ISRIS

2ND INTERNATIONAL CONGRESS OF INTEGRATED SOCIAL RESEARCH AND INTERDISCIPLINARY STUDIES

CONGRESS PROCEEDINGS

MAY 30-31, 2025

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Cumhuriyet Mahallesi Ordu Üniversitesi Cumhuriyet Kampüsü

0452 226 52 00

Website: https://yayinevi.odu.edu.tr/

e-mail: yayinevi@odu.edu.tr

ISRIS 2025

Preface

The International Congress of Integrated Social Research and Interdisciplinary Studies (ISRIS 2025), organized under the leadership of Ordu University Institute of Social Sciences and hosted by the Faculty of Education at Charles University—one of the most prestigious academic institutions in the Czech Republic—was successfully held in Prague on May 30–31, 2025.

ISRIS 2025 brought together scholars from the social sciences, educational sciences, fine arts, natural sciences, sports sciences, and related disciplines, providing an essential platform for interdisciplinary knowledge exchange and academic collaboration. The congress, conducted in a hybrid format, featured the presentation of **92 papers in person** and **52 papers online**, totaling **144 scholarly contributions**.

Academics, researchers, postgraduate students, and K–12 educators and administrators from Turkey, Europe, and Asia actively participated in the congress. The interdisciplinary framework enabled participants to explore contemporary social issues through diverse academic lenses, leading to the development of innovative and collaborative solutions.

The scientific program was enriched by keynote speeches from esteemed scholars in the field.

- **Dr. Antonín Jančařík** (Charles University, Czechia) addressed "Teaching the Teachers of Tomorrow", offering insights into teacher education in the digital age.
- **Dr. Rhian Webb** (University of South Wales, UK) delivered an engaging talk titled "Pandora's Box Has Been Opened: AI in ELT", exploring ethical and pedagogical considerations in the age of artificial intelligence.
- **Dr. Luis Javier Pentón Herrera** (The University of Economics and Human Sciences, Poland) presented "Language Teachers and the Digital World", emphasizing adaptation strategies for educators in rapidly evolving technological contexts.

In addition to the academic content, the congress hosted cultural performances, including solo recitals and traditional music shows, reflecting our commitment to fostering both intellectual and cultural exchange.

One of the defining features of ISRIS 2025 was its success in bridging the gap between theory and practice—encouraging research that is not only rigorous but also impactful in real-world settings.

I extend my sincere gratitude to all contributors, keynote speakers, artists, and members of the organizing committee for their invaluable efforts. It is our hope that ISRIS 2025 has laid the foundation for new collaborations and research that will continue to inspire and expand the frontiers of scientific inquiry.

Let us continue to build a more integrated and truly interdisciplinary academic future—together.

Prof. Dr. Süleyman Erkam SULAK
Congress Chair

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CONGRESS OVERVIEW AND HIGHLIGHTS

The ISRIS Congress will be held in a hybrid format, offering both online and on-site participation options. ISRIS aims to foster knowledge sharing and interdisciplinary collaboration among scholars, industry professionals, and students. The congress provides a dynamic platform to exchange innovative ideas, present cutting-edge research, and disseminate the latest developments in academia and industry.

The congress thematically encompasses the social sciences, educational sciences, fine arts, literature, and a variety of academic disciplines related to the fields of economics and administrative sciences. A total of 92 on-site and 52 online paper presentations will be delivered throughout the event.

The on-site sessions of the congress will be held across four designated halls, providing a vibrant setting for scholarly interaction and engagement.

The congress program will feature three keynote speeches and three musical performances. The keynote speakers are:

- Dr. Luis Javier Pentón Herrera (The University of Economics and Human Sciences), *"Language Teachers and the Digital World"*
- Dr. Antonín Jančařík (Charles University), *"Teaching the Teachers of Tomorrow"*
- Dr. Rhian Webb (University of South Wales), *"Pandora's Box Has Been Opened: AI in ELT"*

The artistic program will include:

- A solo flute recital by Assoc. Prof. Bahar Sarıboğa Akca
- A solo baglama recital by Assist. Prof. Ahmet Serdar Yener
- A Turkish tango and waltz performance by Assoc. Prof. Bahar Sarıboğa Akca and Assist. Prof. Yusuf Çetinkaya

All performances will be held at the Faculty of Education, Charles University, Prague, Czechia.

Following a rigorous peer-review process, accepted papers will be considered for publication in a range of academic journals. Special issues will be published in:

- Journal of Social Sciences Research of Ordu University (Indexed in TR Index)
- Education Mind (Indexed in EBSCO H. W. Wilson)

Additional publication opportunities include:

- Ordu University Journal of the Faculty of Education
- Pedagogical Perspective (PedPer) (Indexed in EBSCO H. W. Wilson)
- Emerging Learning Technologies
- Cappadocia Journal of Education (KAPED) (Indexed in EBSCO H. W. Wilson)
- Cappadocia Journal of History and Social Science

PERFORMANCE ANALYSIS OF THE SONG "BUGÜN AYIN IŞIĞI" BY EROL ÇÖKE, A VIOLINIST FROM THE CENTRAL ANATOLIA REGION

VATAN DURSUN TOPRAK, ORDU UNIVERSITY, ORDU, TURKIYE

ERCAN DURMAZ, ORDU UNIVERSITY, ORDU, TURKIYE

ABSTRACT

Although it is not certain, the violin began to be performed in Ottoman lands in the 18th century, and during the process of westernization movements, it replaced the rebab, kemençe and sinekeman, which were the basic string instruments of Turkish music, and gained great importance. During this process, the violin, which was also known by the local people, was also performed in regional music with a regional style. Central Anatolia is one of these regions. Erol Cöke, one of the violin players who lived in the Central Anatolia region, skillfully performed the melodies of the region in his own style and was appreciated by the people. When the literature is examined, it is seen that no study has been conducted on Erol Cöke's violin performance style. It is important to examine the skillful performances of local performers and determine their characteristics in terms of the instrument literature and recording the regional performance style. In this context, this study aims to determine the performance characteristics of the piece called "Bugün Ayın Işığı" performed by Erol Cöke, one of the violin players of the Central Anatolia region. This research is a case study within the discipline of qualitative research. Within the scope of the research, firstly, a source scan was conducted and both written sources and video and audio recordings on the internet were examined. Then, the obtained data were analyzed with the descriptive analysis method. The score of the determined piece was written using the Finale notation program and the technical and nuance features of the performance were shown on the note. As a result of the analysis, it was determined that Erol Cöke used the performance techniques of legato playing, detache playing, yakın trill, sliding and multiplication performance techniques that take their value from the previous note while performing the piece, and that he generally preferred medium force in the expression of the piece.

Erol Çöke, Violin Performance, Performance Analysis

INRODUCTION

Although the exact date when the violin, a European-based instrument, entered Ottoman lands is not precisely known, some sources indicate that it might have been used in cities such as Istanbul and Trabzon through Levantine communities in the 13th century (Gazimihal, 1939, p. 80). The painting titled "Turkish Musicians Playing the Violin", drawn by the painter Liotard between 1732 and 1742, and the mention of a Turkish violinist in the 1697 work of the poet and writer Perrault, are presented as evidence proving the violin's presence in the Ottoman Empire (Aksoy, 2003, pp. 105–106). Starting from the 18th century, with the increasing influence of Western music in the Ottoman Empire, the violin was initially used by non-Muslim communities and gradually began to spread among broader segments of society. During the reign of Mahmud II, the abolition of the traditional Ottoman Mehter band and the establishment of the Mızıkay-ı Hümayun, a Western music-based palace orchestra, paved the way for the violin's inclusion in court music ensembles. The violin became a highly favored instrument both within court circles and among the local populace (Dökmeci,

2021). In line with this development, the violin replaced bowed string instruments such as the rebab, kemençe, and sinekeman, becoming a significant instrument in Turkish music (Hatipoğlu, 2017, p. 291).

The impact of Westernization movements was not limited to Western music; the violin gradually became widely used within Turkish music as well. Having gained an important place in both Turkish classical music and folk music, the violin eventually became one of the indispensable instruments of Turkish music (Beyhan, 2023). Especially among the Abdals living in the Central Anatolian region, the violin was observed to be widely used in their local music. Although it is not precisely known when the violin reached the Central Anatolian region, various sources indicate that the violin began to appear more frequently in Central Anatolia towards the end of the 19th century and found its place in Abdal music ensembles (Aydın & Ergün, 2020). Abdal communities have not only shaped the cultural structure in the regions where they settled but also managed to preserve and develop their musical heritage over time. Music for these communities has been not only an art form but also a means of expressing and transmitting human values (Parlak, 2012, p. 289). In this context, the widespread violin performance in Central Anatolia became an important instrument in the hands of the Abdals, adding unique melodic and rhythmic differences to the violin with its distinctive performance techniques. Erol Çöke is one of the master performers representing the performance style of this region. Over time, Çöke earned the appreciation of listeners by interpreting the melodies of the Central Anatolian region with his unique style and mastery, becoming widely known even outside his own region. Despite being an important performer in terms of regional music, when the literature was reviewed, it was found that no study had been conducted on Çöke's violin performance style. The analysis of performances of local performers is important both for contributing to the instrument literature and for identifying regional characteristics. In this regard, this study aims to determine the performance characteristics of Çöke's rendition of the folk song Bugün Ayın Işığı in order to make observations about his violin performance style.

METHOD

This research is a case study within the discipline of qualitative research. The aim of case studies is to present findings related to a specific situation. In other words, factors pertaining to a situation are investigated with a holistic approach, focusing on how they affect and are affected by the relevant situation (Yıldırım & Şimşek, 2013, p. 83). In the data collection phase, a literature review method was utilized, and the obtained data were incorporated into the study using the descriptive analysis method. In descriptive analysis, the collected data are first systematically and explicitly described. Subsequently, these descriptions are explained and interpreted, cause-and-effect relationships are examined, and certain conclusions are reached (Yıldırım & Şimşek, 2013, p. 256).

In the analysis phase, the musical notation for the folk song Bugün Ayın Işığı, which is included in Çöke's album Getir Berber, was first transcribed using Finale notation software. Special attention was paid to representing performance-related characteristics on the notation. At this point, during the analysis, an effort was made to identify characteristics such as posture, grip positions, form, makam (mode), usûl (rhythmic cycle), rhythmic patterns, performance techniques, and nuances present in the performance.

FINDINGS

Erol Çöke's Life and His İmportance in Central Anatolian Folk Music

Erol Çöke, born in 1948 in Keskin , began his musical journey in childhood and earned his living by singing folk songs and playing the violin at weddings. During this period, his unique interpretation of Central Anatolian

melodies made him a sought-after artist. In 1987, he signed a contract with Uzelli Müzik, a company that also produced for famous artists such as Ferdi Tayfur, Gönül Yazar, Bülent Ersoy, and Zeki Müren, and released his first album, Getir Berber (Çalışkan, 2022). The significant public interest in this album led Çöke to collaborate with many different music companies and release successive albums. Despite his intense recording schedule, Çöke never lost his essence and continued to perform at weddings, prioritizing his own culture and music. Çöke, who passed away in 2000 as a result of a traffic accident on his way back from a wedding program, released more than 35 cassettes and CDs throughout his artistic life, leaving behind a life dedicated to folk music and unforgettable works (Pehlivanlı, 2024; Çöke, 2024).

Erol Çöke's Posture and Grip Positions in Violin Performance

In Turkish folk music, local performers generally develop their instrument playing skills by observing and imitating their masters within their geographical region. This situation indicates that posture and grip positions for the instrument are also learned through imitation of master performers. However, it is also known that a degree of self-development exists in the formation of posture and grip positions. This is because the techniques prioritized by performers during their interpretive development process alter their posture and grip positions. In this context, although artists from the same region are thought to use similar posture and grip positions, differences are observed among performers due to the interpretive and self-development aspects mentioned. When examining Erol Çöke's distinctive posture and grip positions in violin performance, it is observed that he does not use a shoulder rest, positioning the instrument horizontally and closer to his chest.

Figure 1. Erol Çöke's Posture and Grip Position (Çalışkan, 2022)

Çöke, who also does not use a chin rest, places his chin towards the tailpiece of the violin during his performances. When performing vocal parts of folk song, he is observed to lift his chin to facilitate comfortable singing. Consequently, it is understood that during these moments, he plays the violin while supporting it with his left hand.

Figure 2. Erol Çöke's Vocal Performance Position (Muzikpoptr, 2013)

In Çöke's bow grip, it is observed that he places his right hand approximately a quarter of the way up from the frog of the bow and primarily grips the bow with his index finger and thumb. In his performances, when using the III and IV (thick) strings, he does not lift his right elbow excessively. In parallel, during string changes, he positions both his right and left elbows close to his body. In his left-hand position, he generally keeps his fingers over the string he is playing on, but since he mostly uses his 1st, 2nd, and 3rd fingers, his 4th finger is observed to be held further back compared to the others.

The tuning system Çöke uses when performing folk songs is the "Abdâl tuning," which is also used by the Abdals of the Central Anatolian region in their violin performances within Turkish folk music. In this tuning, the violin strings are tuned from high to low according to Turkish music notation as follows: I string G, II string D, III string A, and IV string D. It is observed that the pitch of A (dügâh) corresponds to the open III string. This tuning is shown on the staff in the figure below.

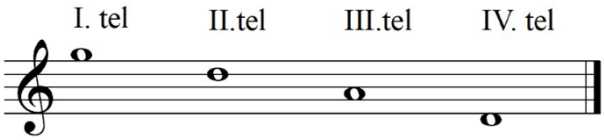

Figure 3. The Abdal Tuning Used by Erol Çöke

As is known, in Turkish folk music, instruments are not always tuned to the same frequency. For example, the lowest string of the bağlama can often be tuned to the Western music pitches of B, C, C-sharp, and D to harmonize with the vocal range of performers. However, regardless of the pitch to which the bağlama is tuned, in Turkish Folk Music, its lowest open string is notated on the staff as the note A (corresponding to the dügâh pitch), which falls in the second space. Furthermore, the other strings are adjusted according to the tuning of the lowest string. It was understood that when tuning his violin, Çöke tuned the A pitch, which corresponds to the second space on the staff, to the C-sharp pitch in Western music. In this context, it was determined that the pitches of Çöke's Abdal tuning, when perceived in Western music, correspond to the Western notation as shown in the figure below.

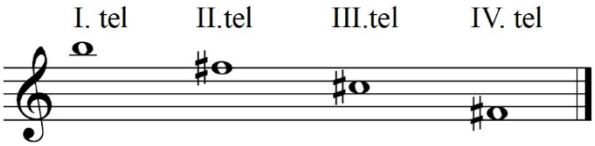

Figure 4. Perception of the Abdal Tuning in Western Music

Notation and Performance Analysis of the Folk Song "Bugün Ayın Işığı"

The kırık hava titled "Bugün Ayın Işığı," belonging to the Keskin region, is registered in the Turkish Radio and Television Corporation (TRT) Turkish Folk Music Repertoire with the catalog number 1339. The folk song was compiled from Hacı Taşan, one of the artists from the Keskin region. Many local artists in the region have performed this folk song in their own style. Erol Çöke is one of these performers. The notation of this folk song, which is included in Çöke's album Getir Berber, has been transcribed by us.

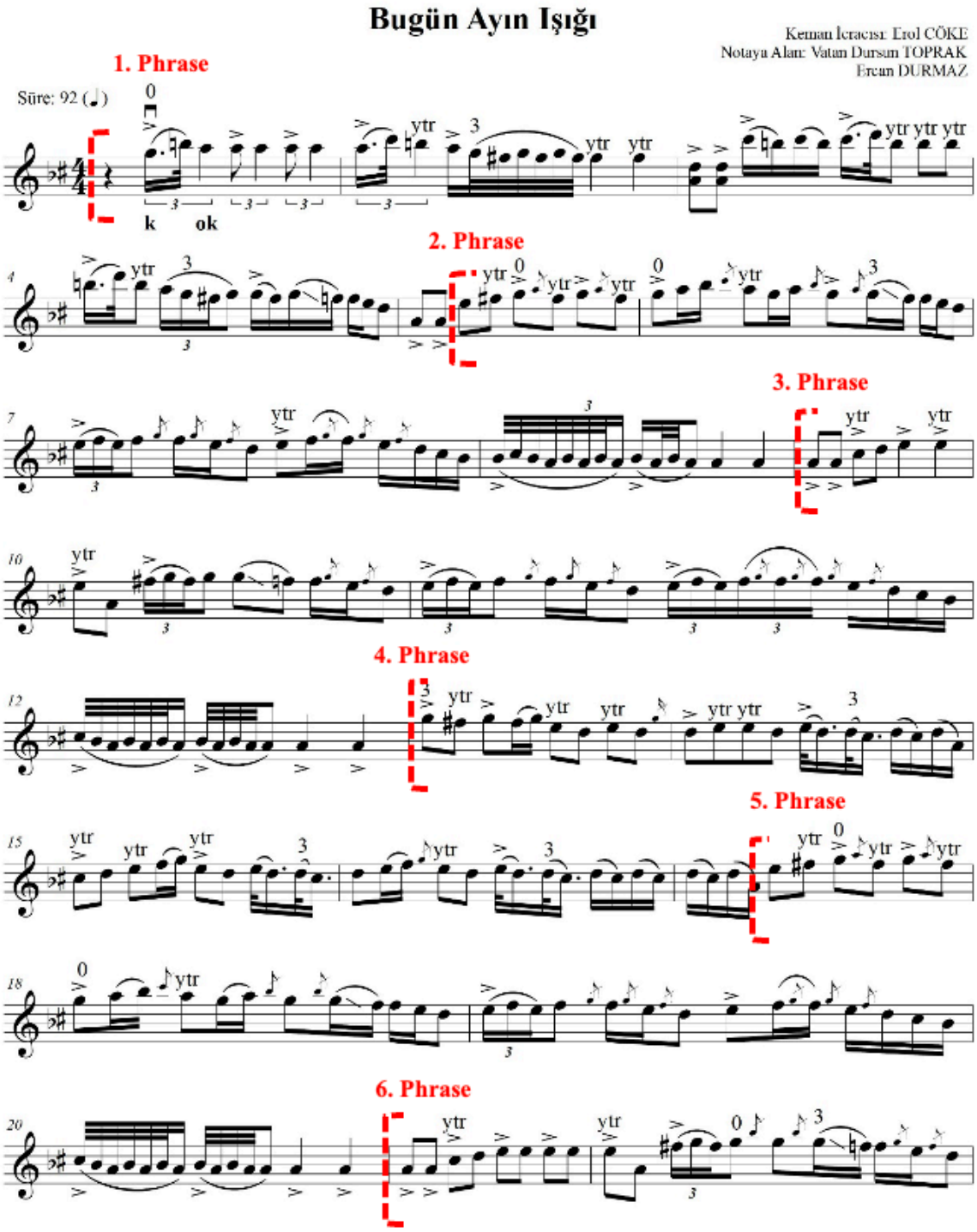

Figure 5. Notation of the Folk Song Bugün Ayın Işığı

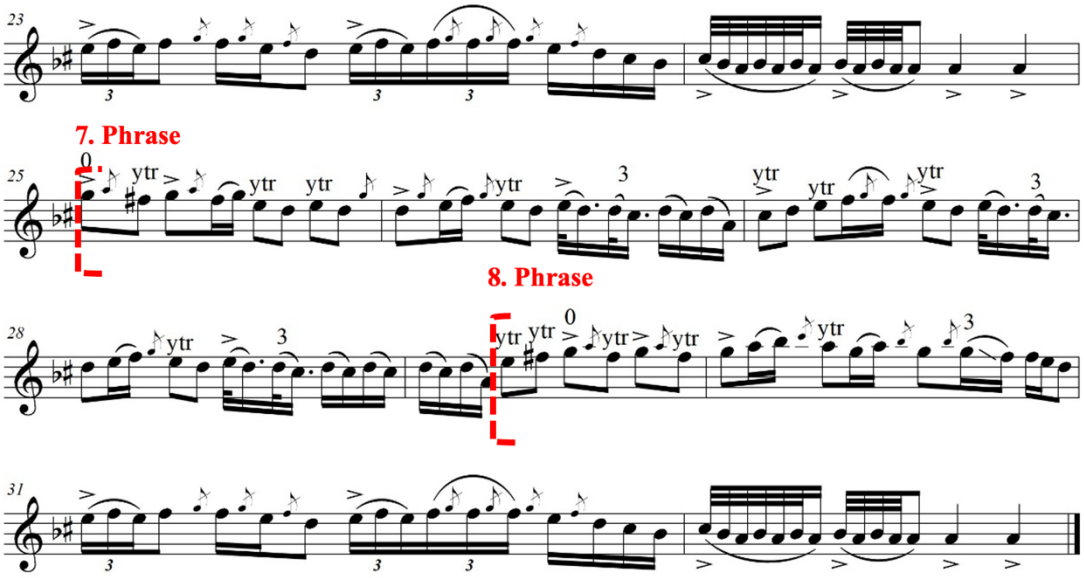

Figure 6. Continuation of the Notation for the Folk Song Bugün Ayın Işığı

This folk song, performed by Çöke, consists of eight musical phrases. These phrases are indicated by red dashed lines in the notation provided above. The first phrase of the folk song begins on the gerdaniye pitch, emphasizing the dügah pitch, and concludes with a descending motion, creating asma kalış (a temporary staying) on the eviç pitch. Subsequently, starting from the high çargâh pitch, a descending motion leads down to the neva pitch, utilizing the high buselik, eviç, and acem pitches. In the second phrase, it is observed that the movement begins on the hüseyni pitch with an ascending motion towards the sünbüle pitch, followed by a descending motion down to the dügah pitch, using eviç, acem, hicaz, and kürdi pitches. The third phrase, starting from the çargâh pitch, first emphasizes the hüseyni pitch, then descends to the dügah pitch from the vicinity of the gerdaniye pitch, utilizing acem, hicaz, and kürdi pitches. The fourth phrase begins on the gerdaniye pitch, and after a descending motion, the neva pitch is emphasized. In the subsequent phrases, it is observed that the fifth phrase is similar to the second, the sixth to the third, the seventh to the fourth, and the eighth phrase is similar in seyir yapısı (melodic progression) to the fifth measure, concluding on the dügah pitch using hicaz and kürdi pitches. When examining the accidentals and melodic progression used within the folk song, it is evident that the folk song is in the Hicaz makam.

Upon examining the rhythmic structure of the folk song, it is understood to be in sofyan (4/4) usul. The folk song extensively uses dotted sixteenth notes and consecutive thirty-second notes. Furthermore, within the folk song, Çöke characteristically preferred to use triplets in his unique interpretive style. The rhythmic patterns characteristically used by Çöke within the song are presented in the notation below.

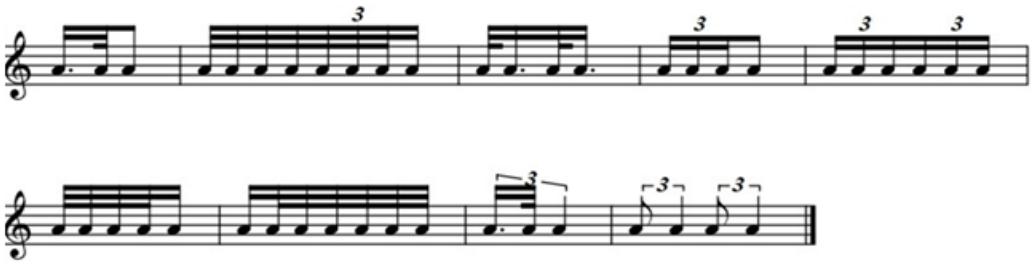

Figure 7. Rhythmic Patterns Used in the Folk Song Named "Bugün Ayın Işığı"

In the performance of the folk song, "çarpma" (the acciaccatura) technique, which derives its value from the preceding note, was observed to be used in measures 5, 6, 7, 10, 11, 16, 17, 18, 19, 22, 23, 25, 26, 27, 28, 29, 30, and 31. The acciaccatura technique refers to "short-valued notes performed with a bow or finger stroke, taking their value either before or after the main note" (Yahya Kaçar, 2012, p. 126). In acciaccaturas that take their value from the preceding note, the main note falls on the strong beat and is played strongly. The acciaccatura notes, however, occurs on the weak beat (Gürel, 2016, p. 28). This acciaccatura technique is indicated by the symbol " ". An example of the technique's usage is provided in the notation below.

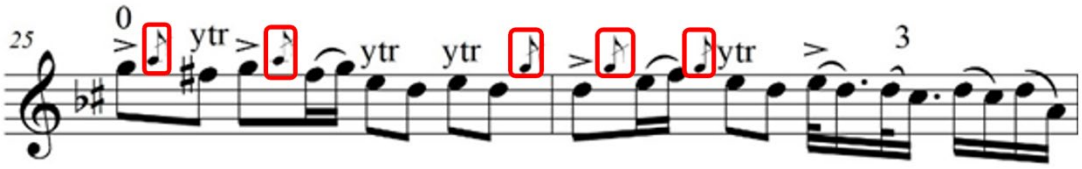

Figure 8. Example of the "Çarpma" Technique

In the performance of the folk song, the trill technique was observed to be used in measures 2, 3, 4, 5, 6, 7, 9, 10, 13, 14, 15, 16, 17, 18, 21, 22, 25, 26, 27, 28, 29, and 30. However, upon examining Çöke's manner of executing the trill technique, a deviation from its known definitions was observed. In Çöke's performance, it was seen that the pitches to which he applied the trill technique were used as closely as possible. The trill technique is generally defined as "the rapid, alternating playing of two adjacent notes with two fingers" (Sevsay, 2019, p. 42). Yet, in Çöke's performance, it was observed that the pitches to which he applied the trill technique were used as closely as possible. Here, it was determined that while the first note remains fixed, the second note is used as close as possible to the first note. At this point, it was understood that a single note, the main note, is emphasized rather than two distinct notes. No source explaining this situation could be found in the literature review. Therefore, to indicate that the trill technique encountered in this performance differs from other trill applications, it was deemed appropriate to name it as "yakın tril" (close trill) in this study. In the process of transcribing Çöke's performance into notation, this technique is indicated by the symbol " ytr " added above the note. An example of the usage of this technique is provided in the notation below.

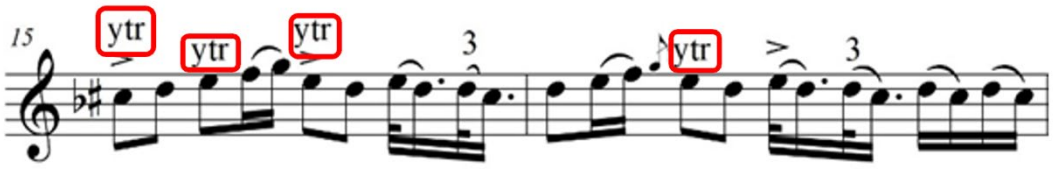

Figure 9. Example of the "Yakın Tril" Technique

In the performance of the folk song, the "kaydırma" (glissando) technique was observed to be used in measures 4, 6, 10, 18, 22, and 30. The sliding technique in bowed string instruments refers to producing a different note by sliding the finger pressing the string forward or backward. In the notation of the folk song, the sliding technique is indicated by the symbol "". An example of the usage of this technique is provided in the notation below.

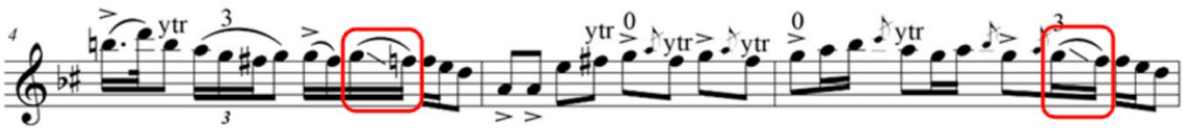

Figure 10. Example of the "Kaydırma" Technique

In the performance of the folk song, the "bağsız çalma" (detached) technique was observed to be used in all measures. The detached playing technique is described as "divided, chopped, separated into small folk songs, not connected to each other. In bowing technique, a separate bow stroke is used for each note" (Büyükaksoy, 1997, p. 42). An example of the usage of this technique is provided in the notation below.

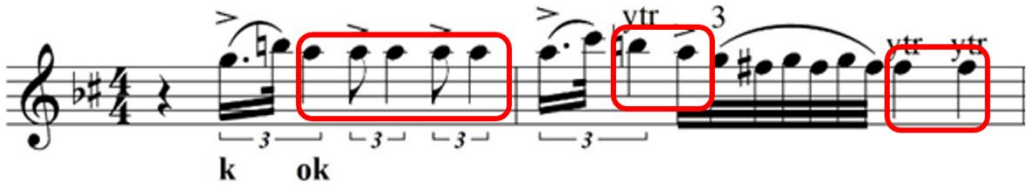

Figure 11. Example of the "Bağsız Çalma" Technique

In the performance of the folk song, the "bağlı çalma" (legato) technique was observed to be used in measures 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, and 32. The slurred playing technique refers to "the continuous playing of one or more notes on a single bow stroke and a bowing style in which the change is not distinctly audible" (Büyükaksoy, 1997, p. 40). In the notation of the folk song, the slurred playing technique is indicated by the symbol " ". An example of the usage of this technique is provided in the notation below.

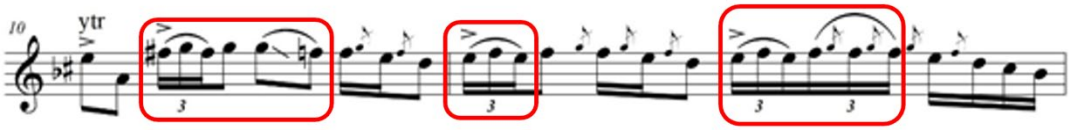

Figure 12. Example of the "Bağlı Çalma" Technique

In the performance of the folk song, "çift ses çalma" (the double stop) technique was observed to be used only in measure 3. çift ses çalma technique is defined as "the simultaneous sounding of two notes achieved by drawing the bow across two strings at the same time" (Durmaz, 2021, p. 113). An example of the usage of this technique is provided in the notation below.

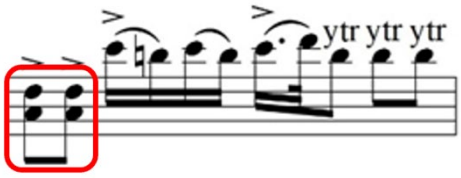

Figure 13. Example of the "Çift Ses Çalma" Technique

In the performance of the folk song, "vurgulu çalma" (the emphasized playing) technique was observed to be used in all measures. "Vurgulu çalma" technique is defined as "starting the performance with strong bow pressure initially and gradually reducing its force in the subsequent process. This technique is indicated in notation by placing the " > " sign (Durmaz, 2021, p. 113). An example of the usage of this technique is provided in the notation below.

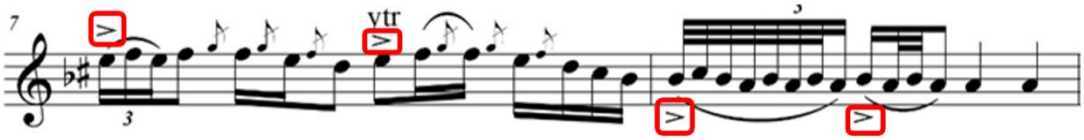

Figure 14. Example of the "Vurgulu Çalma" Technique

To categorize the sound level, three fundamental groups were established: "hafif" (soft), "orta" (medium) and "kuvvetli" (strong). These categories were evaluated within a system reflecting the change in sound from low to high; nuance concepts defining each level were identified, and these terms were indicated in an abbreviated form using their initial letters. To express an increase or decrease in sound level, it was deemed appropriate to use terms meaning "kuvvetlenerek" (gradually strengthening) (<) and "hafifleyerek" (gradually softening) (>) with specific signs on the notes. Among the nuance terms, strong is indicated with the sign (k), and medium strong with the sign (ok) (Durmaz, 2021, p. 70). In the performance of the folk song, medium intensity was generally preferred, but in places where the emphasized playing technique was used, it was observed that the sound transitioned from a strong usage, gradually softening to medium intensity. An example notation for the use of nuance expressions in performance is provided below.

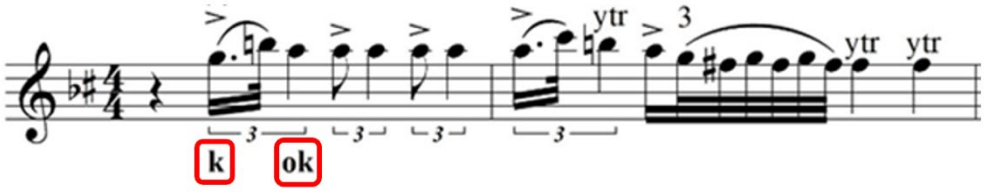

Figure 15. Example of Nuance Expressions in Notation

DISCUSSION AND CONCLUSION

The following conclusions were reached within the scope of this study.

It was determined that when Erol Çöke performs the violin, he does not use a shoulder rest, holding the instrument horizontally and closer to his chest. Since he does not use a chin rest, he positions his chin towards the tail part of the violin. When performing vocals, he lifts his chin and supports the violin with his left hand during this time. In his bow grip, he places his right hand approximately a quarter of the way up from the frog of the bow, primarily gripping the bow with his index finger and thumb. When using the III and IV (thick) strings, he does not lift his right elbow excessively, and he positions both his right and left elbows close to his body during string changes. In his left-hand position, he generally keeps his fingers over the string he is playing on, but since he mostly uses his 1st, 2nd, and 3rd fingers, he holds his 4th finger (little finger) further back compared to the others.

It was determined that Çöke used his violin in Abdâl tuning when performing folk songs. In this tuning, his violin was tuned from high to low according to Turkish music notation as follows: 1st string G, 2nd string D, 3rd string A, and 4th string D, with the A (dügâh) pitch corresponding to the open 3rd string. It was also determined that the perception of Çöke's violin tuning in Western music, from high to low, is: 1st string B, 2nd string F-sharp, 3rd string C-sharp, and 4th string F-sharp.

It was determined that the rhythmic structure of the folk song titled Bugün Ayın Işığı is in sofyan (4/4) usul. The folk song extensively uses dotted sixteenth notes and consecutive thirty-second notes, and it was found that Çöke characteristically employed triplets within his unique interpretive style.

When examining the performance of the folk song from the perspective of performance techniques, it was determined that the çarpma, which derives its value from the preceding note, was used 64 times in 18

measures. Yakın tril technique was used 41 times in 24 measures, kaydırma technique was used 6 times in 6 measures, bağsız çalma technique was used in all measures, the slurred playing technique was used 91 times in 29 measures, and çift ses technique was used in only 1 measure. Upon examining Çöke's manner of executing the trill technique, a deviation from its known definitions was observed. In Çöke's application of the trill technique, it was determined that while the first note remains fixed, the second note is used as close as possible to the first note. In this technique, which is smaller than a semitone in interval and varies in "cent" value depending on the applied note, it is understood that a single note, the main note, is emphasized rather than two distinct notes. No source explaining this situation could be found in the literature review. Therefore, to indicate that the trill technique encountered in this performance differs from other trill applications, it was deemed appropriate to name it as "yakın tril" in this study. Furthermore, in the process of transcribing Çöke's performance into notation, this technique is indicated by the symbol "ytr" added above the note.

It was determined that in the performance of the folk song, medium intensity was generally preferred. However, in places where vurgulu çalma technique was used, the sound transitioned from a strong usage, gradually softening to medium intensity.

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INVESTIGATION OF PROSPECTIVE CLASSROOM TEACHERS' ATTITUDES TOWARDS THE USE OF AR TECHNOLOGY IN EDUCATION

SELVA BAKKALOGLU, SELCUK UNIVERSITY, KONYA, TURKIYE

HAVVANUR NAYAN, SELCUK UNIVERSITY, KONYA, TURKIYE

ABSTRACT

Augmented reality is based on the principle of synthesizing real and virtual information. The AR user interacts with both real and virtual objects in time. In addition, AR is also used in the field of education and this technology can be integrated into the learning, teaching and instructional design process. With AR technology, time and space limitations on learning are eliminated. This technology should not be considered as a technique that replaces teaching with real materials, but rather as an alternative that strengthens the teaching process.Teachers' knowledge, behaviors and attitudes about the subject are of great importance in the integration of AR technology in the classroom environment. As a matter of fact, it is the teachers who will guide the studentsin using AR technology in the lesson and carry out the process of implementing AR technology-based activities. Therefore, it is important to examine the attitudes of teachers and pre-service teachers towards AR technology.

In this study, it is aimed to examine the attitudes of prospective primary school teachers towards the use of AR technology in education. The research model is survey model from quantitative research methods. The study group of the research will consist of pre-service teachers who are studying in the classroom teaching department with the method of easily accessible case sampling. 'Augmented Reality Attitude Scale for Prospective Teachers' will be used as a data collection tool.

As a result of the research, no significant difference was found according to the variables of gender, having knowledge about augmented reality and using AR applications.

Augmented reality, primary education, education

INRODUCTION

Augmented Reality (AR) is a technology that enables the integration of digital objects with the physical world, bringing human-machine interaction to a new dimension. This technology allows the combination of virtual and real elements, the realization of real-time interactions, and the accurate alignment of both environments (Azuma et al., 2001). AR aims to enhance user experience by enriching the physical environment with digital components. Through computer vision, object recognition, and AR-supported mobile cameras, interaction between the physical world and virtual elements is achieved. Moreover, global positioning systems, wireless communication technologies, location-based information processing, and wearable devices contribute to the effective use of augmented reality.

AR technology enhances user experience by integrating digital visual, auditory, and tactile information through software and hardware components. Users can interact with context-sensitive content in real-world environments and integrate virtual elements with their physical surroundings through augmented reality. Especially with the technological advancements offered by smartphones, AR has become more accessible and practical. Initially popular in the entertainment and gaming sectors, AR applications are now widely

adopted in education, communication, medicine, public safety, healthcare, tourism, energy, marketing, and many other fields.

There are three fundamental characteristics of augmented reality applications: (a) the combination of real and virtual elements, (b) interactive operation in real time, and (c) registration in 3D (Azuma, 1997; Kaufmann, 2003). In addition to visual information, AR can appeal to various senses, including hearing, touch, and even smell (Azuma et al., 2001). Due to these features, AR stands out as an effective strategy that supports inclusivity in education (Sheehy et al., 2014). Its ability to support multiple representations in learning processes, promote action-based interactions, and increase student engagement are among its key pedagogical advantages (Meyer et al., 2014).

There are various scientific studies examining the effects of AR in education. These studies focus on the use of AR across different educational levels, from early childhood education to university-level learning (Koutromanos, Sofos & Avraamidou, 2015; O Scrivner et al., 2016). Additionally, research has been conducted on diverse learner groups such as preschoolers, K-12 students, university students, adult learners, elderly individuals, and students in vocational-technical education (Radosavljevic, Radosavljevic & Grgurovic, 2018). There is also a growing body of literature on the role of AR in the education of individuals with special needs (Akcayır & Akcayır, 2017).

The integration of AR technology into educational processes has been examined in both formal and informal learning environments (Koutromanos & Avraamidou, 2014) and is often evaluated within the framework of constructivist learning theory (Dunleavy & Dede, 2014). Common findings across these studies indicate that AR provides innovative learning opportunities that support teaching and learning processes and offer multifaceted benefits in education (Arcos, 2016; Giasiranis & Sofos, 2016; Martin-Gutierrez, 2013; Yılmaz, 2016). In conclusion, AR has significant potential in education, particularly in concretizing abstract concepts, increasing student motivation, and ensuring active participation in the learning process. However, the effective implementation of this technology depends on teachers' knowledge and attitudes toward AR.

Pre-service primary school teachers are individuals who will interact directly with elementary school students in the future. The primary school period is a critical phase for students' cognitive, social, and emotional development, and the teaching methods used during this period can have lasting impacts on their perceptions of the learning process. Therefore, how pre-service teachers evaluate the use of AR technology in education, their attitudes toward using this technology, and their perceptions of professional competence are considered to be influential in the future integration of AR into classroom practices.

This study aims to examine pre-service primary school teachers' attitudes toward the use of AR technology in education and to determine their awareness of technological innovations in teacher training. The findings are expected to contribute to the development of teacher education program content and support the creation of strategies for the more effective use of AR in education. Additionally, identifying potential concerns and barriers related to AR among pre-service teachers can provide valuable insights for the development of AR-based instructional materials and the enhancement of teachers' digital pedagogical competencies.

METHOD

Research Model

The research model employed in this study, which aims to examine pre-service primary school teachers' attitudes toward the use of Augmented Reality (AR) technology in education, is the **descriptive survey model**. The descriptive survey model is a research design that aims to systematically analyze individuals' attitudes, opinions, and perceptions within a specific time frame (Karasar, 2009).

Study Group

The study group of the research was determined using convenience sampling. The participants consist of students enrolled in the Department of Primary School Teaching at the Faculties of Education of Selçuk University, Necmettin Erbakan University, and Karamanoğlu Mehmetbey University. Demographic information regarding the study group is presented in Table 1.

Table 1. Study group information

Independent variable		**N**	**%**
Gender	Female	210	79.8
	Male	53	20.2
Grade level	Grade 1	84	31.9
	Grade 2	68	25.9
	Grade 3	29	11.0
	Grade 4	82	31.2
Having knowledge about AR	Yes	69	26.2
	No	194	73.8
Use of AR applications	Yes	65	24.7
	No	198	75.3
Total		**263**	**100**

As seen in Table 1, 210 (79.8%) female and 53 (20.2%) male pre-service teachers participated in the study. Among the participants, 84 (31.9%) students were in the first grade, 68 (25.9%) were in the second grade, 29 (11.0%) were in the third grade and 82 (31.2%) were in the fourth grade. The number of pre-service teachers who said yes to having knowledge about AR is 69 (26.2%); the number of those who said no is 194 (73.8%). The number of pre-service classroom teachers who use AR applications is 65 (24.7%); the number of those who do not is 198 (75.3%).

Data Collection Tools

In this study, data were collected using a personal information form developed by the researcher and the Augmented Reality Attitude Scale for Pre-Service Teachers developed by Ürek and Kırtak Ad (2024). The personal information form included items regarding participants' gender, grade level, level of knowledge about augmented reality (AR), and their experience with AR applications.

The attitude scale is a 5-point Likert-type instrument consisting of 23 items, and it comprises four sub-dimensions: (1) Willingness to Use AR, (2) Future Perspectives on AR, (3) Negative Opinions Toward AR, and (4) Perceived Benefits of AR Applications. The Cronbach's alpha coefficient for the entire scale was reported as α = .917 by the original authors. In the current study, the Cronbach's alpha reliability coefficient was found to be α = .81, indicating a high level of internal consistency.

Data Collection and Analysis

Following the approval of necessary permissions, data were collected through face-to-face interactions with the participants over a period of three weeks. The collected data were analyzed using IBM SPSS Statistics version 29.0. To investigate whether participants' scores on the Augmented Reality Attitude Scale differed significantly by gender, prior knowledge of AR, and usage of AR applications, independent samples t-tests were conducted. Additionally, one-way analysis of variance (ANOVA) was performed to assess differences based on grade level. Prior to conducting parametric tests, assumptions of normality were examined through skewness and kurtosis values. The results indicated skewness = .025 and kurtosis = .518, both of which fall within the acceptable range of ±1, suggesting that the data were normally distributed. Based on these results, the use of parametric statistical methods was deemed appropriate for data analysis.

FINDINGS

Examination of Pre-Service Classroom Teachers' Attitudes Towards The Use Of AR Technology According to Gender

In the analysis of pre-service classroom teachers' attitudes towards the use of AR technology according to gender variable, t test for independent groups was applied and the results obtained are given in Table 2.

Table 2. Analysis results of pre-service classroom teachers' attitudes towards the use of AR technology according to gender variable

Dimensions	Gender	N	X	ss	t test		
					t	*sd*	p
Willingness to use AR	Female	210	28.08	3.00	-1.223	261	.223
	Male	53	28.67	3.80			
Benefits of AR applications	Female	210	17.98	2.90	-1.525	261	.128
	Male	53	18.67	3.24			
Negative opinions towards AR	Female	210	14.67	2.21	-.553	261	.581
	Male	53	14.86	2.67			
AR in the future	Female	210	15.50	2.55	-1.389	261	.166
	Male	53	16.05	2.80			
Total	Female	210	76.23	6.71	-1.884	261	.061
	Male	53	78.28	8.37			

As seen in Table 2, there is no significant difference in the total scores and sub-dimensions of the scale according to the gender variable *(p>.05)*.

Examination of Pre-Service Primary School Teachers' Attitudes Towards The Use of AR Technology According to Grade Level

ANOVA one-way analysis of variance was applied in the analysis of pre-service primary school teachers' attitudes towards the use of AR technology according to grade level variable and the results obtained are given in Table 3.

Table 3. Analysis results of pre-service primary school teachers' attitudes towards the use of AR technology according to grade level variable

Dependent Variable	Source of Variance	Sum of Squares	Sd	Mean Squares	F	p
Grade Level	Between Groups	918,476	3	306,159	6,430	**.000***
	Within Groups	12331,638	259	47,613		
	Total	13250,114	262			

According to Table 3, it is seen that there is a significant difference (f=6.430, p=.000<.05) in the attitude scores of pre-service primary school teachers towards the use of AR technology in terms of grade level

variable. Tukey hsd test was conducted to determine the source of this difference and the results are given in Table 4 below.

Table 4. Tukey HSD test results regarding the attitude scores of prospective primary school teachers towards the use of AR technology

	Grade level		Difference in Means	Standard Error	p
Total	Grade 2	Grade 1	-4,922	1,125	**.000***
		Grade 3	-3,082	1,530	**,045***
		Grade 4	-5.158	1.322	**.007***

According to the Tukey HSD analysis, this difference between the mean scores of 2nd graders and the mean scores of 1st, 3rd and 4th graders was significant at .05 level. In other words, the total scores of 2nd graders' attitudes towards the use of AR technology are lower than the other grade levels.

The results of one-way variance (ANOVA) analysis conducted to test whether the scores of pre-service teachers' attitudes towards the use of AR technology in the sub-dimensions of the scale differ according to the grade level are given in Table 5.

Table 5. Analysis results of the sub-dimensions of the augmented reality attitude scale for pre-service classroom teachers according to the grade level variable

Dimension	Grade Level	N	X	Ss	KO	F	p	Tukey HSD
Willingness to use AR	Grade 1	84	29,05	3,31				
	Grade 2	68	27,26	2,84	43,086	4,409	,005	Grade 2<Grade 1 Grade 3 Grade 4
	Grade 3	29	28,55	2,99	9,772			
	Grade 4	82	27,97	3,19				
Benefits of AR applications	Grade 1	84	18,80	2,69				
	Grade 2	68	17,25	2,68	32,748	3.790	,011	Grade 2<Grade 1 Grade 3 Grade 4
	Grade 3	29	18,55	2,95	8,640			
	Grade 4	82	17,98	3,34				
Negative opinions towards AR	Grade 1	84	14,71	2,31				
	Grade 2	68	14,60	1,91	17,844	3.443	,017	Grade 3< Grade 1 Grade 4
	Grade 3	29	13,62	2,22	5,183			
	Grade 4	82	15,18	2,51				
AR in the future	Grade 1	84	16,11	2,34				
	Grade 2	68	14,66	2,76	30,528	4.665	.003	Grade 2<Grade 1 Grade 3 Grade 4
	Grade 3	29	16,13	2,55	6,544			
	Grade 4	82	15,69	2,59				

*p<.05

When Table 5 is analyzed, a significant difference (F=4.409, p=.005<.05) emerged between the classes in the sub-dimension of 'willingness to use AR applications'. The mean scores of 2nd graders for this sub-dimension are lower than the mean scores of 1st, 3rd and 4th graders. In the sub-dimension of 'benefits of AR applications', there was a significant difference between the classes (F=3.790 p=.011<.05). The mean score of 2nd graders is lower than the mean score of other grade levels. In the third sub-dimension of the scale, 'negative ideas against AR', there was a significant difference between 3rd, 1st and 4th grades (F=3.443, p=.017<.05). The mean scores of 3rd grade pre-service teachers were lower than the mean scores of 1st and 4th grade pre-service teachers. Finally, in the fourth sub-dimension, 'AR in the Future' sub-dimension, there was a significant difference (F=4.665, p=.003<.05) between 2nd graders and 1st, 3rd and 4th graders. The mean scores of 2nd graders are lower than the mean scores of students in other grade levels.

Investigation Of Pre-Service Primary School Teachers' Attitudes Towards The Use of AR Technology According to Having Knowledge About AR

In the analysis of pre-service primary school teachers' attitudes towards the use of AR technology according to the variable of having knowledge about AR, t test for independent groups was applied and the results obtained are given in Table 6.

Table 6. Analysis results of pre-service primary school teachers' attitudes towards the use of AR technology according to the variable of having knowledge about AR

Dimensions	having knowledge about AR	N	X	ss	t test		
					t	*sd*	p
Willingness to use AR	Yes	69	28.28	3.79	.268	261	.789
	No	194	28.17	2.95			
Benefits of AR applications	Yes	69	18.49	3.41	1.203	261	.230
	No	194	17.98	2.81			
Negative opinions towards AR	Yes	69	14.55	2.82	-.671	261	.503
	No	194	14.76	2.10			
AR in the future	Yes	69	16.44	2.62	3.153	261	.002
	No	194	15.31	2.54			
Total	Yes	69	77.78	7.87	1.549	261	.122
	No	194	76.24	6.79			

**p<.05*

As seen in Table 6, there is no significant difference in the total scores and sub-dimensions of the scale according to the variable of having knowledge about AR (p>.05).

Examination of Pre-Service Primary School Teachers' Attitudes Towards The Use of AR Technology According to Their Use of AR Applications

In the analysis of pre-service primary school teachers' attitudes towards the use of AR technology according to the variable of using AR applications, t test for independent groups was applied and the results obtained are given in Table 7.

Table 7. Analysis results of pre-service primary school teachers' attitudes towards the use of AR technology according to the variable of using AR applications

Dimensions	Using AR applications	N	X	ss	t test		
					t	*sd*	p
Willingness to use AR	Yes	65	28.72	3.78	1.525	261	.129
	No	198	28.03	2.95			
Benefits of AR applications	Yes	65	17.84	3.37	-.857	261	.392
	No	198	18.21	2.85			
Negative opinions towards AR	Yes	65	14.86	2.47	.605	261	.546
	No	198	14.66	2.25			
AR in the future	Yes	65	16.20	2.68	2.105	261	.036
	No	198	15.41	2.56			
Total	Yes	65	77.63	7.49	1.288	261	.199
	No	198	76.32	6.96			

**P<.05*

As seen in Table 7, the attitudes of prospective primary school teachers towards the use of AR technology in the total scores and sub-dimensions of the scale do not show a significant difference according to the variable of using AR applications (p>.05).

DISCUSSION AND CONCLUSION

The main purpose of this study is to examine whether pre-service classroom teachers' attitudes towards the use of augmented reality (AR) in education differ significantly in terms of various variables. The findings of the study revealed that, in general, pre-service teachers have positive attitudes towards AR technology. However, it was observed that some individual variables did not have a significant effect on these attitudes, while some variables differentiated attitudes.

Within the scope of the first sub-problem of the study, the effect of gender variable on attitudes towards AR was examined and no significant difference was found. this finding is in line with the literature that technological attitudes are shaped by individuals' personal technology experiences, pedagogical approaches, and digital literacy levels, not by gender. Ramazanoğlu and Solak (2020) conducted a study with middle school students and found that students' attitudes towards AR applications did not differ significantly by gender.

The findings regarding the variable of having knowledge about AR did not indicate a significant difference in attitude. This situation shows that only having knowledge is not sufficient in attitude development and that this knowledge should be supported by pedagogical and practical context. In this context, it is understood that structured experiences and guided learning processes are necessary for knowledge to transform into behaviour.

Similarly, no significant difference was found in the attitude scores of pre-service teachers according to their use of AR applications. This finding suggests that in cases where AR technology is not systematically experienced in the classroom environment, individual use may not have a strong effect on attitude. In a study conducted by İzgi Onbaşılı (2018) with primary school students, it was observed that AR applications significantly affected students' attitudes and motivation. The result obtained in the study emphasizes the importance of hands-on experiences for the effective adoption of AR technology. These different results suggest that the effect of using AR applications on attitudes towards AR use may have different results depending on the duration, quality and guidance level of the implementation process.

The variable for which a significant difference was found was the grade level. The findings showed that the attitudes of pre-service teachers in the second grade towards AR technology were significantly lower than the other grade levels. This suggests that the attitudes of second-year students towards technology exhibit a temporary downward trend and this decrease may be due to the fact that they are still at the beginning of the pedagogical formation process. Şahin and Arslan Namlı (2019) stated that as the grade level of pre-service teachers increases, there is a significant improvement in their perceptions and attitudes towards educational technologies, and their technology integration skills are strengthened especially with the effect of formation courses. In this respect, the research findings overlap with the literature and reveal that grade level can play a transformative role on pre-service teachers' technological attitudes.

In general, the fact that pre-service teachers have positive attitudes towards augmented reality technology indicates that this technology can be used more effectively and pedagogically based in educational environments in the future. However, in order for these positive attitudes to become sustainable and transform into behavioral gains, teacher education programs need to be supported with application-based, open to technology integration and interdisciplinary structures.

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THE EFFECT OF PHILOSOPHY FOR CHILDREN (P4C) PROGRAM ON LANGUAGE SKILLS: A META-ANALYSIS STUDY

SELVANUR KAYHAN, TRABZON UNIVERSITY, TRABZON, TURKIYE

NURBANU KANSIZOĞLU, TRABZON UNIVERSITY, TRABZON, TURKIYE

ABSTRACT

The aim of this study is to investigate the effect of the philosophy for children (P4C) programme on basic language skills through meta-analysis. Studies on the impact of the P4C programme on listening, reading, speaking and writing skills were searched in various databases (e.g. ERIC, ScienceDirect, Taylor & Francis) using various keyword phrases. This meta-analysis included 10 intervention studies (k = 13) that implemented P4C-based approaches targeting the improvement of learners' language skills, following the application of clearly defined inclusion and exclusion criteria. All statistical data were obtained and then imported into Comprehensive Meta-Analysis (CMA) software to calculate hedges' g values. The overall effect size of the intervention studies on basic language skills was .801. This effect size indicates a large effect. In addition, language skills, intervention duration and developmental characteristics were determined as moderator variables. The findings show that language skills and intervention duration do not significantly affect the effectiveness of P4C as a moderator variable. In addition, it was determined that developmental characteristics, which was determined as another moderator variable, did not have a significant effect on language skills. Based on the findings, it can be concluded that P4C-based interventions are broadly effective in improving students' language skills. In this direction, P4C-based interventions should be included in education programmes. In the light of the findings, it can be concluded that P4C-based interventions are large effective in improving students' language skills. In this direction, it is recommended that P4C practices should be integrated more systematically into education programmes. In addition, more communities of enquiry can be encouraged in educational environments, and students' ability to express their thoughts and understand different perspectives can be improved.

Philosophy for children, language skills, meta-analysis

INTRODUCTION

In the 21st century, social and technological changes require individuals to have skills such as effective communication, collaboration, creativity, problem solving and critical thinking. Globalisation and facilitated access to information have changed individuals from being only recipients of information. Individuals are expected to become people who can analyse this information effectively, produce creative solutions and create value through teamwork. Therefore, educational policy makers have reflected the belief that thinking skills should be developed as a general ability that increases success and can be transferred to different contexts in curriculum designs (McKendree et al., 2002). In contemporary curricula, individuals' ability to think in multiple ways, solve complex problems, communication and entrepreneurship skills have become the focus (Scott, 2015). Consequently, approaches to developing thinking skills in individuals have gained increasing importance, and the Philosophy for Children (P4C) method has emerged as one of the prominent approaches in this field.

P4C is an educational and philosophical movement that teaches reasoning and discussion skills to children and others of various ages (Anderson, 2016). "The main goal of this approach is to develop children's reasoning abilities and judgment while fostering their capacity for independent thinking and informed

decision-making (Topping et al., 2019). This programme aims to foster students' critical and creative thinking skills through collaborative dialogue, developing independent thinkers and transforming them into more effective learners through skills such as careful listening and argument construction (Topping et al., 2019). P4C supports social and emotional development by strengthening emotional intelligence and building self-esteem through the experience of listening to ideas. It also develops citizens who are able to engage in rational debate and participate effectively in democratic processes and aims to prepare students for participation in democracy (Topping et al., 2019). The movement was founded by Professor Matthew Lipman in the 1970s and has been implemented in more than 60 countries (Gregory et al., 2017).

According to Topping et al. (2019), P4C practices are usually carried out in a setting where students can communicate face-to-face - mostly in a circle - and are carried out in a "community of inquiry" environment that develops over time. In this context, the teacher is not in a position of transferring knowledge in the traditional sense, but as a facilitator who guides the process. Discussions are not required to reach a specific conclusion; instead, students are provided with the freedom to construct and express their thoughts. The facilitator emphasizes important ideas, models effective questioning skills (e.g., seeking clarification and justification), promotes collaborative communication, and maintains neutrality by keeping personal opinions in the background, thereby enabling students to make original contributions (Topping et al., 2019). P4C sessions usually start with the reading of a section from Lipman's texts, continue with students generating questions based on these texts, and continue with the group discussion of a selected question (Fisher, 2013). This process contributes to the development of students' critical thinking skills as well as their linguistic expression skills.

In addition to improving students' thinking skills, P4C also stands out as an effective tool in supporting basic language skills (Lipman, 2023). Studies have shown that P4C practices significantly improve students' speaking skills and significantly reduce their speaking anxiety (Balcı & Eryılmaz, 2024It provides a learning environment in which both the intellectual and linguistic development of students can be supported through activities that integrate language with high-level cognitive processes, with particular emphasis on speaking skills (Özcan et al., 2023). Therefore, P4C supports language acquisition in a multidimensional way by providing a comprehensive learning experience. In recent years, this approach has attracted more and more attention in the field of education, and a systematic evaluation of its impact on language skills has emerged as an important need. The theoretical inferences regarding the contribution of P4C, which is based on skills such as critical thinking, discussion and questioning, to language development indicate that empirical studies examining this field in depth are needed. Although there are various studies focusing on the effects of P4C on language skills in the literature, a comprehensive evaluation that will reveal the general effect of these studies has not yet been conducted. The aim of this meta-analysis is to reveal the potential of P4C in language teaching by statistically analysing the effect of P4C practices on language skills.

METHOD

Research Model

In this study, the effect of P4C-based intervention studies on language skills was analysed using meta-analysis method. Accordingly, the results of the relevant experimental studies were systematically gathered and evaluated using Hedges'g, a standardised effect size measure (Borenstein et al., 2009; Ellis, 2010). The Preferred Reporting Items for Systematic and Meta-Analysis (PRISMA) flowchart was used to identify the studies (Page et al., 2021).

Inclusion and Exclusion Criteria

The studies to be included in this meta-analysis study were selected according to certain criteria. Studies that were conducted in the field of language education, had a true experimental or quasi-experimental design, were published in English or Turkish, and included the statistical data required for meta-analysis (e.g. sample

size, mean, standard deviation, etc.) were included in the study. On the other hand, studies that did not include a control group and did not report the necessary statistical data were not included in the analysis.

Data Sources and Search Strategy

The authors collected the data by searching 12 scientific databases (Academic Search Ultimate, Education Research Complete, Springer Link, Wiley Online Library Full Collection, Sage Journals, Scopus, Science Direct, Taylor & Francis, Google Scholar, ProQuest Dissertations and Theses Global and Council of Higher Education (YÖK) Theses in Turkey). The following keyword phrases were used during the search:

- P4C/philosophy for children-language-experimental
- P4C/philosophy for children-language -intervention
- P4C/philosophy for children-language-treatment
- P4C/philosophy for children-speaking
- P4C/philosophy for children-listening
- P4C/philosophy for children-reading
- P4C/philosophy for children-writing

After the search using keyword phrases, the authors conducted manual searches. The process of searching the databases was completed by the authors within one month. The authors reached a total of 77 studies from the databases during the screening process carried out within the scope of meta-analysis. With the removal of 2 duplicate records, the number of studies evaluated decreased to 75. These studies were examined according to the predetermined inclusion criteria and 54 studies were excluded from the analysis. The 21 studies that complied with the criteria were re-evaluated for the adequacy of the statistical data required for effect size calculations; 11 more studies that did not provide sufficient data in this process were excluded. As a result of all screening and evaluation stages, 10 studies that were methodologically and statistically appropriate were included in the meta-analysis. The flow diagram in Figure 1 summarises the selection process.

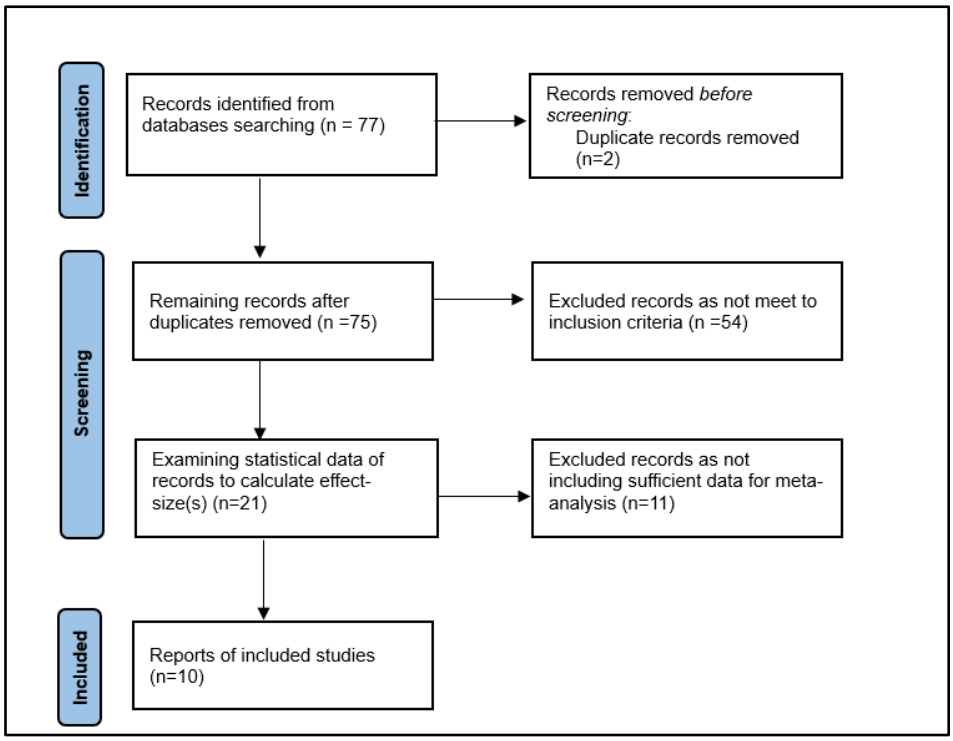

Figure 1. PRISMA flowchart of the selection process

This meta-analysis includes 10 intervention (experimental) studies examining the effect of P4C-based interventions on language skills. In one of the included studies, reading and listening comprehension achievements of typically developing and gifted students were analysed. In this study, since developmental status and four basic language skills were moderator variables, the combined effect size of typically developing and gifted students was not calculated. Instead, effect size was calculated separately for the groups of typically developing and gifted students (Özcan, 2022). Thus, 13 effect sizes were calculated for 10 studies in this meta-analysis.

Coding Procedure

A coding form was prepared by the researchers to obtain the data in the included studies. The coding form includes the title of the study, type of publication, quantitative values (sample size, experimental and control group mean and standard deviation, t and p), developmental characteristics, language skill, intervention period and grade level. While coding, the researchers worked separately and the consistency between the coders was calculated as high: 93%. Instances of disagreement were discussed collaboratively until a consensus was achieved. Descriptive information about the studies included in the meta-analysis is shown in Table 1.

Table 1. Descriptive Information of the Studies Included in the Meta-Analysis

Study Name	Publication Type	Developmental Feature	Language skill	Intervention Duration	Grade Level
Acar, 2022	Dissertation	Gifted individuals	Speaking	10 weeks	K-8
Boyraz & Aydan, 2024	Article	Normally developing individuals	Listening	6 weeks	K-8
Esen, 2024	Dissertation	Normally developing individuals	Reading	12 weeks	K-8
Imani vd., 2016	Article	Normally developing individuals	Reading	Not specified	K-8
Karaboğa, 2023	Dissertation	Normally developing individuals	Listening	7 weeks	Pre-school
Özcan, 2022	Dissertation	Normally developing individuals	Reading	8 weeks	K-8
		Normally developing individuals	Listening		
		Gifted individuals	Reading		
		Gifted individuals	Listening		
Özdemir, 2024	Dissertation	Normally developing individuals	Writing	8 weeks	K-8
Özkan, 2024	Dissertation	Normally developing individuals	Speaking	8 weeks	K-8
Özkılıç, 2023	Dissertation	Normally developing individuals	Reading	6 weeks	K-8
Tian & Liao, 2016	Article	Normally developing individuals	Reading	10 weeks	High School

Data Analysis

Hedges' g was employed for effect size calculation in this study because it provides greater accuracy and reduced bias for small sample sizes (Borenstein et al., 2009). Because Hedge's g is based on eliminating the

bias of Cohen's d, which is an index obtained by dividing the mean difference obtained from individual studies by the standard deviation value, by using a correction formula (Borenstein et al., 2009). The following statistical data were used to calculate Hedges' g value:

- 7 studies included mean scores, standard deviations and sample sizes for the experimental and control groups.
- 2 studies included sample sizes of experimental and control groups and p-values of independent groups.
- 1 study included sample sizes and t-values for experimental and control groups.

In order to interpret the effect sizes, the classification of Güler et al. (2022) (0.14 and below: Negligible; 0.15-0.39 low effect; 0.40-0.74 moderate effect; 0.75-1.09 large effect; 1.10-1.44 very large effect; 1.45 and above perfectly large) was used.

Meta-Analysis Model

In this meta-analysis, the random effects model was used because it was assumed that each study included different samples and interventions and therefore the true effects were different from each other (Borenstein et al., 2009). However, the findings of the heterogeneity test led to the selection of the random effects model. The findings of the heterogeneity test proved that the Q-value was 128.652, which is higher than the critical value of 21.026 (10 degrees of freedom at 95% confidence interval; $p < .05$). In addition, the I^2 value was 90.67, indicating a high level of heterogeneity (Borenstein et al., 2009). In addition, moderator variables were determined as language ability, developmental characteristics and intervention duration. The intervention duration variable was grouped as short-term (0-4 weeks), mid-term (5-8 weeks) and long-term (9+ weeks) (Çalık & Wiyarsi, 2025). Grade level was not selected as a moderator since most of the studies were prepared at the K-8 level.

Analyses on Publication Bias

It is recommended to use more than one test to investigate publication bias in meta-analyses (Borenstein et al., 2009; Card, 2012). In this meta-analysis, publication bias was detected using a series of statistical methods (funnel plot, Duval and Tweedie's cut and fill technique, Classic and Orwin's fail-safe N value, Egger's regression test). According to the results of Classical and Orwin's fail-safe N value, the number of studies required to reduce the p value below 0.01 was calculated as 230 and 52, respectively. In other words, this value indicates that the findings of many additional studies are needed to invalidate the intervention effect on language skills. However, the results of Egger's regression test (95% CI = [3.309, 12.431]; t = 3.79, p (2-tailed)=.003) suggest that there may be a bias. In addition, the funnel plot in Figure 2 shows that the relationship between standard error and effect size is asymmetric. This was considered as a sign of publication bias (Card, 2012). To overcome this problem, Duval and Tweedie's cut and fill method was used and the findings of the test showed that the difference between the observed and corrected values was 33%. In order to eliminate publication bias, it was suggested to add 3 studies (effect size) to the right side of the funnel plot. This made the graph symmetrical (see Figure 3).

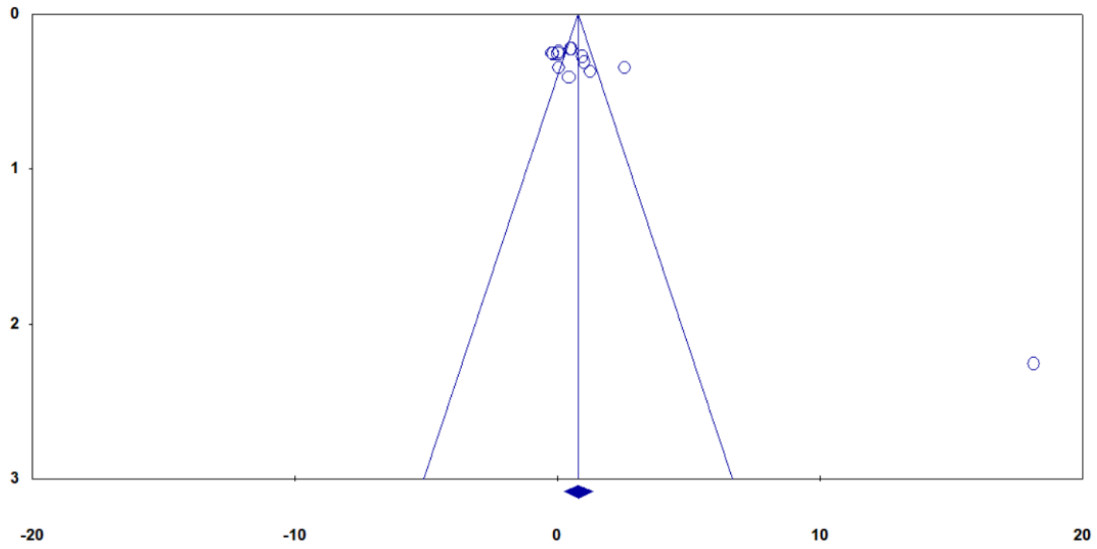

Figure 2. Funnel plot of standard error by effect size

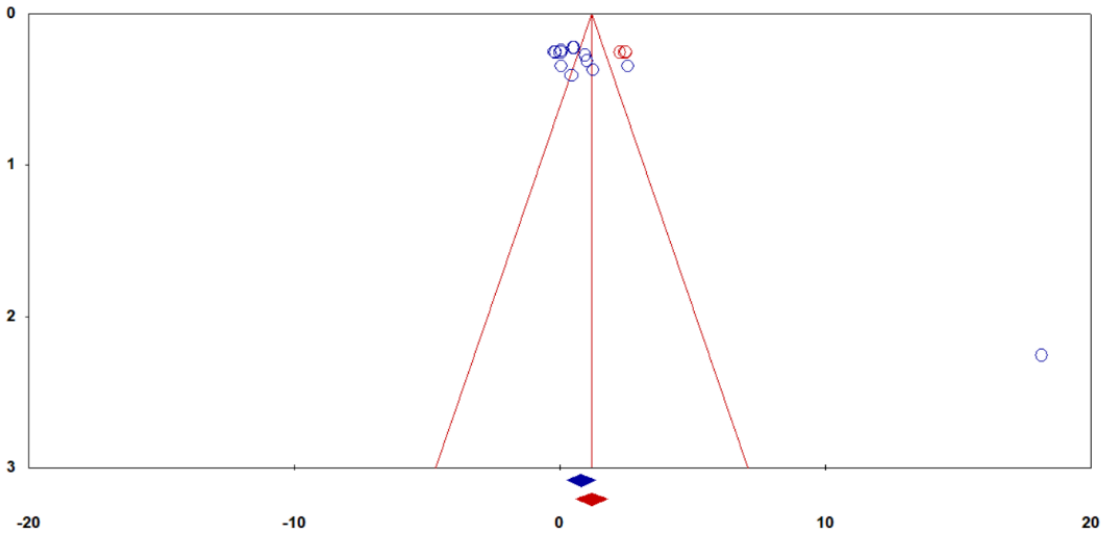

Figure 3. Funnel plot of the standard error by effect size after Duval and Tweedie's trim and fill test

FINDINGS

Overall Impact of the P4C Programme on Language Skills

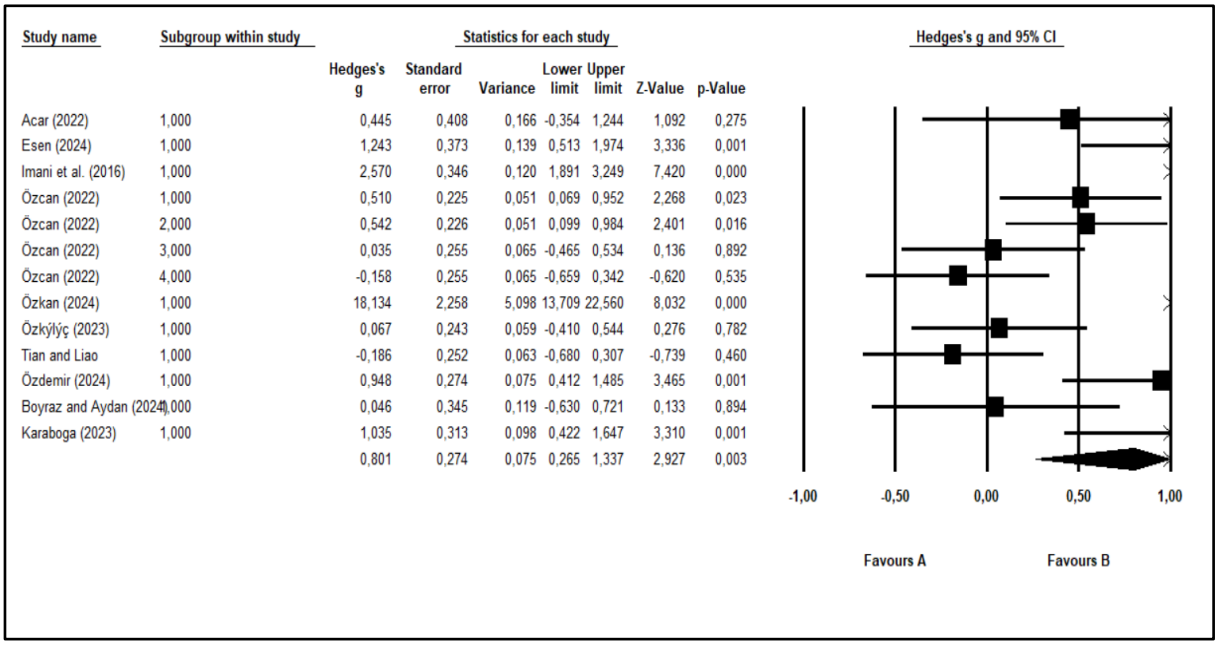

Figure 4. Baseline values of intervention studies (Hedges g, standard error and p)

In this meta-analysis, 13 effect sizes were calculated for 10 studies. Figure 4 shows the findings of the basic values (Hedges' g, standard error and p) of the studies included in the meta-analysis. As seen in Figure 4, the effect size values of 4 studies are greater than 1. In addition, while 3 of the effect sizes vary between 1 and 0.5, 6 of them are smaller than 0.5. According to the effect size classification (Güler et al., 2022), the effect on language skills for the random effects model was estimated as (g = .801), which indicates a large effect. In other words, P4C-based interventions have a statistically significant, large effect on improving language skills.

Moderator Analysis

Moderator analysis findings revealed that there was no significant difference between language skills (p > .05) and intervention duration (p > .05). In other words, the moderators "language skill type" and "intervention duration" did not have a differentiating effect on the effect size values obtained. On the other hand, the moderator "developmental feature" has a differentiating effect on the effect size values obtained (p<.05).

Table 2. Moderator analysis findings

					Confidence Interval (95%)						
	Moderator Variable	k	Point estimate	SE	Lower limit	Upper limit	Z-Value	p-Value	Q-Value	df (Q)	p-Value
Language skill[a]	Listening	4	0.363	0.259	-0.144	0.870	1.405	0.160			
	Speaking	2	9.151	8.843	-8.182	26.483	1.035	0.301			
	Reading	6	0.676	0.364	-0.038	1.390	1.856	0.063			

	Total between							1.453	2	0.484
Intervation duration										
	Long-term	4	1.011	0.644	-0.251	2.273	1.570	0.116		
	Mid-term	9	0.667	0.308	0.064	1.271	2.167	0.030		
	Total between							0.232	1	0.630
Developmental characteristic	Normally developing individuals	10	1.084	0.348	0.403	1.765	3.119	0.002		
	Gifted individuals	3	0.021	0.165	-0.302	0.345	0.129	0.897		
	Total between							7.631	1	0.006

[a]:It was not included in the analysis because it was a study on writing skills.

DISCUSSION AND CONCLUSION

In this study, the effect of the philosophy for children (P4C) programme on basic language skills was examined through meta-analysis. As a result of the study, the overall effect size of the intervention studies on basic language skills was determined as .801. This effect size indicates a large effect. This result is consistent with previous meta-analyses (Gallo-Bohórquez et al., 2023; García-Moriyón et al., 2004; Yan et al., 2018) reporting the positive effect of P4C in improving cognitive learning outcomes. In other words, P4C "encourages children to reflect on their own thinking processes, engages them in discussions about concepts that matter to them, and develops their reasoning skills and capacity for judgment" (Lipman, 1981, p. 37)." Given the relationship between thinking skills and language development, the results of this study are consistent with previous meta-analyses. This consistency is seen as a consequence of P4C's integrated approach to developing both thinking and language. As a matter of fact, it is known that 'all language skills naturally participate in the process' (Özcan, 2023) in P4C programme. P4C significantly contributes to the development of students' speaking skills by fostering critical, creative, and careful thinking through its dialogue and inquiry-based structure (Balcı & Eryılmaz, 2024). Similar findings are observed for other language skills. Esen (2024) notes that P4C education supports students' critical reading processes by strengthening their ability to question and evaluate the content of informative texts. Ab Wahab et al. (2022) state that this process transforms listening skills from being a passive receiver to an active and intellectual activity based on evaluating different perspectives. Similarly, especially critical and creative thinking skills have the potential to be developed within writing education studies. In conclusion, this study presents a promising finding in terms of revealing that students have the potential to develop all dimensions of language skills through P4C practices and shows that these skills can be supported in a meaningful way. In this context, it is considered to be very important to include P4C in primary and secondary school Turkish lessons. In fact, in the Secondary School Turkish Curriculum (2024) implemented in Turkey, the goal of 'students to demonstrate their critical thinking and creativity skills' is clearly stated (p. 32). Therefore, the inclusion of teaching practices such as P4C that encourage students' critical thinking skills and creativity is valuable in achieving the objectives of the Turkish curriculum.

In this study, language skills, intervention duration and developmental characteristics were determined as moderator variables. The findings show that language skills (listening, speaking, reading) and intervention duration (long-term, medium-term) do not significantly affect the effectiveness of P4C as a moderator variable. In addition, it was determined that developmental characteristics (typically developing, gifted), which were determined as another moderator variable, did not have a significant effect on language skills. When the literature is examined, there is a meta-analysis (Yan et al., 2018) on the P4C programme that selects the intervention duration as a moderator variable. This meta-analysis reveals a finding consistent

with this study: no significant difference was found between different intervention durations in the effectiveness of P4C on students' cognitive outcomes. Although there is no evidence in the literature on which language skill P4C is more effective on, there is an indirect emphasis on speaking skill. In fact, the P4C approach is defined by Lipman (2023) as an educational method based on socratic enquiry with the participation of children. This approach significantly contributes to the development of speaking skills, particularly through its structure that encourages children to articulate their thinking processes verbally. The thought-provoking questions directed to students in P4C applications enable them to formulate their own questions and engage in discussions by expressing their ideas clearly (Avcı, 2023). Therefore, the systematic implementation of this process ensures that speaking skills are encouraged in a natural way. Similarly, more evidence is needed to determine whether developmental characteristics (typically developing, gifted) have a differentiating effect in the P4C programme. Firstly, this study analysed 10 intervention studies implementing P4C-based interventions. Therefore, the limited number of studies on the subject limits the generalisability of the findings and makes it difficult to clearly reveal the role of moderator variables on effectiveness. Therefore, there is a need to increase the number of studies involving P4C-based interventions in language teaching.

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ANALYSIS OF UNICEF-ECE 2024 KIDS' BOOKS WITH A SUSTAINABILITY CONTEXT

EBRAR ALEYNA ANGIN, BARTIN UNIVERSITY, BARTIN, TURKIYE

ZERRİN MERCAN, BARTIN UNIVERSITY, BARTIN, TURKIYE

ABSTRACT

Examining early childhood children's books in light of sustainability is the aim of this study. The study was carried out using a qualitative research design and document examination. In this regard, 34 children's books that are part of the UNICEF-ECE 2024 preschool education program are being assessed. The research's data was analyzed using descriptive and content analysis, and themes and sub-themes were developed within this framework. Energy resources, climate awareness and climate change, knowing, loving and protecting living things, loving and protecting nature/natural environment, environmental cleaning, endangered animals, and recycling (ecological sustainability); energy resources, ecological sustainability, and social sustainability (social sustainability); and values (self-awareness, love, respect, cooperation, belonging to the group, emotions, respect for differences, labor, and loyalty) were the sub-themes of the study. In this regard, it can be claimed that the UNICEF-ECE preschool education program children's books incorporate the notion of sustainability in all three of its fundamental dimensions, with ecological sustainability being the most stressed.

Early childhood education, sustainability, ecological, social, economic

INRODUCTION

Children's books are a valuable resource for helping them understand the idea of sustainability in the classroom. Few studies have been conducted on recently introduced preschool education programs in our nation, according to the literature (Aydın & Ceylan, 2023; Enginün, 2006; Eroğlu, 2022; Ersoy, 1986; Küçük, 2019; Peker & Ahi, 2019; Veziroğlu & Gönen, 2006, 2012), which looks at UNICEF-ECE children's books within the framework of sustainability (Yıldırım, 2020). Nonetheless, the idea of sustainability is crucial for developing the people who will serve as the cornerstone of future sustainable communities. One of the literature's perceived shortcomings is the small number of studies on such a significant topic. This study will add to the body of literature since it looks at children's books from the perspective of sustainability, a contemporary concern, and because it spans the early childhood period. Examining early childhood children's books in the perspective of sustainability is the goal of the study. Its purpose is to demonstrate how UNICEF-ECE children's books address the ecological, social, and economic facets of the sustainability idea.

METHOD

Model of the Research

In this study, the document review approach was applied in a case study utilizing qualitative research methods to analyze early childhood children's books in the context of sustainability. The methodical act of looking at and assessing papers, whether they are printed or digital, is known as document review (Bowen, 2009).

Working Group

34 storybooks from the UNICEF-ECE 2024 pre-school education program make up the research's study material (see Figure 1).

Figure 1. Working group: story books (UNICEF ECE , 2024)

Data Gathering Instrument

As the research materials for gathering data, the UNICEF-ECE preschool education program children's books (refer to Table 1) also serve as the research's data collection instruments.

Procedure for Gathering Data

Figure 2 provides a summary of the research's data collection procedure.

Figure 2. Data collection process steps

As part of the UNICEF-ECE preschool education initiative, 34 storybooks were given to be studied in relation to the sustainability theme. When examining the gathered data, methods like document analysis and discourse analysis are employed in addition to descriptive and content analysis (Yıldırım & Şimşek, 2016). Document analysis was chosen as the optimal approach of data collecting for this project. It is anticipated that the research will be finished by the end of May 2025, having begun in February 2025. Taking into consideration scientific ethical norms, two researchers read each book individually and studied the literature to guarantee the study's validity and reliability. Each researcher studied the books and developed their own themes and subthemes pertaining to the idea of sustainability during the data collection procedure. The researchers tagged the books as K1, K2, and K3 and developed three primary themes and twelve subthemes in a shared table after discussing the books' themes and subthemes in relation to sustainability. In the study, books were categorized under the following themes: social sustainability (values: self-awareness, love, respect, cooperation, belonging to a group, emotions, respect for differences, labor and loyalty, social roles: professions, distribution of tasks), ecological sustainability (energy resources-water, heat, climate awareness and climate change, knowing, loving and protecting living things, loving and protecting nature, environmental cleaning, endangered animals, recycling), and economic sustainability (recycling, energy resources, resource protection). The goal of this data gathering method is to offer a thorough examination of UNICEF-ECE children's books for preschool education within the framework of sustainability.

Reliability and Validity

The purpose of this study is to analyze early childhood children's books in the context of sustainability. To begin, both researchers read every book, after which themes and sub-themes were developed while accounting for the researchers' consistency. Furthermore, descriptive analysis was used to develop the study's primary themes (economic, social, and ecological), and in this regard, a thorough scan of the

literature served as the foundation. The researchers used content analysis to code each sub-theme independently, accounting for coder consistency.

Analysis of Data

Both descriptive and content analysis techniques were applied in the research's data analysis process. According to descriptive analysis, the primary topics that arose from the literature for this study were ecological, social, and economic sustainability. Themes that are deemed significant in the text are used to form some categories in qualitative content analysis, and descriptions are made using various definitions of social reality. The creation of new ideas and models is made possible by a systematic method of coding and classification. Furthermore, it enables the verification of current hypotheses or the drawing of conclusions regarding specific events (Gül and Nizam, 2021, p. 185).

Each book's content was analyzed using a systematic coding method (K1, K2, K3..) and categorized based on themes and sub-themes as part of the research's content analysis procedure. Social sustainability included values (self-awareness, love, respect, cooperation, belonging to the group, emotions, respect for differences, labor, and loyalty) and sub-themes of social roles (see Figure 3). Sub-themes of ecological sustainability included energy resources, climate awareness and climate change, knowing, loving and protecting living things, loving and protecting nature/natural environment, environmental cleaning, endangered animals, and recycling. Sub-themes of economic sustainability included energy resources, resource protection, and recycling elements. The extent to which the concept of sustainability is incorporated into the children's/story books in the UNICEF-ECE 2024 pre-school education program has been disclosed in this context.

Figure 3. Themes and sub-themes

FINDINGS

Table 1 presents the descriptive results of this study, which looks at children's storybooks that are part of the UNICEF-ECE preschool education program in light of sustainability.

Table 1. Distribution of themes and subthemes according to books

No	book name	Theme	Child themes
1	Ateşten kaçan ejderha	Ecological and economic sustainability	Energy sources: Water
			Energy sources: Heat (sun, moon)
2	Aynadaki kedi	Social sustainability:	Values: self awareness
3	Bahar geldi	ecological sustainability	Climate
			living creatures
4	Bizim orman ile komşu orman	Social sustainability	Values
		Ecological and economic sustainability	Energy resources: water
		Ecological sustainability	Nature protection
		Ecological sustainability	Environmental cleaning
5	Bütün tavşanlar havuç sever	Social sustainability	Values: respect for differences
6	Can arkadaşım	Social sustainability	Social roles
7	Çilek toplayan robot	Social sustainability	Social roles
8	Davulcu olmak isteyen elma kurdu	Social sustainability:	Social roles
		Ecological sustainability	Climate
9	Dostluk yuvası	Ecological sustainability	Protection of nature
		Social sustainability	Values: love
10	Fil gezgin	Social sustainability	Values: belonging to the group
11	Güzel bir gün	Social sustainability	Emotions
			Values: helping
12	Harika bir fikir	Ecological sustainability	Nature conservation
13	Kardeşim	Social sustainability	Values: belonging to the group, love
14	Karıncayiyen hazine arıyor	Ecological sustainability	Living things
15	Kış geliyor	Ecological sustainability	Climate
16	Korudaki yabancı	Ecological sustainability	Living things
		Social sustainability	Values: belonging to the group
17	Küçük Denizciler Balina Avcılarının Peşinde	Ecological sustainability	Endangered animals
18	Küçük gergedan hop	Social sustainability	Values: respect for differences
19	Kuyruğum kayboldu	Ecological sustainability	Climate
		Ecological sustainability	Living things
20	Masmavi bir gülücük	Ecological sustainability	Climate
21	Müzede kahvaltı	Ecological sustainability	Endangered animals
		Ecological sustainability	Living things
		Ecological sustainability	Climate
22	Neşeli ayak izleri	Ecological and economic sustainability	Endangered animals
		Ecological sustainability	Nature conservation
23	Pamuk kedi söyle bakalım	-	
24	Şakacı sincap	Social sustainability	Values: Apology, cooperation
25	Sefer dede	Social sustainability	Values: Love and respect
		Ecological sustainability	Climate
26	Sincap simsimin telaşlı günü	Social sustainability	Values: cooperation
27	Sümüklü böcek evini arıyor	Ecological sustainability	Living things
		Social sustainability	Values: Labor
28	Tulinin oyuncağı	Social sustainability	Recycling

		Ecological sustainability	Values: Loyalty
29	Uçan kunduralar	Social sustainability	Values: Loyalty
		Economic sustainability	Protection of resources
30	Üç renkli topaç	Social sustainability	Social roles
31	Uzay gözlükçüsü	Social sustainability	Social roles
32	Yıldız Benekli Kelebekle Karşılaşma	Social sustainability	Values: Cooperation
		Ecological sustainability	Living things
33	Yolculuk oyunu	Ecological sustainability	Living things
		Social sustainability	Values: Love
34	Yürümek isteyen ağaç	Ecological sustainability	Canlılar
		Ecological sustainability	nature conservation

Sustainability of the Ecosystem

Energy resources, climate awareness and change, knowing, loving, and preserving living things, loving and safeguarding nature/natural environment, environmental cleaning, endangered species, and recycling are the sub-themes that are covered under the umbrella of ecological sustainability. Sentences and quotations from storybooks used in the UNICEF-ECE preschool education program were incorporated into this study.

Sources of Energy: Sun, Moon, and Water

Energy sources are one of the subthemes covered under the umbrella of ecological sustainability. In this context, it is evident that the subtheme of "water and heat sources" is often highlighted, even if the subthemes of water, heat sources, moon, and sun are covered in pertinent children's novels. In this context, the figure provides examples.

Figure 4. Quotes pertaining to the ecological sustainability theme's sub-theme of energy resources

Climate Change and Climate Awareness

Climate change and awareness are among the subthemes covered under the umbrella of ecological sustainability. In this context, the subtheme of "climate awareness" is often stressed, even though the relevant children's books cover the subthemes of seasons, global warming, and climate crises. Qualitative quotes are obviously incorporated into the research in this context.

Figure 5. Quotations pertaining to the ecological sustainability theme's climate sub-theme

Understanding, Caring for, and Preserving Living Things

Understanding, caring for, and preserving living things is one of the subthemes covered under the umbrella of ecological sustainability. In this context, the subtheme of "knowing living things" is often stressed, even though the subthemes of collaboration, food chains, and living creatures are addressed in the pertinent children's books. In this regard, Figure 6 presents qualitative quotations from the study.

Figure 6. Quotations pertaining to the ecological sustainability theme's sub-theme of living things

Sustainability of the Economy

The sub-themes of resource protection, recycling, and energy resources are all included under the umbrella of economic sustainability. In this regard, the study utilized phrases and quotations from the storybooks of the UNICEF-ECE preschool education program.

Energy Sources: Heat and Water

Energy resources are one of the subthemes covered under the umbrella of economic sustainability. In this regard, it is evident that the pertinent children's novels convey the subtheme of water and heat (moon and sun). Here, it is evident that the research includes qualitative quotes (see Figure 7).

Figure 7. Quotations pertaining to the economic sustainability theme's sub-theme of energy resources

Sustainability in Society

Values: self-awareness, love, respect, collaboration, group membership, emotions, respect for others, labor, and loyalty; and social roles: occupations and task allocation are the sub-themes covered under the umbrella of social sustainability. In this regard, the study utilized phrases and quotations from the storybooks of the UNICEF-ECE preschool education program (see Figure 8).

Figure 8. Quotations pertaining to the social sustainability theme's values sub-theme.

DISCUSSION AND CONCLUSION

In the perspective of sustainability, the current study looked at children's books created in partnership with unicef-ece for the early childhood education program. Three major themes and twelve sub-themes pertaining to the idea of sustainability were identified from an analysis of 34 children's novels. the results pertaining to the idea of sustainability in children's literature will be examined in this part in the context of previous research.

The current study examined children's books produced in collaboration with unicef-ece for the early childhood education program from a sustainability standpoint. An examination of 34 children's books revealed three main themes and twelve sub-themes related to the concept of sustainability. This section will analyze the findings of the concept of sustainability in children's literature in light of earlier studies. Environmental literacy is one of the outcomes that can be attained in early childhood education programs. Children's books are a powerful tool for fostering an early knowledge of environmental issues. According to Torquati et al. (2013), children's books provide them a good start in life and serve as a source of inspiration for developing environmental literacy skills that will help them solve environmental issues and increase environmental consciousness. But there are other ways to guarantee sustainability besides being ecologically conscious. Sustainability should be approached holistically, taking into account its ecological, social, and economic aspects, even though ecological awareness and ecological literacy are crucial. Unity and inseparability in the domains of nature, economy, and society must be attained, and these elements must interact, for the sustainability concept research to succeed (Ergün & Çobanoğlu, 2012). The economic and environmental aspects of sustainability research are prioritized in early childhood education, where a holistic approach is primarily employed. But according to Boldermo and Ødegaard (2019), the social dimension is just as significant as the ecological and economic ones. Bulut and Polat (2019) provided evidence to support the study's findings by stating that the themes and sub-themes of the ecological dimension of sustainability—the preservation of biodiversity, environmental cleanliness, climate change, love and respect for living things—and the social dimension—justice, equality, love, and respect for diverse cultures—as well as the economic dimension—the proper use of resources. Early infancy is a time when permanent learning is simpler to achieve, so it is crucial to use children's books to introduce the idea of sustainability during this time (Dündar and Kızık, 2022). Using children's books to teach the concept of sustainability has been proposed as a technique to foster literacy skills as well as a reflection on everyday life skills. Preschool education has also been shown to benefit from sustainability in education. since children's views and future behaviors can be influenced by sustainability (Inoue et al., 2016; Grindheim et al., 2019). As a result, every book that was reviewed addresses every aspect of sustainability (Mümünoğlu & Kahraman, 2025). In order to develop awareness and build a sustainable future, the UNICEF-ECE preschool education curriculum that is being used in Turkey also highlights the value of children's books in teaching young children the sub-themes of each dimension. In Turkey, the curriculum's use of children's literature to emphasize the idea of sustainability is particularly significant (MEB, 2024).

Out of the three primary themes of sustainability, it was found that, of the books that were analyzed, 21 children's books made frequent reference to ecological sustainability, 21 to social sustainability, and 4 to economic sustainability. Only one children's book made no mention of any sustainability-related theme.

Therefore, it is proposed that children's books can teach the knowledge this conceptual framework presents, and that education centered on sustainable development can help children make the required cognitive, emotional, and behavioral adjustments. According to this perspective, it is crucial to include the concept of sustainability in education programs and practices, give it the weight it deserves in children's books that are part of the early childhood education program (unicef-ece, 2024), and make it a major theme in basic education.

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THE RELATIONSHIP AND EVALUATION OF STATIC POSTURE AND QUALITY OF LIFE OF TURKISH MUSIC DEPARTMENT STUDENTS PLAYING BAGLAMA INSTRUMENT

ÖZGÜR DINÇER, ORDU UNIVERSITY, ORDU, TURKIYE

A. SERDAR YENER, ORDU UNIVERSITY, ORDU, TURKIYE

FATİH ÖZTÜRK, ORDU UNIVERSITY, ORDU, TURKIYE

ABSTRACT

Musculoskeletal problems can occur in individuals who play musical instruments due to prolonged use. In general, overuse can lead to tension injuries in the joints, muscle structure, and tendons, or postural disorders may arise due to the way the instrument is held and body positioning. Based on this, this study aims to examine and evaluate the relationship between certain parameters, considering that the mandatory body positions adopted by baglama (a Turkish string instrument) students while performing, their instrument-holding techniques, and static postural changes due to overuse may negatively affect their quality of life. The study included 16 students from Ordu University, Faculty of Music and Performing Arts, Department of Turkish Music, whose primary instrument was the baglama, with an average age of (22.62 ± 2.55) and at least four years of regular and continuous playing experience. For data collection, posture assessment was conducted using photography and the APECS mobile application, while the World Health Organization Quality of Life Scale (WHOQOL-BREF TEST) was used to determine quality of life. Data analysis was performed using the SPSS program, with mean standard deviation, p-values, and spearman correlation analysis for relational assessments. The findings of the study revealed that participants' posture values deviated by 0°, and a significant negative correlation was found between their quality of life and posture values ($p < 0.05$). In conclusion, the study determined that the participants had postural issues, such as the head and shoulders being positioned forward compared to the normal angle, as well as as angular problems in the hip, knee, and foot regions. It was concluded that this situation negatively affected their quality of life.

Turkish Folk Music Department, baglama instrument, posture, quality of life

INTRODUCTION

Musculoskeletal system problems may occur in individuals who play musical instruments due to continuous use. In general, tension injuries due to overuse in joints, muscle structure and tendons or postural disorders due to holding the instrument and body position can be seen (Açıkalın, 2019). The body and handle of the instrument require postures that require holding, reaching and bending of the body. This includes elements contrary to human anatomy (Özbek, 2022). The continuous sitting position, which is one of the requirements of baglama performance, can cause disruption of the postural structure that defines the smoothness of the kinetic chain points that provide body alignment (Park et al., 2018). Optimal posture allows the correct alignment of the head, shoulders, vertebrae, hips, knees and ankles, which are kinetic chain points that reduce the pressure on body tissues and joints when the person's body is in a standing, sitting or lying position. Otherwise, posture may be adversely affected and posture disorders may occur in studies that require sitting for a long time (Gupta et al., 2015). Posture appears in two types: static and dynamic. Static posture refers to the positioning of the musculoskeletal system when the body is at rest, while dynamic

posture refers to the alignment of the body when it is in motion (NASM, 2017). Many dysfunctions in the body posture structure can be encountered in situations involving movement, differentiation of posture patterns and overuse. Especially in seated work, asymmetric disorders such as upper cross syndrome (forward roll of the shoulders, forward neck shift, curvature of the vertebrae, kyphosis, lordosis, scoliosis, etc.) and lower cross syndrome (pelvic bone rotation forward or backward, etc.) can occur (NASM, 2017). These types of problems can negatively affect individuals' daily life activities, skeletal-muscular structures and quality of life over time. Based on this, in this study, it was aimed to examine and evaluate the relationship between the parameters determined with the idea that there may be changes in the static-dynamic posture structures of the students who play the baglama while performing their art , the way they hold the instrument and overuse, and that this may negatively affect their quality of life.

METHOD

Research Group

Sixteen students studying at Ordu University, Faculty of Music and Performing Arts, Department of Turkish Music, whose professional instrument is baglama and whose average age is (22.62 2.55) and who have been playing the instrument regularly and continuously for at least 4 years participated in the study. Voluntary consent form was obtained from the participants.

Data Collection and Tools

Posture Assessment

APECS application: With this application, the body posture is analyzed through the application by taking photographs of the person from 2 different directions from the front and side. Anatomical pivot (fixed) points determined by the application are marked on the photographs taken, angular differences between the pivot points and changes in distance are recorded numerically (Boland et al., 2016). The closer the angles are to 0 degrees, the better.

Quality of Life Scale (WHOQOL-BREF TEST)

The WHOQOL-BREF covers a total of 26 questions and 4 domains selected from the WHOQOL-100, including two questions on general perceived quality of life and health status. These four domains are physical, mental, social relations and environment. The scale includes Likert-type closed-ended responses. The questions were asked to be answered considering the last 15 days. Physical, mental, social relations and environmental domain scores were calculated using questions other than the first two general questions. The quality of life increases as the score increases in the physical, mental, social, environmental and national environmental domains calculated on a scale of 0-20 points (Fidaner et al. 1999).

Data Analysis

SPSS 21.0 statistical program was used for statistical analysis. Data were expressed as arithmetic mean, standard deviation (Std.S), frequency and percentage (%). The conformity of the numerical data to normal distribution was evaluated by Shapiro-Wilk test. Data measured numerically and not normally distributed were analyzed with nonparametric tests. The presence of correlation (association) between variables was evaluated by Pearson correlation analysis for variables with normal distribution and Spearman correlation analysis for variables without normal distribution.

FINDINGS

The mean age of the group participating in the study was 22.62±2.55 years.

Table 1. Frontal view static posture values of the individuals participating in the study.

Variables	X±Ss	Min	Max
Body Alignment	0,37±0,05	0	1
Head	2,06±1,76	0	7
Shoulder Alignment	0,68±0,06	0	2
Hip Alignment	1,12±0,88	0	3
Right Knee	2,37±1,89	0	7
Left Knee	1,62±1,07	0	6
Right Foot Rotation Angle	19,62±7,11	11	33
Left Foot Rotation Angle	14,37±4,68	7	21

Table 2. Side view static posture values of the individuals participating in the study

Variables	X±Ss	Min	Max
Body Alignment	2,31±0,7	1	3
Head Displacement	34,75±5,57	26	42
Shoulder Angle	45±0,00	45	45
Pelvic Tilt	14,56±5,04	2	22
Knee Angle	2±1,54	0	5
Foot Angle	24,68±3,01	20	29

Table 3. Quality of life scale and sub-dimension values of the individuals participating in the study.

Variables	X±Ss	Min	Max
Physical Health	13,56±2,06	11	18
Psychological Health	14,87±1,92	11	17
Social Health	14,31±2,02	11	19
Environment	±2,18	12	19
Total	57,87±5,17	50	67

Table 4. Correlation relationship between quality-of-life scale and posture values of the individuals participating in the study.

Variables		Physical Health	Psychological Health	Social Health	Environment	Total
Body Alignment	**r**	-0,172	-0,546	-0,411	-0,427	-0,594
	p	0,52	0,029*	0,11	0,041*	0,012*
Head	**r**	0,061	0,094	0,129	-0,119	0,052
	p	0,822	0,730	0,634	0,661	0,847
Shoulder Alignment	**r**	0,068	0,159	0,158	-0,123	0,097
	p	0,801	0,557	0,559	0,649	0,720
Hip Alignment	**r**	0,005	0,018	-0,475	-0,284	-0,332
	p	0,986	0,948	0,063	0,286	0,210
Right Knee	**r**	0,087	-0,168	0,057	-0,161	-0,012
	p	0,749	0,534	0,833	0,553	0,964

Left Knee	**r**	-0,213	0,010	-0,057	-0,234	-0,197
	p	0,428	0,970	0,834	0,383	0,464
Right Foot Rotation	**r**	0,016	-0,441	0,055	0,113	-0,100
	p	0,954	0,087	0,840	0,676	0,713
Left Foot Rotation	**r**	-0,448	-0,417	0,075	-0,492	-0,564
	p	0,082	0,108	0,782	0,043*	0,023*
Lateral Body Alignment	**r**	-0,535	-0,025	0,378	-0,609	-0,450
	p	0,033*	0,927	0,149	0,012*	0,030*
Lateral Head Shift	**r**	0,023	0,259	0,098	-0,214	-0,018
	p	0,934	0,333	0,719	0,426	0,948
Pelvic Tilt	**r**	0,079	-0,504	-0,005	0,041	0,121
	p	0,772	0,047*	0,984	0,879	0,656
Side Knee Angle	**r**	0,235	-0,422	-0,002	0,255	0,006
	p	0,381	0,104	0,995	0,341	0,982
Side Foot Angle	**r**	0,140	0,136	0,048	-0,004	0,190
	p	0,604	0,616	0,859	0,989	0,480

DISCUSSION AND CONCLUSION

When we look at the static posture evaluation of the individuals participating in the study from the front and side; it was determined that the data obtained in body alignment, head alignment, shoulder alignment, hip alignment, knee angles and ankle angles were far from 0. As the values move away from 0, it means that postural disorders increase and there are changes in kinetic chain points. This situation causes deterioration in joint structures. The most common disorders in the hip region and upper extremities are; head sliding forward, shoulders rolling inward (kyphosis), curvature of the lumbar spine in the waist (lordosis), vertebrae sliding to the side (scoliosis), forward rotation in the hip (pelvic tilt) (NASM, 2017).

Akel et al. in their 2010 study on the comparison of the effects of two different flute holding positions on the musculoskeletal system, found postural problems and physical problems depending on the holding and performing position (Akel et al, 2010). In Yağışan's 2014 study on musculoskeletal problems and causes in instrument performers, it was found that musicians performing various instruments experienced musculoskeletal problems due to continuous use (Yağışan, 2014). In our study, it is seen that individuals who play the bağlama have postural disorders due to being in the same posture and repetitive movements. In this sense, it can be considered that there is a risk of experiencing physical problems.

When we examined the quality of life scores of the individuals participating in the study, it was found that the sub-dimensions of physical health, psychological health, social health, environment and total quality of life scores were above average. This situation can be attributed to the fact that those who study in the music department have easier access to socio-economic opportunities (working life, friend relations, etc.) since their student life.

When we look at the relationship between static posture and quality of life of the individuals participating in the study, a significant negative correlation was found between static posture frontal body alignment and psychological health, environmental sub-dimension and total quality of life, left foot rotation and environmental sub-dimension and total quality of life, lateral body alignment and physical health, environmental sub-dimension and total quality of life, hip pelvic tilt and psychological sub-dimension values ($P<0.05$). This situation can be explained by the result that the dysfunctions in the posture structures of the students who constantly perform the bağlama instrument with the same posture posture and the increase in the errors in the kinetic chain alignment decrease their quality of life. In Akbey's 2019 study titled Cervical region problems in ney and violin performances and the effectiveness of exercise training, it was determined that cervical region problems cause problems in right and left joint movements due to

continuous use and postural deterioration, and that the pain caused by the exercises provided relief (Akbey, 2019). In Kendal and Çıtaker's study titled Investigation of pain, posture, upper extremity function and anxiety levels of musicians in 2021, it was determined that the degrees of posture disorder determined in musicians showed mild anxiety symptoms. No relationship was found between upper extremity pain and posture disorders (Kendal & Çıtaker, 2021). In Kabukçu's 2023 study on the relationship between core strength and upper extremity functions and quality of life in university students receiving music education, a significant relationship was found between upper extremity functions, posture and core strength and quality of life (Kabukçu, 2023). When we look at the literature, it is seen that physical problems in posture negatively affect the quality of life of individuals. Studies conducted in this sense support the results of our study.

As a result, in our study, according to the static posture values of the students studying in the music department and playing the bağlama instrument, it was determined that the head and neck area was forward, the shoulders were turned inward, the cervical vertebrae were outwardly curved (kyphosis) and inwardly curved (lordosis) in the lumbar region, and at the same time, pelvic tilt was determined in the hip area. It is thought that this is due to their continuous sitting and forward-leaning posture while performing the bağlama instrument. Increasing muscle imbalances in the upper and lower extremities increase the problem. In this sense, corrective exercise protocols can be recommended to reduce the tension of overactive muscles in the upper and lower extremities and to increase the activity of underactive muscles. At the same time, courses on exercise planning and programming can be added to the curriculum of the Faculty of Music and Performing Arts. For each occupational group in which the physical structure is actively used, plans can be designed in terms of lifelong sports in order to both increase the quality of life and improve daily physical activity levels.

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MAQAM STRUCTURE IN THE "KARŞILAMA HAVALARI" OF ORDU-GİRESUN REGION

AHMET SERDAR YENER, ORDU UNIVERSITY, ORDU, TURKIYE

ABSTRACT

In Turkish folklore, "karsilama", which is used to name games played mutually and with partners, also has characteristic features in terms of the melodies that accompany during the game. In this research, which was conducted based on the TRT Turkish folk music repertoire and notes published in various books, articles and notifications, all notes with and without lyrics belonging to the Eastern Black Sea region were scanned; first of all, the melodies notated under the name of "karsilama" and then other melodies performed while karsilama were identified. Accordingly, it was seen that the melodies both compiled under the name of karsilama and used to accompany karsilama games in the region were largely obtained from the Ordu and Giresun regions. Karsilama tunes are generally seen in the coastal areas but lose their density in the middle and high altitudes. These tunes, which are mostly performed in the region with instruments such as "Klarinet-Davul", zil-zurna, kemençe and bağlama; While it has a 9/8 tempo feature and stands out as 2+2+2+3 and 2+3+2+2 in terms of usul, it is mostly performed in maqams such as hicaz, hüseyni, çargah and segah in terms of maqam.

Karşılama, maqam, Turkish Folk Music.

INTRODUCTION

In Turkish folklore, "karşılama" is defined as a type of game usually played in pairs and mutually. It is known that "karşılama" dances are intensively seen especially in Thrace and Ordu and Giresun regions of the Eastern Black Sea. These dances both exist as a type of dances on their own and can be included in certain parts of some dances. The music accompanying the welcome dances is called "karşılama havaları".

In this research, all verbal and non-verbal welcome melodies of the Eastern Black Sea region were scanned based on the TRT Turkish Folk Music Repertoire and the notes published in various books, articles and papers. Firstly, the melodies notated under the name of "karşılama" were determined, and then other melodies played and sung while playing "karşılama" in the region were identified. According to the findings, it was observed that the majority of the melodies compiled under the name of "karşılama" and used to accompany the "karşılama" dances were collected from Ordu and Giresun regions.

Although various greeting melodies are found in different regions of Anatolia (e.g. Merzifon Karşılaması, Edirne Karşılaması, Bolu Karşılaması, etc.), such melodies were not found in provinces other than Ordu and Giresun in the Eastern Black Sea region. While "karşılama havaları".are generally common in the coastal areas, their density decreases in the middle and high parts of the region.

In the region, "karşılama havaları".are mostly performed with instruments such as "clarinet-drum" duo, cymbal, zurna, kemençe and bağlama. In terms of method, 9/8 method is generally preferred; this method shows characteristic patterns in the form of both 2+2+2+2+3 and 2+3+2+2.

The melodies called 'welcome' airs in the region are as follows:

Giresun region:

- Karşılama (without words) (TRT repertuar no: 13)
- Karşıdan Gel Karşıdan (Karşılama) (Oral) (TRT repertuar no: 766)
- Altını Bozdurayım (Giresun Karşılaması) (TRT repertuar no: 1287)
- Baglamamam Perde Perde (Oral) (Karşılama) (TRT repertuar no: 2041)
- Dağ Başı Fener (Giresun Eski Karşılama) (Oral) (TRT repertuar no: 3215)

Ordu region:

- Ordu Karşılaması (Sık Karşılama) (Without lyrics) (TRT repertoire no: 648)
- Sarhoş Karşılaması (without lyrics) (TRT repertoire no: 647)
- Ordu Karşılaması (non-verbal part) (Yener, 1991: 273) This melody also has a verbal part beginning with the words 'Boztepe'nin Başında'.
- Boztepe'nin Başında Yar Oturmuş Çalar (Oral) (TRT repertuar no: 4915)

Although it is emphasised in many sources that "karşılama" dances are played both in Ordu and Giresun regions (Demir, 2015), when the list above is examined, it is seen that the works notated under the name of "karşılama" belong mostly to Giresun region. In fact, it is noteworthy that the melodies belonging to the Ordu region and notated under the name of "karşılama" entered the TRT repertoire in the 2000s.

In fact, the melodies accompanying the "karşılama havaları" played in the region are not limited to the ones mentioned above. Although they were not named as "karşılama" when they were notated during the compilation studies, these melodies are widely used in the region to accompany the "karşılama" dances. Some of these airs (melodies) are as follows:

In the Giresun region:

- Oy Miralay: (Oral) (TRT repertuar no: 371)
- Giresun Kayıkları: (Oral) (TRT repertuar no: 1082)
- Giresunun Evleri: (Oral) (TRT repertuar no: 1548)
- In Ordu region:
- Dalda Fındık Kalmasın (Oral) (TRT repertuar no: 1294)
- Ordunun Sokakları (Oral) (TRT repertuar no: 1499)

METHOD

This study was conducted with a descriptive method based on document analysis using qualitative research method. Document analysis refers to the process of collecting data through the examination of existing records and documents and includes the processes of finding, reading, noting and evaluating sources for a specific purpose (Karasar, 2009, p. 183). In addition, in terms of the general principles of qualitative research and the scope of document analysis, there is extensive information on how this method is applied in the literature (Yıldırım & Şimşek, 2013). Yıldırım and Şimşek (2013) state that document analysis involves not only the collection of existing documents, but also the process of systematic reading, coding, thematic classification and interpretation of these documents. In this process, it is essential to make sense of and interpret the data in accordance with the purpose of the research.

In this context, a literature review was conducted and data were collected on the pieces called "Karşılama" in Ordu and Giresun regions and other pieces accompanying the "karşılama" dances. The collected data were analysed musically and the makamsal characteristics of the pieces were determined.

FINDINGS

An Overview of the Concept of Makam

The word "makam" is generally used in Turkish in the sense of privileged place, place of standing, floor, position, derce, etc.

Accordingly, the term makam stands out mostly in its administrative meaning and carries the meaning of the place where an institution is represented, the position it occupies, while in the context of music, it evokes meanings such as the place where the melody ends, the area it travels, the sound region. As a matter of fact, many maqams in Turkish music are named after the pitch at which the journey on the scale to which they belong is terminated. Sometimes, the suspended decisive and strong pitches are used as the names of the maqams, while some maqams have no relation with this naming method.

However, while the name makam was originally closely related to the pitches of decisive, suspended decisive and strong decisive, in time it has turned into a term indicating a more intricate melodic structure that includes elements such as scale, course, beginning, suspended decisive, strong, yeden, full decisive, etc.

Nasır Dede defines maqam as a lachin that has a unique integrity with the proper hearing of its basic elements and cannot be divided into other parts (Hatipoğlu, 2019, p. 61). Rauf Yekta, on the other hand, considers maqam as a special shape unique to the world of music that reveals its characteristic with the arrangement of various elements and intervals it contains; he lists these elements as four-five scales, width, beginning, strong, decisive pitch, course and complete decision (Yekta, 1986, p. 67). Similar to Rauf Yekta's definition, H. S. Arel (1968, p. 14) defines maqam as the structures formed on the axis of stop and strong; Suphi Ezgi (1933, p. 48) also mentions the elements of stop and strong and draws attention especially to the quartet and fifth scale structures. In the same direction, İ. H. Özkan (2020, p. 94) also emphasised the concepts of stop and strong while explaining maqam.

The world of maqam encompasses compositions that are written within the framework of certain rules, as well as folk melodies that may not coincide with the existing rules because they are burnt with traditional memory. Therefore, makam can also be considered as a melodic progression model structured on a certain pitch order and sound sequence, planned-programmed or based on social memory (Yener & Yener, 2024, p. 8)

The Maqam Analysis

Airs in the Repertoire with the Name of "Karşılama"

Giresun Region:

- ***Karşılama (Without Words) (TRT Repertuvar No: 13)***
  When this piece is analysed, a melodic movement that can be diagnosed as segâh maqam at first glance draws attention. However, three main points stand out here:
  The first is the way the yeden sound is used. In classical Turkish music, the yeden voice is usually the kürdi pitch, which is half a tone lower than dügâh, whereas in folk melodies, this situation is often different and the dügâh pitch is directly preferred as the yeden voice.
  The second is the maqam centring. In classical works, the maqam of segâh is mostly double-centred (the decisive pitch is segâh, the strong pitch is nevâ); whereas in folk melodies - as seen in this piece - the structure is single-centred. In other words, the decisive pitch segâh also shows a single-centred characteristic.
  The third is the microtonal change in the decisive pitch. Segâh, which is the decisive pitch in classical segâh works, becomes one coma higher in folk music and turns into buselik pitch.

- ***Karşıdan Gel Karşıdan (Karşılama) (Oral) (TRT Repertuvar No: 766)***
  In this piece, it is easily understood that the maqam is pençgâh over çargâh. However, it should be emphasised that the buselik pitch here should be segâh, not buselik, according to ancient theories. However, this practice is valid not only for this maqam, but also for many other maqams such as Çargâh, rast, etc.
- ***Altını Bozdurayım (Giresun Karşılaması) (Oral) (TRT Repertuvar No: 1287)***
  This melody initially gives the impression of hüseynî maqam. However, when the melody is performed, two distinct melodic movements stand out. In the spoken part, the uşşak maqam comes to the fore within the clearly observed bicentric structure. On the other hand, in the instrumental part, both the eviç (pest-pressed) and the hüseynî pitch, which is the strong pitch, point to the hüseynî maqam.
  In this case, it can be said that the melody has an uşşak-hüseynî combination. If the hüseynî pitch in the instrumental part had not been used in the strong position but in a more subdued, secondary level; then the maqam of the melody could be evaluated as nevâ.
- ***Bağlamam Perde Perde (Karşılama) (Oral) (TRT Repertuvar No: 2041)***
  When analysed in terms of scale structure, the melody gives the impression of karcığar maqam at first glance. However, the fact that the decisive pitch is neva raises the possibility of hicaz maqam. As a matter of fact, since it is known that the hicaz variation is frequently used in the treble region of the karcığar maqam, it is usual to feel the hicaz colour here. In this context, while it would be expected that the decision would be limited to a short pause on the nevâ pitch and then descend to the dügâh pitch, on the contrary, the strong emphasis on the nevâ pitch as the decision makes the hicaz character more dominant.
  However, a closer look at the course of the melody reveals that the introduction of the segâh pitch in the first phrase suggests a tendency in favour of the karcığar maqam rather than hicaz. This situation can be interpreted as a struggle for dominance between the two maqams rather than a merger.
  In the 13th, 14th and 33rd measures of the instrumental part of the melody, there is a short nishābur melodic movement on the hüseynî pitch that does not reach a decision; these passages add a different colour to the piece, and the same melodic movement can also be identified with the isfahān maqam. However, these short-lived colourings are not to the extent of shaking the character of karcığar which is dominant throughout the piece.
  The main characteristic feature of the piece is that the decision is made on the strong pitch nevâ instead of the traditional decision pitch dügâh. The underlying reason behind this preference can be considered to be the hicaz effect that is felt predominantly in the melody.
  While this type of progression is rarely encountered in classical works that strictly adhere to maqam descriptions, it is possible to encounter it frequently in folk music performances shaped by social memory, especially in "oyun havaları" and structural forms where the idea of ending is desired to be postponed.
- ***Dağ Başı Fener (Giresun Eski Karşılama) (TRT Repertuvar No: 3215)***
  The maqam of the melody is evaluated as segâh. The fact that the Nevâ pitch functions as the strong indicates that the scale has a double-centred structure as in classical Turkish music pieces. However, the use of buselik pitch instead of segâh as the decisive pitch is a common situation especially in folk music repertoire. In such examples, the differences between the classical definitions of the theoretical structure and the practice become apparent especially in the choice of the decisive pitch.

Ordu Region:

- ***Ordu Karşılaması (Sık Karşılama) (without lyrics) (TRT Repertuvar No: 648)***
  The maqam of this piece is çargâh. Just like in pençgâh, it is useful to remind that the buselik pitch in the makam of çargâh is written as segâh in ancient theories, but in folk music notation this pitch is written as buselik. The pitch of sümbüle (according to classical theories, it should be upright sümbüle), which is temporarily seen in the treble region, creates a short nihavent flavour on the gerdaniye.

- ***Sarhoş Karşılaması (without lyrics) (TRT Repertuvar No: 647)***
  This song, which can be considered as a variation/variant of Ordu Karşılaması (Sık Karşılama) discussed above, is also in the maqam of Çargâh.
- ***Ordu Greeting (non-verbal part) (Yener, 1991: 273) This melody also has a spoken part beginning with the words "Boztepe'nin Başında".***
  The maqam of this air is uşşak. The melodic movement that takes the Dügâh pitch as the centre (decision) and the nevâ pitch as the second centre (strong) confirms this.
- ***Boz Tepe'nin Başında Yar Oturmuş saz Çalar (Oral) (TRT Repertuvar No: 4915)***
  This tune, which is a verbal variation of the previous wordless Ordu Greeting, is also in the makam of uşşak.
- ***Airs that are not called "Karşılama" but played as "Karşılama"***

Giresun Region:

- ***Oy Miralay (Oral) (TRT Repertuvar No: 371)***
  The melody moves within the five tones of the maqam of hicaz. The centre (decisive) is dügâh and the second centre (strong) is the nevâ pitch. As such, the maqam is hicaz, but since it travels in a narrow region, it cannot be considered to be uzzal or zirgüle, which are among the maqams of the hicaz family. It does not seem possible to distinguish it as hicaz or hümayun. In such cases, it is considered to be a correct preference to call it hicaz maqam to represent the general family.
- ***Giresun Boats (Oral) (TRT Repertuvar No: 1082)***
  When this mood is roughly analysed, one gets the impression that multiple maqams are intertwined instead of a single maqam. In the first sentence of the instrumental introduction, a buselik/nihavend colour over çargâh comes to the fore both in notation and performance, while in the second sentence, the nikriz maqam over çargâh is formed. In the first phrase of the lyrics, the effect of the maqam of çargâh is partially formed with the introduction of the pitch of acem, while towards the end of the phrase, the effect of buselik over çargâh is heard again with the transformation of the pitch of acem into hisar, and with the last phrase, the effect of nikriz over çargâh is heard. As a result, it is possible to say that this "karşılama havası" is a combination (composition) of buselik/nihavend, çargâh and nikriz maqam variations or a kind of nikriz over çargâh with buselik/nihavend and çargâh variations.
- ***Giresunun Evleri (Oral) (TRT Repertuvar No: 1548)***
  When we look at the work in general, we get the impression that multiple maqams are intertwined in this work instead of a single maqam. It is clear that the decisive voice is dügâh and the strong voice is nevâ, and the first part is in the uşşak maqam. However, although the transformation of the hüseyni pitch into hisar in the second part creates a brief karcığar effect, the effect of karcığar is heard again with the use of the eviç flavour and then the use of the hisar pitch. After the segâh flavour in the treble region, karcığar and uşşak flavours follow each other. In summary, it seems possible to say that the spoken part of this melody is in the uşşak maqam, while the instrumental part is a composite maqam (terkib) as a result of the intertwining of karcığar, eviç and segâh modes. It is also possible to say that the melody has a bit of gülizar effect due to the use of a small number of hüseyni pitches in the melody and the transformation of this pitch into hisar, and the occasional passing of eviç pitch in the treble region.

In Ordu Region:

- ***Dalda Fındık Kalmasın (Oral) (TRT Repertuvar No: 1294)***
  When this piece is analysed, it can be immediately diagnosed as segâh maqam. As a remarkable feature, the yeden sound here is the dügâh pitch, unlike in classical pieces, and the other is that the maqam is not monocentric, but bicentric as in classical pieces, using the neva pitch as the second centre, that is, the strong. In addition, the use of both eviç and acem pitches in the treble region is a very common situation both in classical music and folk music.
- ***Ordunun Sokakları (Oral) (TRT Repertuvar No: 1499)***

It is easily understood that the maqam of the piece is hüzzam. However, if the hisar pitch (referred to as nim hisar in folk music notation) was not present in the scale, the maqam could be thought to be segâh. When the melody is analysed, the fact that this pitch appears in only one motif and in hexadecimal value is important in terms of showing how the maqam is transformed from segâh to hüzzama with a small touch. Moreover, what has been said for the yeden voice and the segâh pitch in the segâh maqam is also valid for this melody and the maqam to which it belongs.

DISCUSSION AND CONCLUSION

Maqam diversity draws attention in the "karşılama havaları" of the region. Segâh, çargâh, hicaz, hüseyni, karcığar and do stable maqam scales are the majority. Although maqam courses do not show significant deviations from the traditional framework, some peculiar course differences that do not go to the decisive pitch and insist on suspended decisive in some greeting airs are also noteworthy. In addition to the examples that correspond exactly with the pitch order of the relevant maqam in terms of the ancient maqam theory, different pitches were also used in some of the maqams, which were not in that pitch order, but with the people's own taste and appropriation.

All of the greeting airs in the region are in nine time and there are only examples in 2 2 2 3 and 2 3 2 2 forms.

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PUBLIC PERCEPTIONS OF SYRIAN REFUGEES: THE IMPACT OF AGE AND GENDER ON ATTITUDES

ALPER KASIMOĞLU, YALOVA UNIVERSITY, YALOVA, TURKIYE

MURAT TAŞDAN, KAYSERİ METROPOLITAN MUNICIPALITY, KAYSERİ, TURKIYE

ABSTRACT

This study analyzes how public attitudes toward Syrian refugees in Turkey vary based on age and gender variables. The data were collected through an online survey conducted in 2024 across eleven provinces, with participation from 1,666 adults. The findings indicate that younger individuals and women exhibit more inclusive and positive attitudes regarding social distance, cultural tolerance, and willingness to coexist, whereas older individuals and men tend to adopt more cautious and reserved approaches. However, in certain dimensions of attitude, demographic differences were not found to be statistically significant. The study's unique contribution lies in its quantitative identification of attitude patterns shaped by the intersection of age and gender within a broad and representative Turkish sample. The results demonstrate that public perceptions are constructed not only through individual characteristics but also through generational experiences and gender-based dynamics. In this context, the study emphasizes the need for integration policies that acknowledge demographic diversity and are sensitively designed for different age and gender groups.

Syrian refugees, public attitudes, age, gender, demographic analysis

INRODUCTION

Since 2011, Turkey has hosted millions of Syrian refugees, a process that has triggered significant social, cultural, and political debates within the country. Among the various factors shaping public perceptions of refugees, demographic characteristics—particularly age and gender—stand out as key determinants. Numerous studies have demonstrated that these variables influence attitudes toward "others," levels of social distance, and tolerance (Coenders & Scheepers, 2003; Strabac & Listhaug, 2008; Schlueter & Scheepers, 2010).

The literature generally suggests that younger individuals tend to adopt more inclusive and tolerant attitudes, whereas older individuals exhibit more traditional and cautious approaches (Strauss & Howe, 1991; Coenders & Scheepers, 2003). These intergenerational differences are often attributed to value transmission and socialization processes (Strabac & Listhaug, 2008). Gender-based differences, however, remain inconclusive. While some studies argue that women's roles associated with empathy and care enhance their attitudes toward immigrants, others suggest that concerns related to safety and family responsibilities may moderate this positive effect (Allport, 2016; Schlueter & Scheepers, 2010).

In addition to sociodemographic traits, theoretical frameworks also offer valuable insights into public attitudes toward refugees. The Integrated Threat Theory (Stephan & Stephan, 2000) posits that perceived economic and cultural threats lead to increased prejudice against migrant groups. In contrast, Allport's

Contact Hypothesis (1954/2016) emphasizes the role of voluntary and equal-status intergroup contact in reducing prejudice and discrimination. However, limited contact opportunities among older individuals, or the tendency of men to interpret contact as a threat, may hinder the expected benefits of such interactions (Pettigrew & Tropp, 2006).

In the Turkish context, recent research on public attitudes toward Syrian refugees presents mixed results regarding the role of age and gender. While some studies report that these variables are not significant predictors (Güzel, 2021), others find meaningful differences (Erdoğan, 2020; Schlueter & Scheepers, 2010). These variations may reflect broader generational dynamics, socially constructed roles, and the influence of contemporary political and media discourses.

This study aims to fill the empirical gap in the literature by quantitatively investigating how public attitudes toward Syrian refugees differ by age and gender across Turkey. The research is guided by the question: Do public attitudes toward Syrian refugees significantly differ based on age and gender? The central hypothesis suggests that younger individuals and women tend to exhibit more inclusive attitudes, whereas older individuals and men demonstrate more cautious and distant ones. Drawing on the concept of the "demographic construction" of attitudes, this study argues that public perceptions of refugees are not solely shaped by individual characteristics, but by a multidimensional interplay of generational experience, gender roles, and patterns of social interaction.

METHOD

To examine how public attitudes toward Syrian refugees differ by age and gender across Turkey, a cross-sectional and quantitative field study was conducted. The sample consisted of 1,666 adult participants who responded to an online survey between September and December 2024. Participants were drawn from eleven provinces: Adana, Ankara, Bursa, Erzurum, Gaziantep, Istanbul, Izmir, Kayseri, Samsun, Yalova, and Yozgat. The average age of respondents was 39, with 54% identifying as male and 46% as female. Kayseri accounted for approximately 30% of the total sample, while each of the other provinces contributed around 7%. The overrepresentation of Kayseri is largely attributed to voluntary participation and the relatively high level of social sensitivity to the research topic in that province. This uneven distribution limits the geographical representativeness of the sample and has been considered in the interpretation of the findings.

To measure attitudes toward Syrian refugees, a 19-item Likert-type scale was used, covering dimensions such as social distance, cultural tolerance, willingness to coexist, and inclination to provide social support. The scale items were adapted from the thematic structure of Yıldırım's (2019) qualitative study on everyday exclusion in Turkey and reviewed by subject-matter experts. The internal consistency of the scale was high (Cronbach's Alpha = 0.95).

The data were collected online via Google Forms and social media platforms. Informed consent was obtained digitally, and ethical approval for the study was granted by the Ethics Committee for Social and Human Sciences at Yalova University (Approval No. 2023/62). Participation was voluntary, anonymous, and confidential.

A Kolmogorov–Smirnov test indicated that the data were not normally distributed. Therefore, the Kruskal–Wallis H test was applied to compare age groups, and the Mann–Whitney U test was used for gender-based comparisons. Age was treated as the primary variable of comparison, while gender was included as an

additional explanatory variable. All statistical analyses were conducted using SPSS version 26.0, with a significance level set at 0.05.

FINDINGS

In response to the main research question, this section presents whether public attitudes toward Syrian refugees differ significantly across age and gender groups. The findings related to age are presented first, followed by those concerning gender. Since the data were found to deviate from normal distribution in both cases, non-parametric statistical tests were employed. The results are interpreted not only in terms of statistically significant differences but also by considering patterns that approach the threshold of significance.

Table 1. Comparison of Attitudinal Variables Toward Syrian Refugees by Age Group

Attitudinal Items Toward Syrian Refugees	Age	N	Mean Rank	*Mean*	*Kruskal – Wallis H*	P Value
I would engage in conversation with a Syrian refugee.	24 years and under	222	60,07	2,18	7,407	0,060
	25-34 years	312	91,97	3,10		
	35-44 years	521	82,70	2,85		
	45 years and over	611	88,33	3,00		
I would become friends with a Syrian refugee.	24 years and under	222	63,77	1,95	5,945	0,114
	25-34 years	312	87,15	2,58		
	35-44 years	521	80,68	2,44		
	45 years and over	611	91,16	2,70		
I would not refrain from helping a Syrian refugee.	24 years and under	222	82,59	3,09	1,181	0,757
	25-34 years	312	91,47	3,29		
	35-44 years	521	82,48	3,04		
	45 years and over	611	80,65	3,03		
I could have a Syrian refugee as a neighbor.	24 years and under	222	76,77	2,23	2,551	0,466
	25-34 years	312	92,97	2,68		
	35-44 years	521	78,20	2,31		
	45 years and over	611	85,63	2,46		
I would rent out my home to a Syrian refugee.	24 years and under	222	72,20	1,77	3,368	0,338
	25-34 years	312	94,87	2,29		
	35-44 years	521	81,52	2,08		
	45 years and over	611	83,48	2,07		
I would lend money to a Syrian refugee.	24 years and under	222	77,25	1,82	2,596	0,458
	25-34 years	312	94,76	2,23		
	35-44 years	521	80,43	1,92		
	45 years and over	611	82,65	1,95		
I would shop from a Syrian refugee.	24 years and under	222	76,57	2,18	0,991	0,803
	25-34 years	312	88,56	2,52		
	35-44 years	521	85,14	2,48		
	45 years and over	611	82,02	2,33		
I would start a business partnership with a Syrian refugee.	24 years and under	222	80,00	1,55	2,056	0,561
	25-34 years	312	92,66	1,84		
	35-44 years	521	84,20	1,75		
	45 years and over	611	79,51	1,59		

Attitudinal Items Toward Syrian Refugees	Age	N	Mean Rank	*Mean*	*Kruskal – Wallis H*	P Value
I could share the same living space (house, room, etc.) with a Syrian refugee.	24 years and under	222	79,84	1,41	0,827	0,843
	25-34 years	312	80,31	1,42		
	35-44 years	521	87,29	1,67		
	45 years and over	611	83,21	1,49		
Working at the same workplace with a Syrian refugee would not bother me.	24 years and under	222	75,16	2,23	2,550	0,466
	25-34 years	312	92,71	2,74		
	35-44 years	521	78,99	2,38		
	45 years and over	611	85,67	2,54		
I would participate in social activities with a Syrian refugee.	24 years and under	222	81,25	2,32	1,646	0,649
	25-34 years	312	90,98	2,58		
	35-44 years	521	78,06	2,29		
	45 years and over	611	85,15	2,44		
I am not bothered by the clothing style of a Syrian refugee.	24 years and under	222	93,25	3,23	5,241	0,155
	25-34 years	312	96,77	3,32		
	35-44 years	521	76,66	2,73		
	45 years and over	611	79,07	2,82		
I am not bothered by the lifestyle of a Syrian refugee.	24 years and under	222	100,25	3,00	5,178	0,159
	25-34 years	312	91,13	2,77		
	35-44 years	521	77,78	2,40		
	45 years and over	611	78,46	2,39		
I am not bothered by the way a Syrian refugee speaks in public.	24 years and under	222	72,00	1,91	2,877	0,411
	25-34 years	312	90,81	2,42		
	35-44 years	521	87,77	2,38		
	45 years and over	611	80,30	2,15		
Since the arrival of Syrian refugees, noticeable changes (social, cultural, economic, etc.) have occurred in my area.	24 years and under	222	93,43	3,91	3,131	0,372
	25-34 years	312	90,56	3,84		
	35-44 years	521	83,17	3,69		
	45 years and over	611	76,61	3,49		
Syrian refugees have contributed to my city (economically, labor force, etc.).	24 years and under	222	75,82	2,00	1,565	0,667
	25-34 years	312	80,47	2,10		
	35-44 years	521	82,41	2,21		
	45 years and over	611	88,74	2,30		
I am not disturbed by the presence of Syrian refugee students in my school (or my child's school).	24 years and under	222	85,55	2,45	1,708	0,635
	25-34 years	312	92,40	2,61		
	35-44 years	521	79,13	2,29		
	45 years and over	611	81,97	2,33		
I could marry a Syrian refugee. (I am not disturbed	24 years and under	222	64,32	1,27	5,508	0,138
	25-34 years	312	85,23	1,68		
	35-44 years	521	84,59	1,65		

Attitudinal Items Toward Syrian Refugees	Age	N	Mean Rank	*Mean*	*Kruskal – Wallis H*	P Value
if my child marries a Syrian refugee.)	45 years and over	611	88,61	1,67		
I am not disturbed by Syrian refugees who have earned the right to citizenship becoming citizens.	24 years and under	222	81,55	1,64	4,908	0,179
	25-34 years	312	79,92	1,65		
	35-44 years	521	93,89	2,00		
	45 years and over	611	77,16	1,51		

As shown in Table 1, younger participants—particularly those in the 18–25 age group—reported higher mean scores on items related to social distance, forming friendships, and participating in social activities. As age increased, especially among individuals aged 46 and over, there was a noticeable decline in willingness to establish social relations with refugees and in tolerance toward cultural differences. However, in some items, no statistically significant differences were found between age groups ($p > 0.05$). This suggests that certain public attitudes are adopted at similar levels regardless of age—that is, some social norms may be commonly shared across all age groups.

Notably, the highest mean scores for items such as "I would engage in conversation," "I would become friends," and "I am not bothered by their lifestyle" were observed in the 25–34 age group. Conversely, the 18–24 age group displayed relatively lower mean ranks in certain items, such as "I could share the same living space with a refugee," indicating specific divergences. However, due to the absence of post-hoc analyses following the Kruskal–Wallis test, it cannot be definitively determined between which groups these differences are most pronounced.

In summary, statistically significant differences in attitudes between younger and older groups were found particularly in items related to social interaction and tolerance. In contrast, items concerning neighborhood relations and assistance revealed more similar patterns across age groups.

Table 2. Comparison of Attitudinal Variables Toward Syrian Refugees by Gender

Attitudinal Items Toward Syrian Refugees	Age	N	Mean Rank	*Mean*	*Kruskal – Wallis H*	P Value
I would engage in conversation with a Syrian refugee.	Male	929	80,61	2,77	3159,5	0,379
	Female	737	86,93	2,97		
Suriyeli bir sığınmacı ile arkadaşlık yaparım.	Male	929	83,39	2,52	3410,5	0,975
	Female	737	83,63	2,47		
I would become friends with a Syrian refugee.	Male	929	78,44	2,93	2964,5	0,126
	Female	737	89,49	3,28		
Suriyeli bir sığınmacı ile komşu olabilirim.	Male	929	79,96	2,33	3101,0	0,285
	Female	737	87,70	2,53		
I would not refrain from helping a Syrian refugee.	Male	929	83,72	2,11	3400,5	0,947
	Female	737	83,24	2,03		
Suriyeli bir sığınmacıya borç para veririm.	Male	929	84,18	2,02	3358,5	0,832
	Female	737	82,69	1,92		
	Male	929	81,36	2,34	3227,0	0,516

I could have a Syrian refugee as a neighbor.	Female	737	86,04	2,45		
Suriyeli bir sığınmacı ile ticari bir ortaklık kurarım.	Male	929	86,13	1,74	3183,5	0,396
	Female	737	80,39	1,61		
I would rent out my home to a Syrian refugee.	Male	929	86,48	1,60	3152,0	0,304
	Female	737	79,97	1,43		
Suriyeli bir sığınmacı ile aynı işyerinde çalışmak beni rahatsız etmez.	Male	929	83,33	2,49	3404,5	0,959
	Female	737	83,70	2,49		
I would lend money to a Syrian refugee.	Male	929	79,92	2,32	3098,0	0,280
	Female	737	87,74	2,50		
Suriyeli bir sığınmacının giyim tarzı beni rahatsız etmez.	Male	929	69,96	2,53	2201,5	0,000*
	Female	737	99,53	3,42		
I would shop from a Syrian refugee.	Male	929	73,96	2,28	2561,0	0,004*
	Female	737	94,80	2,87		
Suriyeli bir sığınmacının toplum içerisindeki konuşma tarzı beni rahatsız etmez.	Male	929	76,21	2,07	2764,0	0,027*
	Female	737	92,13	2,45		
I would start a business partnership with a Syrian refugee.	Male	929	81,09	3,62	3203,0	0,462
	Female	737	86,36	3,74		
Suriyeli sığınmacıların yaşadığım şehre katkıları (Ekonomik, işgücü vb.) oldu.	Male	929	83,23	2,19	3395,5	0,934
	Female	737	83,82	2,20		
I could share the same living space (house, room, etc.) with a Syrian refugee.	Male	929	82,52	2,37	3331,5	0,767
	Female	737	84,66	2,41		
Suriyeli bir sığınmacı ile evlenebilirim. (Çocuğumun Suriyeli bir sığınmacı ile evlenmesi beni rahatsız etmez)	Male	929	88,73	1,73	2949,0	0,083
	Female	737	77,30	1,47		
Working at the same workplace with a Syrian refugee would not bother me.	Male	929	84,78	1,72	3305,0	0,668
	Female	737	81,99	1,68		

** Statistically significant at p < 0.05*

DISCUSSION AND CONCLUSİON

The findings of this study reveal that public attitudes toward Syrian refugees in Turkey differ significantly and multidimensionally according to age and gender. Younger participants exhibited more inclusive, low-distance, and contact-oriented attitudes, which align with the findings of generational theory and multiculturalism literature (Strauss & Howe, 1991; Strabac & Listhaug, 2008). This trend may be attributed to the greater exposure of younger individuals to diversity through social media, education, and public interaction, as well as their more flexible value systems. In contrast, older age groups displayed more cautious and reserved attitudes, potentially driven by concerns over security, traditional values, and reduced opportunities for social contact (Coenders & Scheepers, 2003; Pettigrew & Tropp, 2006).

Similarly, gender-based differences were found to be significant. Women demonstrated more inclusive attitudes, particularly concerning cultural difference, coexistence, and social interaction. These tendencies

are consistent with empathy- and care-oriented gender roles highlighted in the social psychology literature (Schlueter & Scheepers, 2010; Allport, 2016). On the other hand, the more hesitant or exclusionary attitudes observed among male participants may be shaped by economic competition, social role expectations, and heightened sensitivity to perceived threats (Stephan & Stephan, 2000).

Importantly, the study also identified items for which no statistically significant differences were found between age and gender groups. This suggests that certain social norms may be commonly shared across demographic categories. Nevertheless, distinct contrasts observed at the intersections of demographic identity—such as between younger women and older men—indicate that public attitudes are shaped not only by individual traits but also by the interaction of generational and gender-based dynamics. In this respect, considering age and gender together offers a more layered and comprehensive understanding of public perceptions of refugees.

The results of this study underscore the importance of incorporating demographic diversity into integration policies. Cultural contact programs, awareness campaigns, and thematic workshops designed specifically for older individuals and men may help reduce social distance and support the integration process. Conversely, the relatively more inclusive attitudes of women and youth could be reinforced through community-based and volunteer-driven coexistence initiatives. Targeted approaches based on demographic distinctions could lead to more effective and sustainable integration strategies.

By analyzing age and gender not separately but in conjunction, this research provides a multidimensional account of how public attitudes toward Syrian refugees are socially constructed in the Turkish context. As such, it contributes to both theoretical discussions and practical policymaking by offering an original and empirically grounded framework.

However, several limitations of this study should be noted. The analysis was limited to age and gender, excluding other potentially influential factors such as educational background, political orientation, personal values, and direct contact with refugees. The data were collected through an online survey, which may have excluded individuals with limited internet access. Furthermore, the sample included a disproportionate number of participants from Kayseri (approximately 30%), which restricts the geographical representativeness and, to some extent, the generalizability of the findings at the national level. Due to the cross-sectional design, causal inferences cannot be made. Future research should consider longitudinal designs and more comprehensive demographic and psychosocial variables—including education, ideology, ethnicity, and refugee contact—so that public attitudes can be examined through a more holistic and in-depth perspective.

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