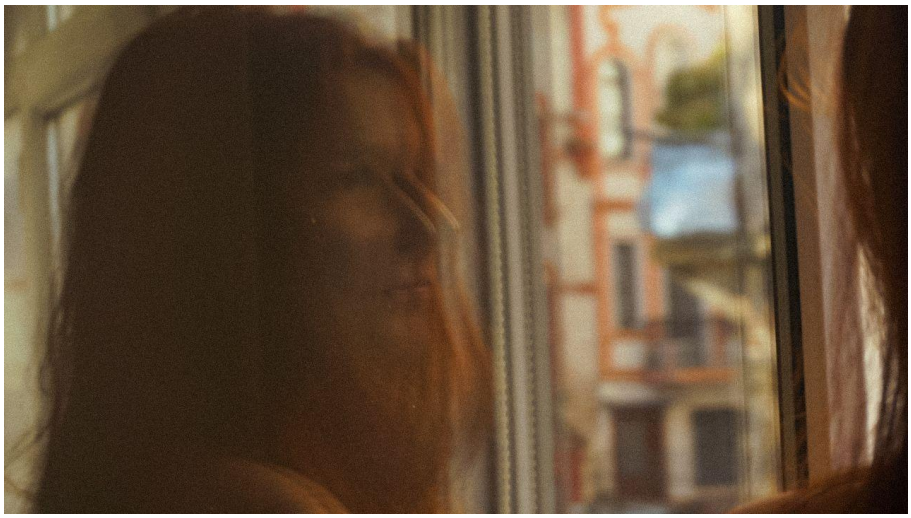
Exploring the Unique Timbre of the Violin in Ottoman Music



Ana Lazar

Global Music Programme

Sibelius Academy of the University of the Arts Helsinki

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This text has been primarily developed through my own experiences, including attending workshops, travelling, and engaging with various sources such as personal journal entries, interviews, literature, and audio-visual materials. While the core ideas, structure, and content are entirely my own, I used digital tools to support the writing process. Specifically, I used OpenAI's ChatGPT for grammar refinement and vocabulary enhancement, and DeepL to translate certain articles from Turkish to English. As these translations were not reviewed by the original authors, there may be occasional inaccuracies or misinterpretations. These tools were used solely to improve clarity and readability, without altering the original intent of the research.

Abstract

This artistic research investigates the timbre of the violin in Ottoman music from the perspective of a musician outside the tradition. Its goal is not only to understand how this distinctive sound is created but also to experience how cultural, historical, and stylistic influences shape it.

Approaching the tradition as both learner and artist, I learn from master musicians, immerse myself in traditional musical environments, and engage in reflective creative practice. I explore how violinists trained in Western classical music can enter this tradition respectfully, embody its nuances, and remain true to its core.

Using four guiding frameworks—tacit knowledge, *meşk* - oral transmission, cultural immersion, and instrument modification—I document a journey of listening, learning, and transformation. This process integrates literature review, conceptual framing, artistic methodology, and reflective analysis, turning the violin into a space where diverse musical traditions engage in meaningful dialogue.

Key outcomes of this study show that timbre in Ottoman violin playing is not fixed but culturally constructed and personally shaped. Timbre is deeply contextual, influenced by cultural models like the human voice and traditional instruments, and expressed through subtle choices in vibrato, ornamentation, bowing, and instrument setup. The expressive identity of Ottoman music relies on sensitivity and subtlety, with small variations significantly affecting the emotional and modal character of the music.

Learning in this tradition depends heavily on embodied, tacit knowledge passed down orally through the *meşk* system, where core concepts such as makam nuance and microtonality are absorbed through long-term listening, singing, and playing alongside masters. Deep listening and cultural immersion were essential for developing stylistic understanding, revealing nuances that notation alone cannot capture.

Keywords

Ottoman music, Turkish classical music, violin timbre, tacit knowledge, meşk, embodied learning, cultural immersion, deep listening, practice-based approach, instrument modification ornamentation, microtonality, vibrato.

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Contents

1. Introduction

1.1. Context of the study

This study explores the violin timbre in Ottoman music, focusing on how the instrument produces the unique sound that characterizes this musical tradition. It examines various elements such as ornamentation, the use of makam, a modal system based on microtones and specific playing styles and techniques—all of which contribute to the violin's distinctive voice within this context.

Although the violin was not originally part of Ottoman music, it has come to play a significant role within the tradition. For musicians trained in other styles, such as Western classical music, playing in this style can be challenging. It requires not only technical adaptation, but also an understanding of the music's cultural and historical background.

While this research does not aim to provide a deep historical analysis of Ottoman music, it is still important to acknowledge the historical context, as it continues to influence how the violin is played within the tradition today.

Approaching this tradition as an outsider, the researcher investigates these questions through a personal process of learning. This includes studying with master musicians, participating in workshops, and immersing in the surrounding culture. The study also draws on interviews with musicians who specialize in this style and who continue to carry forward the rich heritage of Ottoman music.

The goal of this research is to identify the core violin techniques and musical approaches that contribute to the unique timbre shared by expert performers in this tradition. It also aims to explore how musicians from different backgrounds can engage with the Ottoman music tradition in a way that is both meaningful and respectful—by not only learning the techniques but also engaging with the deeper musical and cultural context.

1.2. Personal Context and Artistic Journey

Since I can remember, I've been fascinated by the world of sound. As a child, when people asked why I chose the violin, I simply said, "It has a beautiful voice." This answer came from a deep love for its unique sound. Even when I first began with Western classical music, my focus was not on technical perfection but on expressing emotion through sound.

As I grew as a musician, I started exploring musical traditions from around the world, especially through travel and with the guidance of a Slovenian violin player Bojan

Cvetrežnik. Immersing myself in different cultures, I connected with musicians and learned their approaches to music. What struck me repeatedly was how the same instrument—the violin—could sound so different depending on the tradition. Each place opened up a new sonic world, fueling my curiosity about the nuances of sound and how they are created. A turning point came in 2018 during the Rila Music Exchange in Bulgaria. A friend played a tune that deeply moved me. It had a haunting, beautiful quality, but I couldn't identify its style. Later, I learned it was a Greek melody in the *saba makam* – one of the compound makams in Turkish classical music, known for its melancholic character. That sound stayed with me. The following year, at the Fiddlers on the Move workshops in Ghent, I met Greek violinist Makis Baklatsiz. His playing left a lasting impression. The first tune we learned shared that same peaceful, melancholic feel and was also in saba. At the time, I didn't understand makam or microtonality, but I was captivated by the sound. Even playing the right notes, I couldn't replicate the same timbre. His playing felt fluid and natural, like waves. I began wondering what created that effect—was it the left hand, the bowing, the strings, the ornaments, or something else? That question marked the start of my search to understand this specific sound.

In 2020, I took a workshop with Turkish violinist in Belgium, which inspired me to travel to Istanbul that summer. I stayed two months seeking a teacher who could guide me in this style. Toward the end of the trip, I met Nicolas Royer Artuso, a Canadian violinist living in Türkiye with deep knowledge of this music. He offered valuable guidance on approaching both the playing and the learning process.

Over time, I've studied with several violinists, each with a distinct style, yet I've always sensed a shared timbral connection. After years of exploration, I feel I'm getting closer to understanding it, though some aspects remain mysterious. This ongoing curiosity continues to guide my artistic journey and motivates me to keep learning and listening.

In this research, I will focus on violin playing in the Ottoman style. Following artistic research approaches, this study draws on my own experiences with the Ottoman violin style, as well as insights from other violinists gathered through interviews and recording analyses. By combining personal practice with broader investigation, the goal is to deepen the understanding of the unique timbral qualities that define this musical tradition.

1.3. Research aim and questions

The overarching aim of my research is to explore the violin timbre in Ottoman music from the perspective of a musician coming from outside the tradition. The study focuses on understanding the sound not just as a technical outcome, but as something shaped by cultural, historical, and stylistic influences.

The research questions that will address this aim are:

1. What are the essential cultural, historical, and stylistic elements of Ottoman music that shape its distinctive violin timbre, and what specific playing techniques contribute to it?
2. How can violinists from outside this tradition, particularly those trained in Western classical music, learn to understand, absorb, and apply these techniques in a way that feels respectful and true to the style?

1.4. Structure of the written work

This research report is structured in several key stages. It begins with a literature review that sets the foundation for the study by examining previous research. This is followed by an explanation of the conceptual framework, where the main guiding ideas of the research are introduced. The next section outlines the methodology, including data generation and analysis processes. After presenting and analyzing the collected data, the report moves into a discussion of the findings.

2. Literature review/Previous Studies

This literature review explores the main ideas and background that support this research on the unique sound—or timbre—of the violin in Ottoman music which starts with an overview of Turkish classical music and how the violin became part of that tradition over time. The review then explores the historical and cultural significance of the violin in Türkiye, followed by a discussion of the concept of timbre—its definition, relevance in music, and the various ways it has been interpreted The review also covers different ways timbre has been understood, both from scientific and cultural perspectives. It also considers how timbre is perceived and valued differently in Turkish and Western art music. Finally, the review presents two studies that investigate Turkish violin techniques and their connections to Western traditions. These sources provide a solid foundation for the questions and themes that will be examined in the following chapters of the study.

To understand why the violin's timbre is so important in Ottoman music, it helps to first look at the bigger picture of how Turkish classical music developed.

2.1. The Rich Heritage of Ottoman Music

Turkish classical music is a rich and vibrant tradition that's evolved over more than six centuries, mainly during the Ottoman Empire. Centered in Istanbul, it reached a creative peak in the 17th century and still thrives today. The tradition reflects many cultural influences that combined to create its distinctive sound (Aydemir, 2010). During the Ottoman period, traditional music was highly respected, especially in the palace, where sultans often learned instruments and composed classical pieces. Performances featured many traditional instruments like the *rebab* - a bowed string instrument similar to the violin, *çeng* - a harp, *kopuz* – an ancient Turkic lute*, classical kemençe* - bowed string instrument, *oud* - fretless lute, *tanbur* - long-necked lute with clear resonance, and *ney* - end-blown flute made of reed [1](Alimdar, 2016, as cited in Dökmeci, 2021).

[1] This text was originally in Turkish and translated into English using DeepL.

Figure 1: Tanbur

Figure 2: classical kemençe

Figure 3 oud

2.2. The Violin's Journey into Ottoman Music

As Western instruments entered the Ottoman musical scene, the violin stood out, fitting well with Turkish classical aesthetics. The violin is one of the most popular string instruments worldwide, known for its rich tone and emotional expressiveness. It's used not just in Western classical music but also in many folk and traditional styles across different cultures [2](Lekesizgöz, 2022). The violin's design has roots in earlier instruments like the Chinese two-stringed *Viel or Erhu* - two-stringed bowed instrument, the Persian *Kamancheh* - spike fiddle played with a bow, and the Iranian *Rebab* - bowed lute, all of which influenced its development [3](Durmaz, 2024). The modern violin's shape and sound were perfected by Antonius Stradivarius in the late 17th and early 18th centuries, setting a European standard that still holds today (Durmaz, 2024).

In Turkish culture, the violin is called *keman*, a word that comes from Persian meaning "curve" or "bow," with a suffix showing affection or smallness. Historically, bowed instruments in Anatolia were sometimes called *ıklık*, and the bow itself was also known as keman, while the players were called kemani (Lekesizgöz, 2022). These terms show how bowed instruments, including the violin, have long been part of the region's musical traditions even before the violin officially arrived.

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[2] This text was originally in Turkish and translated into English using DeepL.

[3] This text was originally in Turkish and translated into English using DeepL.

The violin appeared in Ottoman lands during the 18th century and quickly became popular, replacing older Turkish string instruments like the rebab, kemençe, and *sinekema* - traditional Turkish bowed string instrument. One big reason for this was the violin's timbre—its flexible and expressive tone fit perfectly with the emotional depth of Turkish music. Since then, the violin has stayed an important part of Turkish music, sparking ongoing discussions about its role, how it fits with local styles, teaching methods, and performance techniques [4](Hatipoğlu, 2017).

All these historical and cultural details show that, although the violin originally comes from Europe, it has become closely integrated into Turkish music. Its distinct sound helped it blend in and contribute to the tradition, making it a key part of Türkiye's musical landscape.

2.3. What Is Timbre and Why Does It Matter?

Since the violin plays such a key role in Turkish music today, it's important to understand one of its most defining features: timbre. Timbre is what makes each instrument or voice sound unique—even when they play the same note at the same volume. Without timbre, music would lose much of its colour, texture, and emotional power. Along with pitch, loudness, and duration, timbre is one of the main qualities of sound, adding individuality and richness to what we hear.

Defining timbre hasn't been easy for scientists or musicians because it's one of the most complex and subjective parts of sound. Unlike pitch or loudness, which are easier to measure, timbre involves a mix of qualities that don't fit into a simple scale. It can't be measured with a single number or be clearly separated from other sound elements like pitch and volume [5](Yavuz et al., 2010).

2.4. Different Ways Timbre Has Been Defined

One early formal definition came in 1960 from the Acoustical Society of America (ASA), which described timbre as the multidimensional quality that lets us tell two sounds apart even if they have the same pitch, loudness, location, and duration. It also noted timbre is often described using words like "bright" or "dull" (Acoustical Society of America, 1960). The

[4] This text was originally in Turkish and translated into English using DeepL.

[5] This text was originally in Turkish and translated into English using DeepL.

International Electrotechnical Commission (IEC) adopted a similar definition in 1974 but added that timbre depends on things like sound pressure and timing as well (International Electrotechnical Commission, 2025). These definitions highlight how timbre is complex and important in both science and music.

However, Sankiewicz and Budzyński (2007) pointed out that these traditional definitions mostly focus on steady, simple sounds with clear pitch and volume. They don't fully capture the complexity of many modern or changing sounds, like those in electronic music. To address this, the authors suggest a dual approach: objectively, timbre can be seen as the shape of sound across time, intensity, and frequency; subjectively, it exists in a perceptual space shaped by how listeners experience sound. This way, both the physical nature of sound and human perception are included in understanding timbre.

Kaemmer (1993) describes timbre as "the particular quality of a sound caused by different combinations of frequencies in the sound waves occurring at the same time." He explains that the sound of a musical note isn't just made up of one vibration. It includes a fundamental tone-a main pitch, along with other vibrations called overtones. While the fundamental tone gives us the pitch we hear, the overtones add extra sounds that help us tell instruments apart—even when they play the same note. This quality that makes each instrument sound unique is called timbre, or tone colour**.** The shape and design of an instrument, like its resonator, can highlight certain overtones—just like how the shape of your mouth affects the sound of a jaw harp. Because instruments produce different timbres, musicians pay close attention to how each one works and how it creates sound. He adds that timbre doesn't just come from the type of instrument—it also changes depending on how the instrument is played. Even small changes in technique can make noticeable differences in sound.

2.5. Timbre as a Cultural Idea

Beyond the science, timbre also has cultural meaning. Different cultures value timbre in different ways. For example, some sounds that might seem like noise to one group are important musical elements to another, like rattles in African music or breathy tones in Japanese *shakuhachi* - traditional bamboo flute. Timbre can also be shaped through different vocal techniques. For instance, Tibetan monks use a method that allows them to sing two notes simultaneously—one being the fundamental pitch, while the shape of their throat highlights specific overtones. What is considered a good vocal style depends on cultural preferences rather than a universal standard of vocal ability (Kaemmer, 1993). Musicians and

instrument makers interact with timbre through culturally learned techniques and expectations, meaning timbre is not just sound quality but also a reflection of cultural identity (Waksman, 2003).

2.6. Timberal differences between Turkish and Western Art Music

These cultural differences are clear when comparing Turkish and Western art music. A study by Yavuz, Yükselsin, and Küçükebe (2010) showed that Turkish art music players and makers prefer darker, more melancholic sounds like those of the viola, connected to the maqam system. In contrast, Western art music players like brighter, clearer tones. These preferences affect not only the choice of violins but also how makers build them—adjusting things like the soundboard thickness or bass beam to achieve the desired sound. This shows how ideas about timbre are shaped by culture and passed down among musicians and instrument makers.

2.7. Turkish Violin Techniques and Their Relation to Western Traditions

This chapter closely examines key aspects of Turkish violin technique and pedagogy by drawing on three important studies. Lekesizgöz (2022) offers a detailed comparison between Western classical music and Turkish music, while Gürel (2016) focuses on the technical, melodic, and theoretical analysis of master violinist Nubar Tekyay's *taksims*—his improvisations—and explores how his style has influenced teaching within Turkish classical music. Kouloumis (2017) investigates the development of taksim and violin techniques based on the taksims and compositions of Haydar Tatlıyay and Nubar Tekyay. Together, these studies provide a comprehensive understanding of Turkish violin practice, its relationship to Western traditions, and the unique contributions of Tekyay and Tatlıyay to Turkish music education.

At the heart of Turkish music teaching is the *meşk* system, a traditional oral master-apprentice method that values listening, imitation, and emotional connection far more than written notation. This approach is still alive in Anatolia and nurtures intuition, subtle stylistic details, and personal interpretation—very different from the structured, notation-driven conservatories typical in the West (Lekesizgöz, 2022). This learning method fundamentally shapes the distinctive approach to violin playing in Turkish music.

Unlike the formal, classroom-based training common in Western classical music, Turkish violin technique largely develops through individual practice and local influences. Unique tunings such as re-la-re-sol and re-sol-re-sol enable players to reach key makam tonal centers

and explore rich microtonal nuances (Lekesizgöz, 2022). The way violinists hold their instruments also reflects this emphasis on expression: many adopt grips that prioritize comfort and freedom of movement, facilitating intricate ornamentation and delicate microtonal shifts. For example, the left hand's inward-angled wrist helps players execute smooth slides and ornaments essential to the makam style.

Haydar Tatlıyay and Nubar Tekyay were two of the most influential Turkish violinists of the 20th century. Tatlıyay, a Greek Roma musician from Istanbul, was known for his virtuosic style, fast passages, and expressive vibrato, often shaped by his exposure to Arab music in Aleppo and Cairo. He helped introduce the arabesque style into Turkish violin playing in the 1940s. Tekyay, an Armenian violinist also from Istanbul, marked a new era by blending Western and Ottoman techniques, developing a smooth and refined tone that continues to inspire contemporary interpretations of improvisation (Kouloumis, 2017).

Vibrato in Turkish violin playing is used selectively—not continuously as in much of Western practice—but as a tool to enhance expressiveness and mimic the qualities of the human voice. This selective use adds emotional depth while preserving the delicate intonation required by makam music (Gürel, 2016; Lekesizgöz, 2022). Haydar Tatlıyay employed two distinct vibrato types: one based on wrist movement and another resembling a glissando-vibrato, produced by slightly sliding the finger up and down around the pitch. In contrast, Nubar Tekyay used arm vibrato to shape his tone. His smooth and refined vibrato complemented his overall delicate and lyrical style. These contrasting approaches highlight the personal freedom and expressive individuality encouraged in the meşk tradition. (Kouloumis, 2017).

Bowing techniques in Turkish violin playing are generally learned by ear and refined through experience rather than formalized training. This emphasis on intuition leads to personal bowing styles that shape the instrument's tone and emotional quality (Lekesizgöz, 2022). The improvisational nature of taksim performance especially benefits from flexible and responsive bowing approaches. Nubar Tekyay typically played with minimal bow pressure, often using accented *détaché* strokes to articulate phrases with clarity and grace). He also employed the *battuto* technique, which involves striking the strings with the bow hair by "throwing" the bow from a distance, using either the upper or middle section of the bow. In contrast, Haydar Tatlıyay used stronger bow pressure and emphasized staccato strokes. His right-hand articulation supported his expressive vibrato and energetic phrasing. Tatlıyay also used the *ponticello* technique, either playing near the bridge for a strong, resonant sound or

near the fingerboard for a smoother tone. In both cases, he aimed to highlight the harmonic content of each note (Kouloumis, 2017).

Ornamentation plays a vital role in shaping the melodic and emotional expression in Turkish violin playing. Tekyay's taksims featured fast ornaments, wide leaps, and precisely tuned glissandi, often mimicking the phrasing of plucked instruments like the tanbûr and oud(Gürel, 2016). His glissandi were fluid in both slow and fast passages, moving seamlessly in both upward and downward directions. Tatlıyay used glissandi frequently as well, often sliding between intervals of seconds and thirds. His ornaments were expressive and bold, and he frequently opened or closed phrases with distinctive melodic gestures.Trills were also varied and context-specific. Tekyay used quick, narrow trills that resembled ornaments in fast phrases, while opting for strong, well-defined trills to introduce new taksim sections (Kouloumis, 2017).

While many Turkish violinists traditionally remain in lower positions on the fingerboard, Nubar Tekyay often explored third and fourth positions. This expanded his expressive and technical range, allowing for smoother phrase transitions and broader ornamentation (Gürel, 2016). His thoughtful incorporation of Western techniques into makam-based expression demonstrates how tradition and innovation can be balanced.

A major difference in Turkish violin playing comes from the makam system itself, which uses microtonal intervals called commas, quite unlike the Western equal temperament scale. This system demands very precise pitch control and a focus on expressive intonation rather than fixed pitch (Lekesizgöz, 2022). It encourages musicians to prioritize emotion and style, deeply influencing their technique and interpretation.

Both Lekesizgöz and Gürel emphasize the importance of combining Western technical training with the expressive, improvisational traditions of Turkish music in conservatory settings. Gürel especially supports developing method books, workshops, and courses based on Tekyay's style to help preserve and pass on this tradition (Gürel, 2016). These efforts are vital for balancing Western discipline with the oral, intuitive nature of Turkish music.

For Western-trained musicians, learning Turkish violin techniques offers a rich opportunity to explore new sounds, styles, and creative ideas rooted in makam modes, improvisation, and personal expression. Artists like Nubar Tekyay exemplify how technical skill and cultural tradition can blend beautifully, balancing innovation with heritage. Turkish violin playing is deeply tied to its unique culture and teaching style, emphasizing expression and microtones

over strict Western methods. Yet, there's still more to understand about how the violin's timbre shapes the emotional character of the music and bridges Turkish and Western styles. This study will explore these questions from the perspective of a musician outside the tradition, aiming to deepen our understanding of the sound behind the technique and cultural legacy.

Figure 4: Photo of Haydar Tatlıyay

Figure 5: Photo of Nubar Tekyay

Musical examples related to this study can be accessed through the Research Catalogue exposition. Click the following link to listen:

https://www.researchcatalogue.net/view/3805963/3805964

1. Nubar Tekyay - Şevk-Efzâ Taksim (violin)
2. Nubar Tekyay - Sabâ Taksim (violin)
3. Nubar Tekyay and Ercümend Batanay - Kürdilihicazkâr Peşrev & Saz Semaisi
4. Haydar Tatlıyay - Uşşak Taksim (Violin)

3. Theoretical/conceptual framework

In this research, I explored four key concepts that are closely related to my topic: tacit knowledge, meşk, cultural immersion, and instrument modification. These concepts form the theoretical and conceptual framework guiding my exploration and analysis.

3.1. Tacit knowledge

The concept of *tacit knowledge*, or *"tacit knowing"* as Michael Polanyi called it, plays a central role in this study. Polanyi famously said, *"we can know more than we can tell"*—a statement that speaks directly to the kind of unspoken, intuitive understanding often required in music (Polanyi, 1983, as cited in Biggs, 2004). As Gascoigne and Thornton (2013) explain, tacit knowledge refers to knowledge that's hard to put into words—things like playing an instrument, recognizing a face, or sensing the right moment to act. It's deeply rooted in personal experience and practice.

This is further supported by Gilbert Ryle's well-known distinction between *"knowing-that"* - explicit or theoretical knowledge and *"knowing-how"* - practical skill. Ryle (1949, as cited in Biggs, 2004) argued that effective actions—like riding a bike or playing a violin—don't rely purely on abstract knowledge. This reinforces Polanyi's point: not everything we know can be explained. Biggs (2004) later built on these ideas by identifying three relevant types of knowledge in practice-based research: explicit (which can be clearly stated), tacit (learned through doing and sometimes explainable later), and ineffable (completely beyond verbal expression).

These ideas are deeply connected to my research experience. Much of my learning didn't come from explanation or instruction—it came through doing. Lessons, workshops, and fieldwork often involved copying, repeating, trying, and failing. It was through this process—imitation, trial and error, and hands-on experimentation—that I started to absorb the subtle stylistic and tonal qualities of the tradition. This made tacit knowledge a key lens for understanding how violin style and timbre are learned and passed on.

3.2. The Meşk Tradition in Turkish Music Education and Violin Performance

Another core concept in this study is *meşk*, the traditional method of musical transmission in Turkish classical music. Meşk emphasizes close, person-to-person learning, usually through imitation and repetition rather than formal notation. As Aydemir (2010) explains, meşk is considered the most effective—and in some cases, the only truly effective—way to master the musical arts in Eastern cultures, including Turkish classical music. It's not just about learning technique; it also involves absorbing the discipline, emotion, and philosophy behind the music.

In the context of violin, meşk continues to be one of the most effective non-academic teaching approaches in Anatolia (Lekesizgöz, 2021). Unlike the Western classical tradition, which tends to focus on standardized technique and written scores, Turkish violinists develop their style—everything from bowing and fingering to tuning and ornamentation—through a deeply personal learning process with a mentor. These relationships help students develop a feel for expressive playing and makam interpretation, both of which are central to the tradition.

One place where meşk really stands out is in the learning of *taksim*, the solo improvisation that's a cornerstone of Turkish music. Gürel (2021) explains that mastering taksim requires listening to many different master performers and repeating key phrases over and over. This

repetitive, immersive method helps musicians internalize the subtle structures and emotions of each makam, building both technical ability and expressive depth.

I've chosen to use the meşk tradition as part of the framework for this study because it reflects how Turkish classical music is actually taught and lived. It aligns with my own learning journey, which has been shaped by close mentorship, repetition, and a growing emotional connection to the music. Meşk allows me to explore not only how the violin is played in this tradition, but also how the broader musical culture is transmitted—through sound, feeling, and experience rather than words alone.

3.3. Cultural Immersion

Relating to foreign language learning, cultural immersion is crucial in the development of intercultural understanding. Chan and Klayklueng (2018) observe that short-term immersive community language projects can effectively foster learners' intercultural development.

When students have authentic means to interact with the target language culture—through language practice, cultural events, and genuine social interaction—they learn more about the culture. These lived experiences (particular when combined with critical reflection) enable learners to critically assess their own and the new culture, and subsequently create emotional and cognitive cultural awareness as well as personal transformation. So when they are used, they are powerful resources for helping learners to make sense, and to compete with, new meanings, policies, value systems, and identities.

Likewise, Keith (2017) highlights the benefits of adapting to this cultural immersion, especially in relation to music therapy education. Building such an understanding may help students perceive the context of their evolving practices within various cultural domains more effectively and be more successful at incorporating other approaches at the same time they do it in a more competent and culturally sensitive manner.

According to Kearney (2010), culture is widely recognized as an important part of language teaching and learning. However, many still believe that fully experiencing a culture is only possible through direct immersion abroad with native speakers. As a result, cultural education in the classroom is often seen as an enriching experience rather than one that truly changes our understanding of culture, leading us to mistakenly think that real culture only happens "over there."

Karlik (2023) also emphasises the unity between language and culture and claims that to learn a language one needs to learn about its culture. Language learning with cultural content not only contributes to linguistic competence but also to the development of the person. Cultural and language learners experience broader perspectives, gaining empathy and respect for people from varying backgrounds. This comprehensive strategy develops those skills of linguistics and interculturalism.

This framework strongly connects with my research and experiences. While studying Ottoman music—a style similar to learning a foreign language—I spent several months in Türkiye, immersing myself in local life: playing music, listening, learning the language, and experiencing daily rhythms like the call to prayer (Ezan). I practiced with local musicians to improve my skills and to understand the deeper cultural and spiritual meaning of the music. This experience deeply influenced me, helping me appreciate both the music and the culture it comes from.

3.4. Instrument Modification and Its Impact on Violin Timbre

As Kaemmer (1993) explains, although timbre refers specifically to the nature of overtones, many societies modify their instruments in various ways to alter their sound. He gives the example of Tuareg musicians, who create a buzzing sound by attaching a metal jangle to their *tahardent*, a three-stringed plucked lute.

According to Helmholtz (1954, as cited in Trapasso, 2013), part of what makes the violin so acoustically captivating is the complexity of its construction. A modern violin is made from more than 70 individual pieces of wood. This high level of craftsmanship not only adds to the instrument's beauty but also makes studying it both challenging and fascinating.

Although many details about achieving the preferred violin tone remain somewhat mysterious, numerous studies have explored various factors that influence its sound. These include the bridge, plates, strings, soundpost, and varnish, all of which can be adjusted to affect the violin's overall timbre.

For example, Hutchins (1981) explains that the thickness of the violin plates plays an important role. Shaving just a few tenths of a millimeter from the inside of a wooden plate can change its vibration by altering its mass and stiffness. Removing wood from areas that bend a lot during certain vibrations lowers the frequency because stiffness decreases more than mass. Conversely, removing wood from less flexible areas increases the frequency, as the reduction in mass outweighs the loss in stiffness.

The positioning of the *soundpost* - wooden post inside violin transmitting vibrations, is another key factor. McLennan (2001) showed that where the soundpost is placed can boost sound output, especially in the lower range, and overall sound quality is affected by this position.

Similarly, Woodhouse (2005) found that changes in the violin bridge's mass, height, shape, and position all influence the sound. By understanding the violin body's limitations, makers can adjust the bridge to improve tone and clarity, with the bridge's height and foot spacing being particularly important.

Trapasso (2013) focused on two main aspects. First, how the violin's body changes during the varnishing process—right after assembly, after applying the ground coat, and after the final varnish—and how these changes affect the sound. Second, the study looked at how different types of strings influence tone and playability.

There are three main types of strings: gut, steel core, and synthetic core. Gut strings produce a warm, rich sound but need more tuning and are sensitive to weather changes. Steel strings are bright, stable, and long-lasting but have fewer overtones. Synthetic strings combine the warm sound of gut with the stability of steel and are the most popular today.

String thickness, or gauge, also matters. Thicker strings require more tension to reach the correct pitch, which produces more volume and a fuller tone but with a slower response. Thinner strings need less tension, respond faster, and have a thinner, more focused sound. String tension itself also affects sound—strings with higher tension sound brighter and more harmonious. At the same tension, gut core strings tend to sound warmer and more harmonic than synthetic ones. These insights help musicians pick or mix strings to create a personalized sound that suits their instrument and style (Trapasso, 2013).

The varnishing process has a big impact on the violin's tone as well. When a violin is unfinished and unvarnished, it sounds very loud but rough because the wood vibrates freely. The ground coat, which contains calcium, hardens the wood and reduces vibration energy, emphasizing higher frequencies and adding many harmonics while slightly damping low frequencies. The varnish then balances the sound by smoothing these harmonics and reducing unwanted overtones, thanks to its flexible and elastic nature, though it slightly dampens the highest frequencies. Violin makers can adjust these layers to find the best balance for tone quality (Trapasso, 2013).

Varnish and sealers also add mass, stiffen the wood fibers, and increase damping, which can negatively affect the sound. However, violin makers can compensate for these changes during tuning. Many makers note that violins often sound better before varnishing but have learned how to adjust for the effects varnish introduces (Hutchins, 1981).

Finally, environmental factors like humidity and temperature also influence the violin's sound. Violins may sound dull and unresponsive in humid summer weather, and harsh or gritty in the dry indoor air of winter. While adjusting the bridge and soundpost can help, an instrument usually sounds best in the climate where it was made (Hutchins, 1981).

From these sources and my personal experience as a violin player, it is clear that even very small changes and details can significantly affect the violin's timbre. This sensitivity to subtle modifications is why I chose this topic as one of my key frameworks—to further analyze how instrument modifications relate specifically to violin timbre, especially in the context of Ottoman music.

4. Research design/Implementation of the research project

4.1. Methodology

Methodological approach of Artistic Research

This research adopts the approach of Artistic Research (AR), which is a practice-led and practice-based approach that combines advanced artistic creation with critical reflection. It is a way of gaining knowledge and understanding through the artistic practice itself. Unlike traditional methods focused on textual or empirical analysis, AR treats artistic processes, performances, and creative acts as both the method and the outcome of research (Vienna Declaration on AR, 2020). According to the Vienna Declaration, AR must be original, systematic, transferable, reproducible, and aimed at generating new knowledge, following the criteria set out in the Frascati Manual. In music and performing arts, this includes sound production, interpretation, and reflective analysis. AR typically takes a transdisciplinary approach, drawing from the arts, humanities, and social sciences while keeping artistic practice at its core.

Artistic Research is the most suitable approach for this project because it focuses on exploring violin timbre in Ottoman music from the perspective of a performing musician. This study is not only historical or theoretical—it involves directly engaging with the music,

experimenting with performance techniques, and developing a deep, embodied understanding of a sound world that may be unfamiliar to those trained in Western classical traditions.

The research questions address how stylistic and cultural elements shape timbre, and how musicians outside the Ottoman tradition can learn to perform in a way that respects and reflects these elements. These questions cannot be answered through score analysis or literature review alone—they require playing, listening, adapting, and reflecting. Artistic Research supports this type of inquiry by valuing the process of learning and transformation that takes place through practice.

As Borgdorff (2009) explains, artistic research often serves the researcher's own artistic development, as they are closely involved in the practice they are investigating. This means the research is not conducted from a detached perspective, but is instead rooted in direct artistic engagement that drives both personal growth and deeper understanding.

4.2. Data generation and Analysis

In this research, I chose to present data generation and analysis together in a single chapter. This reflects my personal experience and understanding that, especially in practice-based Artistic Research, these processes don't happen one after the other—they often unfold at the same time. During workshops, cultural experiences, and personal practice, collecting and analyzing data were closely connected—many insights emerged in real time through reflection, experimentation, and direct engagement with the music.

The study uses a mix of practice-based and qualitative methods, in line with Artistic Research principles (Vienna Declaration on AR, 2020). These methods supported a hands-on, immersive exploration of Ottoman violin timbre through musical practice, reflective observation, and creative experimentation. The data includes audio and video recordings, listening notes, reflections from lessons, instrument modifications, and artistic outputs.

Analysis took place through repeated listening, reflection while playing, and comparing musical examples. This kind of layered, ongoing process is typical of Artistic Research (Vienna Declaration on AR, 2020), where understanding develops through both artistic intuition and documentation—helping to deepen both technical knowledge and embodied musical experience.

Table 1: Overview of Research Methods, Data Sources, and Analysis

Method	Purpose	Generated Data	Related Core Concepts	Analysis Method
Workshop Participation (2020–present)	To gain exposure to Ottoman violin styles by observing key stylistic elements and learning the musical language directly from masters of the tradition	Audio recordings, personal observations, and experiential learning through direct engagement—listening to, repeating, and internalizing material demonstrated by master musicians over time	Meşk, Cultural Immersion, Tacit Knowledge	Observing, deep listening, and imitating by ear under the guidance of master musicians; occasional use of notation; reflective journaling and personal analysis.
Audio analysis (slow playback)	To closely study sound characteristics from workshop recordings, online sources, and other recording materials, allowing for the identification of timbral nuances without relying on theoretical assumptions.	Annotated audio, technique notes	Tacit knowledge	Repeated listening using slow-playback tools (e.g., Music Speed Changer app); technique notes and transcriptions made directly on the audio, personal reflections.
Fieldwork in Istanbul and Izmir	Immersive engagement with local musicians and the cultural environment to develop an embodied understanding of how musical style is shaped by its cultural and geographical context.	Audio, video recordings, reflections on the interaction between musical and social settings.	Cultural immersion	Reflective analysis of experiences, comparison of local stylistic practices with personal learning, contextual interpretation of musical interaction.
Individual Lessons with Expert Musicians in Turkish Music	One-on-one instruction from experienced musicians within the Turkish music tradition, providing insight into how playing techniques influence sound and how instrument choices affect timbre.	Audio and video recordings, technical exercises, teacher feedback, and detailed notes.	Meşk, tacit knowledge	Critical reflection on feedback, comparative analysis of technique and sound, iterative practice adjustments.

Method	Purpose	Generated Data	Related Core Concepts	Analysis Method
Instrument modifications	Experimenting with how changes to the violin's setup affect timbre, aiming to adapt the instrument's sound to the Ottoman music style.	Sound samples, notes on string types, observations of different violins, and bridge height adjustments including my own modification.	Instrument modifications	Observing performance differences on various violins, making iterative adjustments such as lowering the bridge, and reflecting on how these changes influence sound and style.
Study of makam-based musical traditions through listening and comparative analysis	To explore related traditions such as Turkish, Greek, and Arabic music and refine sensitivity to subtle tonal and stylistic differences across regional styles	Listening notes, comparisons of tone and style	Meşk, tacit knowledge	Qualitative comparison and thematic analysis of auditory material
Artistic creation	To absorb and reinterpret stylistic features by integrating new timbral vocabulary into personal performance and composition.	New compositions, performance videos, rehearsal notes	tacit knowledge	Written reflections and comparative analysis with traditional recordings, incorporating comments and guidance from teachers and expert musicians to refine timbral elements and composition.
Interviews	To gather expert insights from musicians knowledgeable in Ottoman music traditions and better understand its styles and techniques	Audio recordings, transcriptions		This expert insight helped refine or challenge earlier interpretations by comparing them with findings from the literature review, workshops, and personal practice.

The musicians and teachers in this study were chosen because of their deep knowledge and experience with Ottoman and related modal traditions. They are active performers and respected educators, often recommended by others or met during fieldwork, ensuring the insights shared reflect current musical practice.

I used a mix of participatory, observational, and creative methods to explore both the unique sound and playing techniques of the tradition, as well as how someone like me—coming from outside the tradition—can start to learn and adopt them.

In artistic research, playing, replaying, composing, and critical listening happen in a continuous cycle. This means data is gathered and analysed simultaneously through action and reflection. This ongoing process helped me develop new embodied knowledge, reflected in changes to my playing style and a deeper understanding of the cultural and aesthetic context.

Multimedia materials like videos, recordings, and compositions were both tools for analysis and outcomes of the research. They show how my sound evolved through engaging with the tradition and support the written analysis by providing clear evidence of the journey

4.3. Ethics

I based my research on the TENK guidelines to ensure ethical standards were met throughout the process (https://tenk.fi/sites/default/files/2023-11/RI_Guidelines_2023.pdf). I aimed to conduct the study with full transparency, respect for participants, and careful handling of personal data. All participants were clearly informed about the purpose of the research, their role, and their rights regarding participation and data use.

Participants received detailed consent forms explaining the project, how their information would be used, and their right to withdraw at any time. Participation was entirely voluntary and participants were free to ask questions before agreeing to take part.

The research followed the European Union's General Data Protection Regulation (GDPR), ensuring transparent, lawful, and secure handling of personal data with explicit consent. While participant names were included with permission, personal contact information remained confidential and was protected from unauthorized access. Sensitive information was handled respectfully and accurately.

Data, including recordings and transcripts, were stored on password-protected devices accessible only to me. After project completion, recordings and identifiers will be permanently deleted, with transcripts securely stored for up to five years before destruction or archiving according to university guidelines.

Some of the texts used in the literature review were originally in Turkish and were translated into English using DeepL. While I made every effort to maintain the original meaning, there may be minor inaccuracies due to the nature of machine translation.

5. Results/Findings

In this chapter, I present the main findings based on practical experience and reflection, including my participation in workshops (2020–present), audio analysis with slow playback, fieldwork in Istanbul and Izmir, lessons with expert musicians, instrument modifications, and the study of makam traditions through listening and comparison. I also reflect on my own artistic process throughout this research.

As part of my research, I conducted two interviews with musicians whose perspectives and teaching had already influenced my learning. The first was with Burak Savaş, a singer, multi-instrumentalist, and skilled violinist in the Ottoman music tradition, from whom I had previously learned in both workshops and private lessons. The second was with Melisa Yıldırım, a kabak kemane (kamancha) player with expertise in both Ottoman music and Anatolian folk music, under whose guidance I also had the chance to study. These interviews were more like open conversations, where I also shared my own experiences and reflections, allowing the discussions to flow naturally and connect with the knowledge I had already gathered through other parts of my research.

5.1. Timbre as an Entry Point and Cultural Value

Timbre was my personal entry point into this music. After being deeply moved by the sound of certain Turkish musicians, I began imitating them, trying to understand the nuances of their tone production. Only later I started exploring the theoretical aspects.

In a conversation with kabak kemane player Melisa Yıldırım, I reflected on how my interest in this research began with timbre. The first musician I heard playing Ottoman compositions had a unique sound—more glissandi and a distinct style of ornamentation—which I later learned was influenced by Roma traditions. At first, I assumed that was the standard sound of Ottoman music. Over time, I realized that each player had their own approach, and I couldn't quite explain what made them different. It was only after listening to many recordings, speaking with musicians from different regions, and attending workshops with musicians playing different makam traditions, that I began to understand and hear those subtle differences more clearly.

Yıldırım responded simply: "Yes—micro timbral differences." (Yıldırım, personal communication, June 17, 2025)

I replied: “Now I finally understand what that means—how Ottoman music even sounds. I’ve started recognizing these small details—these micro timbral differences.”
(Lazar, personal communication, June 17, 2025)

As I continued my work—especially in workshops in Türkiye and Greece—this realization deepened. My mentors also often advised me to “listen to old violin players” and to avoid simply mimicking modern styles. Through this, I became more aware of subtle yet significant variations in sound production.

This exchange was an important moment in my learning. It made me realize that what I had thought were just small personal differences were actually part of a wider, culturally based system of expression.

One early confusion I had was about terminology: when to use “Ottoman music” versus “Turkish classical music.” During our interview, Burak Savaş explained that today’s Turkish classical music—especially what’s commonly heard on the radio—is largely shaped by the late Ottoman repertoire, particularly the şarkı form. He described two distinct fasıl traditions: *fasıl atîk* (old) and *fasıl cedîd* (new).

The older tradition included more complex forms such as kâr, semai, and peşrev, often with very long rhythmic cycles like 120/4 or 32/4. Over time, especially after the 18th century, the şarkı became dominant, leading to a lighter, more accessible style that defines the modern radio repertoire. Savaş emphasized that although the repertoire evolved, the core interpretive style—particularly ornamentation and phrasing—remains rooted in the old tradition. The main difference, he explained, lies more in structure and form than in performance approach.

This helped me better understand that “Ottoman music” refers to an older, more structurally complex repertoire, while “Turkish classical music” generally refers to its later, more popular evolution.

One of the earliest insights I gained was that timbre—the quality or "colour" of sound—is not a universally fixed concept. What people consider a "good" or desirable sound can vary a lot, not only between different musical cultures but even within a single tradition. For example, Turkish musicians often appreciated the soft, warm tone of my violin, while Western classical players described the same sound as muted or lacking brightness. This made it clear that timbre is not just a technical aspect, but it is deeply shaped by cultural values, listening habits, and historical influences.

Timbre became not just a matter of style but also a reflection of cultural values and personal preferences. This idea was strengthened during interviews with musicians deeply involved in the makam tradition.

Yıldırım elaborated on the intimate and subjective nature of timbre:
“Many factors influence timbre, but it’s also very personal. We all hear sounds differently; the way we listen varies. Even within the same tradition, you can still recognize the individual playing.” (Yıldırım, personal communication, June 17, 2025)

Melisa Yıldırım shared her thoughts on certain stylistic choices in makam music, like using “airy” sounds or sul ponticello bowing. While she acknowledged these effects can be expressive, she felt they can sometimes make the sound feel incomplete. She explained that each makam has its own character and emotion, and if it's played too softly or vaguely, its identity can get lost. In her view, these airy timbres are often used by less experienced musicians who may rely on dramatic effects without fully understanding the structure of the makam. For her, timbre reflects not just personal style, but also how deeply a musician has internalized the tradition.

Timbre emerged as a key theme in both interviews. Savaş noted that while it isn’t usually discussed early in a student’s training, it becomes more important over time. At first, students are focused on exploring the basics of tone and the music itself. Later, he encourages them to develop their own sound and find a tone that feels right to them personally.

Together, these perspectives show that timbre in makam music is far from neutral or secondary. It is a site of personal identity, cultural values, historical continuity, and pedagogical development. Understanding timbre within this tradition requires not only technical skill but deep listening, self-awareness, and cultural sensitivity.

5.2. Education in Ottoman Classical Music: Listening, Tacit knowledge, Meşk

Listening as the Core of Learning

One of the key findings during my research was how important listening is in learning this music. Between 2020 and now, I attended many workshops and had individual lessons with master musicians. I often recorded their playing and listened back in slow motion, trying to catch as many details as possible. These included subtle aspects like bowing, intonation, and ornamentation—elements that are easy to miss in real time but play a big role in shaping the character of the music.

In one-on-one lessons, the learning process was usually based on imitation and repetition. Even when notation was used, it was clear that imitating the sound was essential, since the notation alone couldn't capture all the nuances.

This emphasis on listening was also highlighted in my interviews. Kabak kemane player Melisa Yıldırım pointed out that listening is not just a helpful tool but the very foundation of how makam music is learned and internalized and that it is one of the most important element of this music. In her teaching, Yıldırım emphasizes the importance of listening over reading notation. She often shares high-quality recordings with her students, encouraging them to listen repeatedly to absorb stylistic details. For her, notation is a helpful reference for structure and makam, but it can't capture the full expression of the music. She also highlighted the importance of discipline in both listening and practice, especially when learning a new musical style.

Similarly, Savaş underscored how essential deep listening is—particularly for musicians trained in Western classical music who want to truly engage with Ottoman music.

Personally, I found that listening carefully over time helped me improve my own playing and develop an ear for the subtle timbral differences that define each style. It also became a way of hearing and feeling the music more deeply.

5.3. Tacit Knowledge and the Limits of Explanation

Over time, I began to understand that much of this music can't really be explained in words. In workshops, when someone asked how a certain technique worked, even the teachers often didn't have a clear answer. Through careful listening and slowing down recordings—long before I fully understood the theory—I realized that the tradition includes a wide range of microtones, far beyond just quarter tones. But the tuning isn't something you can calculate mathematically. As one teacher told me, "Don't count the komas; you have to hear it." Especially with fretless instruments, so much of the intonation is based on tacit knowledge—things you feel and absorb rather than analyze.

Melisa Yıldırım confirmed this. She said that although makam theory is solid and includes detailed notation systems, it can't capture everything. There aren't symbols for every subtle shift, like two or three commas. Instead, you rely on what you've absorbed through listening. Even if theory leaves some gaps, the sound becomes part of you.

I mentioned how hard it is to explain the difference between things like Uşşak, Beyati and Segah perde—you can only really say something vague like "it's a bit lower." She agreed, saying that's when tacit knowledge takes over.

She emphasized that when you grow up or spend enough time inside the musical culture, these microtonal differences become second nature. You just know how to adjust your intonation or timbre without needing to think about it. This kind of intuitive, intergenerational listening is what allows musicians to develop a natural understanding of the music—something that can't be taught through theory alone.

5.4. The Meşk Tradition: Embodied Imitation and Oral Transmission

During my one-on-one lessons, I eventually learned that this approach is called *meşk*, and that it plays a central role in this musical tradition. I realized that through this way of learning, I was absorbing the most. That's why I made the decision to seek out masters and learn directly from them.

One of these experiences was in February 2025, when I went to Berlin for intensive classes with kemançe master Derya Türkan. He also emphasized the importance of listening and imitation. While we focused a lot on technical aspects, the process went beyond that—it also involved absorbing the discipline, emotion, and philosophy behind the music.

When we discussed the meşk tradition—a historical and still-active way of teaching—Melisa Yıldırım described it as a process based on observation, imitation, and shared musical experience. Instead of formal lessons, students learn by being around skilled musicians, listening closely, and trying to play as they do.

Burak Savaş also emphasized the essential role of meşk as an oral, master-apprentice method that's vital for learning this music: "Without meşk, it's very difficult—almost impossible—to really learn this music. Listening helps, even through we have YouTube nowadays, but you still need someone to explain how everything actually works."
(Savaş, personal communication, June 17, 2025)

He explained that learning this music involves much more than just listening—it requires guidance from someone who can show how to use ornamentations, shape intervals, play with the right rhythmic feel, and even approach improvisation. These aspects can't easily be picked up through recordings alone; they need to be demonstrated directly by someone who knows the tradition.

This meşk approach, for me, became the key to learning. In this kind of music, you need someone to show you the bigger picture—only then does it become possible to continue the learning process on your own. With Derya Türkan , we explored a new makam each day. First, we analyzed its structure together, listened to musical examples, played pieces in that makam, and created small *taksims* (improvisations). We also talked about how the music works as a whole—the philosophical aspects behind it, and sometimes just life in general.

Musical examples related to this study can be accessed through the Research Catalogue exposition. Click the following link to listen:

https://www.researchcatalogue.net/view/3805963/3805964

5. Video recording of learning the Teslim of Hicaz Peşrev (Refik Fersan) – Lesson with Derya Türkan
6. Audio recording of learning Uşşak Oyun Havası (Haydar Tatlıyay) – Lesson with Burak Savaş

5.5. Using the Voice and Core Instruments in the Ottoman Tradition as Models for Learning

During my lessons and conversations with other musicians, I started listening more closely to different instruments within the Ottoman tradition. My interest deepened so much that I began learning the *oud* to better understand this music from multiple perspectives. I listened to various tanbur and kemençe players, both from old and new recordings, and I always felt a connection in their sound—a shared aesthetic linking them together. I also noticed that even when musicians are singing, their timbre often resembles that of the instruments and vice versa.

Burak Savaş emphasized that Turkish music is fundamentally vocal-oriented. He explained that people used their voices, and all instruments try to imitate how singers perform, especially in ornamentation and phrasing. (Savaş, personal communication, June 17, 2025)

In my lessons with Derya Türkan, he encouraged me to sing. Every time we studied a new makam, we analyzed it, and sometimes he asked me to sing a little improvisation based on the rules I had just learned about the *seyir*—the developmental progression of the makam. This was a new approach for me; previously, I had only used singing to learn melodies faster, but here I was expected to sing all the subtle details, including microtones, and closely follow the *seyir*. Türkan also encouraged me to imitate singers and learn from them, applying their style on the violin. He even pointed me to a recording of Kani Karaca, saying, “Look Ana, this is your teacher.” (Lazar, field notes, June 17, 2025) At that moment, I noticed the connection between singing and violin playing—the timbre felt very similar.

Melisa Yıldırım also emphasized the importance of practicing singing the seyir. She explained that embodied learning is key: singing microtones with your voice and body helps you truly feel the makam's vibrations, which then improves your improvisation and the timbre you produce on the instrument.

Her practice involved detailed repetition, like listening to a short passage and imitating it over and over, sometimes thousands of times, carefully analyzing the ornamentation. This repeated singing helps the body internalize the sound, which naturally transfers to playing the instrument, affecting intonation, ornamentation, and timbre. (Yıldırım, personal communication, June 17, 2025)

Later, I asked Yıldırım if violinists try to imitate the kabak kemane. She said that in Ottoman music, people don't usually listen to the kabak kemane because it's not traditionally part of that style. They tend to listen more to instruments like the tanbur, yaylı tanbur, and classical kemençe. She also mentioned that when she wants to achieve a more classical sound, she prefers to listen to players like Derya Türkan and mainly focuses on the klasik kemençe for that style and timbre.

Similarly as Yıldırım, Burak Savaş said he's inspired by the sound of the classical kemençe. He explained that no matter who is playing it, he really likes its tone, and he tries to achieve that same sound on his violin. He also mentioned that instruments like the tanbur and oud are very important in shaping the overall style of the Ottoman tradition. (Savaş, personal communication, June 17, 2025)

Musical examples related to this study can be accessed through the Research Catalogue exposition. Click the following link to listen:

https://www.researchcatalogue.net/view/3805963/3805964

7. Hicaz Saz Semai – Derya Türkan, Labyrinth Workshops, Ghent, April 2024
8. Ahmet Erdogdular-Şevk-U Tarâb Taksim (kemençe)
9. Tanburi Cemil Bey - Hicaz Taksim (Yaylı Tanbur)
10. Sadettin Kaynak – (Gazel-vocal improvisation): "Aşka düştüm cân-ı dil müşfik civânan oldu hep" (Rast)
11. Hafız Kemal – (Gazel-vocal improvisation) Hasretle Bu Şeb
12. Kânî Karaca - Hicazşarkı - Şevkî Bey
13. Kani Karaca – singing the seyir of Bayati makam
14. Burak Savaş (voice) -Kürdilihicazkâr Şarkı – Gel Gitme Kadın (Selahattin Pınar)

Teaching Structure: Notation as a Tool and Its Limits

Savaş explained that his teaching usually starts with notation and a formal introduction to the makam. First, he explains the makam, then they build the repertoire and play it together, followed by listening assignments. However, he shares Yıldırım's concern about relying too much on notation in formal education. Many people see following notation as the ultimate goal, but he believes it's just a tool to help learning. Often, students are told they're playing notes wrong or missing ornamentations, but in reality, these details aren't usually written down. In folk music especially, there wasn't even any written score to begin with. Some teachers focus too much on the written score, even though the original composers might not have known how to write music. This can lead to mechanical performances that sound like computer-generated music, which Savaş feels isn't real music. (Savaş, personal communication, June 17, 2025)

5.6. Immersion as Method: Cultural Context Shapes Musical Understanding

As part of my exploration, I spent over two months in Istanbul and one month in Izmir. In the beginning, it wasn't easy to find a master to learn from, so I focused on trying to understand the culture as a whole. I spent time observing daily life—watching people, tasting the food, listening to the *ezan* (call to prayer), hearing music in restaurants, and noticing how people sang casually in public. I was trying to understand the place that this music comes from—and why I felt so connected to it. Along the way, I also began learning the Turkish language. I found that this helped me better understand the music, especially in terms of expression and communication with people.

In the interviews I conducted, we spoke about the importance of being immersed in a musical environment.

Yıldırım emphasized how important it is to be surrounded by music and musicians when learning this tradition. She said that if you want to learn the music, you should spend a lot of time in workshops, classrooms, and with masters—just being in a musical environment.

Savaş gave similar advice, especially for Western-trained players. He said they need to be in the environment, even if only for a few weeks, to play with others, have conversations, and practice together. That's what helps the most.

Yıldırım also explained that people often absorb makam music naturally through daily life, not just by listening actively but also through sounds on TV or around them. Musical talent helps people pick up these sounds without realizing it.

During my time in Türkiye, I noticed how makam sounds are deeply part of everyday life—whether in restaurants or just walking outside. Hearing the ezan, which is sung in different makams, every day can also be a way of learning.

5.7. Playing Technique Affect Timbre Sensitivity

Analyzing recordings—often using slow-motion techniques—alongside lessons with experts such as Nicolas Royer Artuso, Burak Savaş, and Derya Türkan, and receiving their feedback, introduced me to practical ways of shaping and altering my sound. These included changes in bow technique, new approaches to ornamentation, the use of specific vibrato types, shifting positions, and even making physical modifications to the instrument—such as lowering the violin bridge. I experimented with these adjustments myself and carefully observed the results. Through this process, it became clear that both the instrument's setup and the playing technique have an influence on timbre, making the violin more suitable for Ottoman music.

Ornamentation and Contextual Sensitivity

Burak Savaş explained that the unique character of Turkish music comes from its horizontal structure, unlike Western music which focuses on vertical harmony. Instead of harmony, the music relies on ornamentation, dynamics, and how each note is played to create beauty and interest.

Ornamentation is very important in Ottoman and Turkish classical music—Savaş said it makes up about half of the music. Without the right ornamentation, the music loses its identity.

He also pointed out that ornamentation should be used carefully depending on the context. In choral music, ornaments are simpler, while in fasıl performances they become richer and more expressive. Playing without ornamentation sounds immature, but using too much also has a negative effect.

Derya Türkan also mentioned that balance is key—enough ornamentation is necessary to give the music its character, but too many ornaments become excessive.

When asked how to find this balance, Savaş said it depends on the concept, not the style. Playing in a choir, accompanying a singer, or performing köçekçe or fasıl each requires different ornamentation approaches.

Among the ornaments, çarpma is the most common, involving quick grace notes or note clusters. Savaş also highlighted differences between Turkish and Greek violin styles,

especially in finger movement and glissando use. Sliding into notes is common in Greek style but generally not used in Turkish style. (Savaş, personal communication, June 17, 2025)

From my own experience learning different makam traditions, I sometimes confused the ornamentations of Greek and Turkish styles. This became clearer after Derya Türkan noted that my playing sometimes sounded like older Greek violinists.

These experiences helped me listen more carefully and better understand the distinct ornamentation practices in each tradition.

Bow Technique and Bowings

Bowings in Turkish music are often underestimated. "Nobody talks much about them. But it's important," Savaş stated (Savaş, personal communication, June 17, 2025). Burak Savaş pointed out that a common problem in Turkish music education is incorrect bow hold and posture. Many violinists, even those in top choirs, develop poor habits—like bending the wrist inward or gripping the bow with only two fingers and ignoring the pinky. He sees this as a systemic issue caused by a lack of proper guidance.

Although Savaş began with Western classical training, he kept the correct bow hold as he transitioned into Turkish music. He believes that the basic bow grip should follow classical technique, though the bow angle might shift depending on the style. For example, in Island style, it's normal to use only the upper part of the bow or change the angle slightly.

He explained that bow pressure and speed vary depending on the passage. Fast sections require more pressure, while slower ones rely on the bow's natural weight. Long staccato notes may need a bit of added pressure, but overall, the playing style should feel soft and gentle.

As for creating airy, ponticello-like sounds, Savaş said that's not typical in Ottoman music—it's more often used in folk music for dramatic effect.

Vibrato: Frequency, Intention, and Influence

One important element I noticed in Ottoman music is the use of vibrato. Coming from a Western musical background, and after analyzing audio and video recordings of musicians performing in the Ottoman style—along with imitating my teachers—I realized that both the technique and the approach to vibrato are different.

In this tradition, vibrato is used in a subtle but deeply expressive way. Burak Savaş, for instance, often starts long notes without vibrato and gradually brings it in to shape the

emotion of the phrase. He was especially influenced by Derya Türkan's approach, noticing how he adds very small vibratos even on short notes like eighths, and decided to incorporate this into his own playing.

Savaş sees vibrato in Ottoman music as more flexible and personal than in Western classical music. There's no fixed rule—each performer uses it differently. His own style relies mostly on finger vibrato, which tends to be slower and more delicate. Occasionally, for long sustained notes, he might use a softer wrist vibrato, though he hasn't analyzed this part of his technique in detail.

What matters most, he emphasized, is intention. Vibrato shouldn't be added automatically—it needs to be placed with care and purpose to enhance the musical expression. (Savaş, personal communication, June 17, 2025)

Tuning Practices and Shifting Positions

Throughout my exploration, I began to recognize the importance of position shifting. While trying to imitate certain pieces or repeat specific phrases, I encountered ornamentations that could only be executed properly through shifting positions. I also came across violinists who mentioned that they retune their instruments. However, I wasn't sure whether this practice originated from the Ottoman tradition or was influenced by other *makam* traditions, where alternative violin tunings are more common.

Burak Savaş shared that he uses a lot of position shifting in his playing because he prefers to avoid open strings. Open strings, he explained, tend to sound too bright, while pressing the note creates a warmer tone and allows for vibrato. For instance, instead of playing an open string, he might shift position to play the same pitch with a finger, adding vibrato or çarpma for more expression.

He also commented on tuning. Although older generations sometimes used alternative tunings, he now sticks with standard Western tuning. It's more practical for modern ensemble settings and ensures that no notes are lost. This approach reflects a more blended method that many younger musicians are adopting today.

5.8. Strings, Instrument Preferences, and Sound Characteristics: Setup Modifications Affect Timbre

One aspect I paid close attention to throughout my exploration was the setup of the violin—specifically, what kinds of modifications or preferences suit the stylistic demands of Ottoman classical music. I became increasingly curious about elements such as bridge height, string action, the thickness of the violin plates, and choice of strings.

I clearly remember a moment during a lesson with a master violinist, where he demonstrated two different instruments. One, he said, was more suitable for Western classical music; the other, for Turkish music. He described the classical violin as "too open" for Turkish aesthetics. That moment was a turning point—I realized that the type of violin you choose, and how it's set up, really does make a difference depending on the musical style you're playing.

After several musicians tried my violin, they remarked that the strings were too high. I began to notice this myself, especially after trying other violins with lower setups. I eventually took mine to a violin maker, who lowered the bridge, reducing the string height. The result was immediately noticeable: it became easier to play in general and significantly easier to execute the desired ornamentation.

Figure 6, 7 Reduced string height after bridge adjustment

Although I haven't experimented extensively with different string types, I've heard many musicians—including some of my teachers—express a preference for gut strings due to their warmth and responsiveness. When I asked Burak Savaş about his own string choices, he shared that he had previously used Pirastro Chromcor strings for their softness, but later switched to Pirastro Gold: "Now I have Pirastro Gold, which is very difficult to play, but... feels more, rich in terms of the sound." (Savaş, personal communication, June 17, 2025)

He also expressed interest in trying gut strings, drawn by their potential for an even warmer tone. For Savaş, the ideal string must strike a balance: it should support the nuanced ornamentation characteristic of Ottoman music, while still delivering a full, expressive sound. This insight highlights how string choice directly affects both the tonal colour and expressive potential of a performance.

Burak Savaş pointed out that many Turkish violinists prefer instruments with thinner tops and backs because they emphasize the lower frequencies and create a darker tone. However, he avoids this approach, as thinning the wood too much can weaken the instrument and make it prone to damage.

Instead, he looks for violins with a wide tonal range—ones that offer both brightness in the high register and warmth in the low. For him, a rich, balanced sound is ideal.

These insights show how much the physical aspects of the violin—its construction, strings, and setup—affect the sound in Ottoman violin playing. Adjustments to the setup aren't just technical; they are artistic decisions that enhance expression, support ornamentation, and deepen the instrument's overall tone.

5.9. Timbre-Led Exploration and Artistic Development

This research grew out of my personal process of learning and exploring the Ottoman style of violin playing. It has played a significant role in my artistic growth. By attending workshops, learning from masters, and immersing myself in the culture, I developed a deeper understanding of the music—something that now comes through in my playing.

As I learned more, I began performing pieces from the Ottoman tradition, exploring imporvisation (taksims), and trying to imitate the style. At the same time, I started searching for my own voice within it. One important realization was that creative practice—especially through composition and improvisation—was central to developing my understanding of Ottoman violin timbre and style.

Over time, I noticed that elements of this style began to appear naturally in my general playing. In my improvisations, I often found myself using techniques common in Ottoman music without consciously thinking about them. This process also changed how I listened to music: I began to hear details and nuances that I hadn't noticed before.

I also started composing new music. Writing and improvising helped me explore the materials I was learning and make them part of my own musical language. These creative activities allowed me to express intuitive and abstract ideas more clearly in sound.

What first drew me to this music was not theory, but the sound—the timbre—especially of the violin. That strong emotional reaction made me want to learn more about the music, its structure, and the cultural world it comes from. I became interested in related instruments like the *oud* and the *kaval,* and eventually, I began to think about music theory in a new way—focused more on modal systems, microtonality, and specific ways of composing.

This journey also led me beyond music. I started learning Turkish and traveled to Türkiye to better understand the culture behind the sound. These experiences had a deep impact on how I think about music and sound. I came to understand that timbre is not just a technical feature—it's shaped by culture, history, and lived experience. Looking back, I realize that none of these explorations would have happened if I hadn't first been moved by the unique sound of the Ottoman violin.

Support and feedback from teachers and musicians were very important throughout this process. One piece that reflects my journey is Echoes of Elsewhere, which I performed at my bachelor's concert. It combines Turkish and Greek influences and was mostly composed by ear and intuition. At first, I didn't know which makam the melody followed, so I asked Derya Türkan for feedback. He described it as a »modern Buselik« and pointed out some intuitive changes I had made. This was a clear example of how deep listening and experience can guide musical choices, even without formal knowledge. Inspired by his comments, I added a new section using Saba makam, making a more intentional connection between my intuitive ideas and traditional modal structures.

Now, in both my improvisations and compositions, I pay more attention to the timbral aspects of Ottoman violin playing. I try to include subtle techniques like specific vibrato, ornamentation, and bowing styles. While my sound still reflects different influences from my musical background, I aim to deepen my connection with the timbral qualities of Turkish violin.

One of the most humbling parts of this journey has been realizing how much of the knowledge in these musical traditions is embodied and developed over time. In the beginning, Ottoman, Arabic, and Greek music all sounded similar to me. But with focused listening and

practice, I began to hear their differences more clearly and realizing how every music style inside the makam tradition is actuallyvery distinct.

This ongoing process continues to shape how I listen, play, and create music.

Musical examples related to this study can be accessed through the Research Catalogue exposition. Click the following link to listen:

https://www.researchcatalogue.net/view/3805963/3805964

15. Video of my composition *Echoes of Elsewhere*, performed at my Bachelor concert in the Black Box, Musiikkitalo, May 2025.

6. Discussion

This research explored how timbre in Ottoman violin playing reflects both cultural aesthetics and individual technique. While scholarly texts provided important background, interviews and hands-on learning showed how these ideas are lived and passed on. Researchers like Yavuz et al. (2010) point out that timbre isn't just about physical sound—it's also shaped by personal experiences and culture. Timbre is complex, involving many qualities and is hard to measure. Kaemmer (1993) explains that a sound seen as emotional or expressive in one culture might be seen as a flaw in another. Yavuz et al. (2010) found that Turkish art music players prefer darker, more melancholic sounds like the viola, while Western players like brighter, clearer tones. Burak Savaş and Melisa Yıldırım echoed these ideas, emphasizing that tone in Ottoman music values warmth and emotional nuance, but is at the same time also very personal and affected by many qualities. Indeed, timbre also shows personal identity. Waksman (2003) notes this, and Yıldırım described timbre as "very personal," shaped by how each musician listens and absorbs sound (personal communication, 2025). Even within the same tradition, players develop unique voices—seen in Kouloumis' (2017) comparison of violinists Haydar Tatlıyay and Nubar Tekyay—highlighting how cultural frameworks interact with individual style.

This balance of tradition and individuality is further reflected in the learning process. Lekesizgöz (2022) highlights the *meşk* system's central role in Turkish music education, but my lessons with Derya Türkan brought it to life. Instead of relying solely on notation, we learned by singing, playing, listening, and imitating. This oral-aural method helped me internalize subtle elements like phrasing, microtonality, and tone colour. It also strengthened my technique, deepened my understanding, and gave me a clear direction for future study. Savaş and Yıldırım also emphasized the importance of *meşk*. Savaş explained that learning

this music requires not only careful listening, but also guidance from someone who knows the tradition—someone who can demonstrate how to use ornamentation, shape intervals, play with the right rhythmic feel, and approach improvisation.

Melisa added that singing the *seyir* is essential for absorbing *makam*—and potentially timbre—not just intellectually but physically. This music must be learned through doing, as many elements, like microtonality, are difficult to explain with words or notation. This supports Biggs' (2004) concept of tacit knowledge as something gained through practice.

Although the violin originated in the West, Turkish violin technique blends classical fundamentals with Ottoman musical traditions. There are different vibrato types—some use wrist motion, others slide the finger around the pitch. Gürel (2016) and Lekesizgöz (2022) say vibrato is used carefully depending on phrasing. In my interview, Savaş said vibrato in Turkish music is more flexible and personal than in Western classical music. He mostly uses slow, gentle finger vibrato and sometimes softer wrist vibrato on long notes. Savaş also said many Turkish violinists, even among the most skilled ensembles, have poor bow hold and posture, often bending the left wrist or holding the bow incorrectly, which he attributes to poor teaching. Coming from a Western background, he keeps the classical bow grip but changes the bow angle depending on style—for example, Island style uses mostly the upper bow. Lekesizgöz (2022) believes that many players choose relaxed grips to help with ornaments and slides. The angled left wrist helps with smooth slides important in makam music.

These technical details are essential for playing Ottoman-style music, including taksim improvisation, which also requires flexible bowing. In the interview, Savaş said he believes bowing in Turkish music is often underestimated. "Nobody talks much about it, but it's important," he explained. Bow pressure and speed vary depending on the passage—fast sections require more pressure, while slower ones rely on the bow's natural weight. Long staccato notes may need a bit more pressure, but overall, the playing style should feel soft and gentle. Nubar Tekyay used light bow pressure and clear *détaché* strokes, plus the *battuto* technique—lightly throwing the bow onto the strings. Haydar Tatlıyay used stronger bow pressure and staccato strokes to support his strong vibrato and bold phrasing. He also played near the bridge or fingerboard (*ponticello*) for different tones (Kouloumis, 2017). Melisa Yıldırım noted that " airy" sounds can be expressive, but if overused, they may weaken the makam's character. This example again shows that even within the same style, timbral preferences are highly personal.

Ornamentation is key in Turkish violin music. Savaş explained that Turkish music focuses on ornamentation and phrasing rather than harmony, unlike Western music. Ornamentation makes up about half the music. But both he and Derya Türkan warned against too many ornaments—they should fit the context. Simpler ornaments work in choirs, while *fasıl* music allows richer decoration. Tekyay's taksims had fast ornaments, wide leaps, and smooth glissandi, often imitating plucked instruments like the tanbûr and oud (Gürel, 2016). Tatlıyay also used glissandi and bold gestures to start or end phrases. Their trills differed: Tekyay's were quick in fast parts, while stronger trills marked new sections (Kouloumis, 2017).

Timbre is also affected by the instrument's setup and materials. Yavuz et al. (2010) explain that Turkish luthiers often thin the violin's back plate for a darker sound, though Savaş warns this can make the instrument fragile. He prefers violins with both clarity and warmth. Changing strings also affects tone—Savaş noticed a big difference when switching from Chromcor to Pirastro Gold strings. This supports Trapasso's (2013) view that string tension, thickness, and material shape the sound. I also lowered my violin's bridge, which made it easier to play certain ornaments in this style.

This research is closely tied to my own experience learning the Ottoman violin style. By attending workshops, learning from masters, and immersing myself in the culture, I was able to better understand the music and improve my playing. Performing Ottoman pieces and practicing improvisation (taksims) helped me connect with the tradition while finding my own musical voice. Composition and improvisation were important for learning the style and timbre. Over time, these Ottoman techniques have become more natural for me, and I've started to hear new details in the music. I also composed a piece called *Echoes of Elsewhere*, blending Turkish and Greek influences, and with feedback from Derya Türkan, I linked my ideas to traditional makam modes. This learning process changed how I listen to and create music. It showed me that timbre is shaped by culture and personal experience. It also helped me notice the differences between related musical traditions. Overall, this journey of learning Ottoman violin style is ongoing and continues to influence how I play and understand music.

7. Conclusions

At the outset of this study, I posed two central questions:

1. What are the essential cultural, historical, and stylistic elements of Ottoman music that shape its distinctive violin timbre, and what specific playing techniques contribute to it?/
2. How can violinists from outside this tradition, particularly those trained in Western classical music, learn to understand, absorb, and apply these techniques in a way that feels respectful and true to the style?

This study has shown that timbre in Ottoman violin playing is not a fixed property but a culturally constructed and personally shaped quality. Rather than being dictated by a singular technique or aesthetic ideal, timbre emerges from a combination of musical values, embodied traditions, and individual interpretation.

7.5. Timbre Is Culturally Constructed and Contextually Defined

Timbre in this tradition is deeply contextual. Sound ideals are shaped by cultural models—such as the human voice or traditional instruments like the tanbur or kemençe—and are expressed through subtle choices in vibrato, ornamentation, bowing, and setup (Savaş & Yıldırım, personal communications, June 17, 2025). Factors such as instrument configuration, regional styles, and personal listening practices influence what is perceived as an emotionally appropriate or "beautiful" sound.

7.6. Expressive Identity Through Sensitivity and Subtlety

Ottoman music demands a high degree of nuance. Slight variations in bowing, microtonal inflection, ornamentation, and phrasing can dramatically affect the modal and emotional character of a piece. While its formal structures are often complex, the expressive identity of the music resides in how the notes are played, not just which notes are played. As Savaş emphasized, the tradition “demands sensitivity—sensitivity is the key” (Savaş, personal communication, 2025).

7.7. Learning Is Rooted in Embodied, Tacit Knowledge

The meşk system, in which music is learned orally through imitation and repetition, remains essential for internalizing Ottoman style. In this tradition, core concepts such as makam nuance, microtonality, and phrasing are rarely written down—they are absorbed through long-term listening, singing, and playing alongside experienced musicians (Yıldırım & Savaş,

personal communications, 2025). My own lessons with Derya Türkan reflected this process and revealed how much of the knowledge is tacit and embodied.

7.8. Deep Listening and Cultural Immersion Are Foundational

Stylistic understanding developed most clearly when I engaged deeply with recordings, language, and local musical culture. Listening closely to historical recordings and regional variations helped reveal fine differences in ornamentation and timbre that notation cannot capture. Living in Türkiye and being surrounded by the music and language made many abstract ideas—like makam character or microtimbral shifts—suddenly intuitive (Lazar, personal reflection, 2025; Yıldırım, personal communication, 2025).

7.9. Challenges and Future Directions

This research faced several limitations. First, there is a lack of published material specifically about Ottoman violin timbre, especially in English. Most existing texts are in Turkish, and even then, they often focus on other instruments. This made it difficult to situate my findings within a broader academic context. Second, only two interviews were conducted due to time constraints. While insightful, a greater number of voices—especially from diverse regional and stylistic backgrounds—would have provided a more comprehensive picture.

Future research could include interviews with violin makers to explore how instrument modifications influence timbre. In addition, technical studies such as slow-motion video analysis of hand and bowing techniques could offer detailed insights into physical gestures that shape the Ottoman violin sound. More focused studies could also be valuable, such as in-depth investigations into ornamentation techniques, vibrato styles, or tuning preferences.

In this project, I explored a broad range of topics connected to timbre. However, each area—whether instrument setup, cultural context, or learning method—deserves more focused study. My composition *Echoes of Elsewhere* and the performance work around it reflect how deeply these elements have influenced my own practice. As a result, the line between researcher and performer became blurred: my understanding grew not only through reading and interviewing, but through listening, playing, and composing.

This study contributes to a deeper appreciation of Ottoman violin style and highlights the importance of context, sensitivity, and embodiment in learning non-Western traditions. For musicians outside of this tradition, the findings suggest that deep listening, cultural immersion, and patient, experiential learning are essential. By offering a combination of

technical insights, reflective practice, and cultural understanding, this research can serve as a foundation for others beginning similar journeys—musicians who wish to approach this rich tradition with respect, curiosity, and care.

8. References

Acoustical Society of America. (1960). *Timbre*. ASA Standards Terminology. https://acousticalsociety.org/timbre/

Aydemir, M. (2010). *Turkish music makam guide* (E. Dirikcan, Ed. & Trans.). Pan Yayıncılık.

Biggs, M. A. R. (2004). Learning from experience: Approaches to the experiential component of practice-based research. In *Forskning, reflektion, utveckling* (pp. 6–21). Vetenskapsrådet. https://www.diva-portal.org/smash/get/diva2:1283796/FULLTEXT01.pdf

Borgdorff, H. (2009). *Artistic research within the fields of science*. Bergen Academy of Art and Design (KHiB).

Chan, W. M., & Klayklueng, S. (2018). Critical cultural awareness and identity development: Insights from a short-term Thai language immersion. *Electronic Journal of Foreign Language Teaching, 15*(Suppl. 1), 129–147.

Culture Action Europe. (2020, June 26). *Vienna declaration on artistic research*. https://cultureactioneurope.org/news/vienna-declaration-on-artistic-research/

Dökmeci, S. C. (2021). Osmanlı Devleti'nde Batı müziği ve keman ailesi enstrümanları üzerine inceleme. *RAST Müzikoloji Dergisi, 9*(1), 2555–2572.

Durmaz, A. (2024). Baki Kemancı yorumuyla Türk müziği keman icrasında Duate. *Motif Akademi Halkbilimi Dergisi, 45*, 412–430.

Electrotechnical Commission. (2025). Timbre (IEV ref. 801-29-09). In *International Electrotechnical Vocabulary*. https://electropedia.org/iev/iev.nsf/display?openform&ievref=801-29-09

Fritz, C., Blackwell, A. F., Cross, I., Woodhouse, J., & Moore, B. C. J. (2012). Exploring violin sound quality: Investigating English timbre descriptors and correlating resynthesized acoustical modifications with perceptual properties. *The Journal of the Acoustical Society of America, 131*(1), 783–794. https://doi.org/10.1121/1.3666010

Gascoigne, N., & Thornton, T. (2013). *Tacit knowledge*. Acumen.

Gürel, M. (2016). Nubar Tekyay'ın keman taksimlerinin tahlîli [Doctoral dissertation, Gazi Üniversitesi]. YÖK Tez Merkezi. https://tez.yok.gov.tr

Hatipoğlu, V. (2017). Türk müziği keman akordu: Tuning the violin to play Turkish music. *İdil Sanat ve Dil Dergisi, 29*, 289–309. https://www.ceeol.com/search/article-detail?id=690693

Hutchins, C. M. (1981). The acoustics of violin plates. *Scientific American, 245*(4), 170–187.

Kaemmer, J. E. (1993). *Music in human life: Anthropological perspectives on music*. University of Texas Press.

Kearney, E. (2010). Cultural immersion in the foreign language classroom: Some narrative possibilities. *The Modern Language Journal, 94*(2), 332–336.

Keith, D. R. (2017). Study-abroad in music therapy: Cultural immersion as a form of self-experience. *Music Therapy Perspectives, 35*(2), 230–238.

Kouloumis, M. (2017). *Taksim development and violin techniques based on taksims and compositions of Haydar Tatlıyay and Nubar Tekyay* [Master's thesis, Codarts Rotterdam]. ResearchGate. https://www.researchgate.net/publication/321225188

Lekesizgöz, Y. (2022). Keman çalma teknikleri açısından Klasik Batı Müziği ve Türk Müziği arasındaki farklılıkların incelenmesi [Master's thesis, Anadolu Üniversitesi, Güzel Sanatlar Enstitüsü]. *Anadolu Üniversitesi Tez Merkezi*.

McLennan, J. E. (2001). The soundpost in the violin. Part I: The effect of soundpost stiffness on peak resonance and sound output. *AAMIM, 20*(1), 24–35.

Sankiewicz, M., & Budzyński, G. (2007). Reflections on sound timbre definitions. *Archives of Acoustics, 32*(3), 591–602.

Trapasso, L. (2013). *Feature-based analysis of the violin tone quality* [Master's thesis, Politecnico di Milano, Scuola di Ingegneria dell'Informazione].

Waksman, S. (2003). Reading the instrument: An introduction. *Popular Music and Society, 26*(3), 251–261. https://doi.org/10.1080/0300776032000116941

Woodhouse, J. (2005). On the bridge hill of the violin. *Acta Acustica United With Acustica, 91*(1), 155–165.

Yavuz, İ., Yükselsin, M., & Küçükebe, M. (2010). Batı ve Türk sanat müziği keman çalıcıları arasındaki tınısal algı farklılığının kültürel ve bilişsel yönleri üzerine spektral bir analiz. *Uluslararası Sosyal Araştırmalar Dergisi, 3*(10), 687–698.

Artistic and multi-media references

Ahmet Erdogdular. (2022, December 17). *Şevk-U Tarâb Taksim: Kemençe* [Video]. YouTube. https://www.youtube.com/watch?v=bHc_5ORPhwQ

Ahmet Yağmur Kucur. (2021, March 30). *Nubar Tekyay ve Ercümend Batanay - Kürdilihicazkâr Peşrev & Saz Semaisi* [Video]. YouTube. https://www.youtube.com/watch?v=HUioxbV9HCY

Burak Savas. (2024, November 19). *Kürdilihicazkâr Şarkı - Gel Gitme Kadın - Selahattin Pınar* [Video]. YouTube. https://www.youtube.com/watch?v=57IZERvFDL0

Kalan Müzik. (2016, March 24). *Haydar Tatlıyay - Uşşak Taksim [Kemanî © 2001 Kalan Müzik]* [Video]. YouTube. https://www.youtube.com/watch?v=KU63OBHVYnQ

Klasik Türk Musikisi. (2017, January 7). *Hafiz Kemal - (Gazel) - Hasretle bu şeb* [Video]. YouTube. https://www.youtube.com/watch?v=HX0eGllkOpg

Klasik Türk Musikisi. (2017, July 1). *Sadettin Kaynak - (Gazel) - Aşka düştüm can-ı dil müşfi civanan oldu hep (Rast)* [Video]. YouTube. https://www.youtube.com/watch?v=cJu5GAaV8RM

Korkutalp Bilgin. (2011, July 5). *Kânî Karaca - Hicaz şarkı - Şevkî Bey* [Video]. YouTube. https://www.youtube.com/watch?v=idXWZ4Pl-_s

Lazar, A. (2024, April). *Hicaz Saz Semai* [Personal recording, Labyrinth Workshops, Ghent].

Lazar, A. (2024). *Audio recording of learning Uşşak Oyun Havası (Haydar Tatlıyay)* [Personal lesson recording with Burak Savaş].

Lazar, A. (2024). *Video recording of learning the Teslim of Hicaz Peşrev (Refik Fersan)* [Personal lesson recording with Derya Türkan].

Lazar, A. (2025, May). *Echoes of Elsewhere* [Original composition performed at Bachelor Concert, Black Box, Musiikkitalo].

Makam Uygulamaları. (2018, February 13). *KK - 02 - Kani Karaca - Bayati Makamı* [Video]. YouTube. https://www.youtube.com/watch?v=K-bQnkhzrZ4

Musiki Lugatı. (2024, January 15). *Nubar Tekyay - Sabâ Keman Taksimi* [Video]. YouTube. https://www.youtube.com/watch?v=K9ABZG9G50s

Nubar Tekyay. (2015, March 29). *Şevk-Efzâ Taksim (Taş Plak)* [Video]. YouTube. https://www.youtube.com/watch?v=nRfDZXx5oMc

Tanburi Cemil Bey. (2016, March 4). *Hicaz Taksim (Yaylı Tanbur)* [Video]. YouTube. https://www.youtube.com/watch?v=JusQYyKBAng

Appendix 1: Examples of Guiding Interview Questions

Here's a curated and concise list with a few questions from each topic—to showcase the types of questions I asked my interviewees:

Cultural and Historical Context

1. What historical or cultural knowledge is essential for a musician seeking to perform Ottoman music in a true and respectful way?
2. Is spending time in the region essential to understand and play this music well?

Technique

3. What role do intonation and microtonality play in shaping the sound of the violin in Ottoman music?
4. How do you approach ornamentation in this style, particularly in relation to shaping the violin's timbre?
5. How does bow pressure or speed affect the timbre in this tradition?
6. Do you use the same bow hold as in Western classical music, or has it changed for this style?
7. What is the role of finger slides or position shifts in shaping the timbre in this music?
8. How is vibrato used in Ottoman violin playing, and how does it affect the sound?
9. Do you use a specific tuning system or type of strings for this style, and do they affect the timbre?

Instrument Setup & Modification

10. Have you made any physical modifications to your instrument to better suit this style of music?

Teaching & Learning

11. How does the meşk system influence how this music is taught and passed on?
12. What advice would you give to a violinist with a Western classical background who wants to learn this style and develop a feel for the sound?

Appendix 2: Consent form

Global Music Department

Sibelius Academy, University of the Arts Helsinki

CONSENT FORM FOR AN INTERVIEW

This from confirms that I give consent for my participation in an interview for the bachelor project by Ana Lazar as part of her bachelor's degree in Global Music, Sibelius Academy, University of the Arts Helsinki.

The central focus of the bachelor project is to explore the violin timbre in Ottoman music from the perspective of a musician coming from outside the tradition. The study focuses on understanding the sound not just as a technical outcome, but as something shaped by cultural, historical, and stylistic influences.

The interview will be recorded and transcribed. All information shared during the interview will be handled with confidentiality and will only be used for purposes related to the research, including any future presentations or publications connected to the project. Parts of the interview may be included in the research with appropriate attribution to the participant.

While the research will maintain confidentiality regarding personal details, the identity of the participant will not be anonymized in the final research or any related materials. The research data will be securely stored, and upon completion of the project, both the interview recordings and any codes linking participants to their interviews will be permanently deleted. Transcripts of the interview will be securely kept for a period of up to five years before being destroyed or archived.

The researcher is committed to following the ethical guidelines set out by the Finnish Advisory Board on Research Integrity and the University of the Arts Helsinki's Code of Conduct.

I confirm that I have been fully informed about the details of the research, the use of my personal data, and any other relevant aspects of the study. I agree to participate voluntarily and understand that I may withdraw my consent at any time by contacting Ana Lazar. However, any data already collected before withdrawal may still be used in the research. If I have any questions regarding this interview or the project, I may reach out to Ana Lazar by email (ana.lazar@uniarts.fi) or phone (+386 51 218 413). In case of an online interview, my consent is given by replying to this email.

The researcher has provided me with sufficient information on the research and the use of personal data and I have had a chance to ask for details on any issues.

Place and Date

_____

Interviewee Name and Signature

_____