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# The Application Of The Solfegio Method In Learning Major Instrument Practice (string) II In The Music Education Study Program, Department Of Music, Faculty Of Language And Arts, Universitas Negeri Padang

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**Abstract:** This study aims to determine whether the application of the solfegio method can improve the ability of student learning outcomes in aiming for tone in the practical learning course of major string instruments 2 of the Department of Sendratasik Music Education Study Program FBS UNP. The type of research is classroom action research (PTK) or classroom action research collaboratively using the Kemmis and Mctaggart cycle. The research subjects were students of the 2022 batch of major string instrument practice II (PIM 2) music education study program FBS UNP. The research procedure is planning, action implementation, observation, and reflection. Research instruments in the form of assessment test criteria sheets. Data collection techniques literature study, observation, practice assessment tests, documentation. Quantitative descriptive data analysis technique. The results showed: (1) the pre-cycle average score was 56.2 in the sufficient category (C) = incomplete (2) in cycle 1 was 67 in the sufficient category (B-) = incomplete, (3) in cycle 2 was 79.4 = complete. Students experienced an increase in cycle 1 of 10.8 and in cycle 2 of 12.4. The research was successful in cycle 2 meeting 2 and the results were significant. It can be concluded that the ability of students to aim for notes in playing string instruments has increased after taking action by applying the solfegio method. So the solfegio method can be applied in learning the practice of playing string instruments.

**Keywords: String instruments, solfegio**

## 1. Introduction

In the Music Education Study Program of the Department of Sendratasik, Faculty of Languages and Arts, State University of Padang, there is one compulsory course that must be taken by every student, namely the major string instrument course. The purpose of this course is to increase knowledge and improve skills in playing string instruments such as violin, viola, cello, or contrabass. The learning materials reviewed in order to equip students in playing string instruments include practicing scales / intervals, practicing fingering techniques (arpeggios), practicing etude-type works, and practicing standard melodies such as minuets, sonatas, concertos, and pop songs. The progression of students in playing string instruments is seen from the fluency of students in reading sheet music, the accuracy of pitch control (left hand), the mastery of precise bowing techniques (right hand), and the accuracy when playing the tempo and dynamics listed in the music notation. In the learning process, the ability of students to produce good quality playing is not only seen in the practice of playing string instrument techniques, but the fluency in reading notation and the accuracy of the pitch shot when playing the instrument must also be considered or which is related to musicality.

Music is an element of art in which sound, rhythm, melody, timbre, tempo, dynamics and harmony are combined into one unit so that it sounds beautiful to the ear. Musicality in children can help hone intelligence, psychomotor, and affective development in learners. Seashore (Sumaryanto, 2000) states that musicality is an innate ability to play music that is inherent in a person. Furthermore, according to Hallam (2006), musicality is considered to be related to rhythmic sensitivity, and is followed by the ability to understand and interpret music, express tones in the form of thoughts and feelings and become motivated to be involved in music.

The background of most of the major string instrument students in the music education study program are beginners who really start from scratch. In accordance with John M. Ortiz in his work entitled "Growing Happy, Smart and Confident Children with Music", children with good musicality have better retention and are better able to apply the musical elements absorbed while listening to music to their capacity when playing music. However, there are also children who have low musical ability. People with low musicality will have difficulty in capturing the tone and therefore the quality of their instrument playing will also be low. In the case found in the field, it can be seen that most of the students who attended the major string instrument lecture at the Music Education Study Program at Padang State University were mostly false (the aim of the tone was not correct) in playing the instrument both during practice and during the exam and even during performances outside the lecture. The reality in the field

shows that a more specific method is needed in the learning process of practicing major string instruments in the music education study program. The method in learning is a certain way that is used in order to achieve learning objectives. Based on the reality that the author found in the field, to improve students' musicality in terms of competence in reading, listening, and playing notes, an exercise called solfegio is needed.

Solfegio is an exercise to hone auditory competence or musical acuity, both rhythmic efficiency and tonal efficiency. The method that can be used in improving one's musicality in playing music is the solfegio method. The application of solfegio is divided into 3 stages namely "sight reading, sight singing, and ear training". Sight reading is a method to practice reading notations or rhythmic patterns in song scores. Sight singing is reading the melody by singing it with sillaby zolmization. Sillaby zolmization which should be sung or voiced by research students is replaced by reading and playing tone by tone or melody using string instruments directly. Ear training is a special exercise to improve hearing ability or hearing acuity to music, Both in terms of rhythmic accuracy and tone accuracy. In this study, researchers utilized audio files that had been exported from the etude 1 sheet music as a support for the application of the ear training method.  Jamalus (1988: 44) argues that all forms of musical activities require the ability to hear, therefore musical activities are based on two important abilities, namely mastery of musical elements and factors related to hearing. According to Banoe (2013: 75-76), sharpening hearing skills can be honed through the practice of imitating various words, syllables, musical terminology, verses, following rhythms with varied patterns through clapping hands or patting the table, tapping feet, speech, following simple tones and melodies both using vocals and using musical instruments. With the accustoming of students to hear gradually, the shadow of the tone or note of a song that is heard will be able to imagine the size and accuracy of the tone jump. The ability to hear is a combination of two factors, namely habit and innate. The habit factor can be honed through regular and consistent practice in addition to the innate factor and musicality as a factor that cannot be separated from it. Based on the facts that researchers found in the field, the benefits of the solfegio method in the music education program need to be considered and researched further. The purpose of this research is to find out whether the solfegio method can improve the ability of student learning outcomes, especially in aiming for ear training tones in the practical learning course of major string instruments 2 in the Music Education Study Program, FBS.

## 2. Literature Review

String instruments are one of the compulsory courses for students of the Department of Music Education (Mimanda, Yensharti, 2022). String instruments that are often found are Violin (Violin), Viola (Alto Violin), Violoncello (Cello), and Contrabass (Double Bass) (Denada et al., 2019). Indicators of student success in playing these instruments are seen from the accuracy of tone or pitch control, the accuracy of bowing techniques, and the accuracy in expressing the tempo and dynamics written in the score. Bowing is a term for the technique of swiping using the right hand. The strength of the right hand in swiping the violin is very influential on the sound produced, especially the tone color, short length and volume played. Improper mastery of bowing techniques will affect the accuracy of the tone and cannot smoothly express the notation in the music read (Mimanda, Yensharti, 2022). Students will not be able to play musical instruments, or read music notation, or play musical instruments by reading music notation well, if they do not understand the basic substance of music theory well. The musical power needed to improve the quality in mastering string instruments, including how one can hear the tone well and its application to the playing of string instruments, so that in each tone will create an appropriate tonality in playing melodies and in applying rhythmic forms appropriately (Agustianto, 2015).

To improve or strengthen one's musical power, in the field of music there is a form of training to improve musicality called solfegio training (Agustianto, 2015). Solfegio is very important because the violin is a fretless instrument, which means that it does not have frets (tone dividing lines) on the finger board, making it difficult to aim for notes in playing it. Playing the violin requires a long training process and solfegio sensitivity is needed to get the right pitch / intonation. Scales need to be practiced continuously so that the left hand fingers automatically hit the desired tone according to the high and low pitch with the right frequency. Violinists must also practice listening to the tone. Without good hearing sensitivity, scales training will be difficult because they cannot feel the highs and lows of a tone (Parahita, 2017).

The Solfeggio method is reading songs according to sheet music as the initial stage that a person must understand if they are to master the dimensions of time and space well (Lumbantoruan, 2021). Solfegio is a term that refers to singing scales, intervals and melodic exercises with sillaby zolmization, which is singing musical notes using syllables (Stanly, 1980: 454). In its further development solfegio is not only singing but also hearing tones. Solfegio activities are closely related to ear training, namely audio as the first step, followed by sight reading rhythm, and finally sight singing melody; improvising melodies from known or unknown songs (Dalby, 2015, p.

91; Mishra, 2014, p. 452; Lumbantoruan, 2021). The ability to hear notes is called ear training and the ability to read notes is called sight reading (Sumaryanto, 2005).

Normal humans since birth have been burdened with the ability to react to sound or music, so that without listening activities, humans cannot react to stimuli in the form of sound Qamalus, 1981: 49). Solfegio activities are performed not only for vocal music but for playing instrumental music. This means that the series of notes read are more focused on the accuracy of the tone, not on the absolute frequency and interval of the tone according to the "fixed do" (Lumbantoruan, 2021). Katie explains that to improve musicality skills in the field of vocal and or instrumental music, namely practice reading melodies, reading rhythms, and combining vision with hearing (Katie, 2013: 70-87). Students who are good at solfege will be good at applying it to further course material such as instrument practice (Pratama et al, 2015). There are three learning experiences carried out in solfegio activities, namely: sight reading, which is reading the rhythm according to time; sight singing, which is reading the melody according to time and space, and ear training is hearing training (Lumbantoruan, 2021).

According to Latifah Kodiyat (1983: 68) ear training is systematic hearing training, vocal training without words and only with open syllables. This hearing can be trained by harmonizing with the notes at hand. The more students practice, the higher the student's ability to imagine the tone, whether or not the tone jumps and intervals are correct. Florentinus (1997: 62) further divides the ability to hear notes (ear training) into three indicators of ability, namely: (1) the ability to hear rhythms, (2) the ability to hear melodies and (3) the ability to hear chords. This ability is a combination of two factors, namely habit and innate factors (Benward 1989: 9). However, it is not the amount of practice that is important but the exercises (even if a little) that are done every day regularly and continuously will be more beneficial (Last 1980: 136).

Sight reading is reading notes without preparation (Last 1980: 135). Sight reading is the ability to simultaneously read and play musical notation that has never been known before (Sumaryanto, 2005). This is often referred to as prima vista. Florentinus (1997: 60) further divides the ability to read notes (sight reading) into three ability indicators, namely: (1) the ability to read rhythm, (2) the ability to read melody, and (3) the ability to read chords. The ability to read notes (sight reading) is the level of fluency or ability at the same time to read and play/sing musical elements without prior preparation (Sumaryanto, 2005).

### 3. Research Method

This type of research is classroom action research (PTK) or classroom action research collaboratively using the Kemmis and Mctaggart cycle with 2 cycles. The research instrument is in the form of an assessment test sheet. Subjects and research locations of 2022 students of major string instrument practice II (PIM 2) music education study program FBS UNP. Data collection techniques through literature study, observation, practice assessment tests, documentation. The practice test that will be carried out is that students play songs or material that has been determined then the researcher provides an assessment based on aspects, namely: (1.) Accuracy of dance in playing string instruments according to the notation on the score; (2.) accuracy in playing string instruments according to (intonation, scales, intervals and melodies); and (3.) accuracy of friction in playing string instruments according to the notation on the score. Practical assessment tests were conducted at the end of each cycle 1 and 2. The data analysis technique was processed descriptively quantitatively.

To find out whether the increase in test scores at the end of the cycle is significant or not, a hypothesis is carried out by conducting a t test. The research hypotheses proposed are H0 and Ha. H0 = there is no significant improvement in learning outcomes using the solfegio ear training method. Ha = there is a significant increase in learning outcomes using the solfegio ear training method.

### 4. Research Results

The following is the syntax of the application of the solfegio method in learning the practice of major string instruments 2 in the Music Education Study Program FBS UNP:

1. Prepare learning materials / sheet music Forty elementary etudes part I from Franz wohlfahrt. Op 51.
2. Researchers prepare learning media (string instruments, piano, tuner application)
3. Warm-up exercises playing scales (ear training)
4. Understanding of finger position
5. Practice reading and playing tone intervals (sight singing and ear training) 5.
6. Practice reading rhythm patterns (sight reading)
7. Practice reading and playing the melody of the first 18 measures of etude 1 (sight singing and ear training).

The following is the syntax for applying the solfegio method that will be implemented in cycle 2:

1. Preparing learning materials in the form of etude 1 sheet music

2. Researchers prepare learning media (string instruments, pianos, tuner applications, audio files that have been exported from etude 1 song scores as teaching materials)

3. Practice playing C major scales and arpeggios (ear training)

4. Understanding of finger position

5. finger warm-up exercises 3 and 4

6. Practice reading rhythm patterns (sight reading)

7. Playing 18 new measures of etude 1 as a continuation after 18 measures in the previous meeting in cycle 1 (sight singing and ear training).

## A. Pre-cycle research results

Table 1. Pre-cycle (total average score of students' ability to play string instruments based on assessment aspects in the pre-cycle)

| No. | Assessed Aspect | | Average |
|---|---|---|---|
| 1 | Dancing accuracy in playing a string instrument | | 54 |
| 2 | Pitch accuracy in playing string instruments | Intonation | 55,2 |
| | | Scales | 61,2 |
| | | Interval | 55,2 |
| | | Melody | 55,4 |
| 3 | Friction precision | | 55,4 |

The table above is the total average value of student ability on each assessment indicator before the action. This means that the average above has not reached the limit of complete grades in the music education study program FBS UNP. The following is the description: there are 3 students who get scores in the C- category (less) and 2 people in the C + category (enough). Judging from the total of 5 students of major string instruments 2 music education study programs show that the average ability of students to aim for notes in playing string instruments is only 2 people who are able to get scores in the sufficient category.

## B. Cycle 1 research results

**Table 2. Cycle 1 (total average score of students' ability to play string instruments based on assessment aspects after the implementation of cycle 1)**

| No. | Assessed Aspect | | Average |
|-----|-----------------|--|---------|
| 1 | Dancing accuracy in playing a string instrument | | 65,8 |
| 2 | Pitch accuracy in playing string instruments | Intonation | 64,8 |
| | | Scales | 70,6 |
| | | Interval | 66,6 |
| | | Melody | 66,4 |
| 3 | Friction precision | | 67,8 |

The table above is the total average score of students' abilities in each assessment indicator after the first action in cycle 1. The following is the description: there are 2 students got a complete score in the "good" category and 3 students got a score in the "sufficient" category. Judging from the number of students, namely 5 people, the average of their ability to aim for the tone is still classified as sufficient (B-). This means that the ability of students to aim for notes in playing string instruments still cannot be said to be successful or has not reached a complete score. However, when compared to the results obtained during the pre-cycle, students experienced an increase in progress in this cycle 1 which amounted to 10.8. Therefore, the action will be continued in the next cycle.

**Figure 1. Cycle 1 (practice playing scales, intervals, and etude 1. Documentation: Fela Vio Mimanda, August 31, 2023)**



## C. Cycle 2 research results

**Table 3. Cycle 2 (total average score of students' ability to play string instruments based on assessment aspects after the implementation of cycle 2)**

| No. | Assessed Aspect | | Average |
|---|---|---|---|
| 1 | Dancing accuracy in playing a string instrument | | 78,8 |
| 2 | Pitch accuracy in playing string instruments | Intonation | 78 |
| | | Scales | 81,4 |
| | | Interval | 79,2 |
| | | Melody | 78,8 |
| 3 | Friction precision | | 79,8 |

The table above shows the total average score of students' abilities on each assessment indicator after the action in cycle 2. The following description is that all students have received a complete score. There are 2 students got a complete score in the "very good" category and 3 students got a complete score in the "good" category. This means that the ability of students to identify and aim for notes in playing string instruments has increased much better and significantly compared to the scores in the pre-cycle and cycle 1. From cycle 1 to cycle 2 the average increase in scores from a total of 5 students was obtained, namely 19%. Therefore, based on the observation data during the research, it is found that the students' ability to aim for notes in playing string instruments has increased from each cycle.

**Figure 2. Cycle 2 (practice playing scales, arpeggios with piano accompaniment. Documentation: Fela vio mimanda, September 14, 2023)**

### Reflection and evaluation of cycle 2

In this cycle 2, the ability to aim the tone of students in playing string instruments has increased and progressed quite rapidly. Students began to be able to distinguish between false and correct tone sounds. Students have begun to be skillful in identifying the notes they will play. This is evident when the student realizes that he is aiming at the wrong tone then he will stop and repeat the section again. The success of the aspect of aiming for notes in playing string instruments is supported by the melody of the etude 1 song played which is familiar to the ears of students because the material and stages of practice played by students are oriented from the etude 1 song to be read. Like the aspects of playing scales and tonal intervals that have been summarized in harmony.

From the data of the researcher's observations of the ability of students to aim for notes in playing string instruments that have progressed and improved in each cycle, the value of the results of the action of applying the solfegio method can be seen in the table below :

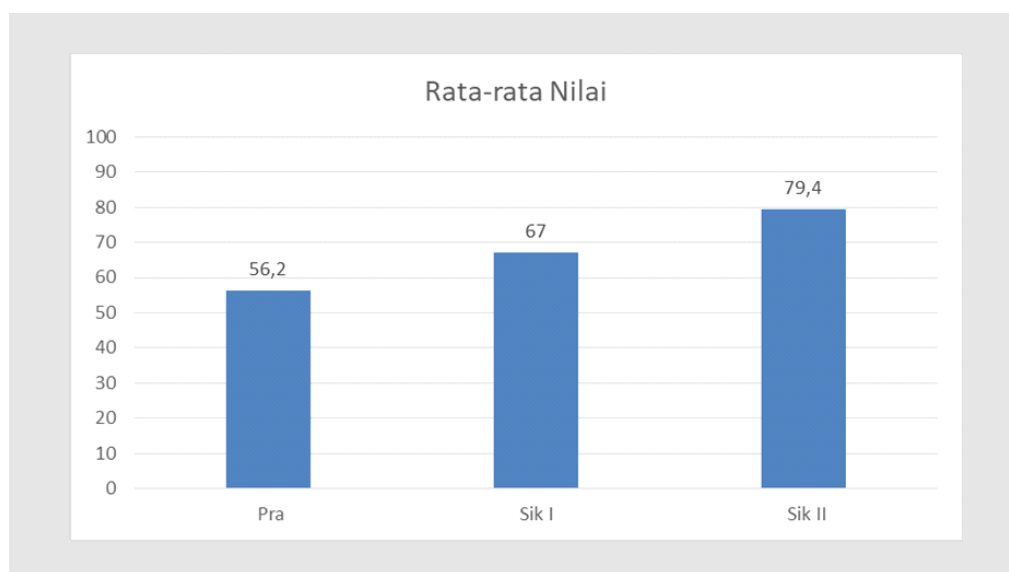### D. Analysis of improvement Pre-cycle, Cycle 1 and Cycle 2

From the data of the researcher's observations of the ability of students to aim at notes in playing string instruments that have progressed and improved in each cycle, the acquisition of the average value of student abilities from the action of applying the solfegio method starting from pre-cycle, cycle 1 to cycle 2 can be seen in the table below :

**Table 4. (Average ability of each student to play string instruments starting from pre-cycle, cycle 1 and cycle 2)**

| No. | Student name | Pre | Sik I | Sik II |
|-----|--------------|-----|-------|--------|
| 1 | Claudia Eka Putri | 52 | 60 | 74 |
| 2 | Illonia Aurin Putri Novita | 54 | 63 | 76 |
| 3 | Salsa Shabila | 54 | 64 | 78 |
| 4 | Wardatul Husni | 60 | 74 | 85 |
| 5 | Yuri Yolandri | 61 | 74 | 84 |
| | Total | 281 | 335 | 397 |
| | Flat | 56,2 | 67 | 79,4 |

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**Graph of average student scores from pre-cycle, cycle 1 to cycle 2**



## 5. Discussion

Based on the research results that have been obtained, it can be concluded that the average value of students in the pre-cycle is 56.2 which is in the sufficient category (C) which means that it has not been completed because no student has been able to meet the assessment criteria for accuracy in aiming for a complete tone. Therefore, researchers want to continue in cycle 1 by giving action, namely applying the solfegio method in the learning process of practicing playing string instruments. The results of the average value of student scores in cycle 1 are still in the sufficient category but with a higher value range than at the pre-cycle of 67. This means that there has been an increase in students' ability to aim at notes by 10.8. Furthermore, in cycle 2 students obtained an average score of 79.4 with the category B + (good) which means that students have obtained a complete score. So it can be said that the research was successful in cycle 2 at the last meeting. There was an increase compared to the average score in cycle 1 which amounted to 12.4.

Based on the findings above, it can be concluded that the learning process using the solfegio method emphasizes students to understand the importance of doing exercises repeatedly or doing routine exercises to form the right habits so that students are skilled in playing string instruments according to the right tone shots and not false based on scales, intervals, melodies, intonation, accuracy in dancing and accuracy of bow friction. With this routine practice, it can help improve students'

musicality in playing music, especially in terms of ear sensitivity to the sound of the notes heard, making it easier for students to play any song.

## 6. Conclusion

Based on the results of research and discussion, it can be concluded that to improve the ability of major string instrument students of the music education study program FBS UNP in aiming for notes, the solfegio method needs to be applied in the learning process.  The steps taken: (1). practice playing scales where students play scales. (2). reading rhythm patterns according to the shape and value of the notes to be read using tempo, (3). playing melodies on etude 1 songs in accordance with basic tones, scales, pitch intervals, intonation, dancing and accuracy of friction in playing string instruments. During the exercise, students were guided by using piano accompaniment and tempo by the researcher to get the correct pitch.

he ability of students in the pre-cycle obtained an average score of 56, 2, in cycle 1 which amounted to 67. Between these two cycles there was an increase in the average score of 10.8. In cycle 2, the average score of students experienced a better increase of 79.4. There was an increase from cycle 1 to cycle 2 of 12.4. This means that in this cycle all students have managed to get a score past the standard limit of complete grades, namely B (70-74) in the good category. There are 2 students who get scores in the very good category and 3 people get good scores. The ability of students to aim for the tone in playing string instruments can be said to have been successful in cycle 2. The results of the increase in the average score in cycle 2 can be said to be significant (meaningful) by conducting a T test by the researcher. Hypothesis testing with alpha 5% and deka (degree of freedom) obtained t table = 3.182 and t count 7.5525. It can be concluded that t count (7.5525) > (greater) than t table, then H0 is rejected and Ha is accepted. This means that there is a significant increase (meaningful) related to the learning outcomes of aiming for notes on the practice of major string instruments with the application of the solfegio method of 7.5525. Therefore, the application of the solfegio method can help improve the ability of students to aim for notes well in playing string instruments in the music education program at FBS UNP.

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