose a language barrier for the Karagözcü or the musician executing the piece.

It is evident that Western-origin, dance-focused pieces of this type brought the multicultural structure of late 19<sup>th</sup>-century Ottoman society onto the stage. Therefore, the inclusion of music such as the polka in Karagöz plays represents not only a form of entertainment but also a reflection of Istanbul’s ethnic and sociological fabric. In this context, it can be interpreted as a representation of how neighborhood culture was depicted through characters and sound patterns within the play. As an indicator of sociological change, neighborhood culture holds significant meaning in the Karagöz stage. In a period when Karagöz could reach a wider audience and technological means for entertainment were limited, the urban population and settlement patterns were organized around neighborhood structures rather than resembling today’s conditions. This demographic context removes the polka from being an identity-specific marker in

contemporary settings. Similarly, characters such as Laz, Jewish, Çelebi, Tuzsuz, and Acem represent the demographic composition of a particular period in Istanbul. Consequently, it can be argued that the city's sociological structure is also reflected in the musical pieces and auditory space within the play.

With changing life practices in the contemporary era, there have also been differences in the production and consumption of sound and music in Karagöz plays. Beyond the musical repertoire, in order to provide a more comprehensive assessment of the sounds within the play, studies and theoretical approaches related to sound have been explored in the following section.

The concept of sound has historically been experienced in conjunction with visual content; in the performing arts, the simultaneous use of auditory and visual elements creates a sensory unity. The verbal and instrumental structures of the works exemplified above generate a multilayered auditory space on the Karagöz stage. This space not only provides a musical layer but also establishes a sensory connection between the audience and the performance. At this point, addressing acoustic theoretical approaches that examine the relationship between hearing and vision is meaningful for a deeper understanding of the sound aesthetics of Karagöz. Studies of sound, which extend beyond theatre and cinema to encompass anthropological research, have increasingly been incorporated into contemporary explorations of sensory spaces. In Karagöz plays, the focus of this article, the soundscape includes the instruments used, the analysis of selected musical pieces from the repertoire, and the auditory examination of two plays performed by Hayali Küçük Ali. Changes in the play's structure over the centuries have generated auditory variations in sound, music, and language. These changes have significantly contributed to the survival of the play into the present and to its process of cultural transmission.

The concept of sound is positioned both as a force that shapes the world and as a tool that generates knowledge about it. Since it also encompasses the field of listening, it possesses various forms of textuality such as grammatical, poetic, and ritual dimensions. Changing practices of listening are also evaluated in relation to the process of modernization (Gautier, 2014, p. 3). In the context of Karagöz plays, such listening practices are exemplified through the representation of social class, regional identity, or professional affiliation via characters speaking in different accents; the evocation of historical belonging and nostalgia through the use of archaic vocabulary in dialogues; and the creation of specific expectations or emotional states in the audience through the music accompanying characters' entrances. These elements demonstrate both how auditory representations of the past are transmitted to the present and how modern listening practices interact with historical elements.

In Karagöz plays, the fact that sound emanates from an unseen source creates a perceptual plane that arouses curiosity between the audience and the characters. In this respect, a parallel can be drawn with the method known as the *acousmate*, which Pythagoras is said to have employed in order to instruct his students through sound. According to legend, during the first years of their training, Pythagoras would teach from behind a curtain, preventing his students from seeing him. The French term *acousmate*, meaning "unseen sound", refers to this method, in which students' visual perception was deliberately obstructed for the first five years of instruction (Kane, 2014). It is reported that during this period Pythagoras remained outside the students' field of vision, delivering his lectures from behind a veil, after which the exoteric stage of acoustic training was completed and the esoteric stage, where the student was finally permitted to see the teacher, would begin. The initial exoteric phase is also referred to as the *acousmates*. This distinctive

pedagogical method has been interpreted as emphasizing the primacy of sensory and auditory education (Kane, 2014, p. 46). In the format of the Karagöz play, since the source of sound remains behind the curtain and outside the audience's field of vision, the concept acquires a distinct significance for the puppeteer (*hayalî*) and his assistant (*yardak*). The invisibility of the sound source may in fact enhance the plausibility of the performance for the audience.

The sound positioned outside the audience's field of vision enhances the credibility of the play and functions as a technique that strengthens stage reality. The *hayalî* exists solely through his voice; characters, events, and atmosphere are constructed by means of this unseen sound. Thus, the Karagöz performance, much like in the Pythagorean teaching, creates an experience that privileges auditory perception over visual representation. This is not merely a technical choice but also a reproduction of the cultural resonance of "the heard but unseen." From the perspective of modern sound theory, this structure can be related to Michel Chion's concept of the *acousmatic voice* (Chion, 2019). In this context, the source of sound is invisible yet audible, and it is associated with the figure on stage. The *hayalî*'s voice is entirely acousmatic; the audience is aware of his presence but cannot see him. At the same time, this voice carries a "disembodied" quality (Chion, 1999; Le Fevre-Berthelot, 2013), for the projected images on the screen are two-dimensional silhouettes without material bodies, yet they are perceived as "embodied" through the puppeteer's voice. In this way, Karagöz offers an auditory experience that is simultaneously both acousmatic (with a hidden source) and disembodied (detached from a physical body).

However, the invisibility of the voice behind the curtain is not limited to staging technique alone. In a Sufi reading, the projected reflections on the screen represent the visible *suret* (form), while the unseen voice behind

the curtain signifies the *asıl* (essence). The manifestation of the unseen truth through sound turns the auditory dimension of Karagöz into not only an aesthetic element but also a medium that shapes its cultural and metaphysical meaning (Pay, 2012; Oral, 2012).

From this point onward, the primary focus of this section has been the structural characteristics of music and the soundscape in Karagöz plays. Undoubtedly, the sustaining role of this sonic heritage has been crucial in the survival of the play as a form of entertainment up to the present day. Listening practices, which have been shaped across different sociocultural contexts for centuries, have also found their reflection in the structure of the play; the music, the vocabulary, and the rhythm of the stage have all undergone auditory transformations. This process involves not only the preservation of the traditional form but also its transmission into new media formats (such as radio or digital platforms).

Once experienced as an auditory theater on the radio, Karagöz is today being re-produced on digital platforms such as YouTube, which also raises questions about the place of sound in entertainment culture. The continued use of words unique to Ottoman Turkish and seemingly primitive two-dimensional figures prompts a critical inquiry: does this situate the form within a nostalgic framework, or does such technical simplicity represent an adaptation to the selective cultural heritage practices of the digital age? To address these questions, the following section will examine in detail the influence of sound media on Karagöz during the Early Republican period and how this transformation has been reflected in processes of heritagization.

In this section, the main focus has been on the structural characteristics of the music and the soundscape used in the play. In the survival of Karagöz plays as a form of entertainment and their transmission as heritage, this sonic legacy has undoubtedly

played a significant role. Both musically and in terms of listening practices that can be included in sound studies, the Karagöz play has shown variations throughout the centuries. However, how have technological developments and changing circumstances influenced the positioning of these sounds within entertainment culture? Once listened to on the radio, and now accessible through various platforms such as YouTube and other forms of social media, where do these sound recordings stand in today's modes of consumption? Does the continued use of words that evoke Ottoman Turkish and of two-dimensional visual figures, which appear simple, or even primitive as a form of entertainment, confine this genre to a nostalgic positioning? Or does this technical simplicity, instead, seek to adapt to the selective cultural heritage practices of the digital age? In order to better understand this transformation, studies from the Early Republican period have been examined in detail, with particular attention to the transformations brought about by technological developments during the modernization process and to the steps taken in the heritagization of Karagöz.

### **The Sound Media of the Early Republic: New Forms of Karagöz through Radio Broadcasting**

Like many countries that pursued Westernization in the 19th century, the modernization process in the Republic of Türkiye was shaped by dominant discourses. Although this tendency had already begun before the founding of the Republic, this article narrows its focus to a specific period following the establishment of the Republic of Türkiye and to Hayali Küçük Ali, who stood out with his Karagöz performances during that time. In the first few decades of the Republican era, the state largely adopted an urban-centered, secular discourse. Various reforms were implemented with the aim of transforming the social structure of society into one more aligned with this ideology. While secular lifestyles developed in major cities, forms of entertainment and practices

of consumption also diversified. Particular emphasis was placed on making women more visible in public life, encouraging Westernized styles of dress, and supporting a social environment in which men and women could participate together. When Karagöz is considered as a form of entertainment, the practices encouraged to adapt it to this rapidly changing lifestyle provide insight into how the play was transmitted as cultural heritage during this period.

Siyavuşgil's (1949) in-depth analysis of Karagöz characters highlights the physical transformation of certain figures in relation to the changing sultans of the Ottoman period. One of the most prominent examples is Çelebi, a well-known character whose costume and accessories evolved over time. Siyavuşgil situates characters such as Tuzsuz Deli Bekir, Beberuhi, the Drunkard, and Zenne within the context of the Istanbul neighborhood. He interprets the character types in Karagöz as symbolic representations of the neighborhood, a social structure that remained relevant in the 1950s but whose meaning was gradually diminishing in the broader framework of Istanbul's urban life. According to Siyavuşgil, the cultural atmosphere of the play is deeply rooted in the Ottoman way of life. Yet, from a contemporary perspective, the concept of the neighborhood no longer holds the same significance in city life. This transformation in urban living is an important factor to consider when evaluating Karagöz plays in a modern context.

Among the significant developments of the period, the technological advances following World War I had a direct impact on entertainment consumption practices. Improvements in radio technology facilitated the dissemination of both news and entertainment, reshaping the cultural landscape of the era. For traditional performing arts that relied not only on oral narration but also on visual imagery, such as Karagöz, radio presented both new opportunities and limitations. Especially for

performances based on two-dimensional figures, the shift to sound-centered expression required both transformation and adaptation. Karagöz, which had previously been performed tangibly in public spaces within the city, found a new platform through radio, enabling it to reach wider audiences and sustain its presence. With radio broadcasts, Karagöz came to exist solely through sound, without the physical screen and figures. Character distinctions were now conveyed exclusively through vocal tones, accents, and musical themes. Radio broadcasts eliminated the need for direct interaction between the audience and the puppeteer, replacing the traditional participatory aspect of Karagöz with a one-way auditory transmission. Furthermore, demographic changes in the diversity of neighborhood identities have continued to influence the vocal portrayals of characters in newly written plays today.

The significance of technology in the context of Karagöz is particularly evident in Hayali Küçük Ali's radio programs. Küçük Ali, who became a popular figure for an extended period through his radio broadcasts, later assumed a nostalgic status. With the technological advances of the era, radio emerged as an important and accessible form of entertainment. The Early Republican Period represents a key turning point in the history of radio, as it coincided perfectly with the rise of radio technology. As Nart (2009) notes, radio was employed as a tool in the modernization efforts of the newly established Republican regime. The initiation of radio broadcasts in Türkiye in 1927 marked a decisive step in cultural change and social transformation. Radio played a dual role in educating and entertaining the public, introducing them to the modern world, promoting Western culture, and disseminating the ideals of the new Republic (Nart, 2009). During the Republican era, institutions such as People's Houses and Village Institutes, which supported the dominant ideology of the period, incorporated themes like modern

citizenship, turning traditional forms into modern educational tools (Erol, 2021).

Ahıska (2019) emphasized radio as “on the one hand a symbol of a nostalgic memory of the past, and on the other hand an effective propaganda tool in the formation of nations and a means of spreading the consumer economy.” Based on this statement, Ahıska (2019) highlights three main functions of radio. The first of these is radio's role as a symbol of a nostalgic past; it functions to preserve the cultural heritage and collective memory of a particular period. Through radio, it becomes possible to trace both individual memories of society and the marks of historical processes. In the case of Karagöz plays, these technological developments provided the means for broadcasting performances via radio. For those who grew up listening to these plays on the radio, the voice of Karagöz became a nostalgic element. The surviving radio recordings of Hayali Küçük Ali demonstrate that Karagöz plays were archived not only as verbal texts but also in the form of vocal performances. These recordings have enabled Karagöz to be preserved as an aural heritage in modern media formats as well (TRT Arşiv, 2020).

### **Hayali Küçük Ali and the Aural Heritage of Karagöz: Representing the Transition from Tradition to Media**

Hayali Küçük Ali (1884-1967) is one of the most important representatives of Karagöz during the Early Republican Period. He played a critical role in transferring the traditional Karagöz form to modern media environments and making it accessible to new generations. It is known that in traditional Karagöz, the transmission of knowledge and techniques occurred not through formal educational institutions but via the “master-apprentice” relationship. From a young age, Hayali Küçük Ali began observing the Karagöz performers of his time and thus educated himself (Özhan, 2011). Radio broadcasting, an indicator of the modernization practices of the period, was concretized in Karagöz performances through Hayali Küçük Ali.

This practice represents an important stage in the concretization of auditory heritage and its transmission to future generations. The significance of Hayali Küçük Ali lies in the preservation of his recordings, which make this transmission possible, and in creating a historical soundscape in the performance of Karagöz plays. The representational nature of this auditory memory, shaped in the recorded programs, is also adopted by contemporary Karagöz performers and serves as a model for reference. This phenomenon is not limited to the influence of an individual performer; it is also evaluated within the context of cultural transmission processes and the inheritance of auditory heritage. Consequently, the voice of Hayali Küçük Ali functions as a bridge that ensures the continuity of cultural memory and traditional performance practices.

Hayali Küçük Ali is the most widely known Karagöz artist of the Republican period. The radio programs in which Karagöz plays were recorded contributed greatly to his recognition among the public. Moreover, his appointment as a Karagöz instructor allowed him to perform in various cities across Anatolia. Cömert<sup>1</sup> (2024) identifies three main reasons for Küçük Ali's prominence as a Karagöz performer: his residence in Ankara, his extraordinary talent and deep knowledge regarding the Karagöz repertoire, and his qualified expertise in Karagöz depictions. Living in the capital, Ankara, provided him with opportunities to access state institutions and collaborate with the government. His proximity to these institutions and his employment by the state made him more accessible and visible.

Before moving to Ankara, Küçük Ali had already established himself as a talented Karagöz artist in Istanbul, acquiring a substantial and qualified repertoire. Born during the Ottoman period and having experienced the transition to the Republican era, Küçük Ali served as a bridge in preserving and transmitting the heritage of Karagöz. Not only did he perform and write

plays, but he was also a renowned Karagöz depiction creator and collector, making him one of the significant figures in the tradition. These qualities logically positioned him as a leading figure of his time.

Born in the late nineteenth century (1886) and widely known in Türkiye by the pseudonym Hayali Küçük Ali, Muhittin Sevilen became an important figure in Republican-era Karagöz performances. During his childhood, he had the opportunity to watch Karagöz plays in coffeehouses and public spaces. Among the Karagöz artists he observed in Istanbul at that time were Saffet Efendi, Hayali Memduh Bey, Hayali Nafiz Bey, Hayali Sobacı Ömer Efendi, Hayali Mehmet Serçe Efendi, Hayali Behiç Efendi, and Hayali Arap Cemal Efendi (Özhan, 2011). After retiring from his position at the post office, he was appointed by the state as a Karagöz instructor in Halk Evleri (People's Houses) (Erol, 2021). In a magazine interview conducted in 1932, Hayali Küçük Ali stated that his master in Karagöz training was Hüseyin Ağa. The primary venue for his performances was the coffeehouse; the aforementioned interview was conducted before one of his performances (32 seneden beri perde arkasında Hayali Küçük Ali neler anlatıyor? 1932). In addition to his public service career, he performed Karagöz plays in coffeehouses, Halk Evleri (People's Houses), and various other locations. He noted that characters like Karagöz and Hacıvat, though not real, exist as national figures in our imagination. In another magazine from the same year, a discussion about Karagöz plays questioned the reality of the characters Karagöz and Hacıvat (Nafiz, 1932). The significance of this debate is closely related to the process of heritage transmission. The reality of the Karagöz plays and their characters is symbolically maintained through representations such as the Karagöz-Hacıvat graves in Bursa and the Karagöz statue in Kırklareli. The adoption of these names by cities through monuments, as a fundamental element determining the place of heritage in social life, serves as an example of heritage practices applied today.

<sup>1</sup> Cömert, E., personal communication, 2024 February,

Between 1939 and 1951, the Istanbul *Halkevleri* (People's Houses) included Karagöz performances in their representational activities in accordance with Article 48 of the 1940 *Halkevleri Working Regulations*, with the aim of ensuring public education and maintaining cultural continuity (Kumas, 2020). These performances not only entertained the public but also functioned as a means of transmitting social values; in particular, they contributed to the reinforcement of local identity by introducing younger generations to traditional arts. In this context, it has been identified that Hayali Küçük Ali contributed directly to this process, not only through the Ankara-based People's Houses but also by staging educational Karagöz performances for children at rural events organized by the Hasanoğlu Village Institute (Özhan, 2011).

According to Özhan, being a Karagöz performer is not limited to the manipulation of figures but also requires mastery in voice and accent imitations. Each character's speech in its distinctive dialect. For instance, a Black Sea native, a person from Kastamonu, a Greek, or a Jew speaking in their regional accents, demonstrates the performer's powers of observation, analytical ability, and interpretive skill. In this regard, Hayali Küçük Ali was among the rare masters who not only portrayed Hacıvat and Karagöz but also vividly brought to life all the characters appearing on stage with distinguishable voices, while skillfully performing their songs. He meticulously maintained these vocal distinctions throughout the entire play.

Hayali Küçük Ali not only preserved Karagöz art in its traditional form but also updated its content and visuality in line with the ideology of the Republic. In the depictions he prepared by hand, he reimagined classical characters in modern attire, for example, portraying Çelebi with a tie and the female characters (*zennes*) in contemporary women's clothing. These figures served not only an aesthetic function but also acted as carriers of ideological transformation. A striking example is the depiction "Flying

Hatay," which directly alluded to the political atmosphere of the period by addressing the annexation of Hatay to the homeland (Figure 8). This representation functioned as a means of raising public awareness about Türkiye's territorial integrity and national unity. Özhan (2011) also identified national themes in Küçük Ali's collection of depictions, such as the "Peace Girl" symbolizing Atatürk's motto "Peace at home, peace in the world," a Red Crescent tent, the Republican People's Party Congress, National Sovereignty and Children's Day (April 23), and Domestic Goods Week (*Yerli Malı Haftası*). Figures like "Flying Hatay" demonstrate that the traditional repertoire of Karagöz was reconfigured to contribute to the discourses of national unity and ideological cohesion of the period. In this context, Hayali Küçük Ali's depictions are not merely play figures but also documents reflecting the political and cultural discourse of the time. These depictions, in which the political and cultural discourse of the period was visualized, also reveal that heritage was transmitted through visual transformation.



**Figure 8.** Flying Hatay Depiction (Özhan,2011)

In Hayali Küçük Ali's performances, voice became not only a means of distinguishing characters but also a fundamental tool for shaping humor, dramatic emphasis, and atmosphere. His use of voice offered extraordinary variety, both in accent variations and in emotional intonations.

Through Küçük Ali's contribution, the vocal aesthetics of Karagöz were transferred into a multi-layered auditory experience, independent of the visual narrative. In the radio adaptations, the songs performed were combined with recordings that included both pieces voiced by Küçük Ali himself and those presumed to have been performed by radio artists. In this way, character vocalizations, later adopted as a model by contemporary Karagöz performers, merged with professional musical performances, giving rise to a new auditory aesthetic.

As a concrete reflection of this transformation, the radio recordings of Hayali Küçük Ali preserved in the TRT Archives demonstrate how Karagöz art was reproduced not only on stage but also through sound. In particular, the recordings titled "*Hayali Küçük Ali Karagöz Oyunu*" dating to the early 1950s are significant examples documenting how the traditional shadow play was adapted into radio form. These recordings present performances that both carry traces of the cultural memory of the period and illustrate how voice itself became an autonomous medium of representation and narration. In the following sections, a theoretical analysis (cultural transmission and representation), character analysis (vocal performance and character types), and musical structure analysis (melody, improvisation, and rhythm) based on these recordings will be presented. In this way, the transformation of Karagöz's vocal aesthetics will be examined through the example of Hayali Küçük Ali.

### Analysis of Hayali Küçük Ali's Karagöz Play Performances

The Karagöz play recordings included in this section are significant in that they represent a form in which Karagöz, originally both a visual and auditory performance, is reduced to a purely auditory dimension. It can be heard that some of the music performed during the play was accompanied by the tambourine played by Hayali Küçük Ali himself, while other pieces were presumably performed by a musical ensemble consisting

of radio musicians. For the purpose of musical analysis, the songs selected in this study were previously transcribed into notation and subjected to a more comprehensive musical analysis in the preceding section, where their auditory functions within the play were also extensively explained. In the performance analyses in this section, the songs considered from an auditory perspective were evaluated in terms of the function of music within the play, but unlike the works selected in the previous section, they were not subjected to detailed theoretical analysis. The recordings of musical performances by Hayali Küçük Ali were assessed with regard to the variations they exhibit and the effects they bring to the dynamics of the play. Through these two fundamental elements, which ensure the preservation and transmission of auditory material, examples serving as a basis for the analyses have been examined within the scope of this article.

The radio recordings of Hayali Küçük Ali made by Dr. İlhan Başgöz between 1958 and 1960 constitute one of the most important examples documenting the Karagöz tradition within the context of oral culture. By capturing the ephemeral and improvisational structure of Karagöz, these performances provided an exceptional contribution to the preservation of oral cultural memory. The seventeen Karagöz plays, together with *meddah* and *orta oyunu* performances recorded in Hayali Küçük Ali's own voice, transformed the memory of an individual artist into a collective cultural heritage, thereby strengthening the archival dimension of the Karagöz tradition. Within the scope of this study, the performance titled "*Aşıklık*" has been selected in order to evaluate the vitality of oral culture by demonstrating the impact of improvisation on artistic and narrative form. In addition, the recording of the play "*Salıncak Safası*" from the book *Karagöz*, published by the Ministry of National Education in 1969, has been chosen because it represents a multilayered cultural structure where written memory converges. In this way, Hayali Küçük Ali

combined the vitality of oral narration with the permanence of written texts, enabling an evaluation of the process through which both the traditional and modern memory of Karagöz were constructed.

Hayali Küçük Ali's Karagöz performance titled "*Karagöz Aşıklar Oyunu*" or "*Aşıklık*" stands out as one of the rare recorded examples of oral cultural memory, staging both the traditional *âşıklık* (minstrel) tradition and the improvisation-based narrative structure of Karagöz. In this play, Hayali Küçük Ali not only employed the traditional Karagöz figures but also enriched the structure of the play with *manis*, improvised poems, and narratives specific to the *âşıklık* tradition. The opening of the play features "Hacivat Çelebi Semaisi," staged in accordance with the classical musical introduction pattern. In this part, the hymn "*Gül Yüzlülerin Şevkine Gel*" by Tab'i Mustafa Efendi, in the form of Beyati Yürük Semai, is used. This musical choice both establishes the atmosphere and highlights the typical identity of the Hacivat character. It is believed that this piece was performed by radio musicians and incorporated into the play to provide professional contribution to the performance. Following this brief musical introduction, Hayali Küçük Ali begins his performance with the classical Karagöz-Hacivat dialogues. Hacivat enters the scene in a polite and measured tone, saying, "*If only I had a friend, clean of face and hand, gentle in words...*", while the Karagöz character responds in a loud and rough tone with "*Haaaaa!*". This short passage demonstrates how the social positions of the characters are constructed solely through voice and manner of speech. From this perspective, in line with Jan Assmann's theory of cultural memory, these dialogues reveal how traditional patterns of humor inherited from the Ottoman period were reproduced within the modernizing social structure of the Early Republican era. Hayali Küçük Ali not only preserved the traditional form but also transformed his performance by including contemporary references to

urban life of the time. In this respect, consistent with Raymond Williams's theory of the evolution of cultural form, Karagöz is shown to be reproduced on stage as a living cultural form rather than a static one.

Following this, the dialogue known as the "name-changing *muhavere*," frequently encountered in Karagöz plays and based on humor and wordplay, begins. In this exchange between Karagöz and Hacivat, they decide to change their names to "Mersin" and "Süpürge Sapı" (Broomstick). To memorize these names, Hacivat proposes a melodic recitation. With increasing tempo, Hacivat begins singing "*Mersin Karagöz*," and Karagöz responds melodically with "*Süpürge Sapı Hacivat*". The *mani* then shifts as Hacivat continues: "*What do you eat, Karagöz? What does your mother eat, Karagöz? What does your father eat, Karagöz? And finally, what does your lineage eat?*" The same *muhavere* is then repeated with the names "Babahekim" and "Miki Fare" (Mickey Mouse), concluding the dialogue segment.

Name-changing in Karagöz plays is one of the classical humor traditions, functioning as a vehicle for identity, social satire, and wordplay. The melodic repetitions represent a technique in which the musical structure is directly integrated with speech on the Karagöz stage, with humor intensified through rhythm and tempo. This structure enables a more dynamic interaction with the audience. Cultural references used in Karagöz plays, such as local contexts like "Mersin," satirical objectifications like "Süpürge Sapı", or modern popular culture elements like "Miki Fare", serve to add contemporary touches to the traditional structure, thereby enhancing the play's relevance. Moreover, the humorous interrogations directed at family members, such as "*What does your mother eat?*" and "*What does your father eat?*", which may be referred to as the *silsile* (lineage) questions, reflect folk humor's observations of daily life and reinforce the social foundations of the play. Following the *muhavere* section, in the transition of the scene, the Karciğar piece

“Kemendi Zülfün Esiri Zülf-i Yâr Oldum” is used to intensify the dramatic atmosphere.

In the later parts of the performance, Hayali Küçük Ali distinguishes different characters solely through vocal features. For example, the character Aşık Hasan enters the stage with the Karcıgar piece, singing “Heeey Heeey, Mor Menekşe boynun eğmiş...”, while a new character, Karagöz’s wife, delivers the phrase “Ne yapıcan?” in a high-pitched voice marked by rhythmic and agile intonations. When evaluated within Stuart Hall’s theory of representation, these accented performances reveal how cultural otherness is staged through humorous representation. In the portrayal of the female character, the use of a thinner vocal tone and a faster, more lively manner of speech is particularly striking. This vocal style is a clear indicator of how gender roles are theatrically reproduced through performance codes.

Although no instruments other than the tambourine are used in this performance, a strong melodic and rhythmic structure is established on stage. The rhymed and rhythmic repetitions heard in the recording directly reference the improvisational narrative tradition of classical *âşıklık* literature. At this point, the resulting structure can be explained through the concept of corporeal musicality. The auditory atmosphere created by changes in vocal tempo, intonation, and rhythm produces dramatic and emotional effects on the audience without the accompaniment of classical music. With this scene, the tempo of the performance occasionally accelerates, while word stresses intensify during character conflicts, structuring narrative tension solely through voice.

In line with Raymond Williams’s approach to living cultural forms, Hayali Küçük Ali’s improvised expressions and rhythmic *manis* demonstrate that Karagöz is not merely a structure repeating the past, but rather a cultural form that evolves by adapting to contemporary social dynamics. Moreover, when assessed

within the framework of Pierre Bourdieu’s concept of habitus, Hayali Küçük Ali’s vocal variations and character typologies gain significance not only as products of individual mastery but also as the stage practice of an artist embodying the cultural reflexes and historical memory of the society in which he lived. At the conclusion of the performance, a traditional Turkish art music piece by Hammâmîzâde İsmail Dede Efendi in the Bayâtî *makam* was used as the closing piece, combining its graceful and emotional character with the rhythmic dynamism of the *aksak usûl*.

The Karagöz play “*Salıncak*”, recorded in 1958 by İlhan Başgöz, is one of the best-documented examples showcasing Hayali Küçük Ali’s improvisational skill, his narrative style integrated with music, and his mastery of stage rhythm. Unlike its existing written script, this play was performed with the inclusion of improvisations. In this respect, it stands out as one of the examples reflecting the melodic and improvisational power of Karagöz and has been selected as another text analyzed in this study. The play opens with a *Hacivat semai* staged in the classical form. Unlike the opening of the previous *Aşıklık* play, which featured the performance of radio musicians, this introduction presents a musical performance by Hayali Küçük Ali himself, based on improvisation and accompanied by the *nareke* and *def*.

The piece performed at this point is the *semai* “Sâkî ele al câm-ı safâ yenilendi.” In terms of its lyrical structure, it bears a strong melodic resemblance to the frequently performed piece “On Kere Demedim mi Sana” within Karagöz plays. In the text of the *Kayık* play documented by Cevdet Kudret, the play likewise opens with Hacivat entering the stage by singing this *semai*. This similarity demonstrates both Hayali Küçük Ali’s mastery of the *Kar-i Kadîm* repertoire and his ability to create variety across different plays. The opening scene not only establishes the traditional stage atmosphere but also plays a key role in highlighting Hacivat’s refined and intellectual persona. Considered through the

lens of the concept of “cultural memory”, this staging functions as an “initiator” that activates the associative power of inherited theatrical forms. The *muhavere* section, beginning at approximately the sixth minute of the recording, is a passage in which the classical Karagöz-Hacivat dialectic intensifies alongside improvisational musical structures. In this section, Hacivat asks Karagöz whether he is knowledgeable about music and enriches his narrative by singing various melodies.

This melodic practice not only serves to teach Karagöz about different *makams* but also carries an instructive function by fostering familiarity with these modes among the audience. Beginning around the ninth minute, the musical transitions unfold through several Turkish music *makams*, including Buselik, Kürdi, Hüzam, Mahur, and Isfahan. These transitions reveal how traditional Turkish music is seamlessly integrated into Karagöz plays while simultaneously reinforcing the narrative rhythm. At the nineteenth minute of the performance, the folk song “Aman Şinanay” is heard in Karagöz’s voice, marking one of the moments in which folk music is directly incorporated into the play. This example illustrates, in line with Raymond Williams’s theory of “living cultural forms,” how elements of folk culture are rearticulated within the theatrical framework. Just before the *fasıl* section performed by radio musicians begins at the twenty-third minute, Hayali Küçük Ali verbally describes Hacivat’s swing being set up on stage, narrating the dramatic development both visually and aurally. This explanation lends dramatic continuity to the flow of the play, while the subsequent performance of the Mahur *makam* piece “Telif edebilsem feleği” adds lyrical depth to the narrative. Following the musical performance, Hacivat once again uses the *def* as a sonic tool to teach Karagöz how to swing. In this scene, visual elements such as puppets are effectively replaced by auditory devices, skillfully employed by Hayali Küçük Ali.

At the twenty-ninth minute of the recording, the song “*Fesleğen ektim gül bitti*” in the Isfahan *makam* is performed melodically by Küçük Ali, accompanied by the *def*. From the thirtieth minute onward, social observations are introduced into the play through the inclusion of audience figures within the performance. According to the recording, a seventy-year-old character appears on stage, invoking popular folk wisdom with the phrase, “*Even if people grow old, their hearts do not*”. While swinging, Karagöz sings the second part of the lyrics of “*Fesleğen ektim*” and, upon stopping, exclaims “*yandı*” before bringing the swinging motion to an end. Following this reference, the continuation of the piece “*Fesleğen ektim gül bitti*” is once again performed by Hayali Küçük Ali with *def* accompaniment.

Following the departure of the elderly character from the stage, the piece “*Nerelelerde Kaldın Ey Servi Nazım*” in the Nihavend *makam* is heard in the recording, performed by the radio musicians. This musical transition once again serves to reinforce the emotional intensity of the dramatic structure through its repetitive function. Subsequently, the Zenne character enters the play, and her vocal portrayal draws attention in the context of cultural gender roles. During the scene in which Zenne sits on the swing, Karagöz attempts to assist her by holding her legs for support; however, Zenne resists these interventions. This moment creates a humorous tension surrounding gender representations, while also making visible the boundaries between the characters. Within the swing scene, Zenne requests that her own song be performed. In response, Karagöz sings, with *def* accompaniment, the anonymous Istanbul folk song in Rast *makam*, “*Bahçeye İndim ki Asma Salıncak*.” With the lyric “*Sonra neler olacak?*” Zenne’s reply to Karagöz’s exclamation of “*yandı!*” humorously reflects her anxious and meticulous temperament. Following these exchanges, the Zenne character exits the stage.

In Hayali Küçük Ali's performance, the explicitly obscene and erotic allusions that feature prominently in the original script are significantly censored or softened. Whereas the written text contains a narrative in which bodily contact between Zenne and Karagöz carries erotic undertones, this scene in Küçük Ali's rendition is reduced to a more general form of humor. Such censorship is closely related to the cultural climate of the 1950s, particularly to the efforts to render Karagöz plays suitable for "family listening" on the radio. As a public and regulated medium, radio transformed Karagöz from a traditional form of folk theater, characterized at times by vulgar and risqué humor, into a modernized mode of expression. In this sense, Karagöz can be understood not merely as a form of popular entertainment but also as a cultural heritage subject to ideological filtering.

Following the departure of the Zenne character, the figure of *Beberuhi* appears on stage. Karagöz recounts to him what he has just experienced with Zenne. The *Beberuhi* song, titled "*Vardım Halep'e Bindim Dolaba*" in the *Saba makam*, is performed with *def* accompaniment. In the subsequent scene, Hacivat re-enters the stage and performs, again with the *def*, the *Segah yürük semai* piece titled "*Etti o güzel ahde vefa, müjdeler olsun*". Although Hacivat appears to exit, at this point in the play he disguises himself as an old woman. This is explicitly explained by Hayali Küçük Ali in words. The ensuing exchange between Karagöz and Hacivat in the guise of an old woman constitutes one of the clearest examples of the classic humor of trickery and deception. In particular, Hacivat's attempt to deceive Karagöz by "dressing as an old woman" demonstrates both the improvisational strength of traditional *tuluat* and the way humor is grounded in the play between appearance and identity. In this scene, Hacivat's effort to pass as a woman in order to trick Karagöz reveals not only the entertaining dimension of the dramatic structure but also the theatrical

reconstruction of identity. Before unmasking Hacivat, Karagöz narrates his experiences to him in all seriousness. These exchanges illustrate how humor functions as a means of questioning a wide range of social values, from age and gender to money and status. At this point, Hacivat's reproaches toward Karagöz and Karagöz's persistent attempts to turn the situation to his own advantage further highlight how traditional folk humor rewards cultural values such as "cunning" and "shrewdness." This particular scene is also significant in that, when adapted for radio or television, it required little textual censorship, and thus could be preserved more faithfully during the radio era.

After Hacivat, disguised as an old woman, exits the stage, the Jewish character enters in Hayali Küçük Ali's 1958 *Salıncak* performance, just as in the classical Karagöz scripts recorded by Cevdet Kudret. He appears accompanied by the Jewish character's song "*Balat Kapısından Girdim İçeri*" in the Hüseynî *makam*. This musical introduction functions as an important device for bringing the cultural identity of the Jewish figure onto the stage. In the classical texts, the dialogues of the Jewish character with Karagöz are shaped through accent imitations, wordplay, and humorous bargaining. This structure both intensifies the comedy and presents a stereotyped representation of Jewish identity. Through Karagöz's mocking remarks, traits such as stinginess and stubbornness are accentuated. At the end of the scene, the dramatized narrative in which the character "dies" after falling from the swing illustrates how a form of cultural otherness is reproduced through the framework of humor.

In Hayali Küçük Ali's performance, a similar structure is preserved in this scene: the Jewish character bargains with Karagöz, confusing him with contradictory demands such as "*swing when I say don't swing, don't swing when I say swing*," and in the end, he is presumed to have "died" after falling from the swing because of his obstinacy. Ultimately, he falls from the swing, and

Karagöz, believing him to be dead, leaves him at Hacivat's door. Hacivat, however, brings him back to Karagöz. At this point, the saying that also appears in the oral performance, "*If a Gypsy and a Jew put their feet together, he will come back to life*", demonstrates how folk beliefs and oral cultural elements are ironically staged. Finally, when the Jewish character raises his head and declares, "*You're not really dead; you're just pretending with me!*" the scene culminates in absurd humor. When evaluated within the framework of Stuart Hall's theory of representation, this scene illustrates how the cultural "Other" is reproduced as a figure that is both familiar and external. At the same time, through Pierre Bourdieu's concept of *habitus*, it reveals how the bodily, linguistic, and aesthetic dispositions of the artist's social environment manifest themselves on stage. The Jewish character's portrayal through occupations such as junk dealer, beggar, or street vendor, carrying a sack on his back and shouting marketing cries like "*I'll buy old things!*", shows how economic stereotypes are reproduced on stage through body and voice.

However, in Hayali Küçük Ali's 1958 radio recording of *Salıncak*, this scene was largely simplified, with many sections omitted. The dialogues of the Jewish character were shortened, and the stereotypical wordplays were significantly reduced. One of the most striking differences is the absence of the funeral scene and the slapstick-style closing in the performance. These omissions may be related not only to the technical difficulties encountered in the process of recording oral culture but also to the ideological and moral censorship mechanisms of the period. This reflects how, within the context of 1950s radio broadcasting, multicultural humor was subjected to censorship, and the unsettling or "inappropriate" aspects of folk comedy were toned down to make them more "acceptable." In the audio recording, Karagöz ultimately mistakes Hacivat for the Jew, slaps him, and the play traditionally ends with the "Karagöz slap." Moreover,

it has been noted that in the preserved recording the play does not conclude with this conventional "Karagöz slap," but instead remains incomplete due to technical reasons. Such an ending demonstrates how archival or technical gaps in documenting oral culture can impact the narrative integrity of a performance. Taken together, these elements reveal that *Salıncak* is not merely a form of folk entertainment, but also functions as a multilayered site of cultural memory. Musical transitions, rhythmic structures, character archetypes, and cultural representations all strongly illustrate not only the stage language of Karagöz and Hayali Küçük Ali's masterful use of vocal elements, but also the richness of this narrative tradition in relation to social memory.

In this context, the general tendencies of the period were shaped in line with the state's vision, resulting in Karagöz performances being stripped of satire and adapted into versions more suitable for children (Öztürk, 2026). This adaptation not only highlighted Muhittin Sevilen's interest and skill in Karagöz, but also aligned with the ideological demands of the era, contributing to the wider dissemination of the form.

With the advancement of technological possibilities, radio programs featuring Karagöz became a significant example of transformation. The way audiences experienced Karagöz also evolved, allowing them to listen to the performance without seeing the source of the sound. While Karagöz is generally perceived through a combination of visual and auditory elements, radio programs reduced it to a purely auditory experience. This mode of listening replaced the physical experience of watching the performance. In this way, technological developments initiated a newly emerging practice of entertainment consumption within society. However, it is important to note that access to radio was not widespread among the public during the early years of the Republic. According to statistics from

the Istanbul Municipality, in the 1940s, for Türkiye's population of 17 million, the total number of radios was approximately 78,000. Therefore, although radio broadcasting began during this period, its popularity and impact only reached a decisive point much later (Cantek, 2008). In this field, examples of radio programs and analyses of the songs in the play repertoire were used to evaluate the steps of transmitting culture auditorily.

### Adaptation of Karagöz Plays in Early Republican Ideology

To integrate elements of the Ottoman tradition into the modernization efforts of the early Republican period, it was deemed necessary to legitimize certain components of the content (Öztürk, 2006). Radio programs enabled Küçük Ali's Karagöz performances to reach the public (Hınçer, 1960). According to Hınçer's (1960) study published in the *Türk Folklor Araştırmaları* (*Turkish Folklore Research*) journal, Karagöz performances were broadcast regularly on the radio for twenty years. This indicates that Karagöz was present on the radio from the 1940s onward, coinciding with the early Republican period. In addition to radio broadcasts, performance recordings have been preserved in various state archives such as the National Library, the Theatre Department of Ankara University's Faculty of Language, History, and Geography, and the TRT archive (Özhan, 2011). Küçük Ali's distinctive style in voicing the characters Karagöz and Hacivat, Karagöz with a lower-pitched voice and Hacivat with a higher-pitched voice, stood out as a notable and well-received technique for performing these main characters. This vocal performance style, popularized by Hayali Küçük Ali and his radio broadcasts, has endured as a Karagöz-Hacivat vocal model etched into public memory to this day.

According to Hüseyin Dilan<sup>2</sup> (2024), Hayali Küçük Ali was, in practice, the state-appointed Karagöz performer of the early Republican period. Prior to this era, the

vocal distinctions in Karagöz performances were not as pronounced. Today, nearly all performers use a similar vocal technique, giving Karagöz a lower-pitched voice and Hacivat a higher-pitched one. This practice, which became widespread with Hayali Küçük Ali, serves as an example of how the auditory aspects of Karagöz heritage were reshaped during this period.

As Öztürk notes in his article, the transformation of Karagöz after World War II can be interpreted as the beginning of its folklorization process (Öztürk, 2006). This interpretation can be considered an important indicator in terms of reflecting the growing sense of nostalgia. Similarly, Babadoğan argues that the problem of Karagöz's modernization stems from its inability to establish vital connections in society, as was the case in the Ottoman period (Babadoğan, 2013).

These theoretical observations found direct correspondence in the state-shaped performance practices of Karagöz during the Early Republican Period. As noted in the previous section, the performances conducted by Hayali Küçük Ali were not limited to the Ankara-centered *Halkevleri*, but also included rural events organized by the *Halkevi Köycülük Kolu* (Village Affairs Branch) and presentations for children at the Hasanoğlu Village Institute, serving as tangible manifestations of this transformation in the field (Özhan, 2011). As a continuation of these activities, the *perde gazeli* specifically written by Hayali Küçük Ali for children is particularly noteworthy. Today, many Karagöz performers continue to use this *gazel* at the beginning of performances aimed at children. Below is the text illustrating the child-oriented adaptation of this *gazel*.

“Off Hay Hak

Çiçeklerle süslenmiş bahara benzer  
perdemiz

Seyredenler zevk alır güzlâra benzer  
perdemiz

<sup>2</sup> Dilan, H., personal communication, 2024 February, 14

*Etrafına toplanınca mini mini yavrular*

*Kelebekler çiçeklere üşmüşe benzer  
perdemiz*

*Dilerim ulu tanrıdan gülen yüzünüz  
solmasın*

*Sizin gülen yüzünüzle güle benzer  
perdemiz” (Şenyer, 2024).*

(Oh God! Our curtain resembles spring adorned with flowers. Those who watch take delight, for our curtain resembles a rose garden. When little children gather around it, Our curtain resembles butterflies swarming to flowers. I pray to Almighty that your smiling faces never fade, With your smiles, our curtain resembles a blooming rose). This *perde gazel* contains several points that align with the secular discourse of the period. Additionally, the choice of the word “God” (*Tanrı*) instead of a more explicit secular reference reflects the preferred terminology of the time. The use of “Ulu” rather than “Yüce” as an epithet for God can also be interpreted as a choice consistent with the secular preferences of the era. During these years, unlike contemporary practice, the call to prayer (*ezan*) was recited in Turkish, and the phrase “*Tanrı Ulu’dur*” was employed. This can be seen as an example of how the ideological preferences of the period were reflected even in Karagöz performances.

In the early years of the Republic of Türkiye, the transmission of the Karagöz tradition progressed through the purification of certain elements inherited from the past, yet it managed to survive. Considering that Karagöz is a form whose performances can be observed more frequently today compared to other traditional Turkish theatre genres such as *meddah* and *Orta Oyunu*, this process of cultural transmission can be regarded as successful in many respects.

Since radio functioned as an official public medium during the Early Republican period, it is evident that lines in Karagöz broadcasts that could be considered immoral according to traditional texts were largely removed

or transformed. In particular, rather than directly expressing curses or coarse language, such expressions were modified or softened for the radio programs. In the analysis of the radio recording of the *Salıncak* play included in this study, erotic expressions in the play text are delivered in a veiled or abbreviated manner. This choice can be considered a concrete indication of the tradition being reorganized within the framework of “appropriate family entertainment.” Consequently, Hayali Küçük Ali’s radio recordings document a selective preservation practice that both transmits the tradition and adapts it to the moral norms of the period. These findings support the claim presented in the introduction that Karagöz was transformed by being adapted to moral and ideological norms in radio broadcasts. The argument that Karagöz was redefined in terms of content and form in radio broadcasts is directly reinforced by observations made from TRT recordings. These findings reveal that the cultural heritage policies of the Early Republic functioned not only protectively but also transformatively, steering Karagöz away from the traditional freedom of improvisation toward a more controlled and official mode of representation.

## Conclusion and Discussion

This study has argued that the Karagöz shadow play should be considered not only as a visual but also as an auditory form of cultural heritage. Most of the research conducted on Karagöz to date has focused on textual structure, character typology, or visual-performance aspects, while elements of sound, music, and auditory performance have largely remained in the background. This article seeks to highlight the significance of auditory elements in terms of cultural continuity and transformation, suggesting a reconsideration of the definitions of heritage.

In the Karagöz play, sound is not merely a technical tool but also a fundamental element for meaning-making and cultural transmission. Dialects, musical modes,

imitations, musical transitions, and rhythmic speech play a central role both in character construction and in social satire. Therefore, the auditory components of Karagöz should be evaluated in parallel with UNESCO's definition of intangible cultural heritage and addressed within the context of archiving, preservation, and reproduction. This study makes an original contribution as one of the first to systematically examine the auditory-musical dimension of Karagöz within the framework of cultural heritage definitions.

The modernization process transformed not only the form of traditional art forms but also the auditory codes they contained. Some elements within Karagöz's vocal repertoire experienced changes in their patterns of repetition and transmission up to that point. With modernization, the auditory heritage began to evolve into a domain in which it was concretized, stabilized, and transmitted to subsequent generations, with a reduced improvisational aspect. This transformation was driven not only by technical possibilities but also by ideological choices (discourses of national unity, secularization, and the distinction between the people and the nation). Within this framework, Hayali Küçük Ali embodies the dual character of the transitional period: both as a transmitter representing the past and as an interpreter transforming the art form amid modernization.

The vocal variations he employed, his repertoire selection, and in-performance improvisations demonstrate that he reconstructed the traditional form with an individual style. In this context, Küçük Ali's practice can be regarded as a concrete example of the idea of transformation within continuity. Karagöz performance is thus a cultural enactment reconfigured for the modern audience rather than a mere repetition of the past.

His voice not only brought the Karagöz characters to life but also left a lasting imprint on cultural memory. The vocal technique he employed in the Karagöz-

Hacivat performances, assigning a low voice to Karagöz and a high voice to Hacivat, has become a standard norm maintained by nearly all performers today. The TRT archive recordings of Küçük Ali serve not merely as historical documents but also demonstrate how the performance transcends temporal and spatial boundaries, transforming Karagöz into an auditory heritage form built through sound.

Karagöz plays are not only a traditional stage art but also a dynamic site where cultural transmission processes are shaped through both classical and contemporary means (Varışoğlu Sarpkaya, 2022). Edward Tylor's evolutionary approach, which defines culture as "everything learned," is significant for understanding the intergenerational transmission of long-standing oral narrative traditions such as Karagöz (Tylor, 1958). This master-apprentice mode of transmission merged with technological tools like radio during the early Republican period, making cultural transmission occur both through live performance and archived audio recordings. From the perspective of Jan Assmann's concept of "spaces of memory," the Karagöz stage or its radio voice can be considered carriers of cultural memory. Each performance represents not only a repetition of the past but also a re-production of collective memory. In this context, Karagöz is not merely a reflection of the past; it is a performative form reconfigured to align with contemporary ideological and cultural frameworks (Assmann, 2001).

In the radio environment, Karagöz acquired a new form of performance in which sound, rhythm, and musical transitions replaced visual representations. Humor was conveyed less through visual caricature and more through vocal variations, and characters became defined primarily through voice. Delivering Karagöz to modern audiences via radio also meant that the content passed through a "filter of acceptability," which transformed both humor and cultural memory. Within this framework, Hayali

Küçük Ali became a foundational figure who transformed and stabilized the auditory aesthetics of Karagöz.

In line with Assmann's concept of cultural memory, the recordings preserved in the TRT archive are not merely traces of the past but serve as tools that actively shape collective memory, forming the foundation for contemporary performances. In the digital age, memory spaces are further diversified through platforms such as podcasts and YouTube recordings; Karagöz has thus evolved into a hybrid heritage that exists not only on radio but across multiple platforms.

This study has evaluated the auditory and musical dimensions of Karagöz performances through the lenses of cultural transmission, representation, and modernization theories, highlighting the dynamic nature of heritage. Hayali Küçük Ali's performances reflect not only the transmission of the past but also the tensions between ideological transformation, technological innovation, and cultural continuity. With modern tools such as radio, Karagöz became both a carrier of the past and a cultural production space oriented toward the future. Through the audio recordings of plays like *Salıncak* and *Aşıklık*, as well as selected songs from the musical repertoire, the soundscape of Karagöz performances has been analyzed, and the elements of auditory heritage have been assessed through cultural transmission theories. These recorded performances demonstrate that cultural heritage is not merely a tradition to be preserved but a creative field that is continually reshaped according to the ideological and aesthetic demands of each era. Both the songs within the repertoire and the auditory elements of the recorded performances reflect the aesthetic and musical values of a given period, revealing the legacy of a dynamic cultural memory. In this context, Karagöz should be understood as both a carrier and a transformer of modern cultural policies through performance memory and auditory transmission.

This study has demonstrated that Karagöz, as cultural heritage, is not merely a "fixed" form but a representational space that can be continuously "interpreted" according to ideological and technological contexts. Analyses focusing particularly on sound and musical elements constitute the most dynamic layer of this reproduction, showing that Karagöz's auditory heritage both preserves traditional memory and can be transformed through contemporary aesthetics. Consequently, Hayali Küçük Ali emerges not only as a transmitter of tradition but also as a "reconstructor" of Karagöz, rebuilding it through sound and adapting it to modern aesthetic, ideological, and technological forms.

## Recommendations

### Recommendations for Researcher

In ethnomusicological research, the role of sound and music remains an ongoing topic of discussion. This article aims to contribute to this debate not only by examining the musical repertoire but also by analyzing the sound elements shaped by the technological and cultural changes of the period. In doing so, it emphasizes the importance of sound in performance studies and encourages further research from a broader perspective.

### Recommendations for Practitioners

There are many contemporary performers of this genre. For future research, this discussion could be expanded by classifying archival materials related to Karagöz players and musicians performing in these shows. Recordings of Karagöz plays can be compared with contemporary texts, and newly written plays from the period can be listed and analyzed alongside the classical ones. Through these materials, state-supported practices of the era can be examined in greater detail. Puppet artists and musicians performing in theaters can approach music in a holistic manner, considering it within a broader stage context.

## References

- Ahıska, M. (2019). *Radyonun sihirli kapısı: Garbiyatçılık ve politik öznellik (The magic gate of radio: Occidentalism and political subjectivity)*. Metis.
- And, M. (1969). *Geleneksel Türk tiyatrosu: Kukla, Karagöz, Ortaoyunu (Traditional Turkish theatre: Puppet, Karagöz, Ortaoyunu)*. Bilgi.
- Arlı, A. (2018). *Oryantalizm, oksidentalizm ve Şerif Mardin (Orientalism, Occidentalism and Şerif Mardin)*. Küre.
- Assmann, J. (2001). *Kültürel bellek: Eski yüksek kültürlerde yazı, hatırlama ve politik kimlik (Cultural Memory: Writing, Remembrance, and Political Identity in Early High Cultures)* (Tekin A., Trans.). Ayrıntı.
- Atay, T. (2004). *Gelenekçilikle karşı-gelenekçiliğin gelgitinde Türk 'gelenek-çi' muhafazakârlığı (The tide of traditionalism and anti-traditionalism: Turkish 'traditionalist' conservatism)*. (Bora T. ve Gültekinil M., Ed.), *Modern Türkiye'de siyasi düşünce (Volume: V, Muhafazakârlık)* in Çiğdem A. (Volume Ed.) (p. 154-178). İletişim.
- Babadoğan, H. (2013). *Understanding the transformations of Karagöz*. Doctoral thesis. Middle East Technical University, Ankara, Türkiye
- Başar, D. (2021). *A dismissed heritage: Contemporary performance in Turkey defined through Karagöz*. Doctoral dissertation. Concordia University, Montreal, Quebec, Canada. <https://spectrum.library.concordia.ca/id/eprint/988042/>
- Bauman, R. (2022). Performans olarak sözlü sanat (*Verbal Art as Performance*) (Altun I., Trans.). *Millî Folklor*, 34 (135), 271-284. <https://dergipark.org.tr/en/pub/millifolklor/issue/73321/1064342>
- Boas, F. (1940). *Race, language, and culture*. Macmillan.
- Bourdieu, P. (1993). *The field of cultural production: Essays on art and literature* (Johnson R., Ed.). Cambridge: Polity Press.
- Bourdieu, P., & Wacquant, L. J. (1992). *An invitation to reflexive sociology*. University of Chicago press.
- Cantek, L. (2008). *Cumhuriyetin büyü çağı: Gündelik yaşama dair tartışmalar (1945-1950) (The puberty age of the Republic: Debates on everyday life, 1945-1950)*. İletişim.
- Chen, F. P. (2013). *Dünyada gölge oyunu (Shadow theatre in the world)* (Gültürk B., Trans.). (Efe P., Ed.), *Hayal perdesinde ulus, değişim ve geleneğin icadı (in Nation, change, and the invention of tradition in shadow theatre)* (p. 1-47). Tarih Vakfı Yurt.
- Chion, M. (1999). *The voice in cinema* (C. Gorbman, Trans.). New York: Columbia University Press. <https://cup.columbia.edu/book/the-voice-in-cinema/9780231108232/>
- Chion, M. (2019). *Audio-Vision: Sound on Screen* (Gorbman C., Ed.). Columbia University Press. <http://www.jstor.org/stable/10.7312/chio18588>
- Cömert, E. (2023). *Muallim İsmail Hakkı Bey'in koleksiyonunda Karagöz ve Orta Oyunu musikisi (Karagöz and Orta Oyunu music in the collection of Muallim İsmail Hakkı Bey)*. İTÜ.
- Çalışkan, F. (2024). Multilayered Resonance: Re-imaginings of the history of Âşıklık (Minstrelsy). *Eurasian Journal of Music and Dance*, 24, 1-18. <https://doi.org/10.31722/ejmd.1469482>
- Çolakoglu, G. (2006). Gelenekten beslenen Karagöz (*Karagöz Nourished by Tradition*). *Folklor/Edebiyat*, 12(46), 543-554. [https://turkoloji.cu.edu.tr/HALKBILIM/gozde\\_colakoglu\\_gelenekten\\_beslenen\\_karagoz.pdf](https://turkoloji.cu.edu.tr/HALKBILIM/gozde_colakoglu_gelenekten_beslenen_karagoz.pdf)
- Erol, T. (2021). *Karagöz ve Halkevlerinde Karagöz folkloru (Karagöz and the folklore of People's Houses)*. Gece.
- Gautier, A. (2014). *Aurality: Listening & Knowledge in 19<sup>th</sup> Century Colombia*. Duke University. <https://doi.org/10.1215/9780822376262>
- Hall, S. (Ed.). (1997). *Representation: Cultural Representations and Signifying Practices*. Sage Publications, Inc; Open University.

- Hınçer, İ. (1960). Hayali Küçük Ali ve Karagöz (Puppeteer Küçük Ali and Karagöz). *Türk Folklor Araştırmaları Dergisi*, 128, 2107-2108. <https://turkfolklorarastirmalari.com/pdf/128.pdf>
- İhsanoğlu, E. (2003). Modern Türkiye ve Osmanlı mirası (Modern Turkey and the Ottoman Heritage). *Doğu Batı: Modernliğin Gölgesinde: Gelenek*, 25, 41-58.
- Kafadar, C. (2014). *How dark is the history of the night, how black the story of coffee, how bitter the tale of love: The changing measure of leisure and pleasure in early modern Istanbul*. (Öztürkmen A. & E. Vitz B., Eds.), In *Medieval and early modern performance in the Eastern Mediterranean* (p. 243-270). Turnhout, Belgium: Brepols. <https://doi.org/10.1484/M.LMEMS-EB.1.102271>
- Kane, B. (2014). *Sound Unseen Acousmatic Sound in Theory and Practice*. Oxford University. <https://doi.org/10.1093/acprof:oso/9780199347841.001.0001>
- Kendirci, M. (2021). *Eğlencesiz eğlence: Erken Cumhuriyet Türkiye'sinde eğlence ve siyasal iktidar (Joyless entertainment: Entertainment and political power in Early Republican Turkey)*. İletişim.
- Keskin, Y. (2006). *İstanbul'da eğlence hayatı (1923-1938) (Entertainment life in Istanbul (1923-1938))*. Master's thesis. Marmara University, Istanbul, Türkiye.
- Kımışoğlu, Z. (2021). *Kültürel Aktarım ve Süreklilik Bağlamında Eski ve Yeni Perde Gazelleri (Old and New Act Odes within the Context of Cultural Transmission and Continuity)*. *Culture and Civilization*, 1(1), 18-26. <https://dergipark.org.tr/tr/pub/culture/issue/73008/1188569>
- Koçak, D.Ö. (2008). *19. Yüzyıl sonunda İstanbul'un dönüşümü ve uygarlaşmanın iletişim ortamı olarak Osmanlı tiyatrosu (Transformation of Istanbul at the end of 19th century and Ottoman theatre as a communication medium to become civilized)*. Doctoral dissertation. Mimar Sinan Fine Arts University, Istanbul, Türkiye.
- Kudret, C. (1992). *Karagöz* (2. bas.), (Folklor Dizisi; No. 55). Bilgi.
- Kumaş, N. (2021). *İstanbul Halkevleri güzel sanatlar ve temsil şubelerinin faaliyetleri (1939-1951) (Activities of Istanbul public houses fine arts and representation branches (1939-1951))*. *Belgi Dergisi*, 21, Kış. <https://doi.org/10.33431/belgi.829437>
- Le Fèvre-Berthelot A., (2013). *Audio-Visual: Disembodied Voices in Theory, The French Journal of Media Studies*. <https://doi.org/10.4000/inmedia.697>
- Marvin, C. (1990). *When Old Technologies Were New: Thinking About Electric Communication in the Late Nineteenth Century*. New York (online edn, Oxford Academic, 12 Nov. 2020), <https://doi.org/10.1093/oso/9780195063417.001.0001>
- Meriç, N. (2007). *Adab-ı muaşeret: Osmanlı'da gündelik hayatın değişimi (1894-1927) (Etiquette: The transformation of daily life in the Ottoman Empire (1894-1927))*. Kapı.
- Nafiz, S. (1932, 8 Eylül). *İtham ediyorum (I accuse!)*. *Servetifünun Newspaper*. [https://www.gastearsivi.com/gazete/servetifunun\\_uyanis/1932-09-08/16](https://www.gastearsivi.com/gazete/servetifunun_uyanis/1932-09-08/16)
- Nart, S. (2009). *1964-1980 arası TRT radyo yayın politikaları: Toplumsal ve politik süreçte radyonun tarihsel ve kurumsal gelişimi (TRT radio broadcasting policies between 1964-1980, (institutional and historical development of radio at the social and political process in Turkey between years 1964 and 1980))*. Doctoral dissertation. Ankara University, Ankara, Türkiye.
- Oral, Ü. (2012). *Karagöz Perde Gazelleri ve Tasavvuf (Karagöz "perde gazeli" and Sufism)*. İstanbul.
- Özçörekçi Göl, N. Z. (Hazırlayan). (2008). *Gölgenin renkleri: Karagöz Tasvirleri Koleksiyonu, (Colours of Shadow: Catalogue of Karagöz Figure Collect)*. Halk Kültürü Bilgi ve Belge Merkezi Karagöz tasvirleri koleksiyonu kataloğu. Kültür ve Turizm Bakanlığı.

Özhan, M. (2011). Cumhuriyet döneminin büyük Karagöz sanatçısı Hayali Küçük Ali (*The great Karagöz artist of the Republican period: Puppeteer Küçük Ali*). *Folklor/Edebiyat*, 17(66), 157-172. <https://dergipark.org.tr/tr/pub/fe/issue/26030/274161>

Özkan, İ. H. (1999). *İsfahan*, in Türkiye Diyanet Vakfı (Ed.), *Türkiye Diyanet Vakfı İslâm Ansiklopedisi* (Volume 19, p. 134-135). TDV. <https://islamansiklopedisi.org.tr/isfahan--musiki>.

Öztürk, S. (2006). Karagoz Co-Opted: Turkish Shadow Theatre of the Early Republic (1923-1945). *Asian Theatre Journal*, 23(2), 292-313. <https://dx.doi.org/10.1353/atj.2006.0027>.

Pay, M. (2012). *Gölge oyunu Karagöz ve sinema* (*The shadow play Karagöz and Cinema*). Master's thesis. Marmara University, Istanbul, Türkiye.

Petkovski, F. (2021). *From community to humanity: Dance as intangible cultural heritage*. Doctoral dissertation. University of California. California, US.

Sevilen, M. (1969). Karagöz. Millî Eğitim Bakanlığı, Devlet Kitapları.

Shils, E. (2003). Gelenek (*Tradition*). (Arslan H., Trans.). *Doğu Batı: Modernliğin Gölgesinde: Gelenek*, 25, 101-131.

Siyavuşgil, S. E. (1949, 14 Temmuz). *Karagöz perdesinde mahalle halkı* (*The townsfolk in the Karagöz shadow play*). Yeni Sabah Newspaper. <https://www.gastearsivi.com/gazete/yeni-sabah/1949-07-14/1>

Subaşı, N. (2003). Kültürel mirasın çeşitliliği ve seçicilik sorunu (The diversity of cultural heritage and the problem of selectivity). *Doğu Batı: Modernliğin Gölgesinde: Gelenek*, 25, 135-147.

Şenyer, E. (2024, Aralık 26). *Perde gazeli. Karagöz Hacivat* (*Curtain ghazals. Karagöz Hacivat*). [https://www.karagoz.net/karagoz-hacivat\\_perdegazeli.html](https://www.karagoz.net/karagoz-hacivat_perdegazeli.html)

Tylor, E. B. (1958). *Primitive culture: Researches into the development of mythology, philosophy, religion, language, art and custom* (Volume 1). Harper & Row. (First Publication 1871) [https://darwin-online.org.uk/converted/pdf/1871\\_Tylor\\_PrimitiveCulture\\_CUL-DAR.LIB.635.pdf](https://darwin-online.org.uk/converted/pdf/1871_Tylor_PrimitiveCulture_CUL-DAR.LIB.635.pdf)

Uz, F. P. (2018). *Nurdan Gürbilek'in denemelerinde edebiyat ve kültür eleştirisi* (*Critique of literature and culture in Nurdan Gürbilek's essays*). Master's thesis. İzmir Kâtip Çelebi University, İzmir, Türkiye.

Üngör, E. R. (1989). *Karagöz musikisi* (*Karagöz music*). Kültür Bakanlığı.

Ünlü, C. (2008). *78 devirli taş plak kayıtlarıyla Türk gölge oyunu Karagöz*, (2 CD ve kitapçık) (*Turkish shadow play with 78 rpm phonograph records (2 CDs and booklet)*). İstanbul: Kalan Müzik.

Varışoğlu Sarpkaya, E. (2022). *Karagöz oyunlarının işlevsel halk bilimi kuramı açısından incelenmesi* (*Research on Karagoz shadow plays within the perspective of functional folklore theory*). *Folklor Akademik Dergisi*, 5(3), 627-637. <https://doi.org/10.55666/folklor.1168413>

Williams, R. (1976). *Keywords: A vocabulary of culture and society*. Oxford University.

Yücedağ, İ. (2010). Nilüfer Gölü'nde Batı dışı modernliği anlamak (*Understanding non-Western modernity in Nilüfer Gölü*). *e-Şarkiyat İlmi Araştırmalar Dergisi*, 3, 69-82. <https://dergipark.org.tr/tr/pub/sarkiat/issue/11238/134309>

## Internet References

Url 1. 32 seneden beri perde arkasında Hayali Küçük Ali neler anlatıyor? (1932, 14 Aralık). Son Posta Newspaper. <https://www.gastearsivi.com/gazete/son-posta/1932-12-14/6>

Url 2. Golden Horn Ensemble. (2012, Ekim 18). Geldi Cevher Tığ-i Ateş (Karagöz'ün Şarkısı © 1996 Kalan Müzik) (Video). YouTube. <https://www.youtube.com/watch?v=NcJqKIsAJ-c>

Url 3. TRT Arşiv. (2020, Mart 26). Karagöz ile Hacivat (Video). YouTube. <https://www.youtube.com/watch?v=EvHSQdFhV4U>

## Biodata of Authors



Research Assistant, **Elif Özen**. Has graduated with a bachelor's degree in musicology and mathematics. She completed her master's degree in ethnomusicology at Istanbul Technical University-Center of Advanced studies in Music (ITU MIAM) and wrote a thesis titled "Evaluation and Analysis of Şarkı Form in Turkish Makam Music". She is a research assistant and PhD. student in the musicology department at the Istanbul Technical University, Turkish Music State Conservatory (ITU TMDK). Her thesis focuses on the heritagization of the Karagöz plays.

Email: [ozeneli@itu.edu.tr](mailto:ozeneli@itu.edu.tr)

ORCID: 0000-0002-9948-0205

Institution Link: <https://tmdk.itu.edu.tr/personel/personel-veri-tabani/aras-gor/elif-ozen>

AcademiaEdu: <https://istanbultek.academia.edu/ElifÖzen>



Assoc., Prof. Dr. **Gonca İncedere**. She was born in 1978 in Istanbul. She graduated from ITU Turkish Music State Conservatory. She has a master's degree in ethnomusicology and a PhD. in Musicology. In 2006, she published her work "Writing Music" in the field of Historical Musicology. In the field of cultural studies, which she focused on during her master and doctorate education, she published various articles on topics such as identity, cultural policies, ethnicity, and participated in international symposiums. In 2015, her book titled 9/8 Romani Dance: Culture, Identity, Transformation and Reconstruction was published in Istanbul. She did workshops on Romani Dance abroad and took part in many concerts as performer (the kanun player and singer). She continues her studies as an activist and researcher on cultural identities and political uses of social classes, political representations through music and dance, and performance theories. She is a lecturer in the Department of Musicology at ITU Turkish Music State Conservatory and gives lectures in these fields.

Email: [zgongcat@itu.edu.tr](mailto:zgongcat@itu.edu.tr)

ORCID: 0000-0003-3076-6763

Institution Link: <https://tmdk.itu.edu.tr/personel/personel-veri-tabani/doc-dr/zeynep-gonca-girgin>

AcademiaEdu: <https://istanbultek.academia.edu/GGirgin>



Prof. Dr., **Metin Balay**. His career in theater started in 1975 at Ankara Sanat Tiyatrosu (Ankara Theater of Arts) as an actor. He completed his undergraduate, graduate and PhD. studies at the Drama Department of Ankara University. He worked as an actor in State Theater. He founded the Acting Department of the State Conservatory of Anadolu University and worked as a teacher and academician at this department. His plays, his play translations and his book Halk Tiyatrosu ve Dario Fo (People's Theater and Dario Fo) and his translation of Peter Brook's Open Door were published. He directed many plays in Ankara Theater of Arts, State Theaters, Antalya Municipal Theater, Kartal Theater of Arts, Versus and Tatavla Theater. Many articles written by him were published in periodicals. He is the chairperson of Yeditepe University, Faculty of Fine Arts Theater Department.

Email: [mbalay@yeditepe.edu.tr](mailto:mbalay@yeditepe.edu.tr)

ORCID: 0000-0003-4634-3291

Institution Link: <https://yeditepe.edu.tr/en/academic-staff/159>

AcademiaEdu: <https://independent.academia.edu/BalayMetin>



## Contents

---

- Reflection of Islamic musical culture in an indonesian malay secular song as evidence of local identity* 239 - 260  
Suryati Suryati, Sevi Qurrotul A'yun & Andre Indrawan
- An investigation into the effects of breath coaching-based breath exercise practices on stage and exam performance* 261 - 282  
Gökçe Sarvan
- The face that speaks, the voice that sings: the triad of orthodontics, music, and aesthetics* 283 - 305  
Korab Shaqiri, Blerim Mehmeti, Armend Xhoni, Rina Caka, Rina Caka & Fidane Gjinolli
- An evaluation of the usability of Ahıska Lullabies as music educational material* 307 - 327  
Gülnehal Gül, Murat Mevlütoğlu & Tugay Bütün
- Implementation approaches and strategies in the use of equalizer in music production: A systematic review* 329 - 353  
Ali Delikara
- The evolution and impact of Karagöz plays' sound in Early Republican Türkiye: a focus on Hayali Küçük Ali* 355 - 388  
Elif Özen, Zeynep Gonca Incedere & Metin Balay