Pegem Journal of Education and Instruction, Vol. 14, No. 3 , 2024 (pp. 21-43)

RESEARCH ARTICLE WWW.PEGEGOG.NET

Sustainable Education Practices in Amateur Guitar Education during the Covid-19 Pandemic

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Abstract

This study aimed to demonstrate sustainable education practices in the field of amateur guitar education during the Covid-19 pandemic, emphasizing that all lessons were conducted entirely online. The goal of the study was to enhance economic, social, and environmental performance through a comprehensive approach that assessed the effectiveness of activity-based lesson plans focused on scale, chord, and arpeggio instruction. The lesson plans were designed to include introduction, development, and evaluation sections. The instructional intervention involved five beginner-level students over an eight-week period, with performance data evaluated by three expert evaluators using a 5-point Likert scale. The evaluation allocated 40% weight to theoretical knowledge test results and 60% to performance test outcomes, with student achievement scores ranging from 89.2 to 98.8. The success of the study highlights the potential for sustainable education practices in challenging times like the Covid-19 pandemic and serves as a model for others to follow.

Keywords: sustainable education, covid-19, music education, amateur guitar education, activity-based learning.

Introduction

Sustainable education is increasingly recognized as an essential component of addressing contemporary global challenges (UNESCO, 2014). Educational institutions around the world are adopting sustainability principles, both in their curricula and operational practices (Barth et al., 2007). This shift aims to prepare students to become responsible and conscious global citizens who can contribute to a more environmentally and socially responsible future (Sterling, 2001). Sustainable education promotes interdisciplinary approaches to provide students with comprehensive insights into sustainability issues (Lotz-Sisitka et al., 2015). Additionally, it leverages technological advancements to broaden its reach and impact (UNESCO, 2020). The future of education hinges on its ability to inspire individuals to become active agents of positive change within a sustainable framework (Lozano et al., 2016).

The COVID-19 pandemic has underscored the critical importance of sustainability in education more than ever before. It has disrupted traditional educational systems worldwide, compelling institutions to adapt swiftly to new challenges (UNESCO, 2020). Sustainability in education has proven to be essential not only for addressing current crises but also for building resilience to future ones (Peters et al., 2020). The pandemic has highlighted the significance of online and distance learning, with technology becoming a central tool for education continuity (Hodges et al., 2020). Sustainable education plays a pivotal role in this context by promoting digital literacy and responsible technology use (UNESCO, 2020). Moreover, it empowers students with the critical thinking and problem-solving skills needed to navigate complex global issues, including public health crises (Sterling, 2001; Lotz-Sisitka et al., 2015). As the world grapples with the lasting impacts of the pandemic, sustainable education remains integral to preparing future generations for the challenges and opportunities of an increasingly interconnected world (Lozano et al., 2016; Peters et al., 2020).

Music education has been implemented online during the Covid-19 period, which has proven to be quite appropriate for sustainability (Varadi et al., 2023; Svihus, 2023; Nurdyansyah et al., 2022). The pandemic has forced educators to adapt to online teaching, leading to the exploration of various internet platforms and the creation of teaching materials (Thiyagarajan & Sarala, 2022). Experienced online teachers have found that attitude and experience are important factors in promoting participation in online classes (Charina et al., 2022).

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How to cite this article: Ceviz B, Albuz A (2024). Sustainable Education Practices in Amateur Guitar Education during the Covid-19 Pandemic. Pegem Journal of Education and Instruction, Vol. 14, No. 3, 2024, 21-43

Source of support: Nil.

Conflict of interest: None

DOI: 10.47750/pegegog.14.03.03

Received: 05.08.2023

Accepted: 19.11.2023 **Publised :** 01.07.2024

Inclusive online schools have been developed to address the low learning competence of inclusive students during the pandemic, showing that online tools can be a breakthrough in inclusive education. Sustainable education programs have also been implemented to help small industries recover post-pandemic, with open innovations being explored to improve economic, social, and environmental performance. Overall, the shift to online music education during the Covid-19 period has provided opportunities for creativity, adaptability, and the development of new teaching methods, making it a suitable and sustainable approach.

In light of the ongoing Covid-19 crisis, societies around the world are being prompted to engage in deep reflection and summon the courage to devise new strategies (Marouli, 2021). Among the key actors in this process are universities, which constitute the cornerstone of shaping society's abilities and inclinations, and must therefore modernize their existing programs, facilities, and infrastructure (Mian et al., 2020). In this context, the concept of sustainable education has gained strategic significance, emphasizing the need for a strong foundation in educational philosophy (Sund & Lysgaard, 2013). Despite the strong responses from higher education communities, however, the number of comprehensive studies on sustainable education strategies is surprisingly limited (Stewart, 2010). Thus, the objective of the current study is to contribute to sustainable education strategies and enhance economic, social, and environmental performance through the development of a comprehensive approach. One promising avenue for achieving these goals is the proliferation of online music lessons, which has the potential to enable participation from individuals of all backgrounds, reduce access costs, and decrease fuel consumption.

Music education can be described as a fundamental procedure of disseminating, altering, generating, metamorphosing, cultivating, and empowering musical conduct (Uçan, 2018). Although music education serves various purposes and performs diverse functions, it is also employed as an instructional instrument. The belief persists that the musical surroundings, encounters, aspirations, and inclinations; the age, as well as the physical and cognitive attributes of the student engaged in music education, are decisive factors in the operation, objectives, and anticipations of this process.

Amateur music education endeavors to offer the essential musical behaviors to individuals who possess a deep passion for music or a specific genre of music, in addition to providing a broad-based music education. This comprehensive approach is designed to guarantee a meaningful engagement with music, fostering both enjoyment and contentment while also nurturing and enhancing it to the greatest extent feasible (Uçan, 2018). As indicated by Tarman (2016), amateur music education caters to those individuals who harbor a keen interest in and an ardent affection for music. Its overriding objective is to furnish the requisite musical behaviors that facilitate effective musical involvement, gratification, and fulfillment, while concurrently ensuring its perpetuation and advancement. The crucial factor is not an individual's innate talent, but rather their willingness to engage in the pursuit of music.

Musical instrument education is a form of musical engagement that necessitates thorough planning and implementation in accordance with the child's developmental milestones within their musical progression. This pedagogical approach assumes a pivotal role in facilitating the proper utilization of auditory stimuli, cultivating auditory acuity, and fostering a fervent appreciation for music (Saraç, 2016). Instrument education encompasses the cognitive, affective, and psychomotor dimensions of the individual. Through this form of education, the individual acquires both technical expertise and aesthetic principles. Consequently, cultural enrichment ensues. In this manner, education strives to foster individuals who exhibit creativity, implementation skills, research capabilities, interpretation aptitude, critical thinking, and self-assurance (Kolukırık, 2019, as cited in Akgül). Uyan (2018) asserts that students who partake in amateur music education exhibit superior academic accomplishments compared to those who do not.

Amateur instrument education is an important dimension of music education, as it enables individuals to realize themselves by being able to perceive and define themselves, develop their existing skills through the education they receive, and thus have the opportunity to recognize themselves (Ercan & Orhan, 2012). Based on previous definitions, amateur guitar education can be defined as the process of learning how to play the guitar to develop cognitive, emotional, and physical skills. During this process, individuals become familiar with the guitar, explore it, and receive education through various institutions, such as schools, music clubs, training centers, private music courses, associations, and independent educators. According to Yılmaz and Şen (2016), guitar is a popular instrument, and its popularity is increasing daily. Similarly, Yavçin (2011) stated, the most preferred instrument in amateur instrument education is the guitar. It is important to plan and design the path to be followed in the teaching of this instrument, which is included in instrument education and mandated to be learned.

One of the instructional strategies employed in the realm of instrumental education is the utilization of the active learning approach. As Saraç (2016) elucidates, active

learning is a pedagogical model that places the onus of learning primarily on the students themselves, as they engage in efficacious learning practices which involve their active participation in practical applications, accompanied by the stimulation of their cognitive faculties, in a rapid, enjoyable, and supportive manner that transcends the confines of traditional educational methods. The objective of this study was to develop an activity-based teaching plan that aligns with the principles of the constructivist approach, specifically the 3e, 5e, and 7e teaching models. In accordance with the constructivist theory of learning, it is crucial to identify a problem that stimulates the students' interest, afford them the opportunity to express their individual perspectives, and prioritize the imparting of fundamental concepts through the implementation of deductive reasoning, with their active involvement (Saraç, 2016). While the stages of the constructivist approach are typically delineated as engage, explore, explain, elaborate, and evaluate (Saraç, 2016), it is also possible to modify or augment these stages as deemed appropriate.

Therefore, in the amateur guitar teaching process, it is important for the learner to be willing and interested, for the teacher to have the necessary equipment, to apply appropriate teaching methods to individuals or groups, to use suitable resources that support teaching, to encourage students to work in a planned manner, and to conduct teaching within an appropriate program framework.

Method

Research Design

The investigation was carried out using a single-group posttest design, which falls under the category of experimental designs. In this particular study, an eight-week activity-based lesson plan was developed for a group of five beginner-level students. The single-group posttest model involves the administration of an independent variable to a randomly selected single group, followed by the observation of its impact on the dependent variable (Karasar, 2020). The research process consisted of the following stages: Review of relevant literature, selection and composition of the study group, creation of the lesson plans, implementation of the eight-week program, evaluation by experts.

Study Group

The research team was comprised of a collective of five student volunteers whose ages ranged from 18 to 33 years. None of these individuals had obtained any previous guitar instruction from any establishment or individual. Each participant in the research team was an individual who had a keen desire to acquire guitar-playing skills in the amateur genre. Owing to the utilization of a sole-group study, it can be stated that the research team was specifically assembled from individuals possessing the aforementioned attributes.

Outline of the Unit, Topics, and Learning Outcomes for the Study Group

Chapter: Scales, Chords, and Arpeggios Topics

- Major Scales, Minor Scales, Chords, Arpeggios

Unit General Learning Outcomes:

- Acquire knowledge about the formation of major scales
- Play C major, G major, and F major scales
- Acquire knowledge about the formation of minor scales
- Play A minor, E minor, and D minor scales
- Learn chord formations
- Play exercises in major and minor scale progressions
- Play open position chords
- Learn barre chord techniques
- Play some barred chords
- Transition between chords smoothly
- Understand the meaning of arpeggios
- Play arpeggio exercises on open strings
- Play some chords using various arpeggio patterns

Data Collection Tools

The research process involved the utilization of a literature review and experimental procedures in order to gather data. Three field experts were consulted and their approval was obtained regarding the appropriateness of the drafted course program outline, both in terms of content and level.

In the study group, online one-on-one lessons were conducted with five students during the experimental phase. These lessons spanned over a period of 8 weeks, with each lesson having a duration of 50 minutes, resulting in a total of sixteen instructional hours. At the conclusion of the chapter, theoretical knowledge tests and performance tests were administered to the students, focusing on each topic and its coverage. For the evaluation of the performance tests, Albuz's (2001) doctoral thesis titled "The usage of the scales about the tone system of traditional Turkish Music in viola teaching and the polyphonic approaches about this system" was utilized as a performance assessment scale (Table 1).

The researcher converted these four criteria into 5-point Likert scales and requested that field experts base their evaluations on this developing Likert scale.

Table 1: Performance Evaluation Criteria

S. No	*Criteria*	*Score*
1	Accuracy of pitch and durations	40
2	Acceptable tempo	10
3	Playing technique	30
4	Musicality	20
5	Total	100

The researcher reported the responses to the theoretical knowledge tests obtained during the experimental procedure and included them in the calculations using weighted percentages. The researcher shaped forms for the evaluation of performance tests based on the recordings of expert evaluators listening to the video recordings. The researcher then calculated the total scores obtained and the arithmetic averages of the scores from the three expert evaluators.

The scores from the theoretical knowledge tests and performance tests of the students were recorded in tables using predetermined weighted averages specific to each unit.

The levels of success in performance for the students were expressed as follows: 0–30: Very Unsuccessful, 31–50: Unsuccessful, 51–65: Moderate, 66–80: Good, 81–100: Very Good. The end-of-unit success scores for the students were determined by calculating the weighted averages of the theoretical knowledge tests and performance tests for the relevant unit.

Activity-Based Lesson Plans

Chapter: Scales, Chords, and Arpeggios

Topic 1: Major Scales

Lesson Duration: 50 minutes

- Introduction (Motivation – Discovery):

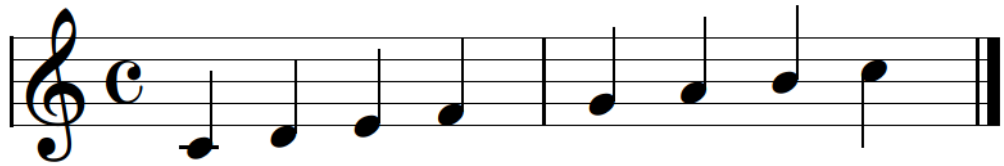
The instructor asked the students about the meaning of the term "major" and then explained that it means "big" or "large." The instructor aimed to arouse curiosity among students by asking questions such as "What could 'bigness' mean for scales?" and "Could it be related to the intervals between the notes that make up the scale?" Major key pieces were played and discussed in terms of the emotions they evoke (such as joy, excitement, enthusiasm, etc.). Understanding major scales can be approached from the previously learned C major scale. When the notes on this scale, which are whole and half steps, are written in an appropriate formula starting from any note, the major scale of that starting note is obtained.

The C major scale, written as C - D - E – F - G - A - B - C, consists of whole, whole, half, whole, whole, whole, half steps, respectively. In other words, it is made up of two whole steps, one half step, three whole steps, and one half step. Therefore, major scales can be formulated as 2W + 1H + 3W + 1H (two whole steps, one half step, three whole steps, and one half step).

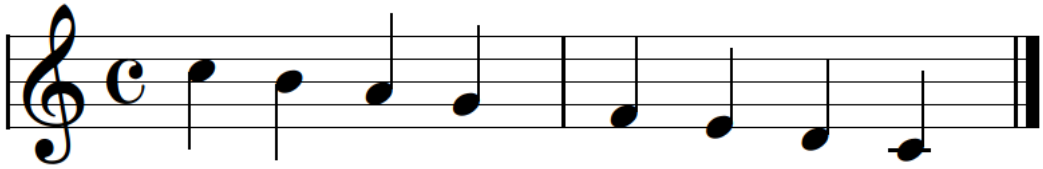
- Development (Explanation – Deepening):

Activity 1: The instructor played the following C major ascending and descending scales on the guitar and asks the students to try playing them. The students were instructed to use the finger corresponding to the fret pressed on the left hand and the "i" and "m" fingers sequentially on the right hand.

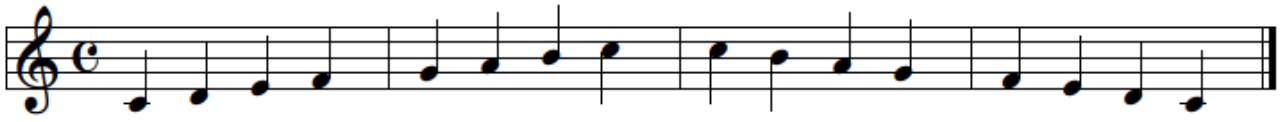
C Major Ascending Scale



C Major Descending Scale

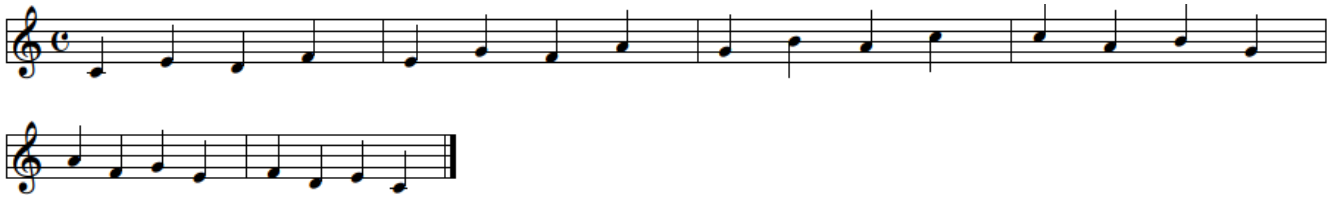


C Major Ascending and Descending Scale

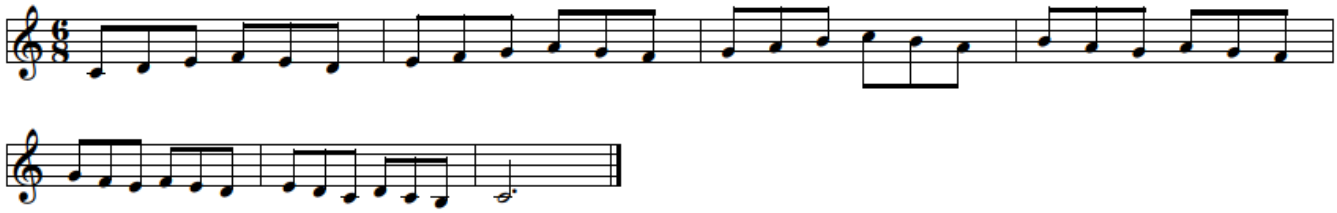


Exercises in the C Major Scale

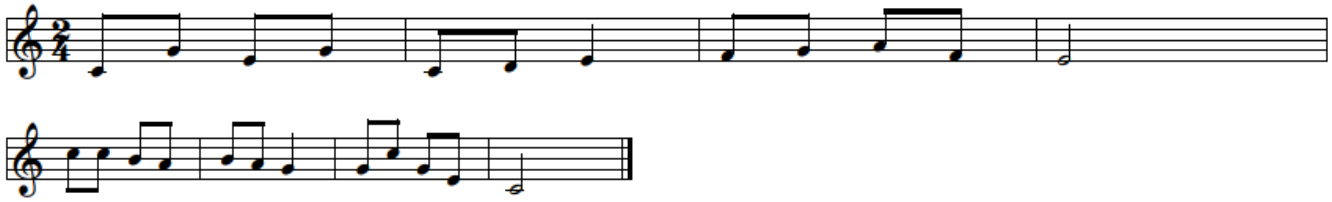
Exercise 1



Exercise 2

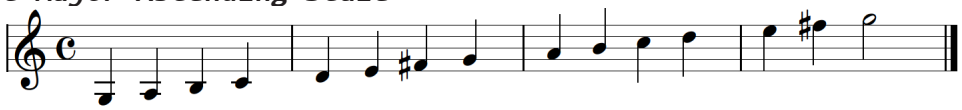


Exercise 3

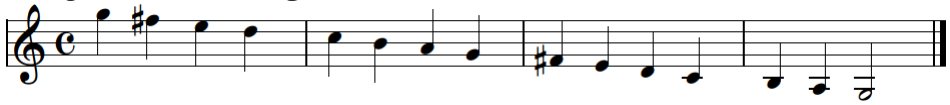


Activity 2: The instructor explained that the G major scale can also be played in the first position using two octaves. Therefore, it was appropriate to practice the scales within a two-octave range. The instructor played the ascending and descending G major scales on the guitar and asked the students to try playing them. The students were instructed to use the finger corresponding to the fret pressed on the left hand and the "i" and "m" fingers sequentially on the right hand. It should be noted that all "F" notes in the G major scale should be played as "F sharp." This can be indicated by placing a "#" sign above the "F" line, but for the convenience of beginner students, the instructor has already shown the sharp signs when the time comes to use them.

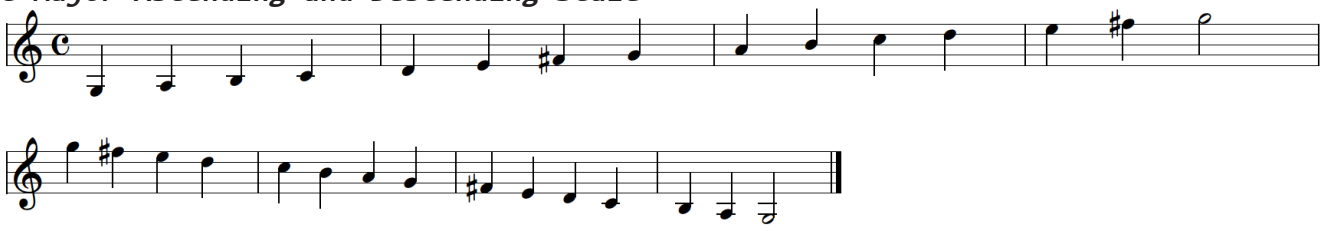
G Major Ascending Scale



G Major Descending Scale

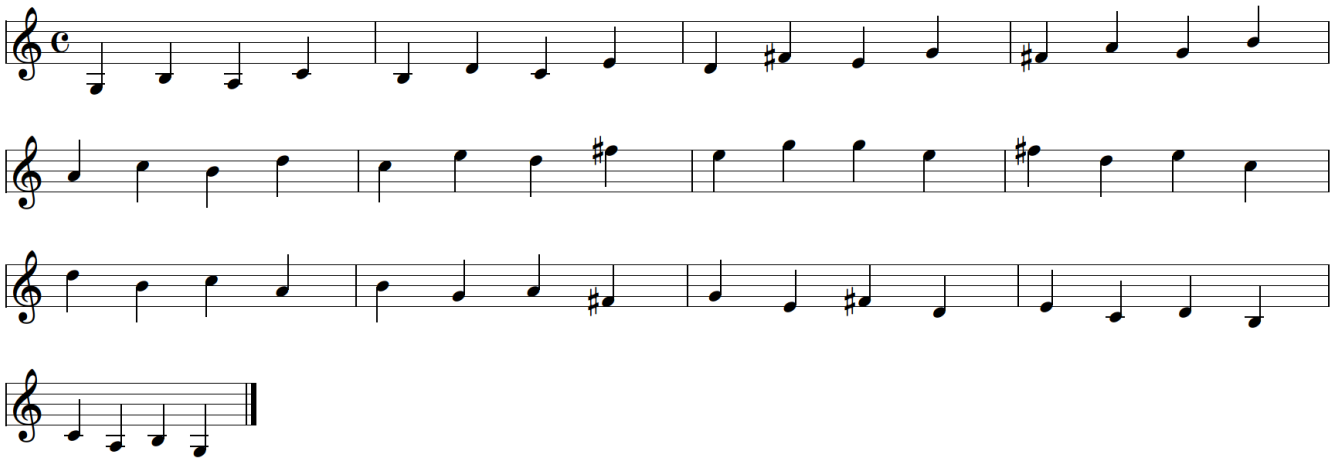


G Major Ascending and Descending Scale

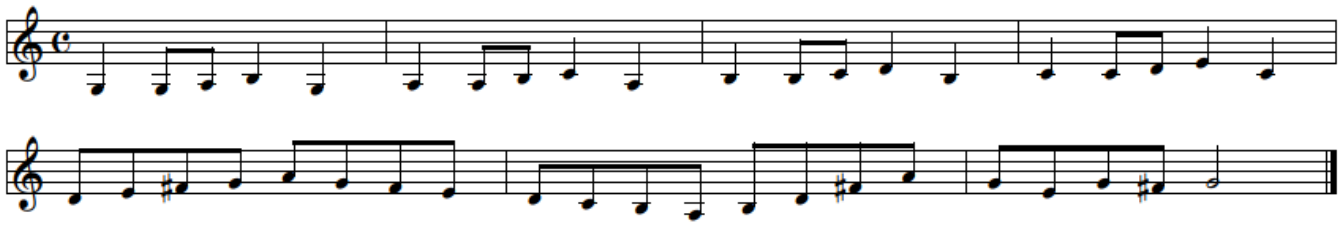


Exercises in the G Major Scale

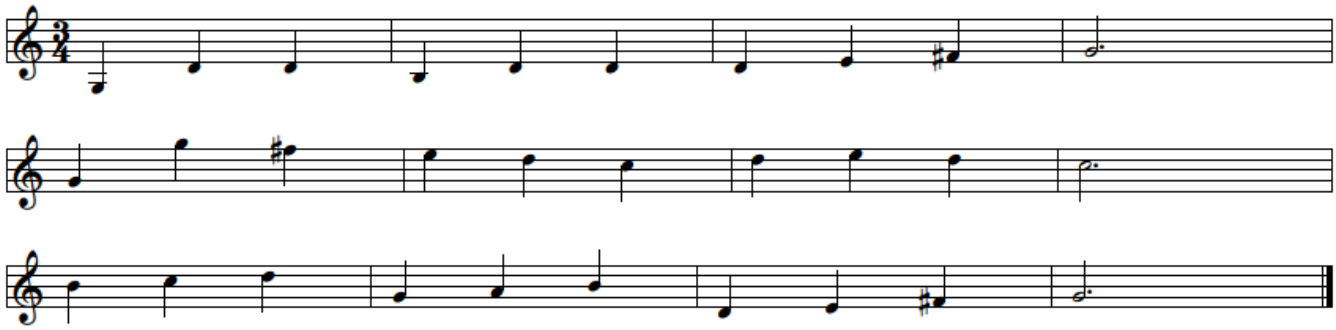
Exercise 1



Exercise 2

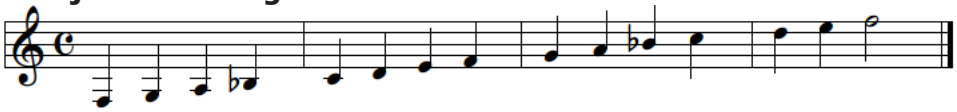


Exercise 3

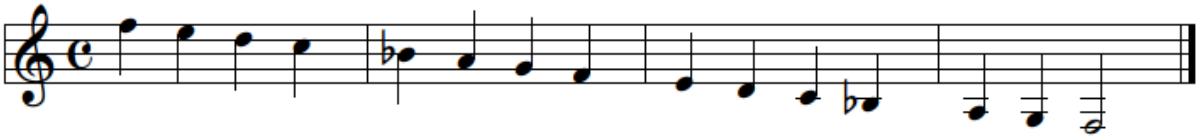


Activity 3: The instructor explained that the F major scale can be played in the first position using two octaves. Therefore, it was appropriate to practice the scales within a two-octave range. The instructor played the ascending and descending F major scales on the guitar and asked the students to try playing them. The students were instructed to use the finger corresponding to the fret pressed on the left hand and the "i" and "m" fingers sequentially on the right hand. It should be noted that all "B" notes in the F major scale should be played as "B flat." This can be indicated by placing a "♭" sign above the "B" line, but for the convenience of beginner students, the instructor placed the flat signs wherever the time comes to use them.

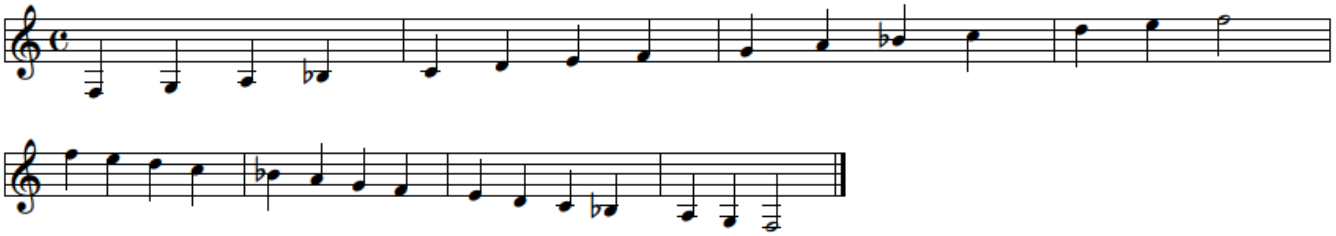
F Major Ascending Scale



F Major Descending Scale

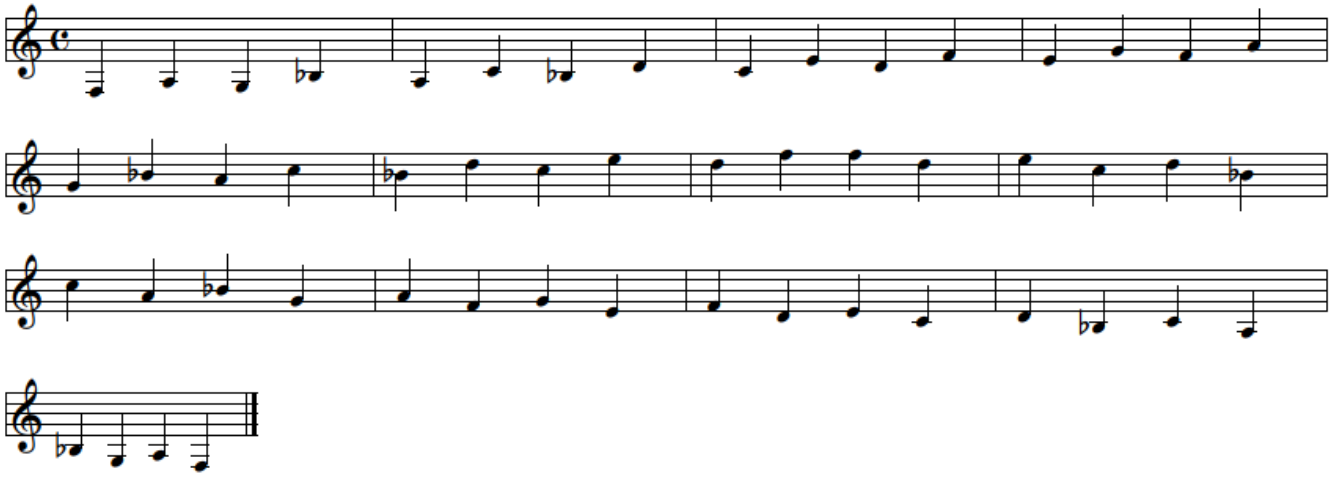


F Major Ascending and Descending Scale

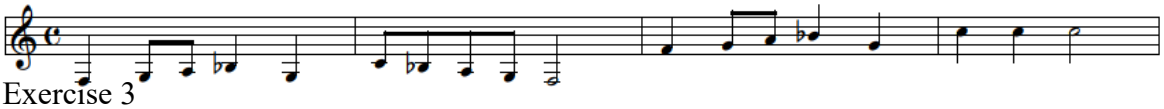


Exercises in the F Major Scale

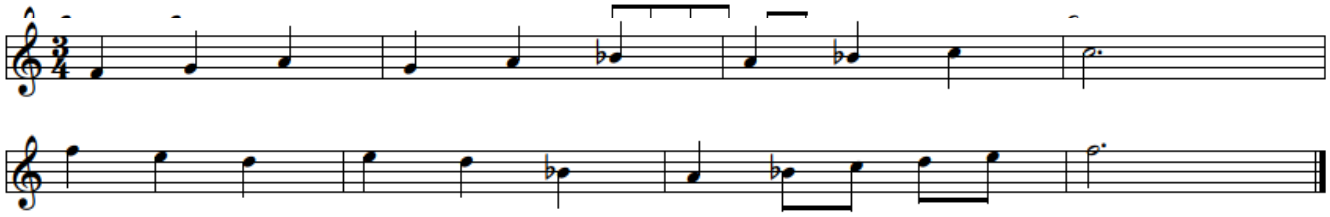
Exercise 1



Exercise 2



Exercise 3



- Evaluation

The evaluation of the subject was conducted by testing questions 1, 3, and 4 from the theoretical knowledge test, and questions 1 and 2 from the performance test.

Chapter: Scales, Chords, and Arpeggios
Topic 2: Minor Scales
Lesson Duration: 50 minutes

• Introduction (Motivation – Discovery)

The instructor asked students about the meaning of the word "minor" and then explained that it means "small." They aimed to arouse curiosity in students by asking questions such as "What could smallness mean in terms of scales?" and "Could it be related to the intervals between the notes that make up the scale?" Pieces written in minor tonality were played and discussed in terms of the emotions they evoke (sadness, pain, longing, etc.).

When understanding major scales, the A minor scale is a natural minor scale without any sharps or flats. The notes that correspond to the whole and half steps in this scale form the A minor scale.

The A minor scale, written as A - B - C - D - E - F - G - A, consists of whole, half, whole, whole, half, whole, whole steps, respectively. In other words, it is formed by whole, half, whole, whole, half, whole steps on the A note.

Therefore, minor scales can be formulated as: 1W + 1H + 2W + 1H + 2W (1 whole, 1 half, 2 whole, 1 half, 2 whole).

Minor scales can be seen in three different forms:

- Natural minor
- Harmonic minor
- Melodic minor

The natural minor scale is a scale in which no note other than the possible accidental in the key is changed.

The harmonic minor scale is a scale in which the seventh degree is raised by a half step in addition to any possible accidental in the key.

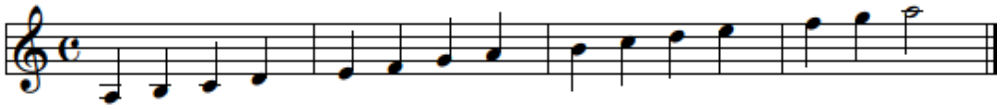
The melodic minor scale is a scale in which the sixth and seventh degrees are raised by a half step, in addition to any possible accidental in the key.

When writing harmonic and melodic minor scales, sharps or flats are indicated for the raised notes, and when writing descendi ng, the raised notes return to their original state. The accidentals for these scales are not included in the key signatures. Examples and exercises related to these scales are included in the activities.

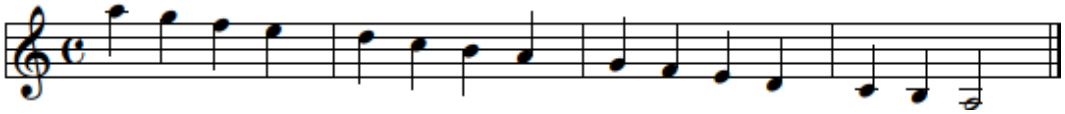
- **Development (Description – Deepening)**

Activity 1: The A minor scale can be played in the 1st position covering a range of two octaves on the guitar. Therefore, it is recommended that scale exercises be practiced within a two-octave range. The instructor asked the students to try playing the following A minor ascending and descending scales on the guitar using the same finger that corresponds to the fretted note on the left hand, using the fourth finger for the A note on the fifth fret of the first string, and sequentially using the "i" and "m" fingers on the right hand.

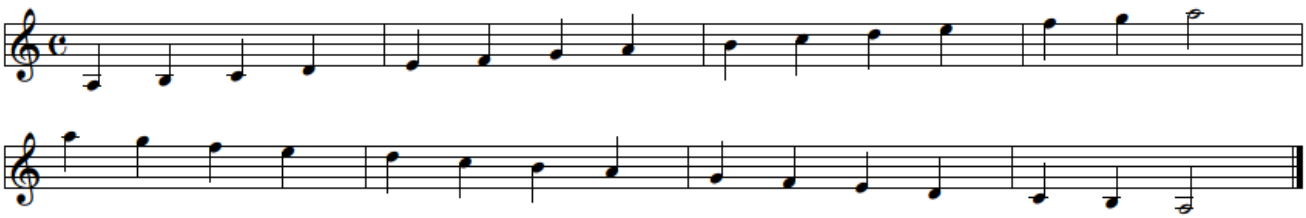
Natural A Minor Ascending Scale



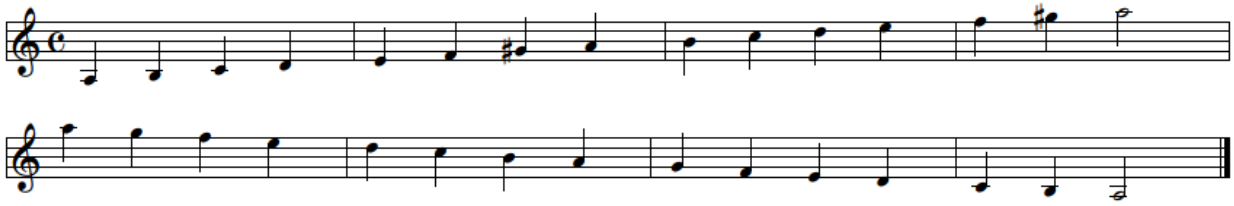
Natural A Minor Descending Scale



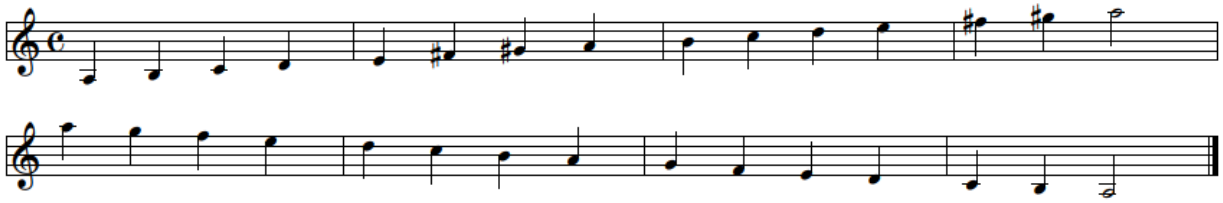
Natural A Minor Ascending and Descending Scale



Harmonic A Minor Scale

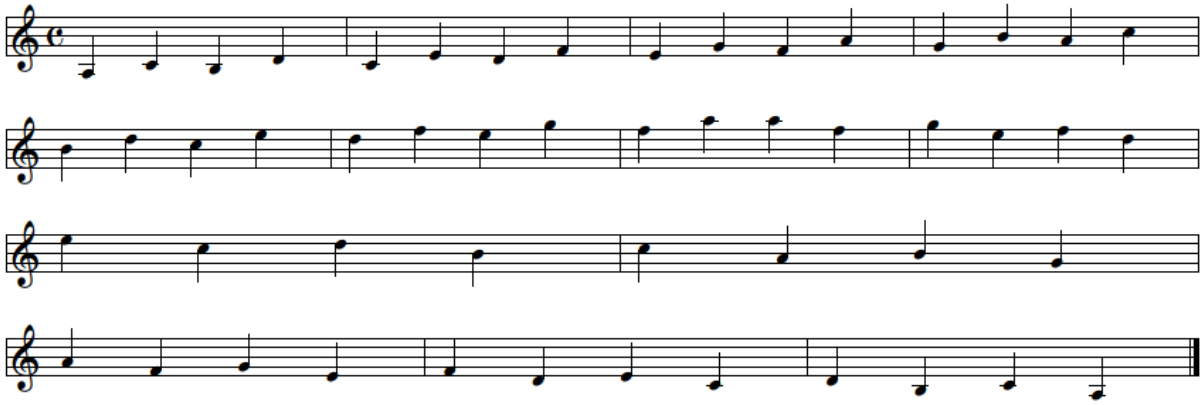


Melodic A Minor Scale

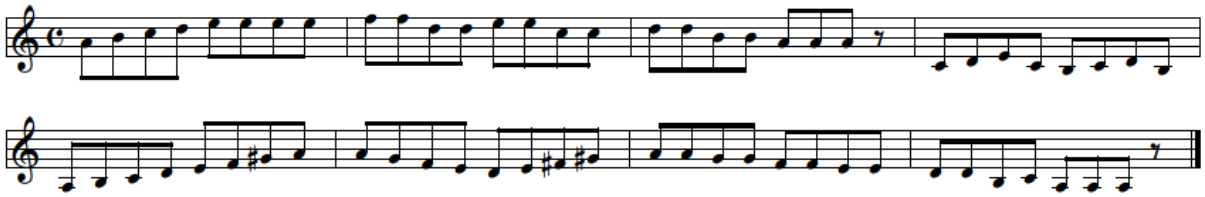


Exercises in the Natural A Minor Scale

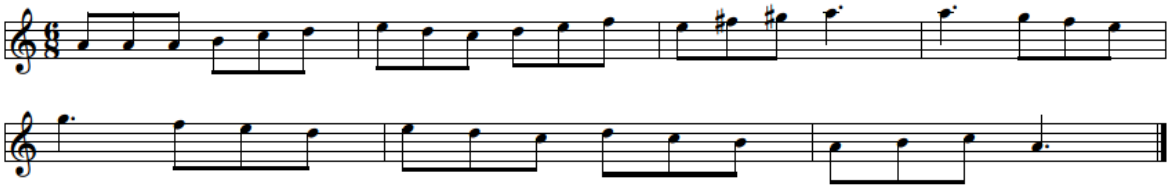
Exercise 1



Exercise 2

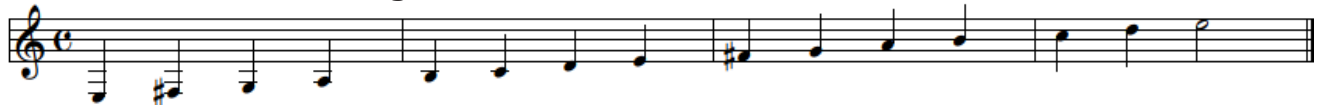


Exercise 3

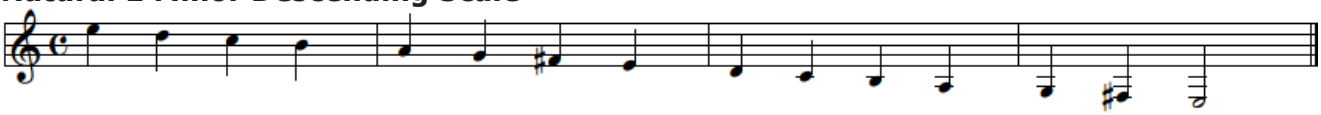


Activity 2: The E minor scale can be played in the 1st position covering a range of two octaves on the guitar. Therefore, it is recommended that scale exercises be practiced within a two-octave range. The instructor asks the students to try playing the following E minor ascending and descending scales on the guitar, using the same finger that corresponds to the fretted note on the left hand, and sequentially using the "i" and "m" fingers on the right hand. The E minor scale in its natural form includes an F sharp note. This can be indicated with a sharp sign above the F line on the notation. This means that all F notes in the scale (in the piece, etude, etc.) should be played as F sharp. However, in the initial stages, it is considered appropriate to show the altered notes in the exercise to prevent students from forgetting.

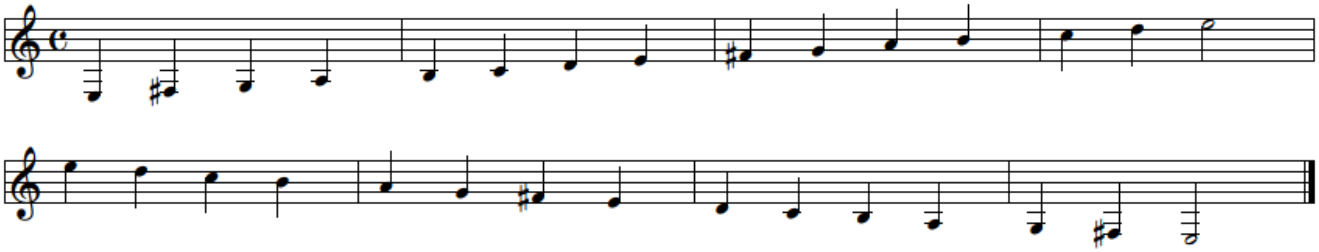
Natural E Minor Ascending Scale



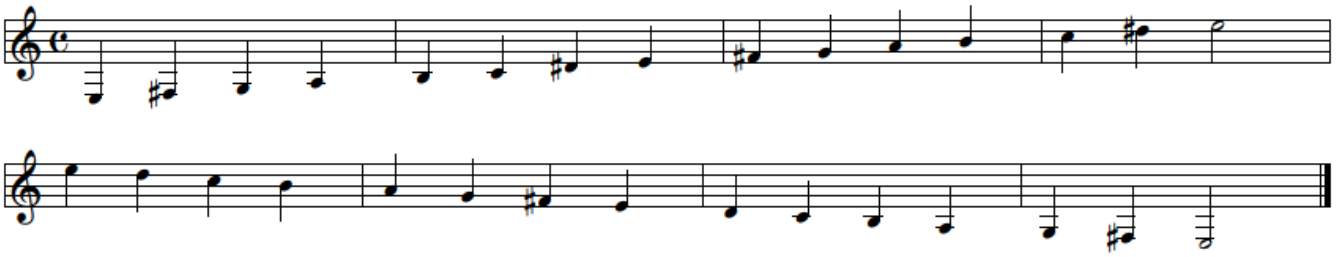
Natural E Minor Descending Scale



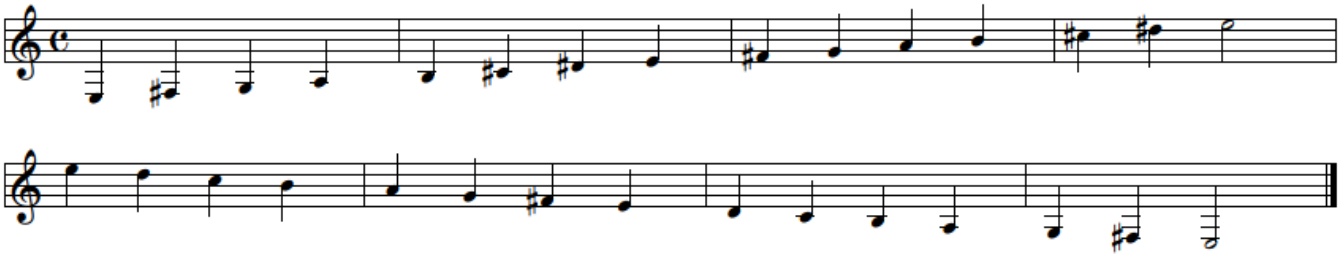
Natural E Minor Ascending and Descending Scale



Harmonic E Minor Scale

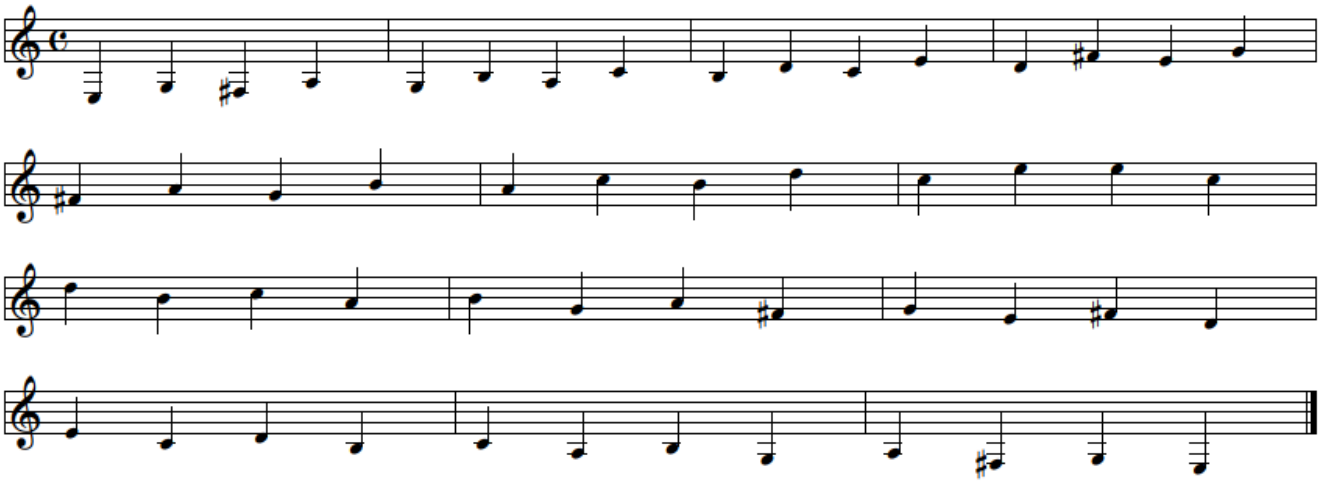


Melodic E Minor Scale

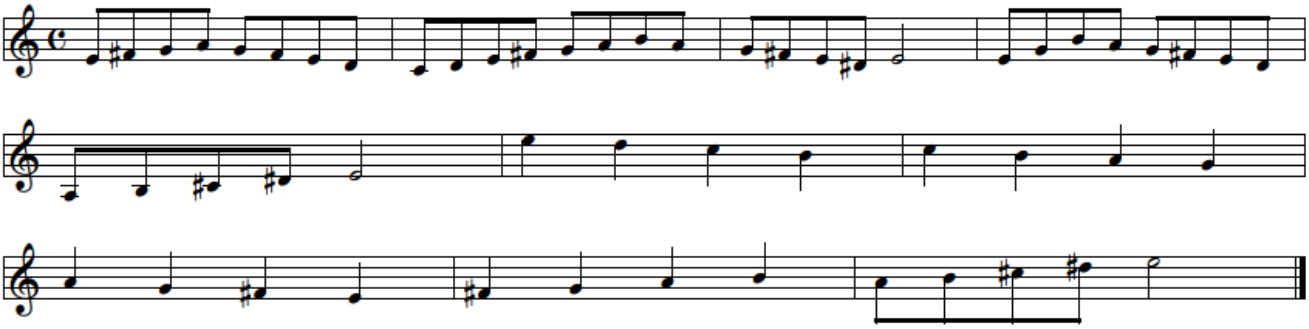


Exercises in the E Minor Scale

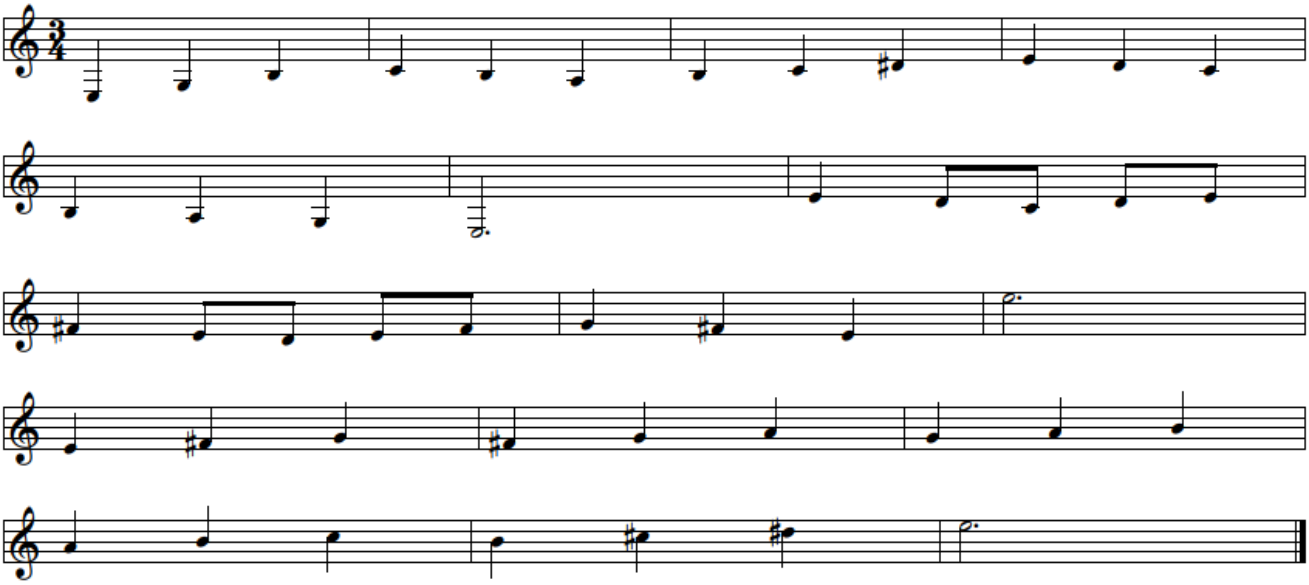
Exercise 1



Exercise 2

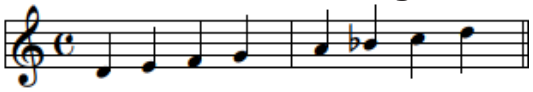


Exercise

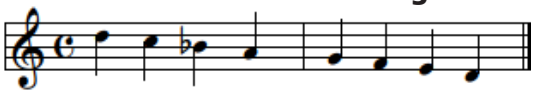


Activity 3: The D minor scale can be played in the first position covering a range of one octave on the guitar. Therefore, it is recommended to practice scale exercises within a one-octave range. The instructor asked the students to try playing the following D minor ascending and descending scales on the guitar using the same finger that corresponds to the fretted note on the left hand and sequentially using the "i" and "m" fingers on the right hand. The D minor scale in its natural form includes a B flat note. This can be indicated with a flat sign above the B line on the notation. This means that all B notes in the scale (in the piece, etude, etc.) should be played as B flat. However, in the initial stages, it is considered appropriate to show the altered notes in the exercise to prevent students from forgetting.

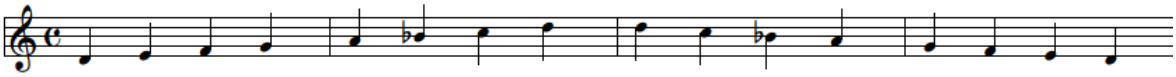
Natural D Minor Ascending Scale



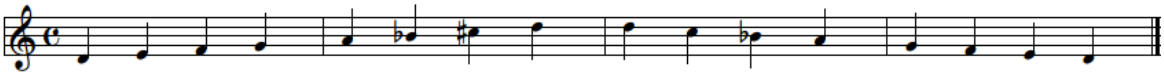
Natural E Minor Descending Scale



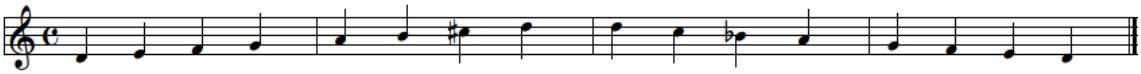
Natural E Minor Ascending and Descending Scale



Harmonic D Minor Scale

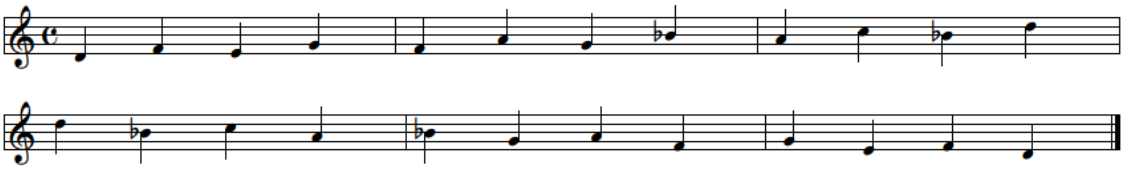


Melodic D Minor Scale

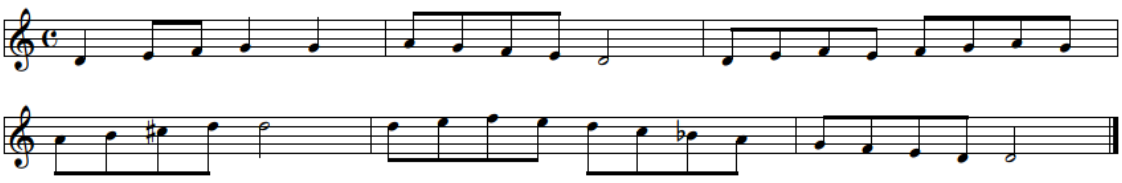


Exercises in the D Minor Scale

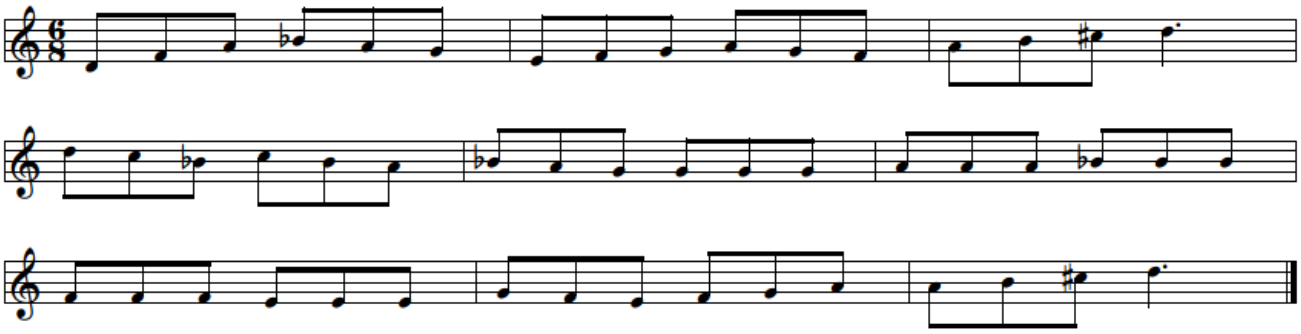
Exercise 1



Exercise 2



Exercise 3



- **Evolution**

The evaluation of the topic is conducted through the theoretical knowledge test, which includes questions 2, 5, 6, and 7, as well as the performance test, which includes questions 3, 4, and 5.

Chapter: Scales, Chords, and Arpeggios

Topic 3: Chords

Lesson Duration: 50 minutes

- **Introduction (Motivation – Exploration)**

The instructor asked the students if they had any prior knowledge about the concept of chords. It is known that many aspiring guitar students often confuse the terms "chord" and "chord tuning." The instructor provided explanations and defined the concept of chords. A chord is a set of three or more notes that create a sound. The instructor played various major and minor chords on the guitar to gauge the students' perception of these tones. By explaining how chords are formed, how they appear on the fretboard, and how to play them on the guitar, the instructor aimed to spark curiosity among the students about the topic.

- **Development (Explanation – Deepening)**

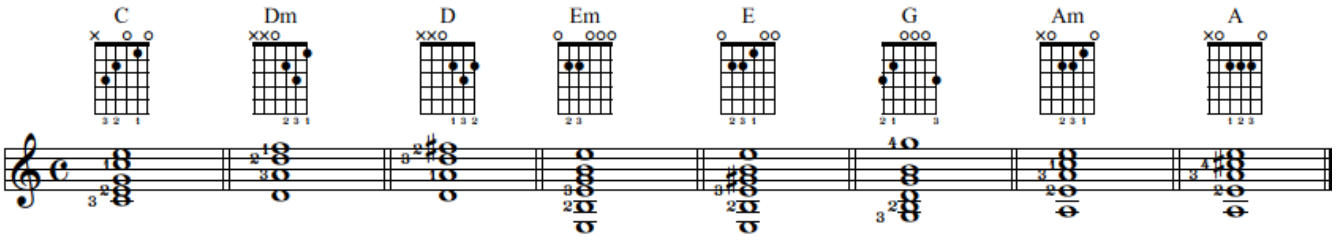
Activity 1: The instructor provides information about the formation of major and minor chords. Major chords are created by adding two whole steps (major third interval) and one and a half steps (minor third interval) above the root note. Minor chords, on the other hand, are created by adding one and a half steps (minor third interval) and two whole steps (major third interval) above the root note. Both chords should have a 3.5-step interval (perfect fifth) between the root note and the third note.

For example, let's create a C major chord on top of the C note. Moving two whole steps from C, we find the E note, which becomes the second note of the chord. Moving one and a half steps from E, we find the G note, which becomes the third note of the chord. Therefore, the C major chord consists of the notes C-E-G.

Similarly, let's try to create an A minor chord on top of the A note. Moving one and a half steps from A, we find the C note, which becomes the second note of the chord. Moving two whole steps from C, we find the E note, which becomes the third note of the chord. Therefore, the A minor chord consists of notes A-C-E.

Chords can also be represented with codes using the letter equivalents of the notes. Only the capital letter corresponding to the root note is used for major chords, while for minor chords, the capital letter corresponding to the root note is used, followed by the lowercase letter "m." Therefore, the C major chord mentioned above can also be represented as "C," and the A minor chord can be represented as "Am."

Activity 2: The instructor showed the positions of the chords on the fretboard in the 1st position and explained how to play them using only the "p" finger to strum the strings on the guitar.



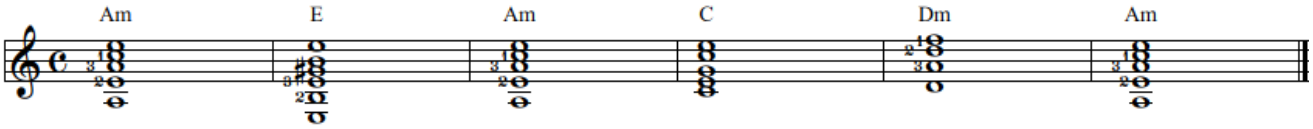
In the above, the chords played without using barre in the first position are shown on the fretboard, and the finger numbers to be used in the left hand are indicated next to the notes. A schematic view of the placement of the chords on the fretboard is also given. In these chord diagrams, the leftmost vertical line represents the top string of the guitar, and the vertical lines representing the lower strings of the guitar are seen to the right. The "x" sign indicates that that particular string is not included in the playing of that chord. The lines with "0" written on them indicate that those strings will be played as open strings. The horizontal lines symbolize the division of the frets on the guitar. Therefore, the dark round symbols at the intersections of the vertical and horizontal lines represent the frets where the fingers should press. Different finger numbers are shown in the diagrams and fretboard view for the "G" and "A" chords, as the fingers used for playing them vary depending on the position transitions. Both ways of playing are considered correct.

The students were shown the fingering of each chord, and they were asked to imitate by playing the chords and naming the notes that make up the chords. Since chords are made up of notes played simultaneously, it is important that the fingers or any other part of the palm do not touch or mute any of the guitar strings that are pressed down. At the same time, applying the right amount of pressure with multiple fingers on the fretboard was seen as important for the perfect sound of the notes. The students were asked to practice each chord separately for a while. In this practice, the right hand should use the thumb to strum the relevant strings. No specific rhythm practice will be included.

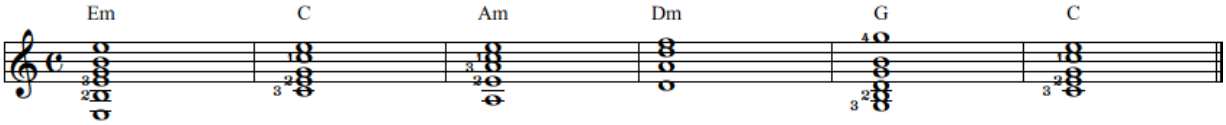
Once the students started producing the correct sounds from the chords, they were asked to practice the following chord transitions.

Open Chord Exercises

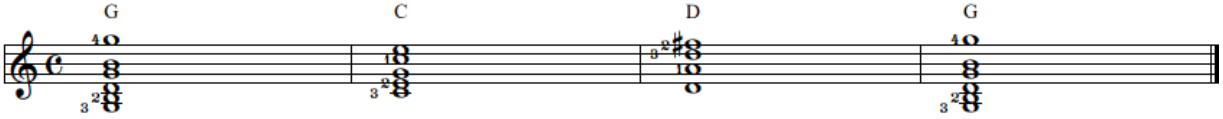
Exercise 1



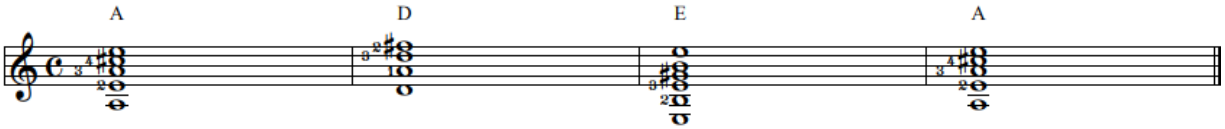
Exercise 2



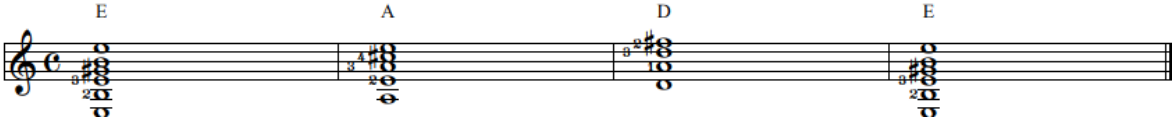
Exercise 3



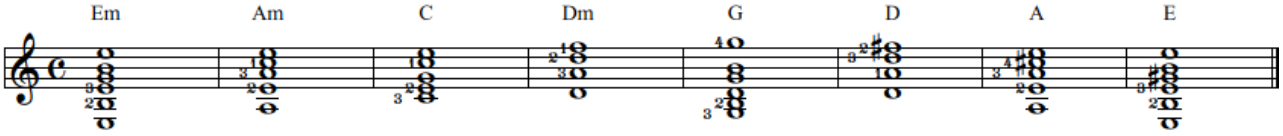
Exercise 4



Exercise 5

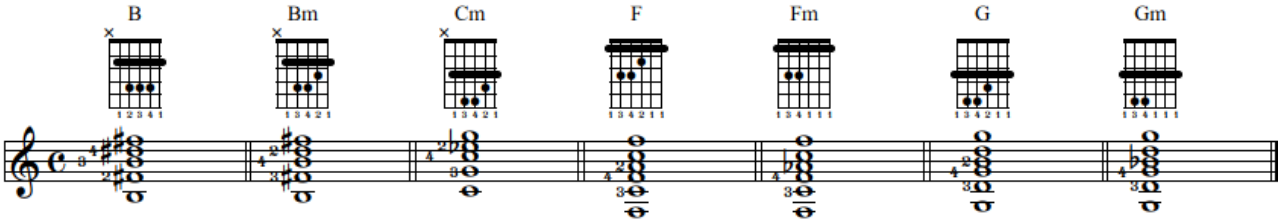


Exercise 6



During these chord transitions, the fingers that apply pressure should move simultaneously to learn the chord positions. It is believed that practicing each chord separately before transitioning between chords will increase the effectiveness of the practice.

Activity 3: The definition of "barre" was explained. Barre refers to the index finger of the left hand pressing down multiple strings and is usually indicated with the letter "C." It is important not to bend the finger forward or backward while applying a barre.

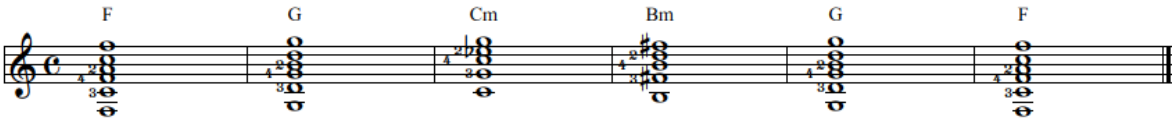


In the above, some barred chords are shown on the fretboard, and finger numbers to be used in the left hand are indicated next to the notes. A schematic view of the placement of chords on the fretboard is also provided. In these chord diagrams, the thick horizontal line represents the barre. The "x" mark indicates that the string is not included in the playing of that particular chord, and the dark circular markings at the intersections of vertical and horizontal lines indicate the frets where the fingers should press. It is important to note which fret the barre line is on and to position the fingers accordingly. For example, in the "Bm" chord, the barre line is on the second fret, while in the "F" chord, the line is on the first fret. The "G" chord can be played both with and without a barre, so both forms are shown.

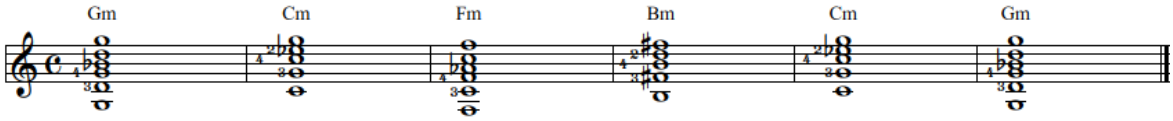
Students were shown the placement of each chord and asked to imitate it, while the notes in the chords are also vocalized. Since chords consist of simultaneously played notes, it is important that the fingers or any other part of the hand that applies pressure do not touch or mute any of the guitar strings, and the barre finger (usually the index finger) should press on the forward part of the fret without bending any joints, generally in a straight manner. At the same time, applying sufficient pressure with multiple fingers on the fretboard is considered important for producing perfect sounds. The students were asked to practice all the chords separately for a while. Here, the right hand should focus on picking the strings related to the chords with the thumb. No rhythmic exercises will be included at this stage. Once students started producing the correct sounds from the chords, they were asked to practice the following chord transitions:

Barre Chord Exercises

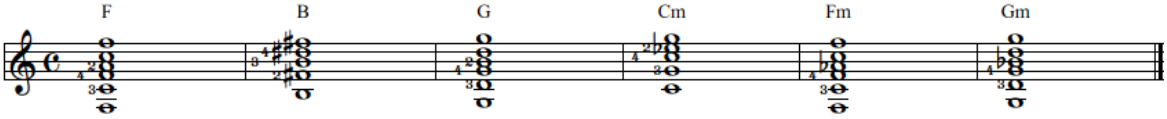
Exercise 1



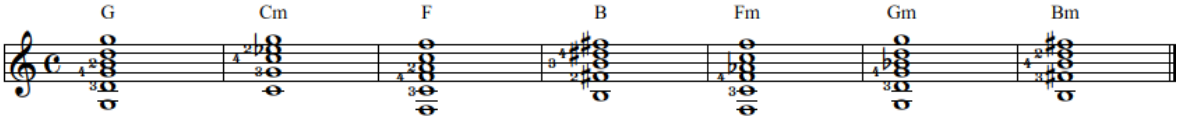
Exercise 2



Exercise 3



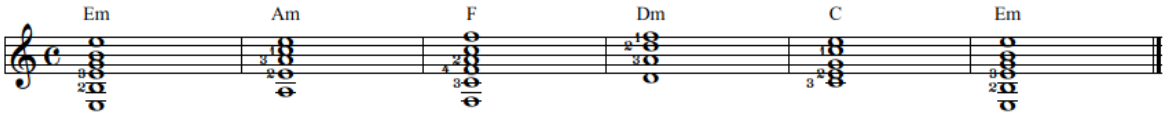
Exercise 4



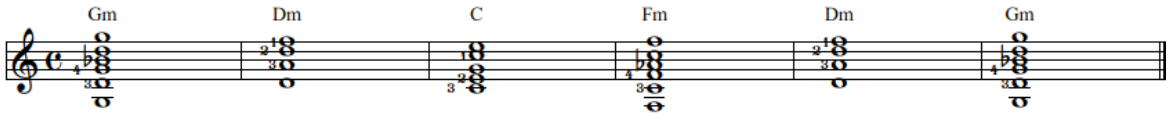
Barre is not only used as a technique for playing chords but also as a way to play the notes that need to be played in unison during polyphonic playing. In some pieces or etudes, the section where the barre will be applied can be indicated with the letter "C" (Capo), or sometimes with the letter "B" (barre). Generally, the position of the barre is indicated by a Roman numeral. For example, if you see "C IV" or "B IV" written on a piece, it means that the barre should be placed on the fourth fret. While some sources do not specify which strings should be pressed with the barre, in some cases, the number of strings to be pressed is indicated as a fraction, with 6 as the denominator. For example, you may see "4/6" notation for a barre where four strings need to be pressed. Below are some exercises that aim to practice transitions between barre and non-barre chords.

Barre and Non-Barre Chord Exercises

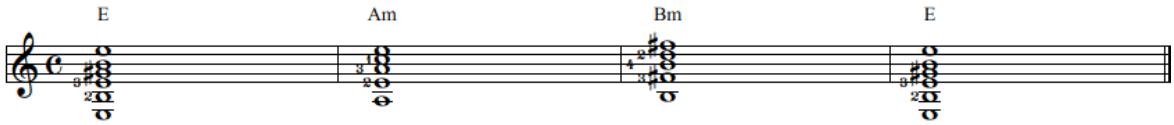
Exercise 1



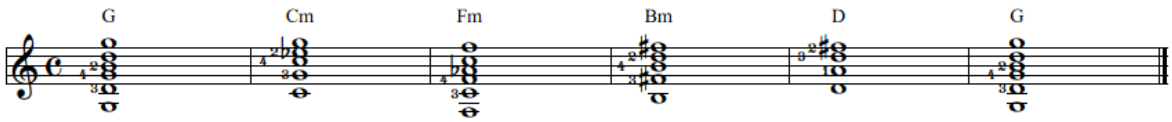
Exercise 2



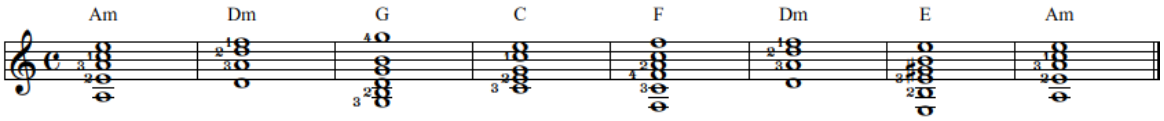
Exercise 3



Exercise 4



Exercise 5



- **Evaluation**

The evaluation of the topic was conducted by testing the theoretical knowledge with questions 8 and 9 in the theoretical knowledge test, as well as questions 6, 7, and 8 in the performance test.

Chapter: Scales, Chords, and Arpeggios

Topic 4: Arpeggios

Lesson Duration: 50 minutes

- **Introduction (Motivation - Exploration)**

The instructor asked the students if they had any knowledge about the concept of arpeggios. They played various arpeggios using some of the chords they had learned. They explained that arpeggios can be obtained by playing chord notes in a sequential manner.

At the beginner level of arpeggio usage, the right-hand fingers play the strings as follows:

p: 6th, 5th, and 4th strings
i: 3rd string
m: 2nd string
a: 1st string

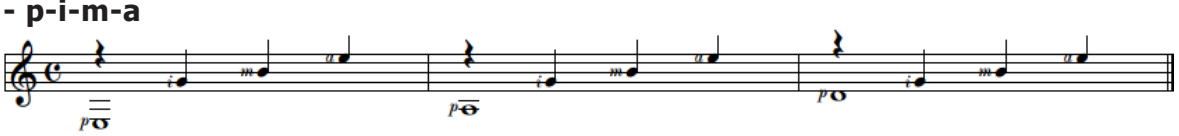
This is a common distribution of fingers for arpeggio playing. However, in some situations where the right-hand fingers play different strings, it is usually indicated above the relevant notes, depending on the chord to be played or during the performance of a piece.

- **Development (Explanation – Deepening)**

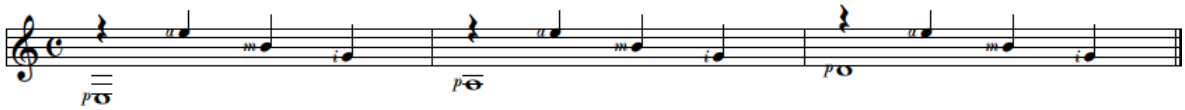
Activity 1: The instructor asked the students to play the following arpeggios on open strings without using their left hand, following the distribution of the right-hand fingers explained in the introduction section. For each arpeggio pattern, the "p" finger should play the sixth, fifth, and fourth strings sequentially.

Arpeggio Exercises on Open Strings

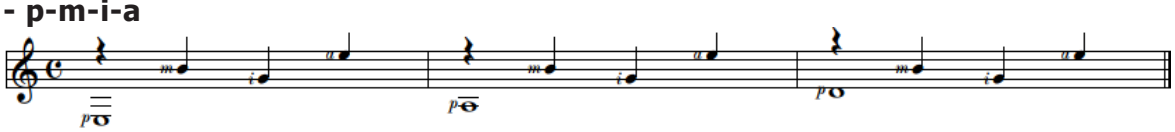
- p-i-m-a



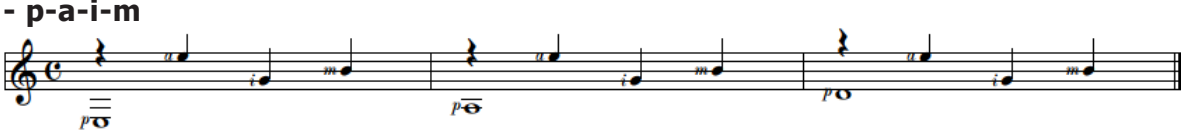
- p-a-m-i



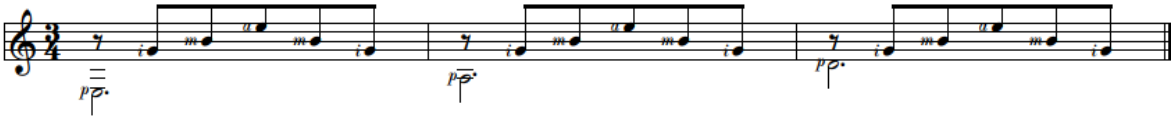
- p-m-i-a



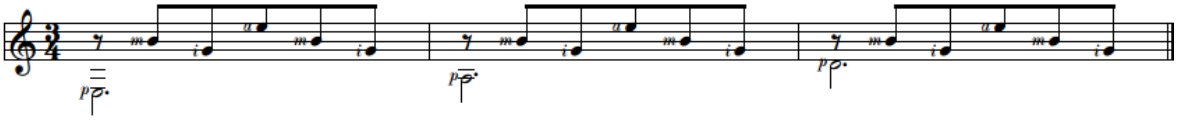
- p-a-i-m



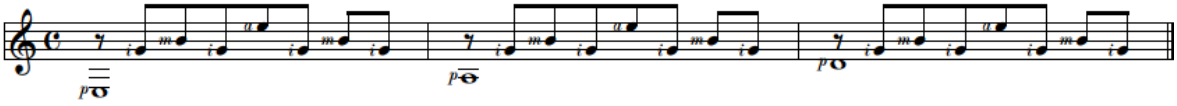
- p-i-m-a-m-i



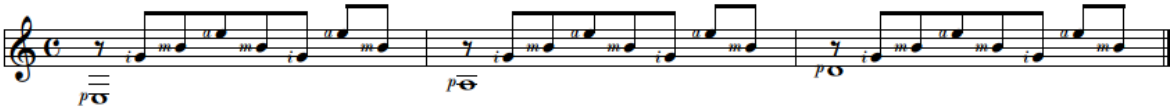
- p-m-i-a-m-i



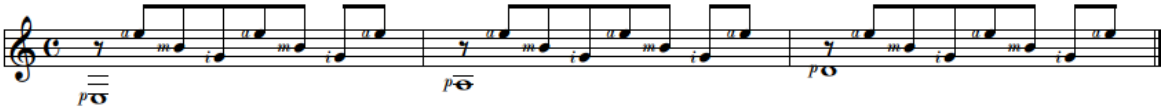
- p-i-m-i-a-i-m-i



- p-i-m-a-m-i-a-m



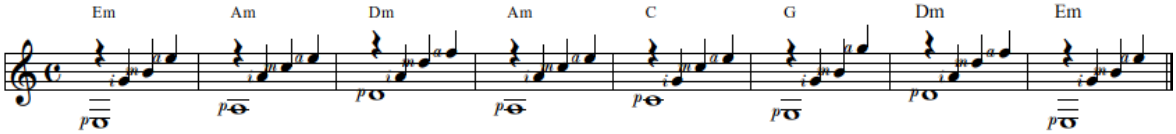
- p-a-m-i-a-m-i-a



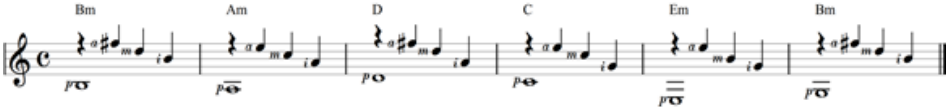
Activity 2: The instructor demonstrated various arpeggios of different chords and then asked the students to play them.

Exercises for Arpeggio Techniques on Chords

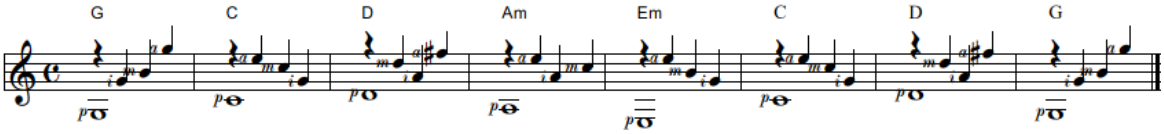
Exercise 1



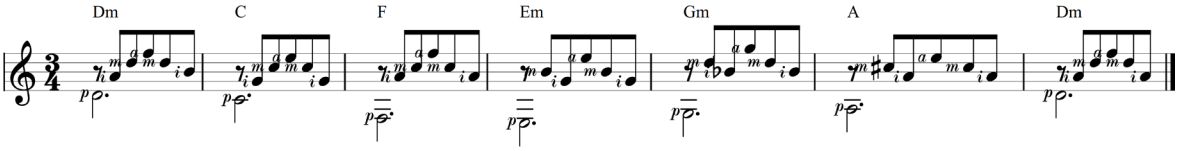
Exercise 2



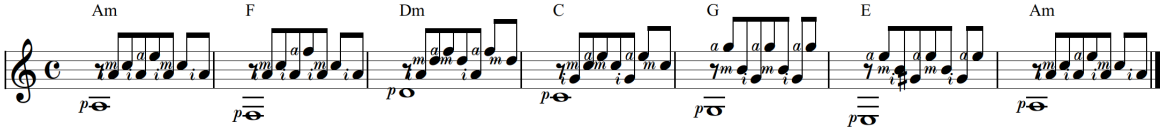
Exercise 3



Exercise 4



Exercise 5



- **Evaluation**

The evaluation of the topic was conducted by testing the theoretical knowledge with question 10 and performance-based assessment with questions 9 and 10.

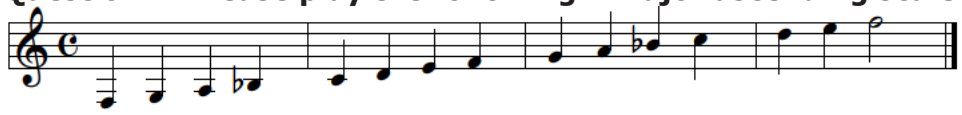
A theoretical knowledge test consisting of 10 questions and a performance-based assessment scale with 10 questions were devised in order to gauge the effectiveness of the desired behaviors within the relevant learning domain. Each theoretical question holds a value of 10 points, while each performance-based question also carries a value of 10 points and is assessed using the provided scale. The overall evaluation incorporates a weight of 40% for the theoretical knowledge test and a weight of 60% for the performance test, resulting in a total of 100 points.

Theoretical Knowledge Test Questions

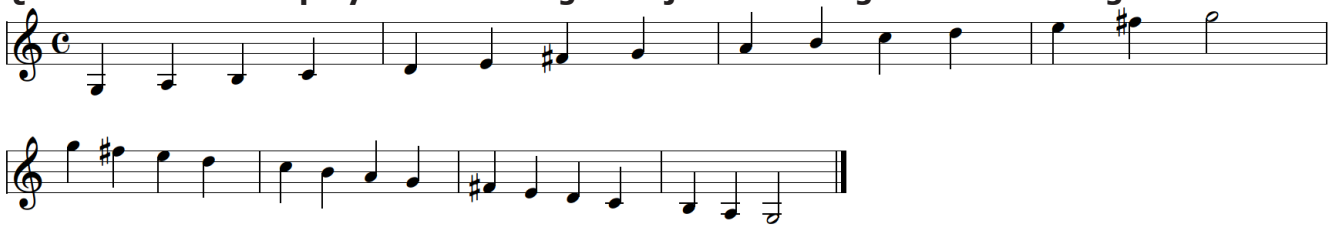
Question 1: State the formula for constructing major scales.
Question 2: State the formula for constructing minor scales.
Question 3: What is the enharmonic symbol for the G major scale?
Question 4: What is the enharmonic symbol for the F major scale?
Question 5: What notes are included in the harmonic A minor scale?
Question 6: What notes are included in the melodic A minor scale?
Question 7: What notes are included in the natural D minor scale?
Question 8: What notes are included in the E major chord?
Question 9: What notes are included in the B minor chord?
Question 10: Which fingers are used to play which strings in the arpeggio exercises we have been practicing?

Performance Test Questions

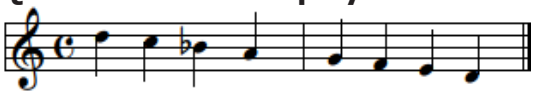
Question 1: Please play the following F major ascending scale:



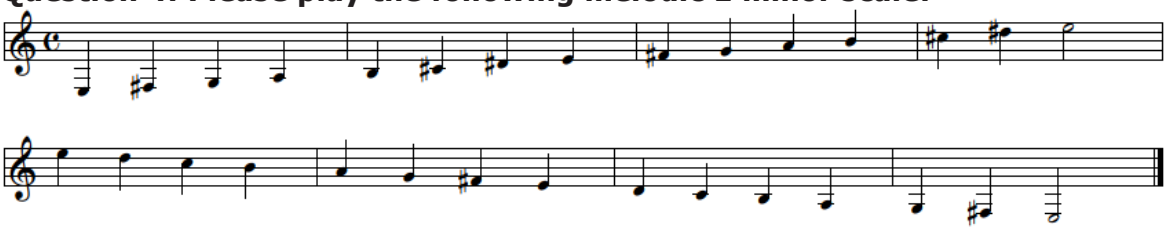
Question 2: Please play the following G major ascending and descending scale:



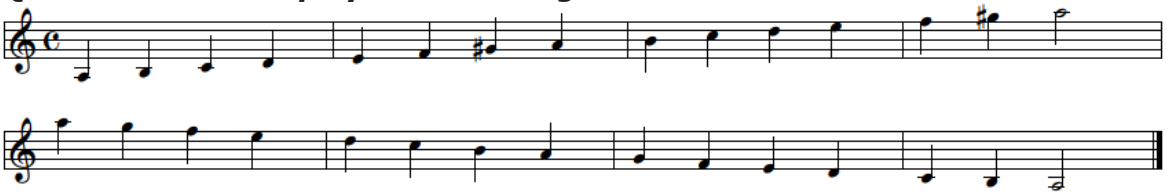
Question 3: Please play the following D minor descending scale:



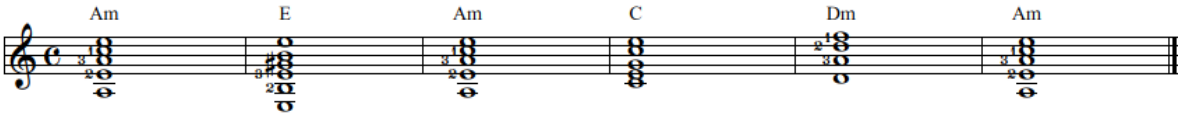
Question 4: Please play the following melodic E minor scale:



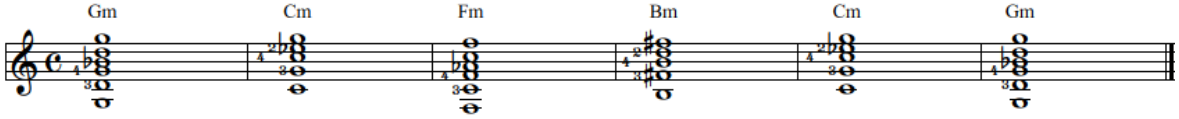
Question 5: Please play the following harmonic A minor scale:



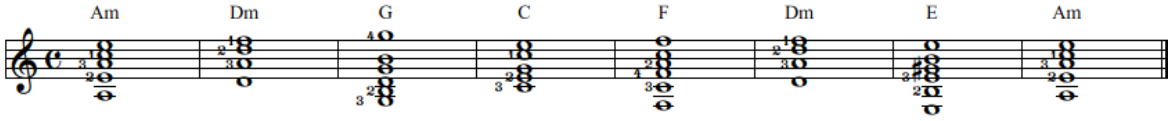
Question 6: Please play the following open chord exercise:



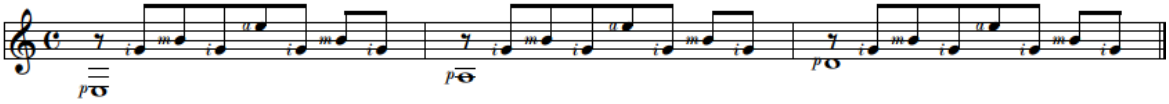
Question 7: Please play the following exercise of barre chords:



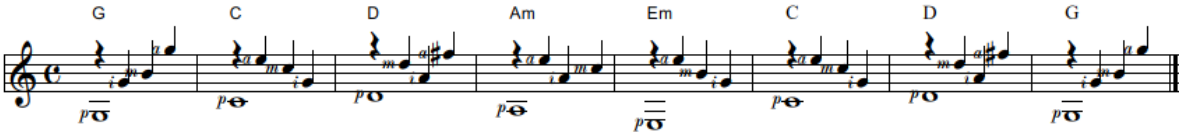
Question 8: Please play the following chord progression exercise:



Question 9: Please play the following "p-i-m-i-a-i-m-i" arpeggio exercise:



Question 10: Please play the following arpeggio chord exercise:



Theoretical Knowledge Test Results

Table 2 *Theoretical Knowledge Test Results*

Students/Questions	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*Total*
S 1	10	10	10	0	10	10	10	10	10	10	90
S 2	10	10	10	10	10	0	10	0	10	10	80
S 3	10	10	10	10	10	10	10	10	10	10	100
S 4	10	10	10	10	10	10	10	10	0	10	90
S 5	10	10	10	10	10	10	10	10	10	10	100

As demonstrated in the aforementioned table, the students provided responses to the questions on the theoretical knowledge examination and were awarded scores of 90, 80, 100, 90, and 100 correspondingly. The mean score for theoretical knowledge attainment among the students amounted to 92 points. This outcome suggests that the implementation of activity-oriented pedagogy in amateur guitar education has proven efficacious in facilitating the acquisition of theoretical principles by the students.

Performance Test Results

Table 3: First Student's Chapter Average Achievement

Theoretical Knowledge Test	*Performance Test*	*Average*
90	91.65	91

According to the table above, the first student's chapter achievement score was 91. In this case, the student successfully completed the chapter with a "very good" grade.

Table 4: Second Student's Chapter Average Achievement

Theoretical Knowledge Test	Performance Test	Average
80	95.34	89.2

According to the table above, the second student's chapter achievement score was 89.2. In this case, the student successfully completed the chapter with a "very good" grade.

Table 5: Third Student's Chapter Average Achievement

Theoretical Knowledge Test	Performance Test	Average
100	92.58	95.5

According to the table above, the third student's chapter achievement score was 95.5. In this case, the student successfully completed the chapter with a "very good" grade.

Table 6: Fourth Student's Chapter Average Achievement

Theoretical Knowledge Test	*Performance Test*	*Average*
90	96.1	93.6

According to the table above, the fourth student's chapter achievement score was 93.6. In this case, the student successfully completed the chapter with a "very good" grade.

Table 7: Fifth Student's Chapter Average Achievement

Theoretical Knowledge Test	Performance Test	Average
100	98	98.8

According to the table above, the fifth student's chapter achievement score was 98.8. In this case, the student successfully completed the chapter with a "very good" grade.

Table 8: *T*he Students' Success Averages

	Student 1	Student 2	Student 3	Student 4	Student 5
Average	91	89.2	95.5	93.6	98.8

According to the table above, the average achievement score for student 1 was 91, student 2 was 89.2, student 3 was 95.5, student 4 was 93.6, and student 5 was 98.8. This indicated that all students completed the chapter with a grade of "very good."

Based on the overall averages of the students, the class average was 93.6. This shows that the activity-based instructional plan in amateur guitar education resulted in successful outcomes for the study group.

Discussion and Conclusion

The study successfully demonstrated the effectiveness of activity-based lesson plans in amateur guitar education during the Covid-19 pandemic.

The research includes a lesson plan based on activity-based teaching, which consists of an introduction, development, and evaluation stages, converted from the 5E model to the 3E model. Motivating questions and exploratory information aimed at arousing curiosity in students are included in the introductory sections of the topics. The content of the development sections includes explanatory and in-depth information. In this stage, exercises are used in the form of activities to reinforce the lasting impact of instruction. In the end-of-topic evaluation section, theoretical knowledge tests and performance tests were applied to measure the acquired knowledge and skills related to the topic.

In practical application, the implementation of an instructional methodology that revolves around activities has been shown to effectively encourage students to actively engage in listening during lessons. For instance, based on the research conducted by Doğan (2008), it has been established that activity-based education significantly enhances listening skills, a finding that is corroborated by the present study. Moreover, it has been observed that the utilization of activity-based teaching methods has a positive impact on students' involvement in the learning process, their performance in evaluations, as well as their overall interest and attitude towards the subject matter. Consequently, this pedagogical approach contributes to students' academic achievements (Batdı, 2014). Similarly, the outcomes of this study align with those of previous relevant research.

Furthermore, a separate investigation conducted using a constructivist approach and employing the 5E model revealed that students exhibited a heightened level of interest and active participation during lessons, resulting in higher academic accomplishments compared to the control group (Gök, 2012). This particular study also incorporated a lesson plan based on the 5E model, and it was observed that students' academic achievements were remarkably elevated.

In the identical context, within the confines of the activity-based lesson plan employed for the five students encompassed in the study group, the students' scores on the theoretical knowledge assessments and performance evaluations conducted by professionals varied between 95 and 98.8, suggesting that the incorporation of activity-based instruction in guitar teaching produced favorable outcomes.

In conclusion, the study provides valuable insights into the implementation of activity-based lesson plans in amateur guitar education. It emphasizes the significance of engaging teaching methods, appropriate resources, and structured teaching practices in promoting student learning and achievement. The findings contribute to the existing body of research on activity-based teaching approaches and highlight the potential for their application in other musical instruments and educational contexts.

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