

Research Article

# Improving the Skills of Reading Number Notation in Grade V Students of SDK Ngorabolo

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## ABSTRACT

The Independent Learning Independent Campus Program is a program launched by the Ministry of Education and Culture. Research and Technology Culture (Ministry of Education, Culture, Research and Technology), which aims to improve the quality of education in various regions through the involvement of students as teachers by sending students to assigned schools. One of the main focuses of this program is to provide support to schools from elementary, junior high, and senior high schools, to develop students' basic skills, including reading number notation skills. In terms of improving the skills of reading number notation in grade 5 students, it is necessary to make efforts to improve students' competence in reading music notation. This study also aims to understand and be able to have an impact on students at SDK Ngorabolo, as well as improve their ability to read number notation. Using the Classroom Action Research (CAR) method. Data were collected through post-tests, class observations. The results of the study showed that the creative approach applied by students, such as the use of interactive media and simple tools, was able to increase students' learning motivation and understanding of number notation.

**Keywords:** Campus Teaching Program; Numerical Notation; Reading Ability; Music Learning

## 1. INTRODUCTION

Education is a process that aims to develop the potential of individuals as a whole, both physically, intellectually, socially, and emotionally. Through the process of teaching and learning, education helps individuals achieve the optimal abilities needed to achieve their life goals. One important element in education is the art of music, which plays an important role in developing students' cognitive, affective, and psychomotor abilities. Quality education is very important in improving student literacy, including music literacy. At the elementary school level, music education plays an important role in honing students' skills in reading number notation. Number notation is a form of musical representation that is unique, simple, and relevant for elementary education, especially in Indonesia. This ability not only hones technical aspects, but also encourages students to develop their imagination and creativity (Hallam, 2010). However, many schools in remote areas of Indonesia still face challenges in teaching these basic skills due to limited resources and access to adequate music education (Ulyana et al., 2024). This is a form of musical representation, which is very influential in building broader skills.

Music learning, especially in the skill of reading number notation, can encourage creativity and improve students' focus (Dwi et al., 2023). However, in SDK Ngorabolo, many students have difficulty in understanding and applying number notation effectively. Challenges in music learning do not only come from limited facilities, but are also related to a less varied learning approach. Conventional methods tend to make it difficult for students to understand abstract concepts in number notation, thus reducing their interest and motivation to learn music. In fact, music learning can significantly improve students' cognitive abilities, including memory, concentration, and problem-solving abilities (Octavyanti et al., 2024). This challenge can prevent them from creating, exploring their musical potential optimally. Along with technological advances and increasingly easy access to information, music education also needs to be adjusted to the demands of the times. Users of digital media and innovative learning applications in the learning process. This allows students to create, examine number notation in a more interactive and enjoyable way, so that it can increase their motivation and interest in music (Ela et al., 2019). Therefore, the Ministry of Education, Culture, Research and Technology (Kemendikbudriset) launched the independent learning program, independent campus, with the aim of improving the quality of education in a particular institution. The campus teaching program is also committed and strives to create cooperation with the community to create a holistic learning ecosystem, where students not only learn in class, but can also practice and collaborate in a broader context. By considering several supporting aspects, the campus teaching program does not only emphasize academic aspects, but also forms a strong support network for students, and not only increases students'

self-confidence, but also strengthens the relationship between schools and communities, and builds a harmonious learning environment and through a comprehensive approach so that they can develop their love for music sustainably (Meilia & Erlangga, 2022).

In the context of inclusive education, developing the ability to read number notation also contributes to students' understanding of the diversity of music from various cultures. By understanding notation, students not only learn music theory, but also have the opportunity to explore local and global cultural heritage. This is very important to build awareness and appreciation of the richness of music that exists around them (Riyadi & Aprillia, 2024). By utilizing various learning techniques, this program aims to overcome existing challenges and deliver meaningful learning experiences. In addition, learning to read number notation can be a means to train students' critical and creative thinking skills. By understanding number notation, students are encouraged to practice their independent musical analysis skills, such as creating simple arrangements or interpreting songs with creative variations. This approach also supports the development of students' musical intelligence which contributes to their multiple intelligences (Monica et al., 2023).

The Campus Teaching Program also has the potential to be a place for innovation in teaching methods. By utilizing a more creative and responsive approach to the needs of students, students, teachers can build a more progressive learning atmosphere. Research shows that the application of innovative methods in music education can significantly improve student learning outcomes (Hamidah & Minsih, M, 2024). Furthermore, the success of this program is highly dependent on ongoing evaluation and feedback from students, teachers, and parents. Modern research indicates that experiential learning and inclusive approaches can increase student engagement and what happens to their learning outcomes. (Abdun & Fikri, 2024). The implementation of this program is also in line with Vygotsky's theory of the Zone of Proximal Development, which emphasizes that support from teachers can help students overcome difficulties in understanding number notation. (Brown, 2019). Thus, this article will discuss improving the ability to read number notation in grade V students of SDK Ngorabolo, and explore how the tactics and strategies used can empower students in music learning.

## 2. RESEARCH METHOD

The research method used in this study is Classroom Action Research (CAR). Classroom Action Research is a research method that is oriented towards improving the learning process in the classroom through a cycle that includes planning, implementation, observation, and reflection. This approach is designed to solve learning problems directly in the classroom environment while providing teachers with the opportunity to evaluate the effectiveness of the strategies implemented (Arikunto, 2008). In this study, the stages carried out are focused on developing students' ability to read number notation through an approach that involves active student participation and experiential learning. This approach emphasizes that real experience is an important basis for creating deep and meaningful learning. The main objective of this study is to improve students' skills in reading number notation through the implementation of the Kampus Mengajar Program. This study involved 29 students of grade 5 SDK Ngorabolo as the main subjects of the researcher. By using quantitative and qualitative descriptive data analysis methods. The research process was carried out in several cycles that included 4 main stages:

- a. Planning: Identifying students' problems and objectives of improving their reading skills, by designing interactive learning strategies, such as using visual aids and practical activities. Evaluation instruments such as pre-tests and post-tests and observation sheets are also prepared.
- b. Action: Students are actively involved in practical activities using an experiential learning approach to understand number notation, with the help of simple musical instruments such as the pianica.
- c. Observation: observing the learning process to record the level of student participation in understanding, in recognizing number notation symbols, rhythm reading patterns and connecting number notation symbols with notes.
- d. Reflection: Analyze the results of the actions taken to assess the success of the intervention and identify areas that need improvement for the next cycle, with the aim of continuous improvement.

In classroom action research, the instruments used by researchers in this study include:

1. Observation sheet: used to monitor student participation and engagement during the learning process.
2. Diagnostic test: used to determine students' initial understanding of number notation.
3. Written test: used to evaluate students' ability to recognize and write number notation.
4. Practical test: used to assess students' ability to apply number notation when playing the pianica.

With data collection techniques through several methods, namely:

- a. Test

The test implementation includes an initial test and a final test which are carried out to measure student understanding.

- b. Observation  
Observations were conducted to record student involvement during the learning process.
- c. Documentation  
Documenting the learning process as supporting data in the research conducted.

### 3. RESULTS AND DISCUSSION

This study was conducted with the aim of improving the ability of 5th grade students of SDK Ngorabolo, in reading number notation through the implementation of the Kampus Mengajar Program. This program not only helps students understand the material better, but also creates a more interactive and interesting learning atmosphere, and uses a repeated cycle scale with learning stages of cycle 1 and cycle 2.

#### 3.1 Learning Cycle 1

In cycle 1 learning, the focus is more on the introduction of basic number notation using simple media such as whiteboards and posters, and preparing student worksheets (LKS), which contain basic exercises in reading number notation. In the implementation of the action, each student is asked to recognize and understand the number notation symbols of the notes do (1), re (2), mi (3), fa (4), sol (5), la (6), si (7) and understand the duration of the notation. From the observation results, most students began to recognize the number notation symbols (do (1), re (2), mi (3), fa (4), sol (5), la (6), si (7)) and understand the concept of notation duration with varying levels of success. Students showed active participation in learning activities, although some had difficulties, especially in understanding the duration of notes and relating them to the number notation symbols. In addition, there was an imbalance in understanding between students who quickly understood the material and students who needed more intensive assistance through tutoring, both individually and in groups. Assistance was carried out to overcome learning problems faced by students, including in the context of the ability to understand number notation. Often students have difficulty in reading and writing number notation correctly, understanding and placing numbers in number notation. With the approach of identifying student needs, the implementation of actions can be carried out in a directed manner. In addition to the assistance provided, there is also a diagnostic test conducted to measure and identify the extent of students' understanding of number notation symbols and how to read them correctly. This test can cover several aspects, such as symbol recognition, note duration, and placement of numbers in the correct notation. Some types of questions used in diagnostic tests for reading number notation:

##### 1. Identification of Numeric Notation Symbols

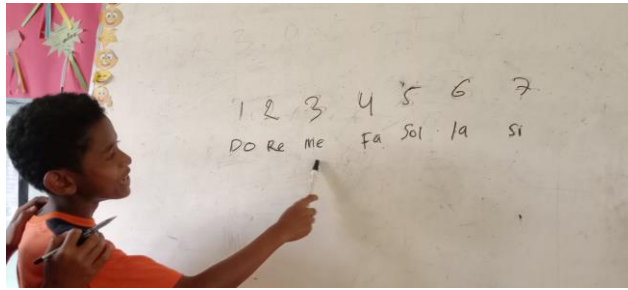
This test is designed to evaluate students' basic ability to recognize number notation symbols and relate them to the appropriate note names. This ability is an important foundation in learning music, especially for students who learn using the number notation system. In the initial stage of implementing this test, by writing simple number notation (do (1), re (2), mi (3), fa (4), sol (5), la (6), si (7), using a whiteboard. then the students are asked to show a number notation such as 2 and ask students to write the name of the corresponding note (re). And ask students to write down the name of the note that corresponds to the number given.



**Figure 1.** Identification of Numeric Notation Symbols

##### 2. Arrangement of Number Notation and Placement of Number Notation

In diagnostic tests, one type of question that can be used is the arrangement of number notations. by giving a sequence of numbers, such as 1, 2,3,4, 5, 6, 7, and asked to arrange them into the correct number notation. And the sequence will produce the number notation do, re, mi, fa, sol, la, si. And after arranging the sequence of number notations, students are asked to mention the sequence of number notations and adjust them to the tone.



**Figure 2.** Shows the Sequence of Number Notation

**3. Duration of Notation**

In diagnostic tests, one type of question that can be used is about the duration of number notation. This question displays number notation with different durations, such as 1/4, 1/2, or 1 beat. For example, do (1) with a duration of 1 beat, and students are asked to explain that this duration means that the note do is played for one full beat. Students are asked to explain the meaning of the duration or demonstrate it, for example by clapping. Variations of the questions can also be given, such as a combination of number notation with different durations, to practice rhythmic understanding and calculating the total time required.

Number of students 29	Compilation and placement of number notation	Duration of notation and identification number notation symbol
19 students	55.5%	55.5%
10 students	24.5%	24.5%
Total (100%)	80%	80%

Based on the results of several tests conducted during the implementation of cycle 1, with 29 students in class V, shows that although there are some students with a good level of understanding, some students still have difficulty in reading numerical notation, especially those below the class average. Analysis of the results of the cycle 1 test showed that students who scored below average, namely 10 students (24.5%), had difficulty in understanding the duration of notation, number notation symbols and the placement of more complex number notations. Meanwhile, 19 students (55.5%), who were above average, had shown a basic understanding of number notation, although they still needed reinforcement in reading rhythm patterns consistently. Therefore, in order for students' understanding to increase in relation to number notation, it is necessary to continue with cycle II actions.

**3.2 Learning Cycle 2**

Learning in Cycle II is designed to improve students' weaknesses in reading number notation, especially in reading rhythm patterns and understanding number notation symbols. In learning in cycle II, the focus of learning is the method used with a varied learning approach, and the use of visual aids such as pianica. With the presence of a pianica, it can help students connect number notation and note duration, and apply it in the form of practice. There are several tests conducted to measure learning outcomes and measure students' understanding of number notation and provide guidance for students whose abilities still require special assistance, especially in reading number notation.

**a. Written Test**

The written test that is conducted is asking students to write down the sequence of number notations and recognize the relationship between numbers and tones (for example, 1 = do, 2 = re, 3 = me, 4 = fa, 5 = sol, 6 = la, 7 = si). This test measures how well students can identify number notation symbols and remember the sequence of tones. In the written test, students are able to determine and relate each number to a tone.



**Figure 3.** Test of Writing Sequence of Number Notations

### b. Pianica Playing Practice Test

In the practical aspect, students are asked to apply number notes using a pianica, to review students' progress in translating number notation. By pressing the existing keys, the pianica can help students determine the notes, be it do (1), re (2), me (3), fa (4), sol (5), la (6), and si (7), so that students are able to understand the relationship between numbers and notes. Students are asked to play number notation using a pianica, which allows them to practice the relationship between numbers and notes. The song used in the practice of playing the pianica is the song of gratitude. Through this test, students can show progress in translating number notation into real sounds.



Figure 4. Practical Test of Playing the Pianica

### c. Posts

After the learning is completed, an evaluation is carried out through a post-test to assess the level of students' understanding of number notation. The post-test is an evaluation stage carried out after the learning is completed. The post-test was carried out in grade 5 with the aim of assessing the level of students' understanding of the number notation studied, then the results of the post-test were compared with the results of cycle I to see student progress, as well as provide feedback on student learning outcomes and conduct evaluations. From the results of the post-test carried out in the implementation of cycle II, the scoring obtained by students was 90% from 25 students, and 9% of the scoring obtained from 4 students. The results of the observation showed that the level of students' understanding had improved in understanding number notation and were able to apply number notation in practice using the pianica musical instrument.

Number of students 29	Written test	Pianica playing practice test
25 students	90%	90%
4 students	9%	9%
Total (100%)	90.9%	90.9%

Based on observations and test results in cycle 2 conducted, by considering several aspects both in terms of learning methods and guidance carried out both individually and in groups, the cycle was declared successful. With a more structured approach and the use of aids such as pianica, students were able to understand and apply number notation in practice. Through written tests, 90% of students were able to recognize number notation symbols and students were able to sort the number notation. The practical test also helped students in applying number notation with the use of pianica aids, so that a real learning atmosphere was created, and the post-test provided a clear picture of the progress achieved by students. The post-test results showed a significant increase in student understanding, especially in recognizing and playing number notation. Cycle II was designed to improve students' weaknesses in reading number notation, especially in rhythm reading patterns, and in understanding number notation symbols. By using a varied learning approach, it was able to maximize student learning outcomes. At the planning stage of cycle II, by focusing on the learning methods used and strengthening students' understanding that was still weak. Adjustment of learning methods is very important, to improve students' understanding of the material presented, especially for students who have learning difficulties, by considering several aspects such as the presentation of the material, and the content that is carried out gradually. In addition, the use of pianica aids in understanding number notation can help students learn the theory, and can apply the theory with direct practice. In addition, tests and assessments are carried out to improve student learning outcomes and measure the extent of students' understanding of number notation, and provide feedback based on the development and success achieved.

## 4. CONCLUSION

The Campus Teaching Program not only improves students' ability to read number notation, but also has a positive impact on students' motivation and interest in learning music. Through the use of creative teaching methods and

interactive media, students become more involved and enthusiastic in the learning process, which in turn strengthens their understanding of musical concepts. In addition, collaboration between student teachers and teachers at SDK Ngorabolo provides opportunities for the exchange of knowledge and experiences, thereby enriching the teaching process in the classroom. The support and guidance provided by students also helps teachers to develop their pedagogical skills, which are expected to continue even after the program ends.

With this success, it is suggested that the Kampus Mengajar Program can be expanded and implemented in more schools, especially in areas that still experience limitations in music arts teaching. By continuing to refine the approach used, the quality of music education in these schools can continue to be improved, providing students with better opportunities to develop their talents and interests in music arts. The Kampus Mengajar Program has shown its success in improving students' ability to read number notation, while also having a positive impact on students' motivation, interest, and engagement in music learning. Creative and interactive teaching methods have proven effective in strengthening students' understanding of music concepts. In addition, collaboration between student teachers and teachers provides added value in the form of an exchange of knowledge and experience, which not only enriches the learning process but also helps teachers develop sustainable pedagogical skills. The success of this program is the basis for recommending the expansion of its implementation to more schools, especially in areas with limited music arts teaching. With continuous improvement of the methods and approaches used, this program can be a strategic solution to improve the quality of music education in Indonesia. It is hoped that music education will not only be a means of developing students' talents and interests, but also contribute to character formation, increasing emotional sensitivity, and developing social skills that will be beneficial for their lives in the future.

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