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The Role of Sequences in Harmony Education

Maryna Demir
Ibrahim Chechen University, Turkey
https://orcid.org/0000-0003-3095-8650

Utkan Baykal Demir
Ibrahim Chechen University, Turkey
https://orcid.org/0000-0002-9329-1403

Abstract
This study aims to examine how sequences are addressed in harmony textbooks published in Turkey and to highlight their significance in harmony education. Sequences play a crucial role in both thematic and harmonic development, contributing significantly to the enrichment of musical structures. However, it has been observed that sequences are often superficially addressed or limited to practical applications in Turkish harmony education materials. This limitation hinders students' understanding of the theoretical foundations of sequences and their ability to apply them effectively.
The research adopts a qualitative approach, employing document analysis as its primary method. The sample comprises 14 widely used harmony textbooks in Turkey, analyzed for their theoretical explanations, practical examples, and educational treatment of sequences. The data were evaluated using content analysis to identify the role, scope, and deficiencies of sequences in harmony education.
The findings reveal that sequences are generally treated superficially in most harmony textbooks in Turkey and are rarely integrated into broader theoretical contexts. Nevertheless, some textbooks provide more detailed theoretical and practical insights into sequences. The study emphasizes the need for a more comprehensive approach to incorporating sequences into harmony education and offers suggestions for addressing these gaps.
This research serves as a valuable resource for academics and educators in music education, providing guidance on how sequences can be more effectively integrated into educational contexts. The findings also aim to contribute to the improvement of harmony education materials in Turkey. This study offers several recommendations for enhancing the integration of sequences in harmony education. First, educational materials should be developed to provide a detailed explanation of the theoretical foundations and various types of sequences, and sequences should be incorporated as a fundamental topic in the curriculum. Additionally, supporting materials should be provided to help educators utilize sequences more effectively in an educational context, and greater emphasis should be placed on the use of visual and auditory resources to enhance students' understanding of the subject. In line with these recommendations, this study aims to contribute to the improvement of harmony education materials and to provide a framework for a more effective approach to teaching sequences in music education.

Keywords: Sequences, Harmony Education, Harmony Textbooks in Turkey, Diatonic and Chromatic Sequences, Modulating Sequences.

Introduction

Harmony education, as one of the fundamental disciplines of music theory, provides students with the theoretical foundation necessary for analyzing, interpreting, and creatively applying musical structures. In this context, sequences emerge as a significant tool in both thematic and harmonic development of music. Sequences are structures formed by the melodic or harmonic repetition of a specific motif at different pitch levels. They play various roles in music, such as creating tension, enhancing expressive richness, and establishing points of resolution. These characteristics make sequences an indispensable tool in both composition and analytical processes.

Music theory and harmony education have been shaped by different approaches influenced by cultural and historical contexts. In Turkey, classical harmony education has developed based on Western music theory and is conducted within a traditional framework focusing on the analysis and application of harmonic structures. However, an examination of harmony education materials in Turkey reveals that sequences are often addressed superficially or presented with limited information primarily aimed at practical application. This situation is thought to potentially hinder the understanding of the functional role of sequences in musical structures and the development of students' creative skills.

Sequences, beyond being merely an educational material, are a significant tool that contributes to the enrichment of musical expression. In Western music literature, there is extensive research on diatonic, chromatic, modulating, and mixed types of sequences. However, in the context of harmony education in Turkey, it is noticeable that this subject is often addressed within a limited framework. This can be evaluated as a factor that may negatively impact students' understanding of the theoretical foundations of sequences and their process of developing practical proficiency.

The primary aim of this study is to examine how sequences are addressed in harmony textbooks published in Turkey and to identify existing deficiencies in this area. The research seeks to evaluate the functional role of sequences in musical structures and their place in harmony education, aiming to contribute to the literature by addressing these gaps. In this context, through an analysis of harmony education materials in Turkey, the study will propose recommendations for a more effective treatment of sequences. By enabling a more comprehensive and functional approach to harmony education, the research aims to provide a new perspective to the educational context of music theory.

The Russian harmony school offers a broader perspective on the use of sequences, considering them as a fundamental component of harmonic development. Russian music theorists view sequences not only as tools for modulation and transposition but also as structures that enhance musical expression. In contrast, Turkish harmony textbooks primarily address sequences within a basic harmonic context, often within a more limited theoretical framework.

This study, emphasizing the functional roles of sequences in musical structures and their significance in an educational context, also aims to provide a roadmap for enriching harmony education materials. In this regard, the findings obtained will serve as a valuable resource for academics and harmony educators working in the field of music education.

The Purpose and Significance of the Study

The primary aim of this study is to examine how sequences are addressed in harmony education resources in Turkey and to emphasize the importance of this subject in harmony education. The research seeks to explore how sequences are treated in theoretical and practical contexts, the extent to which this topic is comprehensively covered in resources, and to identify existing deficiencies.

Furthermore, the study will evaluate the adequacy of harmony textbooks in Turkey in terms of their coverage of sequences, and based on the findings, recommendations will be developed for improving harmony education materials. In this regard, the study aims both to provide a theoretical evaluation and to contribute to the qualitative enhancement of harmony education.

Sequences are a significant element in the structure of musical works, influencing both thematic and harmonic development. In this context, addressing sequences comprehensively in education provides students with a valuable perspective for understanding and analyzing musical structures. However, it is observed that in most harmony education resources in Turkey, the topic of sequences is treated superficially or in a limited manner. This situation may negatively impact the qualitative development of harmony education.

The significance of this study lies in its evaluation of how sequences are addressed in harmony textbooks in Turkey and its ability to identify deficiencies in this area. The findings have the potential to provide concrete recommendations for the development of harmony education materials. Furthermore, this research highlights that sequences should be regarded not only as a musical tool but also

as one of the cornerstones of harmony education. In this context, it aims to contribute to harmony education by offering guidance to both educators and students.

Methodology

This study is based on the document analysis model, one of the qualitative research methods. Document analysis involves the detailed examination and interpretation of existing written resources related to a specific topic. According to Yıldırım and Şimşek (2018), document analysis encompasses the systematic analysis of written materials containing information about the phenomenon or phenomena being investigated. In this context, harmony education textbooks published in Turkey have been meticulously analyzed regarding how sequences are addressed.

The research model is based on the content analysis approach, evaluating the theoretical information, practice examples, and explanations in the textbooks within specific themes. Content analysis involves organizing the obtained data and interpreting it through themes (Sığrı, 2021). This model was chosen to understand the role of sequences in harmony education and to identify deficiencies in this area. Additionally, the analytical framework provided by the model enabled the systematic evaluation of the findings and the structuring of recommendations for improving harmony education.

Findings

Findings on the Treatment of Sequences in Harmony Textbooks Used in Turkey

This study is limited to the analysis of 14 textbooks widely used in classical harmony education in Turkey. The selected sources are among the most frequently referenced works in academic circles, preferred as course materials in music education departments, and commonly cited in scholarly studies. The selection process was based on specific criteria, including whether the textbooks addressed sequences, their frequency of use as educational materials, and their academic validity.

This study focuses solely on classical harmony textbooks, excluding resources related to Turkish Folk Music Harmony or other music genres. Accordingly, the research aims to analyze the role of sequences within classical harmony education.

Classical harmony education in Turkey has developed based on Western music theory and is structured in accordance with classical harmony rules. The resources used provide theoretical knowledge and practical exercises to help students comprehend harmonic structures. However, the analysis revealed that while some harmony textbooks published in Turkey address the topic of sequences, in others, this subject is treated superficially or inadequately.

Literature Review on the Treatment of Sequences in Harmony Textbooks used in Turkey

Usman (2020), Savaş (2024), and Sınır (2020) state in their studies that sequences are generally divided into two types: harmonic and melodic. While Savaş (2024) distinguishes between harmonic and melodic sequences, he particularly focuses on harmonic sequences in detail. Usman (2020) notes that certain types of sequences are defined and named differently. In his study, he refers to Benward and Seker's Music in Theory and Practice and adopts the terminology used in that book.

Savaş (2024) states that melodic sequences commonly have two types: tonal and real. In a tonal sequence, musical patterns are transposed diatonically without departing from the tonality of the piece. In contrast, a real sequence involves the direct transposition of patterns to another key, maintaining the interval structure unchanged. It is emphasized that real sequences are often used in modulation passages. Sınır (2020) and Usman (2020) share similar views on this subject.

Elhankızı (2012) categorizes sequences as diatonic and modulating, providing an example to illustrate this distinction. However, it is observed that subject is not elaborated in sufficient detail.

Bağçeci (2018) includes only practical exercises related to diatonic sequence types in his study. However, the study does not contain any theoretical explanation of the subject.

It has been observed that the topic of sequences is not addressed in the analyzed sources such as Acim and Sağer (2020), Çakır (2021), Çiçek (2022), Özdağ (2023), Kurtçu (2023), Cangal (2005), Özdemir (2022), and Çelebioğlu (2017).

Discussion

The analysis revealed that harmony textbooks in Turkey generally address the topic of sequences superficially, with only a limited number of works providing comprehensive coverage. This indicates that the importance of sequences in harmony education is not adequately emphasized and that the existing resources contain deficiencies in this regard.

Considering the role of sequences in musical structures and their theoretical and practical contexts, it is essential for resources to address this topic more comprehensively to enhance students' understanding. In particular, the types of sequences found in international literature and their use in various musical contexts should be integrated into harmony education resources in Turkey.

These findings demonstrate that sequences should be regarded not merely as a topic of harmony but also as a fundamental tool that supports musical creativity. Adjustments in educational materials can enable students to understand the theoretical foundations of sequences and enhance their practical application skills.

The Use of Sequences throughout History

Sequences hold a significant place in the structure of musical works, relying on ascending or descending motions with repeated melodic and harmonic shifts. These sequences, which exhibit structural and characteristic diversity, are noteworthy in thematic and textural arrangements, compositional structure, and tonal connections. Additionally, they function as fundamental components of the tonal structure of a musical whole, providing a space where the tonal functional and phonetic characteristics of harmony are demonstrated (Grigoryev, 1981).

Etinger emphasizes the importance of sequences in the harmonic structures of the early Classical period. He states that sequences are a crucial tool both for thematic development of musical material and for organizing tonal structures. Furthermore, he highlights that sequences should be carefully considered in the musical context of the period in terms of their functionality and relationship to tonal structure. According to the theorist, the use of sequences in vocal music is more limited due to the constrained range of the human voice and the articulation-based melodic structure. Vocal music, composed on a smaller structural scale compared to instrumental music, requires fewer sequences involving wide leaps. This limitation primarily stems from the physically demanding nature of the human voice. Additionally, in some classical works, composers deliberately avoid using sequences to align with the expressive character of the form. The range of the human voice sometimes makes it impractical to transpose sequence loops from their starting points.

According to the theorist, Johann Sebastian Bach and his contemporaries gave significant prominence to sequences in their works. Regardless of whether polyphonic or homophonic structures dominated, composers of this period frequently utilized sequences. Notably, composers such as Couperin and Rameau often approached sequences in a diatonic context and associated them with modal structures. This approach aligns Bach with Handel, as Handel's treatment of sequences is particularly noteworthy for its large scale and diatonic foundation. However, Handel's understanding of sequences exhibits a more mechanical structure, whereas Bach created more dynamic and expressive sequences. Bach enriched musical expression by diversifying sequences, moving motifs, and even transitioning seamlessly from one sequence to another. Etinger highlights that Bach systematically employed sequences to construct extensive compositions, emphasizing that technique was considered a significant innovation in 17th- and 18th-century music (Etinger, 1979).

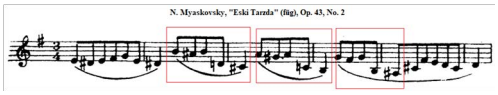
According to Grigoryev (1981), from the second half of the 18th century onward, sequences became a defining feature of sonata and symphonic development sections. In this context, the initial loop of a sequence often represents an emphatic return of the main theme. Particularly in 19th-century music, sequences were used with ascending and descending movements to create tension and resolution. The dynamic qualities of sequences are associated not only with harmonic structures but also with the kinetic energy inherent in melodic movements. Grigoryev emphasizes the intrinsic melodic energy of sequences, noting that this feature became particularly prominent in the 19th century. According to the scholar, in 19th and partly 20th

century music, sequences served not only as tools for development but also as a means of introducing and presenting thematic material. In this context, the loops within sequences form stages of variations that enrich the theme and add depth to the musical structure.

"Sequence. 'Progression.' The repetition of a melodic fragment at different pitch levels. The term originates from the Latin word 'Sequi,' meaning 'to follow.' In Turkish, it is referred to as sekileme; previously, it was also called sekvens. French: sequence, German: Sequenz, English: sequence" (Say, 2005).

"Sequence: the repetition of a melodic or rhythmic motif at different degrees of the scale".

According to Vahromeev (1961), a sequence is referred to as a melodic line that takes the form of a motif repeated at different degrees of the scale (see the example of sheet music No. 1).



Example of sheet music No. 1. Myaskovsky, 'In an Old Style' (Fugue)

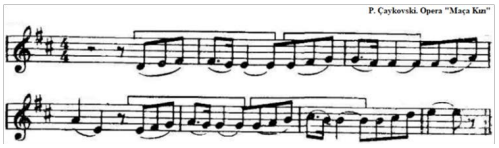
According to Fridkin, a sequence is a structure formed by the repetition of a melodic or harmonic progression at different degrees of the scale or within a specific interval (Fridkin, 1962).

According to Sposobin (1963), a sequence refers to the repetition of a melodic progression at different pitch levels.

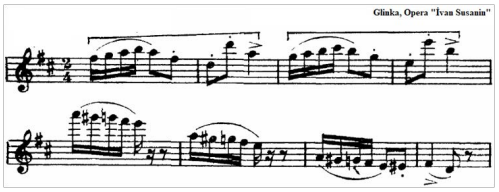
According to Grigoryev (1981), sequences generally possess a variational structure, as each loop represents a modified repetition of the initial loop. This structure creates a unique variation cycle, where the initial loop serves as a theme, and the subsequent loops function as variations.

Sequences are considered one of the most impactful tools in the development of musical material and are widely used by composers, particularly in development sections, for purposes such as increasing tension (or conversely, reducing it) or approaching a climax. The direction of sequence movement also plays a significant role. For instance, ascending sequences often lead to a notable increase in musical tension through heightened dynamics and accelerated tempo. In contrast, descending sequences are more commonly associated with a decrease in dynamics and an overall reduction in tension. However, at times, these movements can produce the opposite effect (Alekseyev & Myasoyedov, 1986).

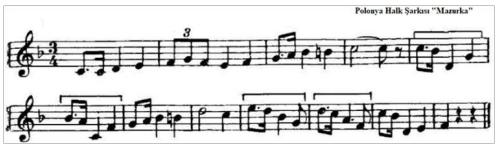
A sequence is the transposition of any melodic or harmonic progression in ascending (see the examples of sheet music No. 2, 3) or descending (see the examples of sheet music No. 4, 5) directions based on specific intervals (beyond the octave as a "perfect 8th," where repetition occurs only at a different interval).



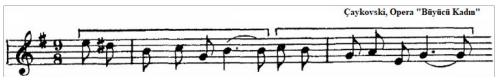
Example of sheet music No. 2. Example of an ascending sequence. Tchaikovsky, Opera 'The Queen of Spades'



Example of sheet music No. 3. Example of an ascending sequence. Glinka, Opera 'Ivan Susanin'



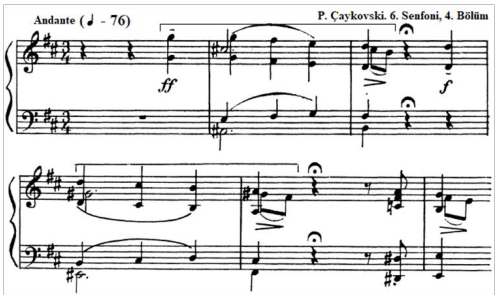
Example of sheet music No. 4. Example of a descending sequence. Polish Folk Song 'Mazurka'



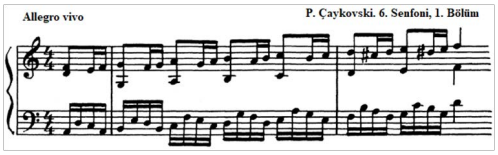
Example of sheet music No. 5. Example of a descending sequence. Tchaikovsky. Opera 'The Enchantress'

The melodic-rhythmic pattern and the harmonic foundation of the transposed musical material are generally preserved; however, it is heard each time at either different degrees or in different tonalities. In this context, a sequence exhibits a structure akin to transposition and often combines with it. The progression underlying the sequence movement is referred to as the "sequence loop" or "sequence motif". At a minimum, a melodic sequence can consist of two pitches at different heights, or a harmonic sequence can comprise two different

chords. Nevertheless, more complex structures can also be formed. The length of a sequence, that is, the number of loops it contains, largely depends on the internal structure of the motif and the tempo of the music. If the loops are large and the tempo is slow, the sequence typically consists of three to four loops (see the example of sheet music No. 6). Conversely, if the loops are short and the tempo is fast, this number can increase significantly (see the example of sheet music No. 7). A sequence can be constructed with a minimum of two loops (Alekseyev & Myasoyedov, 1986).

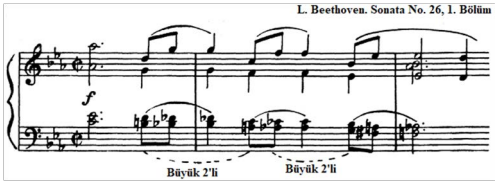


Example of sheet music No. 6. Example of a sequence in a slow tempo. Tchaikovsky. 'Symphony No. 6, 4th Movement'

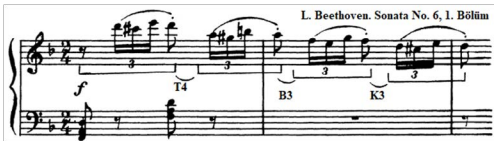


Example of sheet music No. 7. Example of a sequence in a fast tempo. Tchaikovsky. 'Symphony No. 6, 1st Movement'

Alekseyev and Myasoyedov refer to the interval that determines the movement of a motif or loop within a sequence as the sequence step. It is stated that this step can have a fixed structure or exhibit a variable structure depending on the progression of the sequence.

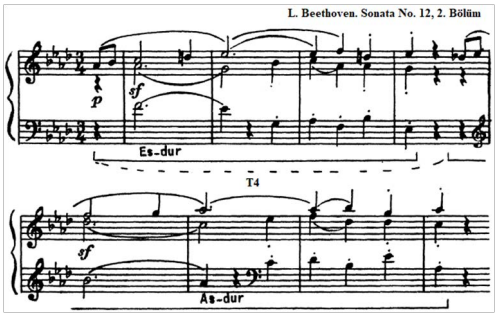


Example of sheet music No. 8. Beethoven. 'Sonata No. 26, 1st Movement'. M2



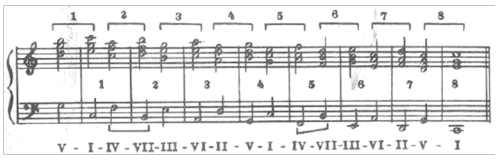
Example of sheet music No. 9. Beethoven. 'Sonata No. 6, 1st Movement'. P4, M3

It is also noted that sequence loops typically move within narrow intervals (seconds, thirds, fourths), although wider intervals (such as fifths or sixths) can also be used. However, movements involving wider intervals are generally perceived as tonal interval relationships rather than sequences. The structural development of a sequence is emphasized to depend on both the internal structure of the motif and the tempo of the music (Alekseyev & Myasoyedov, 1986).



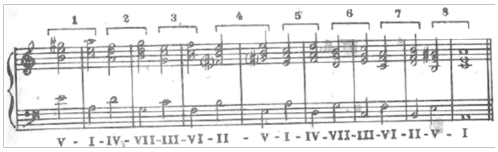
Example of sheet music No. 10. Beethoven. 'Sonata No. 12, 2nd Movement'. Eb Major, Ab Major, P4

According to Tyulin and Privano (1986), a sequence in a major key: a descending second sequence is constructed over the V-I motif within an octave range and consists of eight loops. The final loop exactly repeats the first loop. In the second loop and the fifth measure, instead of the fifth or fourth movement of the bass, tritone progressions (IV-VII) occur. In the sequence, the seventh-degree chord is generally not used in its triadic form; however, in this case, this method is applied conditionally and appropriately in systematically constructed sequences (similarly in the VII-III connection).



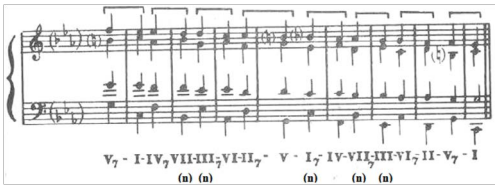
Example of sheet music No. 11

The sequence in a minor key shares many common features with the sequence in its parallel major key: except for the first and last loops, all loops contain the same chords. Additionally, in its basic form, it includes a diminished triad (within the tritone progression, VI-II) and appears in fourth-fifth connections (II-V or V).

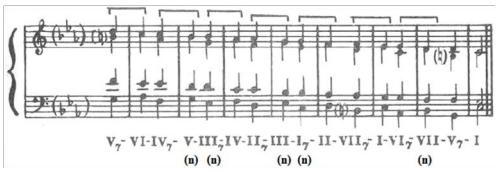


Example of sheet music No. 12

The motif of the sequence can serve the function of resolving a diminished dominant seventh to the tonic (see the example of sheet music No. 13) or the return of a deceptive cadence (see the example of sheet music No. 14). According to examples of these motifs, the resolution of all other seventh chords in the sequence occurs (Tyulin & Privano, 1986).



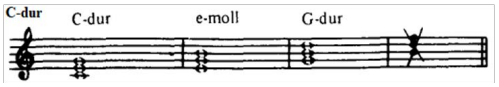
Example of sheet music No. 13



Example of sheet music No. 14

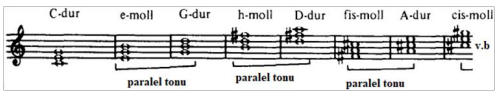
A characteristic feature of all types of sequences, including diatonic ones, is the presence of free voice movements between loops. This can sometimes result in the unidirectional movement of all voices, the use of augmented fourths, voice crossings, or parallel movements of perfect consonances. All of these constitute exceptions that do not violate the principles of classical harmony. In every sequence, the fundamental aspect is the logic of the loop's movement, the momentum of the progression, and the avoidance of perceiving the gaps at the connection points of different loops as harmonic relationships. As Abızova notes, in major keys, the VII degree of the scale is generally avoided during modulations to relative keys, while in minor keys, the II degree is similarly skipped. This is because the VII5/3 chord found on these degrees is not considered the tonic of the relative keys. This practice aims to ensure fluidity and balance within the harmonic structure (Abızova, 2008).

Sequences are referred to as mediant sequences when major and minor tonalities follow each other. If a third-step ascent is chosen for the sequence within the related tonalities, the sequence reaches the boundary of diatonicism after the third loop, as shown in the example of sheet music No. 15.



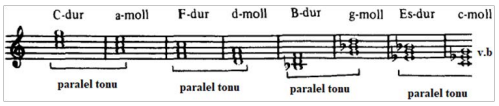
Example of sheet music No. 15

As shown in the example below, if the sequence is constructed based on the upper mediants (III degree tonalities) by moving beyond the boundaries of the main tonality, a natural tonal progression is formed. In this progression, relative major and minor tonalities alternate, and neighboring tonalities can form parallel pairs.



Example of sheet music No. 16. Parallel key

Similarly, the tonal sequence can also be constructed based on the lower mediants, that is, the VI degree tonalities.



Example of sheet music No. 17. Parallel key

Types of Sequences

The characteristics and qualities of sequences combine in various ways to create different forms. These forms can be classified as basic types and derivative varieties. While basic types generally exhibit simpler and more cohesive structures, derivative varieties possess more complex and detailed characteristics. The classification of all sequence types is based on three fundamental criteria: tonal organization, textural properties, and structural-syntactic arrangements.

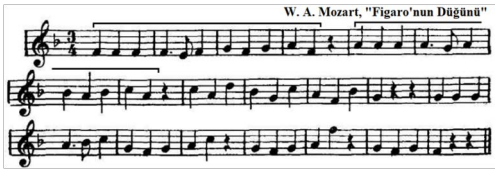
Based on tonal organization, sequences are divided into two groups: diatonic and modulating. Diatonic sequences remain within the boundaries of the existing tonality, while modulating sequences involve changes in tonality. In the classification based on textural properties, sequences are also divided into two groups: basic and derivative structures. Basic structures include melodic, harmonic, or melodic-harmonic sequences. In sequences within this group, the musical structure is defined entirely by structural boundaries and details. Each loop precisely reproduces the small-scale contours of the previous one. Additionally, this group includes sequences that involve vertical pitch shifts.

Derivative structures include freer forms that only partially exhibit the characteristics of sequences. In some cases, there is a mismatch in phrasing and rhythm between melodic and harmonic structures. Here, sequences move independently, without accompanying harmony. In other cases, sequences provide melodic and harmonic freedom over fixed rhythmic patterns (ostinato). From a structural-syntactic perspective, sequences are categorized based on the lengths and structures of their loops. Some sequences consist of loops of equal length, while others feature expanding or contracting loops. Additionally, structures that emerge from the combination or transitions between different loops are included in this classification. Phenomena such as compression between simultaneous loops or sequential transitions particularly enhance the structural flexibility of sequences. These details reveal how sequences are used in musical compositions and how they are diversified through various structures (Grigoryev, 1981).

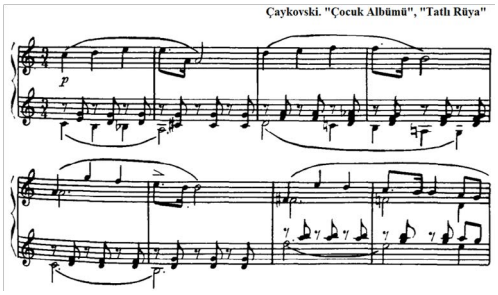
According to Grigoryev (1981), a special type of sequence is characterized by extensive successive repetitions. These sequences combine the stability of tonal organization with the accuracy of modulating sequences (to be explained below) and are shaped by successive textural variations of the loops. Additionally, these structures allow for larger-scale arrangements within the musical form.

Grigoryev points out the existence of sequence-like structures established at specific intervals that partially resemble this type of sequence. These structures create sequence-like relationships between the beginnings of adjacent musical sections. Such connections can particularly be observed between phrases within a period. Thus, the sequence becomes functional not only through small loops but also between larger musical structures.

Sequences can appear in definite and indefinite forms, as shown in examples of sheet music No. 18 and No. 19.



Example of sheet music No. 18. Example of a definite sequence. Mozart. 'The Marriage of Figaro'



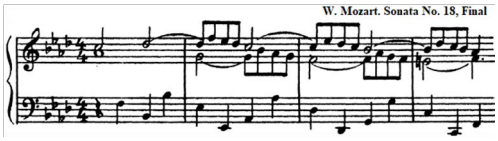
Example of sheet music No. 19. Example of an indefinite sequence. Tchaikovsky. 'Children's Album,' 'Sweet Dream'

As outlined below, Alekseyev and Myasoyedov classify sequences as follows (Alekseyev & Myasoyedov, 1986):

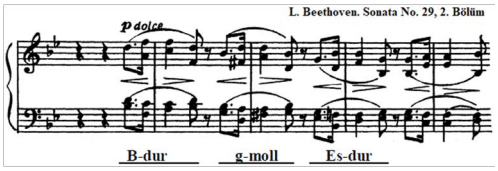
Types of Sequences	Definition	Subtypes	Characteristics
Tonal Sequence	Does not exceed the boundaries of the current tonality; loops are transposed between different degrees within the same tonality.	None	The melodic-rhythmic structure and harmonic pattern are preserved. Formed through the systematic arrangement of tonal chord structures. Transitions occur without disrupting the integrity of the sequence.

Modulating Sequence	Relies on continuous changes in tonality during its progression.	Chromatic Sequence Transposed Sequence	Built on the same degrees in different tonalities. Includes tonal chord relationships or intervallic transitions.
Chromatic Sequence	Develops between closely related tonalities.	Subtypes of Modulating Sequence	Transitions occur between closely related tonalities. The tonal slope is maintained.
Transposed Sequence	Occurs between tonally distant keys.	Subtypes of Modulating Sequence	Broad and complex transitions occur between distant tonalities. Tonal boundaries are exceeded. Generally, wider intervals are used.

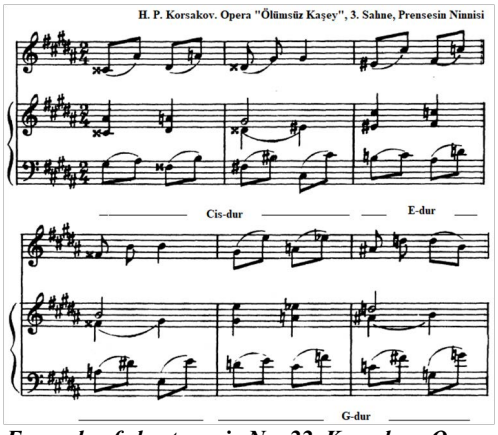
In the examples below, the types of sequences are presented in the following order: tonal (diatonic) sequence (see the example of sheet music No. 20), followed by two modulating sequences – chromatic (see the example of sheet music No. 21) and transposed (see the example of sheet music No. 22).



Example of sheet music No. 20. Mozart. 'Sonata No. 18, Finale'



Example of sheet music No. 21. Beethoven. 'Sonata No. 29, 2nd Movement'



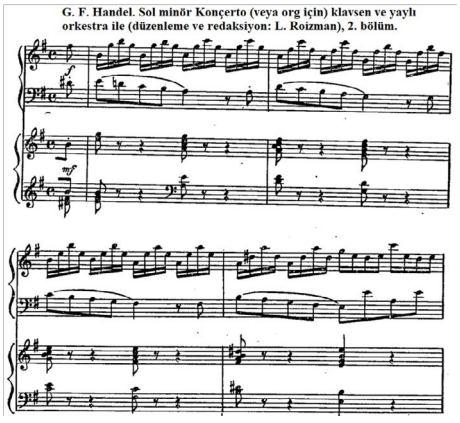
Example of sheet music No. 22. Korsakov. Opera 'Kashchey the Immortal,' Act 3, Princess's Lullaby

According to Grigoryev (1981), sequences are divided into two main groups based on tonal structures. The first group, tonal (diatonic) sequences, consists of loops confined to diatonic degrees within the same tonality. The second group, modulating sequences, transitions between different tonalities, resulting in a broader and more expansive structure.

Diatonic Sequences

According to Abızova (2008), diatonic sequences are defined as sequences in which all loops use the material of a single tonality and do not deviate from its natural structure. These sequences are also referred to as tonal sequences.

Additionally, while Abızova uses the terms "diatonic" and "tonal" synonymously, Grigoryev (1981) associates the term "diatonic" with "internal-tonal" sequences. Alekseyev and Myasoyedov (1986), on the other hand, directly refer to this type of sequence as "tonal." These differing terminological approaches highlight the interdisciplinary variety in the classification of sequences.

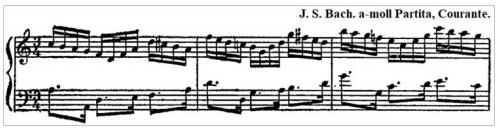


Example of sheet music No. 23. Example of a diatonic sequence. Handel. 'G minor Concerto (for harpsichord or organ) with harpsichord and string orchestra (arrangement and editing: L. Roizman), 2nd movement'

According to Etinger (1979), diatonic sequences hold a significant place in early Classical period harmony and often have a broader developmental scope compared to chromatic sequences. Etinger notes that these sequences typically consist of two or three loops, although the number of loops can be greater. Diatonic sequences, being based on natural tonal structures, are closely associated with 19th-century folk music examples.

According to Abızova (2008), diatonic sequences play a significant role in the development of thematic material and are often encountered in the development sections of musical forms. These sequences are particularly found in the second phrases of periods, and sometimes in the first phrases as well. They are frequently used as a tool for extending a period or as an addition to it. In larger forms, diatonic sequences commonly appear in the less stable, elaborative sections of the form-such as development sections, middle sections, and transitions.

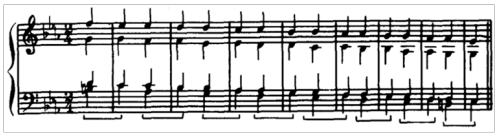
In addition to diatonic sequences, Etinger (1979) notes that transitions made with third intervals create a more refreshing effect compared to the more static transitions made with seconds. The use of third intervals enhances the dynamism of diatonic sequences, strengthening their impact on harmonic development. Etinger emphasizes that this type of dynamism becomes particularly pronounced in cases where the sequence loops are shifted with wider intervals and ascending motion.



Example of sheet music No. 24. Bach. 'A minor Partita, Courante'

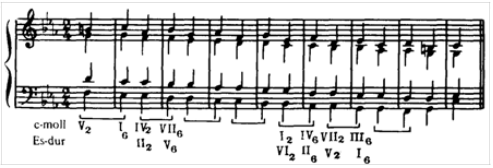
Characteristics of Minor Diatonic Sequences

Abızova (2008) states that the VII degree of the harmonic minor scale forms augmented intervals (seconds, fourths, and fifths), which are avoided in diatonic sequences by using the natural minor scale. Highlighting the similarity of the natural minor scale to its parallel major, the scholar emphasizes that this resemblance creates short-term transitions and functional changes in a tonal context. Additionally, Abızova notes that diatonic sequences in a harmonic minor context merge harmoniously with preceding and subsequent material, offering a fluid structure.



Example of sheet music No. 25

Abızova (2008) emphasizes that the natural minor scale shares a similar tonal structure with its parallel major. The characteristic leading tone of the minor scale balances these tonalities in terms of their fundamental tonic functions. During the sequence process, a temporary deviation or short-term transition through the natural minor often leads toward the parallel major. This reveals the law of functional variability, highlighting how sequences gain tonal flexibility.



Example of sheet music No. 26

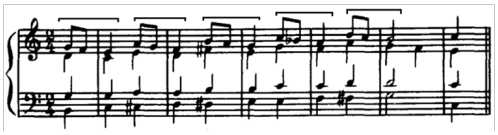
Abızova highlights the similarity between the natural minor scale and its parallel major. The absence of the characteristic leading tone in the minor scale equalizes these two tonalities in terms of their fundamental structure, sharing the tonic function. Consequently, sequences in the natural minor can create temporary deviations and facilitate short-term transitions to the parallel major. During these transitions, the law of tonal functional variability becomes evident.

According to Tyulin's theory of functional transformation, any chord can acquire a temporary function in addition to its primary function, depending on its contextual surroundings. This temporary function particularly supports the tonal flexibility of transitions and the relationship between harmonic connections in sequences. These transitions are sometimes reinforced by cadences, leading to modulation into the parallel major. However, such modulations typically conclude with a return to the primary tonality (Abızova, 2008).

Chromatic Sequences

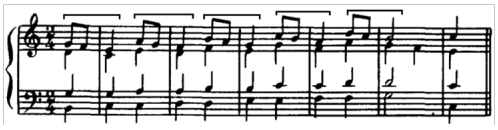
According to Abızova (2008), unlike diatonic sequences, in chromatic sequences each loop is heard in a new tonality, reproducing not only the pitch movements but also the functional relationships of the chords while remaining faithful to the initial motif. Chromatic sequences are also referred to as modulating (where each loop transitions to a new tonality) or transposing (where loops transfer the initial motif to different tonalities) structures.

In chromatic sequences, each loop reproduces an exact harmonic copy of the initial motif; however, the motif is transposed to a new tonality each time. This characteristic enhances the dynamic structure and tonal variety of chromatic sequences, contributing to a richer musical expression.



Example of sheet music No. 27

In diatonic sequences, each new loop replicates only the placement and pitch movement of the motif while remaining within the boundaries of the previous tonality. This characteristic ensures the tonal integrity of diatonic sequences and allows them to exhibit a structurally stable character (Abızova, 2008).

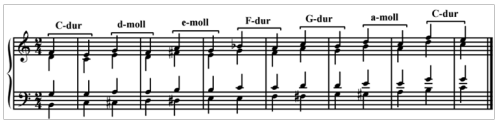


Example of sheet music No. 28

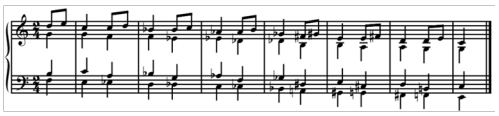
Etinger (1979) notes that chromatic sequences are widely used in both major and minor tonalities, gaining particular prominence during Bach's era. In major keys, chromatic sequences occur with equal frequency in ascending and descending movements, whereas in minor keys, descending movements are generally more dominant. This is attributed to the minor key's retention of its older vocal-intonation character and traditional structure. Additionally, it is emphasized that chromatic sequences, especially when constructed with loops consisting of three or more chords, exhibit a strongly closed structure through the combination of dominant and tonic chords. For instance, the d-minor fugue (measures 15-16) and the e-minor prelude (measures 5-10) from Bach's Das Wohltemperierte Klavier are cited as examples of this. In these cases, the dominant either resolves into the tonic at the end of the loop, creating a definitive closure, or resolves at the beginning of the next loop, dynamically continuing the musical development.

During movements involving different sizes of thirds (for example, major third – minor third – major third – minor third) or perfect fourths, chromatic sequences can transition to distant tonalities compared to the initial tonality. Nevertheless, the tonal relationships between adjacent loops are maintained throughout this process. In chromatic sequences, since both major and minor tonalities exist among the tonal relationships, it is necessary to arrange the loops in accordance with their tonal slope. In contrast, the tonal slope of the loops in a transposed sequence remains unchanged. Therefore, the repetition of the initial motif occurs exactly as it was. This characteristic is the fundamental feature that defines the name of the transposed sequence (Alekseev & Myasoyedov, 1986).

Kuregyan (2011) states that chromatic sequences are formed by transferring an unchanging harmonic progression (loops) to different tonalities according to a fixed principle. Chromatic sequences are generally divided into two types: the first relies on chord structures based on tonalities related to the initial tonality, while the second is arranged according to specific intervals (minor or major thirds, whole tones, etc.). Kuregyan emphasizes that chromatic sequences progress through related tonalities, ensuring connection and continuity in tonal transitions.



Example of sheet music No. 29. Chromatic sequence on relative tonalities

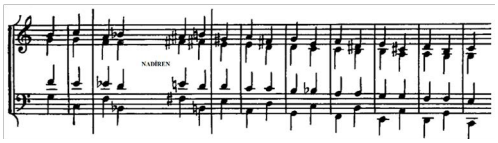


Example of sheet music No. 30. Chromatic Sequence on a Defined Interval (Descending Tones)

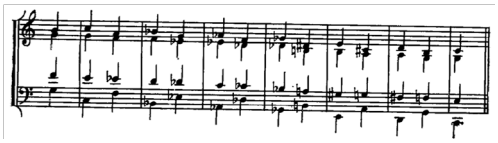
Within a chromatic sequence, it is possible to introduce chromaticism in place of a natural note found between the loops. Additionally, the movement of all voices in the same direction is also acceptable (Kuregyan, 2011).

Modulating Sequences

Grigoryev (1981) categorizes modulating sequences into two main types. The first type occurs through the extension of diatonic chord relationships beyond tonal boundaries. The structural characteristics of these sequences aim to preserve the structural arrangement of the loops as well as their connections to the tonal framework. During the arrangement of loops, major and minor structures alternate, and the sequence progresses in small or large second intervals. Examples of such sequences in Beethoven's works include the slow section of the 2nd Symphony (measures 14-16: D-e-G) and the middle section of the 10th Sonata (measures 17-18: C-d-e). These sequences are prominent as thematic development tools in music from the late 18th and early 19th centuries. In the second type of modulating sequence, each loop differs in pitch and tonality from the previous one. These loops move in semitones, whole tones, or other equal intervals, achieving chromatic tonal relationships. The defining characteristic of this type is that the tonal organization of the loops is preserved through equal-interval transpositions.



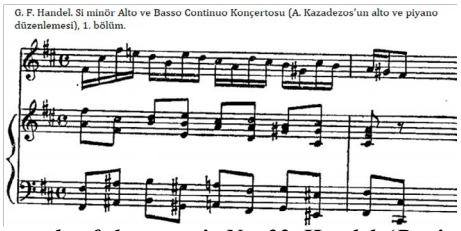
Example of sheet music No. 31. First Type of Modulating Sequence



Example of sheet music No. 32. Second Type of Modulating Sequence

Mixed Sequences

Etinger (1979) notes that during the Baroque period, mixed (diatonic-chromatic) sequences, which serve as a transition between diatonic and chromatic sequence types, were frequently used. It is stated that these sequence types appear uniquely in the works of Johann Sebastian Bach and his contemporaries. In this context, Etinger examines an example from Handel's B minor Alto and Basso Continuo Concerto, emphasizing the significance of such sequences in the repertoire of the period.

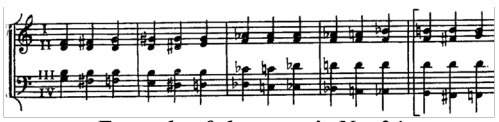


Example of sheet music No. 33. Handel. 'B minor Alto and Basso Continuo Concerto (A. Kazadezos's arrangement for alto and piano), 1st movement'

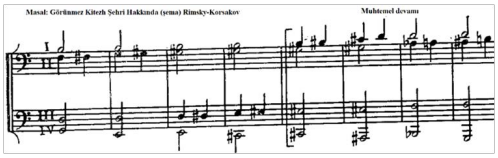
According to Grigoryev (1981), the cadence-like structure of harmonic progressions is a key feature for the sequences that include or could include such structures. This concept was defined by Rameau as "l'Imitation des Cadences" (imitation of cadences). Grigoryev notes that this definition applies not only to the strict diatonic sequences characteristic of the first half of the 18th century but also to various sequence types from later periods. In modulating sequences, in particular, alongside the final type of progressions, diverse chromatic structures can also be observed. The cadence-like structure lends the final loop of a sequence a complementary sense of completeness and a distinct closing character.

Sequences with Vertical Voice Displacements

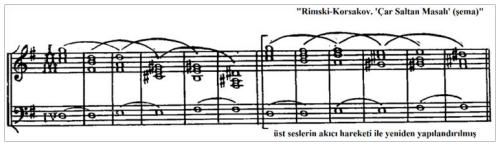
According to Grigoryev (1981), the type of sequence that reproduces connections through vertical contrasts in voice displacement is referred to as a "sequence with vertical voice displacements." In this type of sequence, the preservation of the vertical contrapuntal motion between the initial and derived connections is a fundamental characteristic. This structure allows for the arrangement of melodic and harmonic elements in a more complex interaction through the displacement of voices.



Example of sheet music No. 34



Example of sheet music No. 35. Legend: The Invisible City of Kitezh (schema) Rimsky-Korsakov Probable continuation

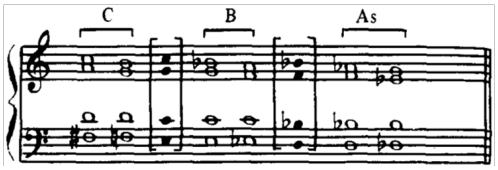


Example of sheet music No. 36. Rimsky-Korsakov. 'The Tale of Tsar Saltan' (schema). Reconstructed with the flowing motion of the upper voices

Grigoryev states that in sequences where three upper voices are vertically displaced, each chord occupies successive melodic positions. In these arrangements, voice groupings such as octaves, thirds, sixths, and sevenths are observed in each loop of the sequence. However, in such vertical displacements, the bass remains unchanged and serves as a stable element throughout the connections. Grigoryev highlights that this type of sequence (sequences with vertical voice displacements) emerges based on contrasts in musical texture and movements of voices that diverge or converge. These movements often follow a stepwise, typically chromatic progression. However, such progressions can occasionally be interrupted by sudden leaps or temporary pauses of specific voices. The stepwise progression in these structures is sometimes so transformed that only the general contours of diverging or converging movements can be discerned. Additionally, sequences involving vertical voice displacements often exhibit a simple melodic content and a purely harmonic structure. Grigoryev explains that these structures primarily occupy a straightforward and fundamental melodic domain in specific arrangements. The scholar further notes that such sequences were widely used in the works of Nikolay Rimsky-Korsakov and his contemporaries to achieve dynamic and dramatic effects. These sequences are typically found in the introductory or connecting sections of a musical-dramatic process and function in the introduction, transition, and sometimes closing sections of a musical structure. However, Grigoryev points out that these structures are not favored for creating dramatic progression or reaching climaxes in large-scale forms, as they lack the complexity required for such purposes (Grigoryev, 1981).

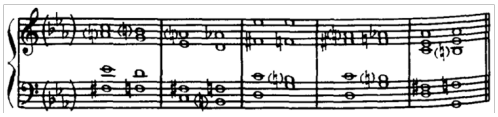
Dominant Chains

Abızova explains that combining two dissonant dominant chords from different tonalities in the initial motif transforms the sequence into a structure referred to as a "dominant chain." For instance, dissonant dominants (DD and D) resolve not into a tonic but rather transition into a new dissonant dominant chord in another tonality. In this scenario, the progression moves downward in whole tones (major seconds).



Example of sheet music No. 37

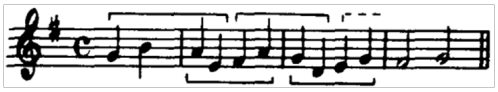
The scholar notes that the most common type of dominant chains involves connecting minor major seventh chords through their subdominant (a fifth below) relationships. These chains have numerous variations. The chords can appear in their root form (seventh chord) or in inversions (6/5, 4/3, 2). The connections between the chords can be made smoothly or through sharper leaps, both of which are standard practices for dominant chords. Additionally, dominant harmonies can be enriched with sixths (VI degree) or varied through alterations. Abızova explains that dominant chains can also be formed by combining diminished seventh chords with inversions of minor major seventh chords. This structure is typically seen in the resolution of an introductory double dominant or in progressions toward dissonant chords on the V degree. Furthermore, combining a diminished chord with another diminished chord in inversion (for example, the movement to the VII degree of a double dominant) can also create these chains. Moreover, various combinations, such as the union of ninth chords with seventh chords or other ninth chords, can also be part of dominant chains (Abızova, 2008).



Example of sheet music No. 38

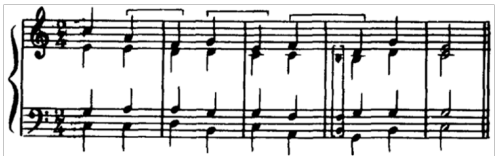
Abızova (2008) provides the following recommendations regarding sequences:

- Before starting the analysis of a piece, the given material should be examined, and the loops of the sequence should be indicated using parentheses.
- Sometimes, the conditions may allow for different interpretations of the sequence's starting point. Regarding the following musical example: These are iambic motifs (starting on a weak beat) that resonate more actively and progress from weak to strong beats.



Example of sheet music No. 39

- The sequence should not conclude with incomplete primary triads (VII5/3 in major keys and II5/3 in minor keys). To prevent this, the definitiveness of a loop should be disregarded, and a freer variant of the motif should be created.



Example of sheet music No. 40

- The sequence is an effective tool for thematic and harmonic development. Therefore, it is generally not used at the beginning of a period.
- In theory, both long sequences (comprising seven connections, ending the motif with an octave repetition) and short sequences (3-4 connections, leading to a subdominant chord suitable for a cadence) can be used. In practice, however, short sequences are usually preferred.
- When independently selecting type of sequence (chromatic or diatonic), its direction (ascending or descending), and its step (degrees, primary triads), the following points should be considered:

a. If the given motif contains a non-diatonic degree (even a conditionally diatonic degree such as the submediant in the harmonic major), it is not possible to use a diatonic sequence.

b. One of the fundamental characteristics of diatonic development is that the motif concludes on a subdominant group chord.

c. The movement of the sequence is determined by the direction of either the bass line or the upper voice. If the extreme voices move in opposite directions, the sequence may be ascending or descending (see the example of sheet music No. 28). If the motif ends on a dissonant chord, the beginning of the next connection will resolve this dissonance. If the harmonic content of the motif includes II or V chords, the next connection will begin with I and establish the descending direction of the sequence.

Conclusion

This study examined how sequences are addressed in harmony textbooks published in Turkey and aimed to provide an evaluation of the importance of this topic in harmony education. The research revealed that in most harmony textbooks in Turkey, sequences are either treated superficially or limited to practical information. This suggests that the existing resources do not fully reflect the theoretical and practical contexts of sequences.

The analyzed resources indicate that sequences should be addressed more comprehensively in the context of harmony education. Although some resources provide theoretical explanations and practical examples of sequences, it is evident that this topic is often covered within a limited scope. This highlights the need for harmony education materials to be enriched and made more comprehensive.

Recommendations

Comprehensive Coverage of Sequences: Harmony education materials in Turkey should be revised to provide detailed explanations of the theoretical foundations and various types of sequences. This approach can help students gain a better understanding of the subject.

Enrichment of Resources: Comprehensive studies from international literature should be adapted into Turkish and included in harmony textbooks in Turkey. Additionally, examples demonstrating the use of sequences in different musical contexts should be expanded.

Curriculum Development: Sequences should be addressed as a fundamental topic in harmony education curricula, supported by theoretical information and practical applications for comprehensive coverage.

Support for Educators: Informative materials and training programs on the importance of sequences and their educational applications should be provided to harmony teachers.

Visual and Auditory Materials: Emphasis should be placed on the use of visual and auditory content to enhance students' understanding of sequences. This can contribute to both theoretical and practical learning processes.

In conclusion, this study provides an evaluation of how sequences are addressed in harmony education materials in Turkey and develops recommendations to address the identified shortcomings. In this context, the study serves as a valuable resource that can contribute to enhancing the quality of harmony education.

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Author Details

Maryna Demir, *Ibrahim Chechen University, Turkey,* ***Email ID****: mrdemir@agri.edu.tr*

Utkan Baykal Demir, *Ibrahim Chechen University, Turkey,* ***Email ID****: ubdemir@agri.edu.tr*