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Velocity Approaches for Scales in Classical Guitar Education

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Abstract

The aim of this research is to contribute to students, trainers and performers by examining the materials prepared for the effective and fast performance of the scales. As a descriptive study, literature review and document analysis were used in the analysis of the data. The results of this study revealed that guitarists should determine a sitting position suitable for their physical characteristics in order to perform a fast passage at a desired tempo and a comfortable way. In adittion, they should provide their fingers the ability to make minimum movement, and file their nails smoothly at the appropriate length and angle. Another finding was that guitarists should conduct systematic studies on coordination and synchronization. Similarly, they should memorize parts of the piece and accelerate in a controlled way starting from a very slow tempo, accompanied by a metronome. Lastly, they should do velocity exercises for the right and left hands; vocalize the scales with various rhythmic variations, and conduct studies on i-m (m-i)/i-a (a-i), p-i (i-p)/p-m (m-p), a-m-i (m-i-a, i-a-m) ve p-m-i (m-i-p, i-p-m) finger combinations.

Keywords: Music, Music education, Guitar, Guitar education, Velocity, Velocity approaches.

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Contents

Contribution of this paper to the literature
This study aims to contribute to students, trainers and performers by examining the materials prepared for the effective and fast performance of the scales.

1. Introduction

Instrument education is a long process involving the acquisition of many technical behaviors and knowledge towards music. New information about the instrument can be acquired and new technical behaviors can be developed in this process. Various problems are likely to be encountered during this technical development process. These problems should not be considered as obstacles, but as factors that contribute to the development when efforts are made for solutions. Hence, Coşkuner and Varış (2018) state that efforts towards to the solution of technical problems are of great importance in terms of musical development.

It might be necessary to struggle with various difficulties in every step of instrument training. While some difficulties in basic musical knowledge, holding-sitting and finger movements need to be overcome in the beginning, the variety and level of difficulties encountered increase in time. One of these problems is that fast passages cannot be vocalized at the desired tempo. According to Glise (1997) the common problem for students who have reached a certain level is how to improve fast playing. This situation is true for classical guitar as well as for all instruments.

There is a misperception in the society that the performers who cannot reach a certain velocity are not good guitarists. However, velocity is a tool used for musical expression (Tennant, 1995). To this end, it should not be forgotten that the main goal is not to play fast, but to increase the power of musical expression. For instance, if someone who saw Andres Segovia on the street told him "you are playing really fast", he would not take this person seriously since he did not understand the music Andrew was making (Chapman, 1999). Yet, it is a fact that it is necessary to have the ability to make a certain velocity in order to strengthen musical expression in some works that need to be vocalized at a fast pace. Therefore, there has appeared a need to benefit from special methods and studies in order to perform fast passages effectively. In this sense, the aim of this research is to examine the materials prepared for the effective and fast vocalization of the series, and to contribute to students, teachers and performers.

2. Method

2.1. Research Model

This qualitative research is a descriptive study in which literature review and document analysis techniques are used.

2.2. Data Collection

Yıldırım and Simşek (2013) state that document analysis can be used as a stand-alone data collection method or together with other data collection methods in qualitative research. Literature review and document analysis methods were used to collect data in this study.

2.3. Data Analysis

In this study, document analysis was conducted in data analysis process.

3. Findings and Comments

3.1. Approaches to Basic Behaviors

3.1.1. Sitting-Holding

Perhaps, the most basic element for a fast scale to be comfortably performed at the desired tempo is to hold the guitar in the appropriate position. According to Küçükay (2004), for a good grip (for right-handers), the front part of the chair should be preferred; the guitar's waist should be positioned on the left leg with the stem facing left, and the left leg should be raised with a stand. Also, the right leg should be opened enough to grasp the lower curve of the guitar, and the upper curve should rest on the chest area. The sound hole should be slightly turned up and the guitarist should turn slightly from the waist towards the left knee. The angle that the guitar makes with the ground plane should be 45 degrees, and the head of the guitar should be adjusted to stay at eye level in this position. In Figure 1, there is a photograph for the sitting explained by Küçükay.

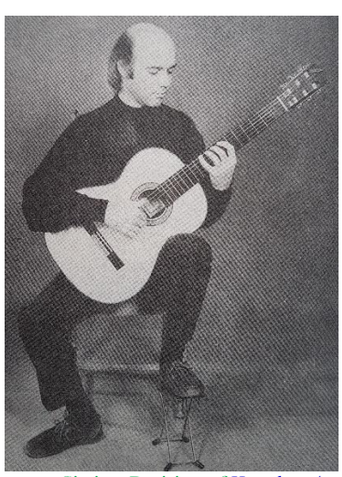

Figure-1. Sitting Position of Küçükay (2004).

The sitting in Figure 1 is referred in many works in the literature. This grip, which allows the guitar to remain in the same position even when the hands do not contact with the guitar, allows both hands to move freely. To this end, it is widely preferred by classical guitarists. Although the sitting in Figure 1 is accepted as basic by classical guitarists, there are also performers who hold the guitar differently. The sitting of the famous guitarist Pepe Romero in Figure 2 can be an example of this situation.

Figure-2. Sitting Position of Romero (2021).

Although this sitting in Figure 2 has great similarities with the basic sitting, which is widely adopted, there are also some differences. The most prominent and striking one of these differences is that the left leg is not placed in the Groove in the body of the guitar.

Apart from the basic sitting Figure 1 and the sitting given in Figure 2, there are a number of different sitting approaches. It can be said that these differences stem from the anatomical features of guitarists. Therefore, a guitarist who wants to successfully sing fast passages at the desired tempo should first determine a sitting suitable for his/her physical characteristics.

3.1.2. Finger Gestures

Finger movements are of great importance in every stage of guitar playing. This situation is felt more clearly in the scales that need to be vocalized quickly since the flawless and proper vocalisation of fast passages can be provided with the highest possible level of controlled movements of the fingers. According to Ryan (1984), the posture (arch) of the right and left hands should not be distorted in fast passages and the fingers of both hands should move with great ease, avoiding excessive tension. Also, the right hand should be kept as steady as possible. Duncan (1993) states that it may be beneficial to lean the right thumb on the 5th or 6th string to stabilize the right hand in fast scales. In addition to these basic principles, Parkening (1997) points out that the left hand fingers should be kept close to the string when not used, and should be moved as minimally as possible when used. The same is true for the fingers of the right hand. In this way, the distance covered by both fingers to touch the string will be minimized and a great time will be saved.

3.1.3. Nails

In classical guitar performance, nails have a great role in the formation of a comfortable technique as well as producing a good timbre. Factors such as nail shape, nail length and lack of care directly affect the success in velocity exercises as well as in many basic technical studies. For this reason, it is crucial to vocalize fast passages and to make the nails suitable for velocity exercises.

3.2. Coordination and Synchronization Approaches

A fast passage that is not sounded clean enough loses its influence and expressive power on the listener. A number of variables can be counted for this situation. Generally, problems with synchronization of both hands are at the top of these variables. Regardless of which finger combination and approach is used, the ability to accurately vocalize a fast passage at the desired tempo depends on the synchronized movement of both hands. Tennant (1995) defines synchronization as the simultaneous vocalization of the right and left hand fingers. Although this subject has been addressed and developed with various exercises starting from the first lessons of guitar training, special studies may be required in order to perform the scales quickly. Perhaps, the most basic of these is the synchronization study proposed by Ryan.

Ryan (1984) states that focusing solely on the right hand can give some ideas on how to vocalize fast passages, but it should be also considered how to increase the coordination of both hands. An exercise that can be applied on the basic chromatic scale given in Figure 3 is proposed in order to increase the coordination and synchronization.

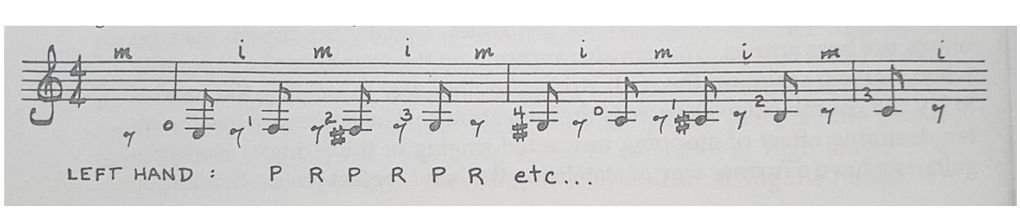

Figure-3. Chromatic Scale Exercise (Ryan, 1984).

In the exercise, the left hand fingers are relaxed simultaneously with the 8th rest right after each note, respectively, while the right hand fingers are brought to the ready position on the relevant string simultaneously with the 8th tace, respectively. Especially in ascending scale, the fingers of the left hand should not be completely lifted from the string during relaxation for minimal movement until it is their turn to play. The letter "P" symbolizes the vocalization (Play), and the letter "R" symbolizes the moment of relaxation in the example. This exercise, which should be practiced very slowly at the beginning, should be increased until the coordinated movements become automatic in a certain time period, with the accompaniment of the metronome (Ryan, 1984). Although it has been proposed on the chromatic scale in the initial stage, it is thought that working with this technique on all scales and with different finger combinations will significantly contribute to the synchronization of the two hands in the future.

According to Käppel (2016) synchronization, which is the most common form of right and left hand coordination, is a very complex process. Some problems arise in this process such as placing the left hand fingers on the strings before the right hand fingers or the right hand fingers are positioned on the strings before the left hand fingers. In order to eliminate these problems caused by the inconsistency of both hands, the movements of the hands should be organized to the finest detail, and both hands should be moved at the same time in all exercises to be studied. That's why, exercises for only one hand will not be effective enough in improving synchronization. Figure 4 presents examples of Käppel's exercises for the synchronization of both hands.

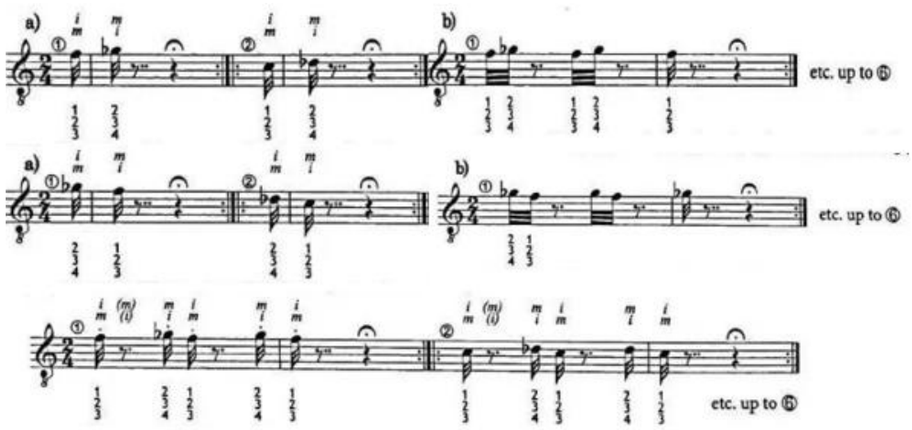

Figure-4. Synchronization Exercise (Käppel, 2016).

When the exercises are examined, it seems that Käppel deals with the synchronization issue in a similar way to Ryan's chromatic approach. Even though the exercises have been notated at diatonic intervals, they have been prepared on the basis of adjacent frets. The main difference that separates Käppel's synchronization studies from Ryan's exercises is that after producing a sound with one finger of the right hand, the other finger silences the string as quickly as possible. In this sense, it can be said that the exercises suggested by Käppel are for velocity exercise with synchronization. In addition, the exercises start with two notes and progress gradually covering the four fingers of the left hand on six strings, and are supported by different rhythm patterns and finger combinations.

Yates (2016) states that coordination exercises should be studied in the 5th position as it supports a more comfortable left-hand posture, and on the 4th string at the beginning since it has more reasonable string tension. The exercise related to Yate's approach is given in Figure 5.

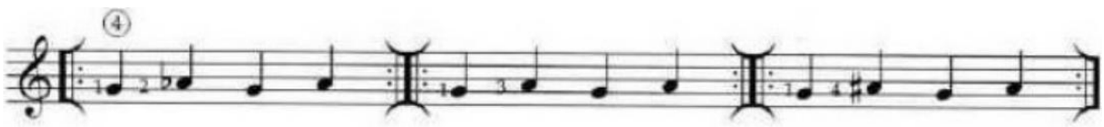

Figure-5. Velocity Exercise (Yates, 2016).

In the exercise, it is aimed that the fingers of both hands move simultaneously and play together in the best possible way. While practicing this exercise, the fingers that do not perform the vocalization process should be kept as close to the string as possible (Yates, 2016). Similar to the approach of Ryan and Käppel, this study, which was built on a chromatic basis, was also supported by combinations of ascending and descending fingers, and it was aimed to provide an acquisition for the basic stance of both hands. Specifically, the main features that distinguish this approach from others are as follows: keeping the non-voicing fingers close to the string, starting the work on the 4th string, which has a more reasonable string tension, and performing the practice in the 5th position.

Yates also proposes a similar exercise to Ryan's left-hand finger relaxation exercise under the heading of coordination. This exercise, which consists of three different stages as "Ghosting", "buzzing" and "normal", is presented in Figure 6.

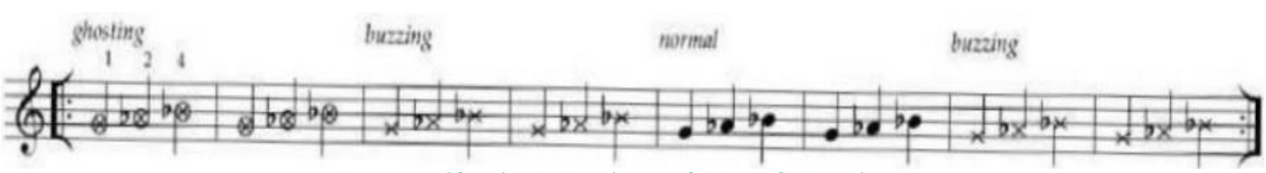

Figure-6. "Ghosting", "Buzzing" and "Normal" Exercise (Yates, 2016).

In the "Ghosting" stage of the exercise, the left hand only touches the fret and string with the relevant note and does not apply pressure, while the right hand finger strikes the string simultaneously. In this stage, since the

left hand finger prevents the vibration of the string, sound production is consciously prevented. In the second stage (buzzing), while the left hand finger presses the string lightly, the right hand finger strikes the string simultaneously. The pressure force exerted by the left hand should be enough to allow the vibrating string to hit the fret during the "buzzing" stage. For this reason, during the "buzzing" stage, a clear sound is not obtained consciously and the scratchy sound created by the string hitting the curtain iron is heard. In the normal stage of the exercise, the left hand finger creates pressure at a level to produce a clear sound and the right hand finger strikes the string simultaneously (Yates, 2016). The fact that this stage performs synchronization work while applying pressure at three different levels with the fingers of the left hand is an important feature that distinguishes this exercise from other approaches. Successful completion of the exercise requires careful work at as slow a pace as possible and a high level of control.

All of the approaches and exercise instances discussed so far are based on the chromatic scale. In the studies on the chromatic scale, while the fingers of the left hand move close to each other, the string passage is either absent or minimal. Thus, since both hands are as stable as possible, the highest level of coordination can be achieved. String transitions are the biggest factor that could disrupt the synchronization of both hands. Successful two-hand coordination in the same position and on the same string often tends to impair when it comes to string transitions. According to Duncan (1980), this stems from the need for the fingers of the right hand to make a larger movement when passing to another string. Due to this large movement, the timing difference, even for a very short time, can lead to impairment of coordination. The same is true for the left hand fingers, but the left hand fingers compensate relatively quickly for the timing change that occurs during string change. Accordingly, trainers and performers mostly focus on right-handed exercises in string change.

Tennant (1995) expresses that one of the best methods to solve the problem of string transitions is to exercise on right hand finger independence. Thus, it is thought that the velocity and correct vocalization rate in the right hand fingers will increase. Figure 7 contains the exercise recommended by Tennant for right hand finger independence.

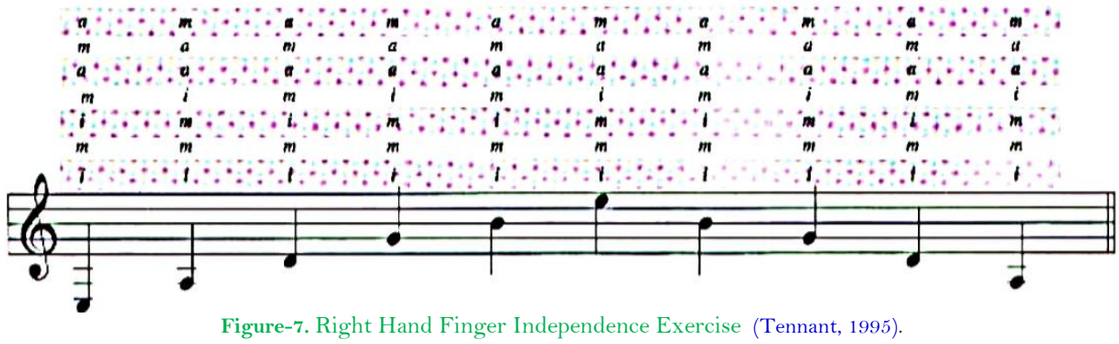

Figure-7. Right Hand Finger Independence Exercise (Tennant, 1995).

It appears that the exercise is aimed at training the six-string transition using various right-hand finger combinations. With this feature, it can be said that it has a preparatory quality for most of the right hand transition variations that may be encountered during the performance of the scales. Similarly, the use of the empty state of the strings allows the guitarists practicing the exercise to focus entirely on their right hand movements.

Tennant (1995) argues that the open string approach will be effective in the string transitions of the fast passages encountered in the works. To this end, it is thought that by focusing only on the right hand, the problems of string transition that may be encountered in the works can be solved. In Figure 8, there is an example for Tennant's approach.

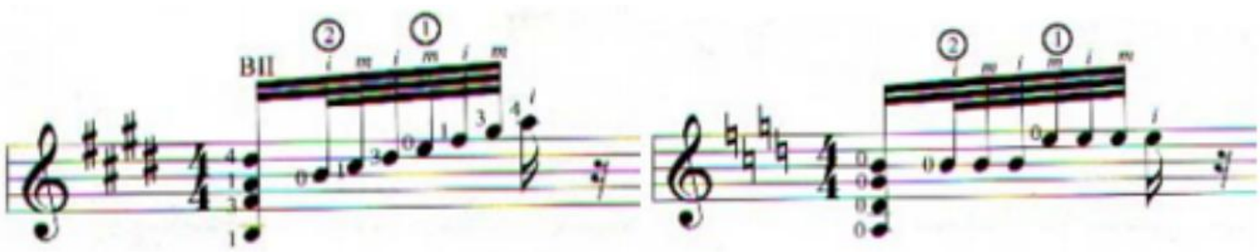

Figure-8. Open String Velocity Approach (Tennant, 1995).

It is seen that the application is the same as the original in terms of rhythm, right hand fingering and string number, although empty strings are used in the example of a passage from Fernando Sor's Op.9 (Variations on Mozart's Magic Flute Theme). In this sense, it is imagined that after the empty string studies on the right hand, synchronization studies including the left hand fingers can be effective in solving the coordination problems caused by string transitions.

Shearer (1990) preferred to handle string passages with an approach that would not only limit the right hand but also include the left hand fingers. He also included bass accompaniment in his exercises. Figure 9 also contains examples of Shearer's exercises for string passages.

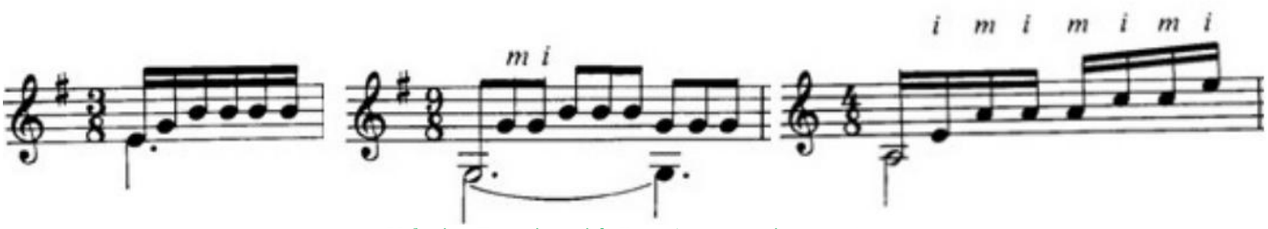

Figure-9. Velocity Exercise with Bass Accompaniment (Shearer, 1990).

It is seen in the exercises that the change of the string is given gradually, first once, then two and three times. In this respect, it is possible to say that the issue of string change is handled from simple to complex systematically. Unlike Tennant's empty string approach, left hand is used in exercises. Therefore, it can be said that these exercises are not only aimed at exercising the right hand, but also aimed at improving left hand transitions.

One of the important issues to be considered in string transitions is especially right hand fingering. Fingering made in accordance with the posture of the hand and the principle of movement will contribute to the solution of coordination problems that may occur in string transitions. Glise (1997) divides right-hand fingering for string transitions into "clean fingering" and "cross fingering". According to this approach, if i and m fingers are used in the right hand, when it is necessary to pass to the upper string, the i finger, the closest finger according to the natural position of the hand, should be used. Similarly, when it is necessary to switch to the lower string, the m finger, which is the finger closest to the natural position of the hand, should be preferred (Oztutgan & Oztutgan, 2018). There is an example for clean and cross fingering in Figure 10.

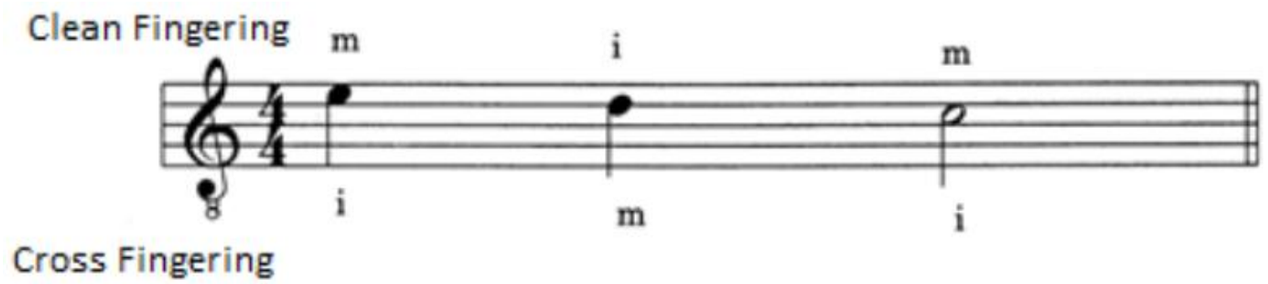

Figure-10. An Example for Clean and Cross Fingering.

In the example, after the mi note voiced with the m finger on the 1st string, the re note on the 2nd string is vocalized with the i finger overlaps with the "clean fingering" approach. In this way, the finger closest to the upper string has been used in the position of the right hand, and coordination of both hands has been tried to be preserved by minimizing the loss of time during the transition. This approach can be used with all finger combinations.

3.3. Approaches to Working Method

It is only possible for a performer or student to carry his/her existing potential in velocity to further through conscious and systematic work. Every step taken in this process should be followed with a strategic approach by the guitarist.

Parkening (1997) point out that it is necessary to learn and memorize the fast passage in a work by vocalizing it as slowly and accurately as possible, and the velocity can be increased gradually after gaining confidence in the correct vocalization. Memorizing the script to be voiced is important in terms of reducing the margin of error that may occur during note reading and the loss of time in various mental processes such as seeing the note, recognizing it and thinking about its place on the guitar. It is thought that working in the same way and as slowly as possible can raise awareness about finger movements, thus it will contribute to an increase in finger control.

Performing the scale or passage at the desired tempo may sometimes require long-term intensive work. According to Vahila (1987), it is necessary to use a metronome in studies aimed at increasing velocity or in vocalizing fast passages. While working, the metronome should primarily be set to a very low tempo and the scale to be accelerated should be vocalized at this tempo at least two or three times. The metronome rate can be increased by one or two levels if the scale is slow and easily vocalized two or three times. However, if it is not possible to perform the scale smoothly and easily at a slow pace, the metronome rate should be reduced by one or two levels. This method should be continued repeatedly until the scale is vocalized at the desired tempo without mistake. This method proposed by Vahila offers a controlled acceleration as well as a large amount of repetitive work.

According to Tennant (1995), velocity attacks should be made with right hand fingers to increase the ability to play fast. Velocity attacks can be defined as vocalizing the note duration as it should be at the beginning and then in shorter units. Stacatto signs should be paid attention in the studies about velocity attacks. In addition, it is important to play apoyando at the beginning and then play tirando. Figure 11 contains examples of Tennant's exercises for right hand velocity attacks.

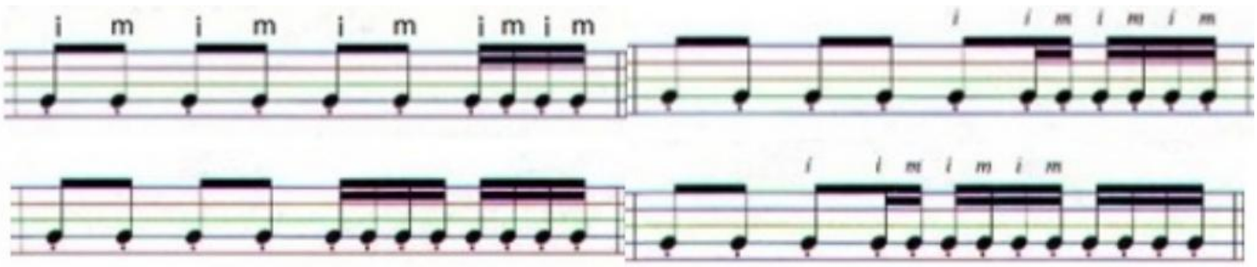

Figure-11. Right Hand Velocity Exercises (Tennant, 1995).

As seen in the exercise, the second string of the guitar is voiced empty with the i-m finger combination, and 16 notes are used, which gradually increases towards the end of the measure. It is thought to be an effective starting exercise for a student or performer who has done the basic behaviors (holding, sitting etc.) and the necessary synchronization exercises. Especially, when stacatto is being performed, using the next finger instead of the same finger on the right hand will be more suitable for the purposes and principles of the exercise.

Likewise, Yates (2016) suggests empty string exercises for right hand velocity development, which is similar Tennant's exercises. Figure 12 presents examples of right hand exercises by Yates.

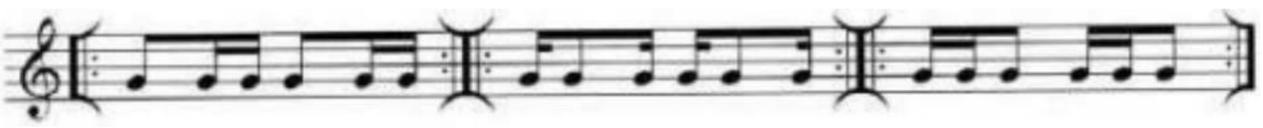

Figure-12. Right Hand Velocity Exercises (Yates, 2016).

In the exercise, it is seen that the second string of the guitar is voiced empty, similar to the example in Figure 11, but differently, rhythmic variations are included. In this way, these rhythmic variations will raise awareness about right hand finger change and control, thus contributing to the acceleration of the right hand fingers.

Making daily scale works is one of the keystones of musicianship and contributes to velocity exercises (Vahila, 1987). Perhaps the most basic scale that can be used in velocity exercises is the chromatic scale. It is possible to focus on the control of the fingers in velocity exercises due to its advantages such as less string passage, having a symmetrical structure and the presence of notes on neighbor frets. As a matter of fact, Tennant (1995) suggests some exercises on chromatic scale for velocity development. Figure 13 contains examples of exercises suggested by Tennant.

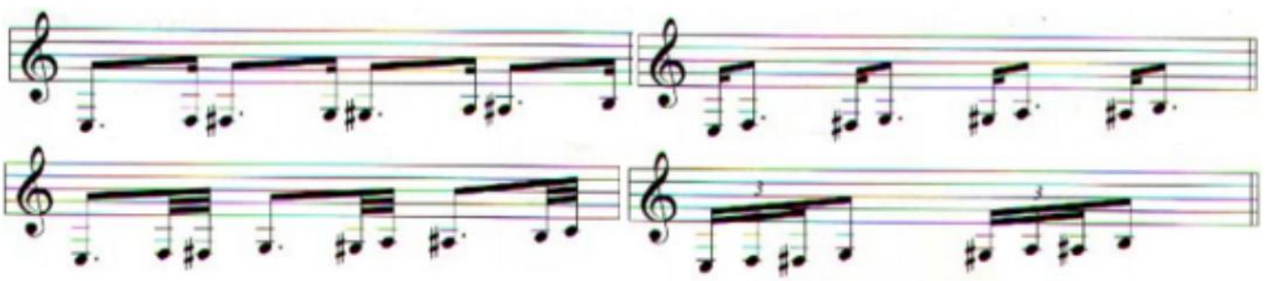

Figure-13. Examples of Rhythmic Exercises (Tennant, 1995).

The exercise has a study similar to the rhythmic variations previously given by Yates in Figure 12. However, this study differs from the exercise by Yates in terms of using both hands and vocalizing on a chromatic scale. Tennant (1995) states that working with various rhythmic variations contributes greatly to being able to play clear and fast.

Parkening (1997) added a different dimension to the work by transferring the rhythmic exercises in Figure 13, and the velocity attacks in Figure 11 to the C major scale. There are examples of exercises suggested by Parkening in Figure 14.

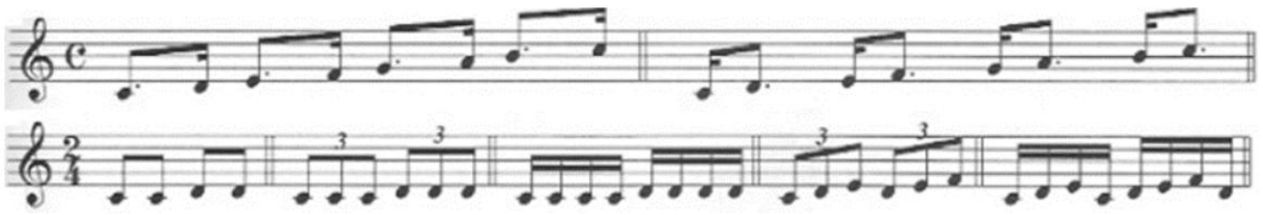

Figure-14. Examples of Rhythmic Exercises (Parkening, 1997).

In this exercise, there is an approach that can be an outcome of the approaches discussed so far, and may be described as the last stage before the scales are performed as a whole. It is possible to diversify these studies and adapt them to all scales.

Velocity exercises are not limited to the right hand only. There are left-handed techniques as in solving synchronization problems. Nonetheless, thanks to the advantage of using four fingers in the left hand, it is considered that there are no velocity problems in the left hand. Therefore, the number and variety of studies on the left hand is quite low. Glise (1997) expresses that it will be beneficial to do staccato and legato exercises for the left hand to increase left hand velocity.

3.4. Approaches to Finger Combinations

Even if a performer or student has been working on synchronization and velocity for a long time, she/he may not develop at the desired level. The reason for this may be an error or incorrect learning in the study steps, or it may be caused by some anatomical differences. Error or incorrect learning in the method of study can be fixed under the supervision of an instructor. However, it would be appropriate to work with different finger combinations for someone who cannot develop because of reasons such as anatomical or motor skills. To this end, the role of various right hand finger combinations in velocity will be examined in this section.

When using two fingers on the right hand, there are a total of 12 combinations: m-i, i-m, m-a, a-m, i-a, a-i, p-i, i-p, p-m, m-p, a-p, p-a. Of these, a-p and p-a are scarcely used. When three fingers are used on the right hand, it is possible to create many combinations, yet the combination of a-m-i and p-m-i is the most suitable one for vocalizing fast passages (Yates, 2016). Although many combinations can be produced numerically, the number of finger combinations that can be used in fast passages is very few due to the limitations in the anatomy of the human hand and the structural features of the guitar. These combinations can be classified under four main headings as as i-m (m-i)/i-a (a-i) approach, p-i (i-p)/p-m (m-p) approach, a-m-i (m-i-a, i-a-m) approach and p-m-i (m-i-p, i-p-m) approach.

3.4.1. i-m (m-i)/i-a (a-i) Approach

While playing the notes in classical guitar performance, it is important to change the finger in the right hand and not to use the same finger repeatedly. I-m or m-i combination is ussually used for finger changes. It is possible to say that all other combinations are shaped on this basic approach (Oztutgan & Oztutgan, 2018). This case did not occur by chance. According to Shearer (1990) the muscles controlling the index and little fingers are more in every person than the middle and ring fingers. This allows the index and little fingers to work more independently than the other fingers. Likewise, the middle finger with the widest movement muscles is the strongest finger, while the little finger with the smallest finger movement muscles is the weakest finger. The muscles controlling the index and ring fingers are equal in size, but the joint connection of the muscles controlling the ring finger with the middle finger limits the ring finger's range of motion. Thus, the i-m (m-i) fingers stand out as the strongest and most independent fingers for vocalizing with two fingers. For this reason, guitar education all over the world starts with these two finger combinations.

It can be concluded from the explanation by Sherrod regarding the anatomical structure of the hand that i-a (a-i) fingers can be preferred as an alternative to i-m (m-i) fingers. Accordingly, i-a (a-i) finger combination may be among the first alternatives to be considered by people who cannot achieve success with i-m (m-i) fingers in fast passages in which finger independence and power are important. When the i-a (a-i) combination is chosen, it is noteworthy that the height difference between the i and m fingers that occurs in the i-m (m-i) approach is minimized.

3.4.2. p-i (i-p)/p-m (m-p) Approach

The thumb positionally separates from the other four fingers and moves in the opposite direction to these fingers. The weak bond with the other fingers positively affects the free movement of the thumb. Likewise, the thumb has a very strong structure in terms of muscle mass. However, despite all these advantages, the thumb is not primarily preferred in the vocalization of fast passages. One of the biggest reasons for this is that the thumb is naturally positioned close to the bass strings due to the right hand posture and the structural features of the guitar. For this reason, the vocalization of bass strings is given primarily to the right hand thumb. Thus, using the thumb is not preferred in a scale that needs to be performed with bass sounds or in a scale with bass sound just before/after it, as it is not ergonomic. Nevertheless, it can be used with the combination of p-i (i-p), p-m (m-p) together with the other strong fingers of the right hand, m and i in scales without bass sound or in scales with bass sound but suitable in position. An example of this usage is given in Figure 15.

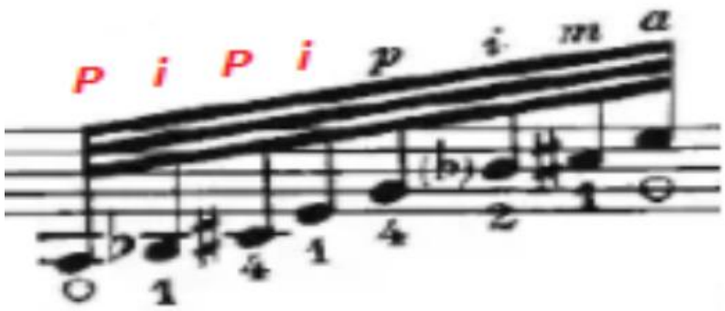

Figure-15. Example of p-i (i-p)/p-m (m-p) Approach (Dyens, 1985).

The scale in the example belongs to the 5th measure of Roland Dyens' Tango En Skai. The right hand fingering marked in red was suggested by the researcher as an example of p-i finger combination. As seen in the figure, the fast passage starting on the bass strings and then connecting to an arpeggio enabled the use of the p-i finger combination. Similarly, it is possible to use the p-m (m-p) combination in the situations that provide ease of transition.

3.4.3. a-m-i (m-i-a, i-a-m) Approach

The string vocalization technique with a-m-i finger combination is a very effective approach for fast passages. This approach has been used effectively by a small group of guitarists since it was pioneered by Narciso Yepes in the mid-20th century (Palmer, 2012). Although it is effective, it has not been widespread enough as classical guitar education begins with i-m (m-i) approach and a-m-i (m-i-a, i-a-m) approach has not been included in the educational materials.

The use of a third finger may offer an ideal solution for students and performers who cannot sing fast passages at the desired tempo with two finger approaches. Considering that the task of vocalizing the bass notes is on the thumb and the little finger is not used effectively in classical guitar for various reasons, it is quite natural for guitarists who want to use three fingers to prefer i-m-a fingers. However, since it is not suitable for the natural movement of the hand, and because of the position of the fingers, it is a more correct approach to use the finger order a-m-i (m-i-a, i-a-m) instead of i-m-a. In this way, it is possible to create a quick finger loop, just like in the tremolo technique, by benefiting the natural movement of the hand. In order to provide ease of transition in this cycle, the starting finger can be m or i according to the passage voiced.

The a-m-i (m-i-a, i-a-m) approach can be vocalized using traditional left hand fingering. However, when traditional left hand fingering is performed, it is possible to encounter unnatural string transitions and an asymmetrical structure with two notes on some strings and three notes on some strings. This makes it difficult to perform the series in a fast and synchronized way. Palmer (2011) points out that in order to solve this situation, a change should be made in the fingering of the left hand so that three notes can be vocalized on each string. With this, it has become possible to vocalize the strings in a more controlled and faster way with the finger combination a-m-i (m-i-a, i-a-m). There is an of Palmer's left hand fingering in Figure 16.

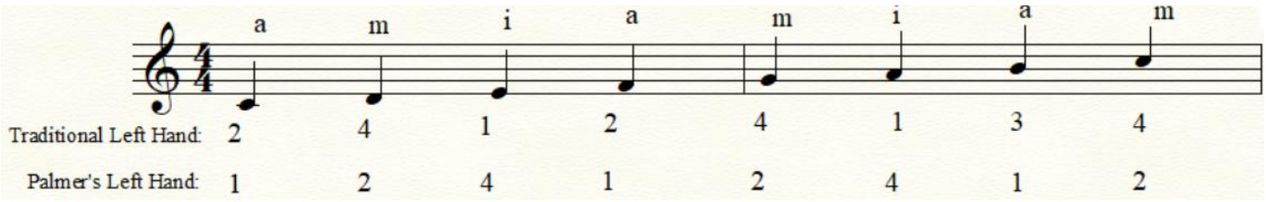

Figure-16. Left Hand Fingering Example (Palmer, 2011).

In the example, two different left-hand approaches are given for the vocalization of the C major scale. Accordingly, it is necessary to open more between the 1st and 2nd fingers (with one fret gap) in Palmer's approach compared to the traditional method. Considering the left hand anatomy, it is possible to do this with a short study or without it.

3.4.4. The p-m-i (m-i-p, i-p-m) Approach

The p-m and i fingers are the strongest and most independently movable of the right hand. In this respect, it is possible to use them effectively in the vocalization of fast passages. Just like the a-m-i (m-i-a, i-a-m) approach, it is possible to create a fast finger loop with the combination of p-m-i (m-i-p, i-p-m). In order to provide ease of transition in this cycle, the starting finger can be m or i according to the scale voiced. When the appropriate starting finger is determined, it is possible to make easy string transitions by using the freedom of the thumb, and the up and down movement of the arm. Despite all these advantages of the p-m-i (m-i-p, i-p-m) approach, it is not suitable for the vocalization of bass accompaniment scales since the bass strings vocalization is primarily given to the right thumb. For this reason, it can only be preferred in scales without bass sound or in scales with bass sound but positionally suitable for vocalization.

The p-m-i (m-i-p, i-p-m) approach can also be used effectively with the three-note on each string approach that Palmer have suggested. A vocalization example of the p-m-i (m-i-p, i-p-m) approach with both left-handed methods is given in Figure 17.

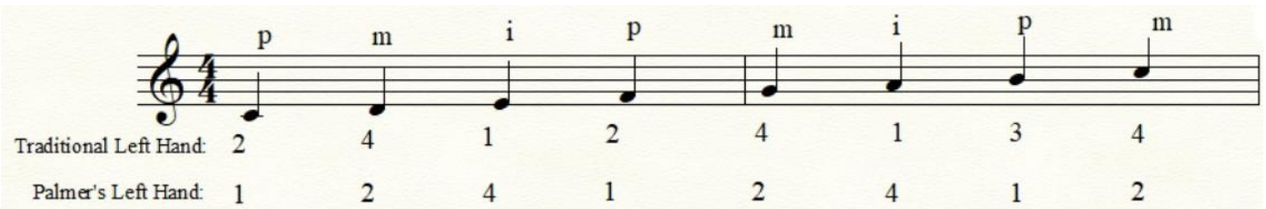

Figure-17. A Vocalization Example of the p-m-i (m-i-p, i-p-m) Approach.

As seen in the example, two different left-hand approaches are given for the vocalization of the C major scale. Accordingly, there is possibility to make more suitable string transitions in Palmer's approach. To this end, taking into account Palmer's suggestion, the p-m-i (m-i-p, i-p-m) finger combination can be used more effectively. However, it should be in mind that a guitarist trained with traditional right-hand fingering should practice for a certain period of time in order to adapt to the p-m-i (m-i-p, i-p-m) approach.

4. Results

In order to vocalize fast passages comfortably, the results found in this study is as follows:

1. The acquisition of basic behaviors such as sitting-holding sitting-holding and minimum finger movements on both hands.
2. Filing the nails to be of appropriate length, angle and smooth.
3. Systematic studies for coordination and synchronization.
4. Memorizing the relevant parts of the piece, and accelerating it in a controlled way with a metronome by starting from the slowest possible tempo.
5. Doing velocity exercises for the right and left hands.
6. Performing the scales with various rhythmic variations.

Lastly, it has been concluded that studies should be conducted on finger combinations i-m (m-i)/i-a (a-i), p-i (i-p)/p-m (m-p), a-m-i (m-i-a, i-a-m) and p-m-i (m-i-p, i-p-m).

5. Suggestions

The suggestions are as follows:

1. Preferring the p-m-i (m-i-p, i-p-m) approach when the combination of i-m (m-i)/i-a (a-i) cannot be achieved in fast passages without bass accompaniment.
2. Preferring the a-m-i (m-i-a, i-a-m) approach when the combination of i-m (m-i) / i-a (a-i) cannot be obtained in fast passages with bass accompaniment.
3. Further scientific studies on fast arpeggio and chord transitions.

References

Chapman, R. (1999). *The complete guitarist.* Ankara: Dost Bookstore Publications.

Coşkuner, O., & Varış, A. Y. (2018). Opinions of Teaching staffs related to technical problems of students get educated piano educaton in professional music education ınstitutions. *The Journal of Academic Social Science, 84*(6), 23-36.

Duncan, C. (1980). *The art of classical playing.* Miami: Summy-Birchard Inc.

Duncan, C. (1993). *Classical guitar 2000.* Canada: Summy-Birchard Inc.

Dyens, R. (1985). *Tango En Skai.* France: Editions Henry Lemoine Publishing.

Glise, A. (1997). *Classical guitar pedagogy.* St. Joseph: Aevia Publications.

Käppel, H. (2016). *The bible of classical guitar tecnique.* Berlin: Verlag Neue Musik.

Küçükay, B. (2004). *Starting method for classical guitar.* Ankara: Evrensel Music House.

Oztutgan, Z., & Oztutgan, K. (2018). Fingering approaches in classical guitar education. *Art-e Art Journal, 11*(21), 115-133.

Palmer, M. (2011). *The virtuoso guitarist, Volume 1: A new approach to fast scales.* Bowie: Matt Palmer Music.

Palmer, C. M. (2012). *The use of a-m-i scale technique to facilitate the performance of Joaquin Rodrigo's Concierto de Aranjuez.* Doctoral Thesis of Musical Arts, Arizona.

Parkening, C. (1997). *The Christopher parkening guitar method - Volume 2: Guitar technique.* Milwaukee: Hal Leonard.

Romero, P. (2021). Photos: Maestro Pepe Romero. Retrieved from: https://peperomero.com/photosmaestropeperomero/duxmp5gzakltsmswwqnqxe3mh6qlhe. [Accessed May, 9,2021].

Ryan, L. F. (1984). *The natural classical guitar: The principles of effortless playing.* New Jersey: Prentice Hall Press.

Shearer, A. (1990). *Learning the classic guitar part 2.* U.S.A: Mel Bay Publications Inc.

Tennant, S. (1995). *Pumping nylon: The classical guitarist's technique handbook.* U.S.A: Alfred Publishing Inc.

Vahila, M. (1987). *How to master any musical ınstrument.* Ohio: Paz Publishing.

Yates, S. (2016). *Classical guitar technique from foundation to virtuosity Part 1- Foundation.* U.S.A: CreateSpace Independent Publishing Platform.

Yıldırım, A., & Simşek, H. (2013). *Qualitative research methods in the social sciences.* Ankara: Seçkin Publications.