



Musical Language Developed in the Classroom through Rhythmic Exercises

Lenguaje musical desarrollado en aula mediante ejercicios rítmicos

  Allyson Armando León Jibaja | Universidad Santo Toribio De Mogrovejo, Perú

 Osmer Agustín Campos Ugaz | Universidad Santo Toribio De Mogrovejo, Perú

 Elvis Manuel Aponte León | Universidad Santo Toribio De Mogrovejo, Perú

Fecha de recepción: 21.12.2022

Fecha de revisión: 30.06.2023

Fecha de aprobación: 31.07.2023

Como citar: León Jibaja, A., Campos Ugaz, O., & Aponte León, E. (2023). Musical Language Developed in the Classroom through Rhythmic Exercises. *Espergesia*, 10 (2), e100201.

<https://doi.org/10.18050/rev.espergesia.v10i2.2622>

Autor de correspondencia: Allyson Armando León Jibaja

Abstract

Música; interpretación musical; lenguaje musical; instrumento musical.

Abstract: The lack of specialization and the frequent empiricism of some art teachers lead students to achieve short-term musical interpretation results. These outcomes, while seemingly positive at first glance, often don't reflect a deep understanding, which can impact instrumental practice and subsequently deteriorate the cognitive musical process. The aim of this research was to implement a rhythmic exercise program for Theory and Analysis I students, with the intent of enhancing musical language. The research design was pre-experimental, focusing on a sample of 15 students from the first cycle of the Public Artistic Training Higher School of Bagua. A Likert-type scale based on two quantitative variables was used for evaluation. The statistical analysis was conducted using the SPSS v.25 software. In the pre-test, students achieved an arithmetic mean of 3.73, using KR20, indicating that 100% were at a low level. However, after the post-test, the same student cohort reached an average of 17.33 points, with 93.3% ranking between the high and very high levels in relation to the dependent variable. In summary, this research demonstrates that the rhythmic exercise program was effective in significantly developing musical language.

Key words: Music; Musical Performance; Musical Language; Musical Instrument.

Resumen

La falta de especialización y el empirismo frecuente de algunos profesores de arte llevan a que los estudiantes logren resultados de interpretación musical a corto plazo. Estos resultados, aunque positivos a primera vista, a menudo no reflejan una comprensión profunda, lo que puede afectar la práctica instrumental y, en consecuencia, deteriorar el proceso cognitivo musical. El objetivo de esta investigación fue implementar un programa de ejercicios rítmicos para estudiantes de teoría y análisis I, con el propósito de desarrollar el lenguaje musical. El diseño de la investigación fue pre-experimental y se centró en una muestra de 15 estudiantes del primer ciclo de la Escuela Superior de Formación Artística Pública de Bagua. Para la evaluación se utilizó una escala tipo Likert basada en dos variables cuantitativas. El análisis estadístico se llevó a cabo con el programa SPSS v.25. En el pre-test, los estudiantes obtuvieron una media aritmética de 3,73, utilizando KR20, lo que indica que el 100% se encontraba en un nivel bajo. Sin embargo, tras el posttest, la misma cohorte de estudiantes alcanzó una media de 17,33 puntos, con un 93,3% situándose entre los niveles alto y muy alto en relación a la variable dependiente. En resumen, esta investigación demuestra que el programa de ejercicios rítmicos fue efectivo en el desarrollo significativo del lenguaje musical.

Palabras clave: Música; interpretación musical; lenguaje musical; instrumento musical

INTRODUCTION

Music is a fundamental component in developing integral processes in the human being. Undoubtedly, it plays a central role in achieving the affective, intellectual, sensory and motor balance sought by education at the preschool and school levels. When conducting musical learning sessions with students, a marked motivational effect is perceived. This effect is not only influential but also extremely interesting for the educational process. According to Palacios Castillo (2019), music plays a crucial role in achieving positive results in education.

Similarly, Pucha (2013) presents in his research that the most employed methods in the practice of musical reading and writing are: “Solfeo de los solfeos” and “LAZ”. The results show that 50.62% of the respondents learned solfege and 8.64% with the LAZ method, while another 8.64% indicated having learned with other different methods. These data confirm that, for the teaching and learning of musical language in schools, “Solfeo de los solfeos” and “LAZ” are the predominant methods. These facilitate the development of auditory, psychomotor, emotional-affective skills, oral expression, body expression and instrumental expression in students.

Rusique Cornejo (2019) has addressed the importance of rhythm in music, especially as a didactic strategy in the formation of musical bands. They have observed a notorious lack of rhythmic elements among the young people who make up these groups, which highlights the relevance of eurythmy. This technique, when used strategically, can enhance and refine the understanding and execution of rhythm. This research has revealed that pedagogical work in this area allows for a transformation of the teacher’s knowledge, adapting it in a way that is accessible to the student. Through didactic tools based on corporal and experiential experiences, young people can transfer theoretical concepts to practical experiences. This allows the resignification of theoretical elements, facilitating their understanding through body movement or eurythmy. This approach not only gives new meaning to rhythmic elements but also enhances their instrumental performance as a whole. In addition, they have observed that, at

certain moments, body movement unconsciously enhances elements of the musical pieces, such as dynamics, articulations and interpretative expression.

Musical language

Bernabé (2015) found that music reading can be very entertaining for students, especially when an accompanying instrument is incorporated with a contrasting rhythm, creating a metrical dialogue effect. Added to this is the use of a metronome that increases its speed when repeating a rhythmic fragment.

Along the same lines, Ruiz et al. (2017) observed that tonal activities in the classroom are effective in offering a comprehensive and motivating education. These activities not only boost students’ creativity but also enable them to compose songs. However, in order to achieve these objectives, it is essential to have mediation, whether instrumental or social. As Salas (2018) points out, students often require melodic references provided by instruments or simply the active presence of the teacher.

A vital aspect of this process is formative assessment. Ruiz *et al.* (2017) highlight that applying it in auditory discrimination exercises (such as musical dictations and intervals) helps students recognize their areas of improvement and seek solutions. This promotes their autonomy and leads to more meaningful learning.

These observations highlight the importance of music reading, as it establishes fundamental structures in musical language. It is crucial to present the content in a clear, precise, gradual and sequential manner, adapting to the musical level of each student. In addition, involving extracurricular activities and didactic resources, such as audio recordings, videos and dictations, is essential to complement theory and practice. All this, under the constant supervision of a teacher, ensures complete learning.

Hernández (2010) states that the purpose of musical language is the theoretical and practical study of its components. These elements, such as figures, rests, measures and staves, are integrated to form a structure that is formalized in a score. This allows instrumentalists to read and perform solos comprehensively.

In conclusion, language is a reflection of human development. It is a continuous and relevant process that promotes the expansion of human capabilities, influenced by interactions and relationships within society. This dynamic fosters the constant improvement of the quality of life and allows individuals to advance and prosper in their environment.

Rhythmic Exercises

Rhythm, an essential part of music, has profound and varied impacts on our cognitive and physical abilities. Beyond the simple cadence of a melody, rhythm plays a role in improving our memory, sustaining attention, and promoting cognitive flexibility (Vernia Carrasco et al., 2016). However, achieving these benefits requires specific educational intervention rather than passive exposure.

More than just being a response to sound stimuli, rhythm is deeply embedded in our physiology. Vernia Carrasco (2014) highlights how rhythm influences our motor skills and auditory perception. At the neurological level, the body is not just a passive receiver but acts as an “instrument” that responds and produces rhythm. This perspective highlights the importance of body expression in rhythmic education since the body is a primary vehicle for experiencing and communicating rhythm. In this sense, Ibanez Gericke (2012) argues that body expression is essential for rhythmic teaching and learning and has an impact on logical, expressive, and emotional dimensions.

This focus on the body and movement as pedagogical tools for rhythmic teaching suggests that students can benefit greatly from activities that incorporate physical movement. Through solfège, students can associate note values with specific rhythmic pulses, using their bodies to demonstrate and experience these rhythms (Alegria, 2018).

Indeed, rhythm is an inherent part of our existence. From the beating of our hearts to the cadence of our breathing, we are surrounded and animated by rhythms (Hemsey, 1964, cited by Alegria, 2018). These natural rhythms, along with rhythmic structures in music, such as pulses and accents, provide the structure and cadence that guide our perceptions and actions (Zavaleta, 2019).

In short, rhythm, whether in music or our biology, is fundamental to our lives. Its integration into education can offer valuable ways to enhance both our cognitive and physical abilities. The key is in how it is taught and experienced.

In a recent evaluation of “Theory and Analysis I” students at the Escuela Superior de Formación Artística Pública de Bagua, Peru (ESFAP-Bagua), it was found that none of them had achieved Very High, High, or Medium proficiency levels in relation to the Musical Language variable. In fact, 100% were found to be at a low level. This low performance is attributed to the lack of specialized music teachers, empiricism in teaching, and poor development of the rhythmic sense in the applicants. These factors contribute to difficulties in music reading and insecurity in instrumental interpretation.

Given this context, the central research question arises: How can we improve the musical language of higher education students in ESFAP-Bagua? It is crucial to address this problem since several studies have shown that learning a musical language can induce significant changes in brain structure and function. This training offers behavioural advantages, such as increased auditory discrimination and superior skills in pitch and speech perception in noisy environments. In addition, those with musical training tend to exhibit superior motor synchronization, better verbal memory, and higher IQ than those without such training.

In recent years, ESFAP-Bagua needs to pay more attention to the entry profile of students, admitting those with notable limitations in reading and musical interpretation. This situation reflects a deficit in musical language. Given the relevance of musical language in the integral formation of a professional musician and awareness of the considerable number of students with deficiencies in this area, the implementation of a rhythmic program to reinforce and optimize musical language is proposed.

The primary objective of this research is to implement a program of rhythmic exercises for the students of “Theory and Analysis I” at ESFAP-Bagua. To ensure a comprehensive approach, specific objectives were raised, such as identifying the current level of proficiency in musical language, determining the desired level and assessing progress after the implementation of the rhythmic program.

METHODOLOGY

The present research study is of an explanatory type, focused on the theory of rhythm and musical language with the objective of promoting new learning. A quantitative approach was chosen, given its capacity to verify hypotheses through data collection and analysis. The evaluation was carried out on Wednesday, May 19, 2021, on an individual basis, using the Zoom platform and lasted 90 minutes.

To evaluate the development of musical language, its two main dimensions were considered: music theory and perceptual audio in students of the first cycle of ESFAP-Bagua, Peru. The variables were analyzed in their natural context, without manipulations. The variables of the study included the program of rhythmic exercises classified into Pulse internalization (3 questions), Accent knowledge (3 questions) and Beat management (3 questions), totalling 9 items. These were evaluated with a Likert-type response scale in four levels: low, medium, high and very high. On the other hand, the musical language development variable consisted of 10 items evaluated with a Likert-type scale with four levels: low (0-10), medium (11-13), high (14-17) and very high (18-20).

A test was performed to correlate the variables of the rhythmic exercise program and musical language. The data presented in Table 4 yielded positive results, leading to the rejection of the null hypothesis. Therefore, the alternative hypothesis was validated, suggesting that the implementation of a program of rhythmic exercises contributes effectively to the development of musical language in students in the first cycle of ESFAP-Bagua, Peru.

H1: The rhythmic program could develop musical language in higher education students.

H0: The rhythmic program could not develop musical language in higher education students.

HC: The application of the rhythmic program will allow the development of musical language in higher education students.

For the present investigation, the single-group pre-experimental design with the application of pre-and post-tests was designated.

Where:

G: Students of the I cycle of higher education.

O1: Pre-test - performance test to determine musical language performance levels before the application of the stimulus.

X: Stimulus, i.e., program of activities to develop musical language skills.

O2: Post-test applied to the study group, i.e., performance test to determine musical language performance levels achieved after the application of the rhythmic program.

Population

The study population consisted of a mixed group of 15 students of the I cycle of higher education of the ESFAP Bagua, located at Km 2 of the Bagua Copallin road. These students, aged between 18 and 24 years, are currently directed by Dr. Matilde Arrollo Castillo. Breaking down the demographic composition of the sample according to gender, we found that 14 of the participants were male, representing 93.33% of the total. In contrast, one participant is female, making up the remaining 6.67%.

Data collection

The technique used for data collection was the survey. In order to obtain the information required for this research, the categories were first defined, and then the questions were elaborated. The researcher created the instrument. Two procedures were used to validate this instrument:

First, expert judgment was resorted to submitting the instrument to the evaluation of education specialists with graduate training versed in the subject. Eight experts in the field of musical art and research were consulted. These experts evaluated the clarity, coherence and relevance of the questions. After this process, it was concluded that the instrument is reliable. This statement was supported by a high score of 0.9693 on the AIKEN V, indicating that the instrument is suitable for its application.

Second, at the beginning of the instrument application, students were informed about the purpose of the pilot test, emphasizing the importance of their collaboration. This step ensured an atmosphere of trust in order to obtain more accurate responses. Subsequently, the test information was collected, and a database was established. Using Cronbach's alpha, a score of 0.703 was obtained, indicating the reliability of the instrument to measure the Musical Language variable. As noted by Hernandez (2010), "Reliability consists of the degree to which an instrument produces a solid and consistent result" (p.211).

The data collection process was coordinated with the Director of ESFAP-BAGUA, the educational institution of the participating students. These students were taking the Theory and Analysis I course, which includes components of rhythm and musical language. This subject was taught

for six weeks as part of the Professional Artist course. After validating the pre-and post-tests, these were applied to the study subjects. The information collected was processed for further analysis and results. The final report was written considering the pertinent references and annexes.

Data analysis

In this phase, descriptive statistics were performed. According to Hernández (2010), "the initial task is to describe the data, that is, the values or scores obtained from the variables.

This is achieved by detailing the distribution of the scores or frequencies of each variable" (p. 287). Therefore, the first step in the analysis and interpretation of the data was the descriptive statistics of the variables and their dimensions.

Table 1

Levels of significant learning

Levels of rhythm development	
Numeric	Descriptive
00 – 10	When the student begins to develop musical language or shows difficulties, it is essential to provide more time for accompaniment and intervention, adjusting to the student's pace and learning style.
11 – 13	As the student moves toward mastery of the musical language, it is essential to provide adequate accompaniment for the time necessary to achieve this.
14 – 17	When the student demonstrates having reached the competencies related to musical language.
18 – 20	When the student not only demonstrates that he/she has achieved the musical language skills, but also shows a solid and highly satisfactory command of all assigned tasks.

Ethical considerations

The research respects the ethical principles established in the Declaration of Helsinki (2013). Specifically, special emphasis has been given to the principles of autonomy and informed consent,

which are fundamental in any scientific research process. All students agreed to participate voluntarily in this study. They were adequately informed through a meeting held via Zoom and were notified via institutional e-mail.

Results and Discussion

Table 2

Pre-test results of the musical language development of the students of the first cycle of the ESFAP-Bagua, Perú

Categories	Score	F	%
Low	0-10	15	100.0
Medium	11-13	0	0.0
High	14-17	0	0.0
Very High	18-20	0	0.0
Total		15	100.0

Statisticians: Mean: 3.73; Median: 4.00; Mode: 2; Max. score: 8; Min. score: 0

The program of rhythmic exercises for the development of musical language is presented, being distributed as follows:

Table 3

Didactic Unit 02: Theory, pulse, rhythm, accent, beat, meter, reading, perceptual audio

Contents	Procedural Contents	Attitudinal Contents	Schedule Week	Session
Music Theory: Definition of the Pulse: rhythmic exercises using round figures, half notes and rests in simple measures.	Identifies the pulse with different figures of duration.	Reads with rhythmic accuracy the different figures of duration.		1
Rhythmic solfège: combination of rhythmic figures using quarter notes, eighth notes and rests to identify the pulse.			01	2
Rhythmic Solfeggio: Maintains a constant pulse in the combination of figures and rests, regulating the collective interpretation.	Identify and recognize the different beats and accents using measures and figures.	They read rhythmic passages using pulse and accent, regulating the collective interpretation in an orderly manner.	02	3

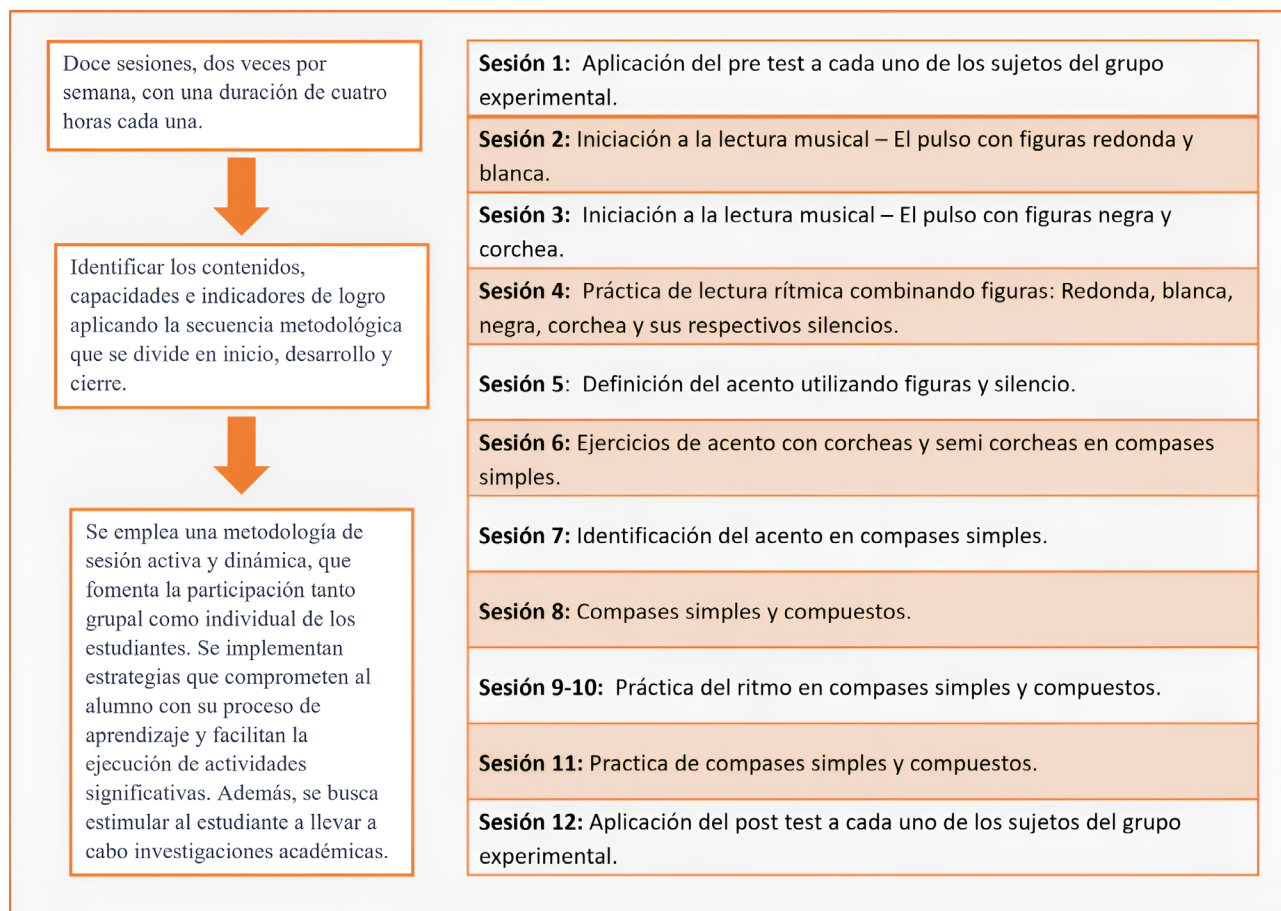
Music Theory: Knows the definition of accent using figures and rests of: rounds, half notes, quarter notes in measures 2/4, 3/4 and 4/4.				4
Rhythmic Solfeggio: Handles exercises of accents with eighth notes and sixteenth notes in simple measures.	Identify accents with different figures in compound measures.	They read rhythmic fragments identifying the accents of each measure in an orderly fashion.		5
Identifies the accent in written rhythmic fragments of 6 to 8 measures.				6
Music Theory: Understands the definition of 2/4, 3/4, 4/4 and 6/8 time signatures with numerator and denominator applied to musical fragments.			03	7
Rhythmic Solfeggio: Handles measures of 2, 3 and 4 beats. Developing varied exercises on compass indicators.	Analyze and recognize the measures and dividing lines.	They read and evaluate rhythmic passages using simple and compound measures.	04	8
	Define the simple capases with their indicators.			9
Perform rhythmic exercises combining: measures, figures and rests applying what has been learned.	Coordinates each of the exercises by applying figures and rests.	Manages simple measures valuing what has been learned.		10
Review group 01 - 02	Reads rhythmic fragments with different.	Values the participation of each of his or her peers.	05	11
Final Exam (Theory)	Compasses.		06	12

The program is based on the development of integral processes of music, carrying out the learning sessions with the students, causing a motivational effect that is very influential and interesting; its purpose is the development of skills with respect to musical language, allowing the student to audibly identify and

recognize the different rhythmic patterns with figures, which contribute to the development of a better understanding of music theory and auditory recognition. It was organized in a unit corresponding to 12 sessions, which are described below.

Figure 1.

Program of rhythmic exercises for the development of musical language



First session:

- Reading of the informed consent form.
- Application of the pre-test to each of the subjects in the experimental group.

Second session:

- Initiation to musical reading: The pulse with round and white figures.

Students were provided with a selected melody, which they had to accompany with clapping at different speeds: slow, moderate and fast. This activity sought to generate a cognitive conflict in relation to the musical pulse. After reflecting on their own perceptions and definitions of rhythm,

various rhythmic exercises were introduced that used figures such as the semibreve and the half note, together with their respective rests in simple time. These exercises were practiced by clapping. Additionally, they were given a score specifically designed for individual rhythmic solfege practice.

Third session: Initiation to music reading: The pulse with crotchet and eighth note figures.

Students were provided with a 12-bar rhythmic phrase, which they had to accompany with clapping and foot tapping at different speeds: slow, moderate and fast. This activity sought to generate a cognitive conflict in relation to the musical pulse. After reflecting and providing their

own perceptions of rhythm, they were introduced to rhythmic exercises that used figures such as the quarter and eighth notes, along with their respective rests in simple time signature. These exercises were practiced by clapping and foot tapping. Finally, they were given a score designed specifically for individual rhythmic solfège practice.

Fourth session: Rhythmic reading practice combining figures: round, half note, quarter note, quarter note, eighth note and their respective rests.

The students were exposed to an auditory rhythmic dictation of 2 measures, with the objective of making the corresponding transcription, integrating what they had learned in sessions 2 and 3. Subsequently, they were provided with a specially designed score that combined different rhythmic exercises, making use of different figures and rests in simple measures such as 2/4, 3/4 and 4/4. This facilitated a collective and regulated interpretation, strengthening the practice of rhythmic solfège.

Fifth session: Accent definition using figures and rests.

Students were exposed to a short melody so that they could identify the musical accent using clapping and clicking at different speeds: slow, moderate and fast. This exercise sought to generate cognitive conflict around the concept of musical accent. Once the students provided their own definitions, they were introduced to a series of rhythmic exercises using different figures and rests in simple measures (2/4, 3/4 and 4/4). The purpose of this activity was to regulate and strengthen the collective interpretation during the practice of rhythmic solfège.

Session 6: Accent exercises with eighth and sixteenth notes in simple measures.

The students were exposed to a rhythmic dictation that included eighth and sixteenth note figures, promoting the accompaniment by clapping and clicking. During this process, special emphasis was placed on the identification of accents in different beats. Subsequently, students were provided with a score with exercises designed to strengthen learning through solfège and individual practice of rhythmic figures.

Seventh session: Identification of the accent in simple measures.

Students were presented with a rhythmic dictation oriented to the identification of musical accent. After that, they were provided with a score with rhythmic propositions taken from the second series of the solfège method. This score included figures and silences in simple measures (2/4, 3/4, 4/4), with the aim of having the students recognize and consolidate their learning in music reading.

Eighth session: simple and compound measures.

Students were provided with a short melody with the objective of identifying the dividing lines and indicating to which type of measure they belong. This activity generated a cognitive conflict related to the differentiation between simple (2/4, 3/4, 4/4) and compound (6/8) measures. Once the students recognized the different measures, they proceeded to an individual practice in which they used the pulse at different speeds (slow, moderate and fast).

Ninth and tenth session: Rhythm practice in simple and compound measures.

Students were presented with a rhythmic dictation containing a combination of musical figures, with the purpose of identifying whether they belonged to a simple or compound measure. Through an active methodology, group and individual dynamics were carried out, implementing strategies that directly involved the students in their learning process. These activities were designed to be meaningful, and aimed to stimulate the student to deepen the study and practice of rhythm.

Session 11: Practice of simple and compound measures.

The students were presented with a dictation of rhythmic exercises with musical figures distributed in different measures, with the objective of identifying whether they belonged to a simple or compound measure. An active methodology was employed, using both group and individual dynamics. These strategies were designed to directly involve the student in the learning process and promote meaningful activities, thus encouraging the student to deepen the study and practice of rhythm.

Twelfth session: Application of the post-test to each of the subjects in the experimental group.

The methodology developed in the course adopts a theoretical-practical orientation that facilitates the student's development of critical analysis and understanding of the theory, as well as its application in reading and musical notation. The active participation of the student is encouraged and cooperative learning is promoted.

In short, the workshop as a didactic procedure has proven to be an effective strategy that facilitates the acquisition of knowledge through an interrelation between theory and practice. Starting from the student's competencies, this methodology takes into account his expectations

and focuses the learning process on him. This process is developed through the experience that the student experiences in his practical action, being part of a work team with a specific task and under the constant supervision of the teacher. This strategy integrates the formation of groups through the Zoom platform and the use of files in DRIVE.

Problem-based learning (PBL) focuses on the development of reasoning skills, self-learning and acquisition of a relevant and essential theoretical and practical body of knowledge. This methodology places the student at the center, encouraging him/her to assume the commitment of his/her own learning, always with the support and guidance of the teacher.

Level of musical language after the application of the program of rhythmic exercises

Table 4

Results of the post-test on the development of the musical language of the students of the first cycle of the Escuela Superior de Formación Artística - Bagua-2021

Categories	Score	F	%
Low	0-10	0	0,0
Medium	11-13	1	6,7
High	14-17	5	33,3
Very High	18-20	9	60
Total		15	100,0

Statisticians: Mean: 17.33; Median: 18.00; Mode: 18; Maximum: 20; Minimum P: 12.

According to the data presented in the table, it is observed that 93.3% of the students reached high and very high levels in relation to their competencies in musical language. The arithmetic mean of the scores is 17.33 points. It is notable that the group is homogeneous, since it presents a coefficient of variation (CV) of 13.27%. The most frequently observed score is 18, which indicates that the mode of the distribution is also 18 points.

Contrasting hypotheses General hypothesis of the investigation scores before and after the intervention.

In the pre-test, students had a mean score of 3.73, while, in the post-test, this mean rose to 17.33. The theoretical significance α established was 0.02, and when compared to the observed significance of Sig = 0.05, the differences are determined to be statistically significant. Therefore, the

alternative hypothesis (H1) is accepted and it can be concluded that the implemented rhythmic exercise program had a positive and significant impact on the development of skills related to the student's musical language.

Table 5
Wilcoxon test

	Median	Sample	Standard deviation
Pre test	3.733	15	2,815
Post test	17.333	15	2,350
Test - Post test			
	Theoretical significance $\alpha = 0,02$	Significance observed Sig. = 005	

The results clearly show that the intervention had a positive impact on student learning. The placement of such a high percentage of students in the "high" and "very high" levels suggests not only that the intervention was effective, but that the students have acquired substantial proficiency in musical language.

This success can be attributed, in part, to the appropriate structuring of the program and the way in which the content was dosed. Gradual learning, which respects the pace and individual level of each student, is critical to success. In addition, the inclusion of extra-curricular activities and the use of different didactic resources such as audios, instruments and videos provided students with multiple ways to interact with the material, which may have enriched their learning experience.

Likewise, Dominguez & Clever's (2018) assertion reinforces the idea that musical language is essential in music education. It is not simply a tool for performing music, but a fundamental skill that empowers self-teaching and a deeper understanding of music.

Finally, it is crucial to highlight the role of the teacher in this process. Constant monitoring and adequate feedback may have been

determinant in the students' progress. This research demonstrates the importance of a well-structured and thoughtful approach to teaching music language.

The importance of musical language in education cannot be underestimated. It is evident that ESFAP-BAGUA students had significant deficiencies in this area, with 100% placing themselves at a low level. This represents a challenge for the teachers and administrators of the institution, since musical language is fundamental for a complete and deep understanding of music and its interpretation.

What Bernabé (2017) highlighted perfectly illustrates the situation. If students do not have a solid foundation in musical language, they may fail to merge historical musical content with current modern tools and techniques. Music language is not only a reading tool but a way of understanding and communicating in the musical world.

Despite initial challenges, a significant effort has been made to improve this situation. The Rhythmic Exercise Program presents itself as a potential solution. The careful design of the program, which is based on a solid academic structure and is taught twice a week for six weeks, shows a serious commitment to improving students' skills. The inclusion of didactic activities and the structuring of each session into beginning, development and closing stages further reinforce the intention to provide structured teaching and learning.

Most encouraging is the strong relationship that was determined between the program and musical language development. This suggests that, although students started at a low level, there is significant potential for progress with the right approach. As students are encouraged to actively participate and provided with the right tools, they can overcome their initial deficiencies.

With continued support from teachers and programs like this one, there is hope for these students. The development of skills in notation analysis and music analysis is crucial, and with the right effort, ESFAP-BAGUA students can reach higher levels of proficiency in the language of music.

CONCLUSIONS

The initial evaluation of first cycle students in the subject “Music Theory and Analysis” revealed significant gaps in their music reading ability, placing them at a “Low” proficiency level. This situation highlighted a pressing need for educational intervention in this fundamental area of their training. The finding underscored an educational gap that, if left unaddressed, could have negatively impacted their professional and academic future.

Responding to this urgent need, the implementation of the rhythmic exercises program emerged not only as a remedy, but as an innovative pedagogical proposal focused on active methodologies. This direct strategy towards the strengthening of musical language not only improved the students’ academic competencies, but also prepared them to integrate more solidly into the professional and cultural musical landscape of the country, evidencing the relevance of adapting and modernizing teaching methods.

The impact of the program was not merely academic. Its structure and content transformed the educational experience of the students, encouraging their active and constant participation. This enriched dynamic led to significant advances in their practice of music reading and notation. These pillars, essential for musical learning, demonstrated that they can be significantly enhanced and elevated through well-planned and executed pedagogical interventions.

Recommendations

Music teachers are urged to actively explore and adapt the proposed program in their teaching methods. This integration could not only enhance the development of musical language among students, but also reinforce the importance of rhythmic solfege as a cornerstone in their musical training. Direct experience with this program could lead educators to better understand its impact and adjust their pedagogical approach accordingly.

On the other hand, it is essential that future research efforts in the field of music education be directed toward the development of robust methodological proposals. Such research should focus on the creation and adaptation of

didactic guides, programs and other methods that comprehensively address the development of musical skills. Doing so will address the needs of students throughout the various academic levels and cycles, ensuring a cohesive musical education adapted to contemporary demands.

Contribution to scientific knowledge

This study not only provides empirical evidence on the teaching of musical language, but also offers a methodological guide for educators and those responsible for the educational field. Its clear and reproducible structure can be a valuable tool in different contexts, adapting to the specific needs and challenges of each group of students. The work emphatically underlines the need for an academic and evidence-based approach to art education, moving away from empiricism. This shift towards specialization is postulated as essential to ensure quality and rigorous music education.

Limitations

Despite the valuable findings, the research has certain limitations. Mainly, we worked with a small and specific sample, which could restrict the extrapolation of results to broader contexts. Although a Likert scale was used for the evaluation, the inclusion of qualitative methodologies could have enriched the analysis, offering a more holistic perspective of the changes experienced by the students. Finally, the focus on rhythmic exercises, while fundamental, does not encompass the totality of what is involved in musical learning.

Authors’ contributions

Allyson Armando León Jibaja: Conceptualization, Formal analysis, Research, Methodology, Project management, Resources, Supervision, Validation, Writing - original draft, Writing: revision and editing.

Osmer Agustín Campos Ugaz: Conceptualization, Data Curation, Formal Analysis, Research, Research, Methodology, Validation, Writing - original draft, Writing: proofreading and editing

Elvis Manuel Aponte León: Conceptualization, Research, Methodology, Supervision, Writing - original draft, Writing: proofreading and editing

Conflicts of Interest

The authors declare that there are no conflicts of interest.

REFERENCES

- Bernabé, M. (2015). *Visión de El Lenguaje Musical y las Nuevas Tecnologías en la Educación Musical Profesional*. El lenguaje musical y las nuevas tecnologías en las enseñanzas profesionales de Música. *Revista Internacional de Tecnologías en la Educación*, 2(2), 79-87. <https://journals.eagora.org/revEDUTECH/article/download/966/530/3079>
- Bernabé, M. A. (2017). *Lenguaje musical y la inteligencia musical en los estudiantes del primer grado de educación secundaria de la I.E. N° 3719 – 2017* [Tesis de Maestría, Escuela de Posgrado, Universidad César Vallejo]. Repositorio Institucional. https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/14058/Macedo_ABF.pdf
- Declaración de Helsinki. (2013). World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. *JAMA*, 310(20), 2191–2194. <https://doi.org/10.1001/JAMA.2013.281053>
- Hernández, R. (2010). *Metodología de la investigación*. <http://petroquimex.com/PDF/SepOct17/Desarrolla-IMP-Metodologia.pdf>
- Ibáñez Gericke, T. V. (2012). *El cuerpo en el proceso de enseñanza-aprendizaje de la lectura rítmica en la clase de Lenguaje Musical* [Tesis de Maestría, Facultad de Artes, Escuela de Posgrado, Universidad de Chile]. Repositorio Institucional. <https://repositorio.uchile.cl/handle/2250/111210>
- Palacios Castillo, V. E. (2019). *El Desarrollo de la Expresión Musical en Niños Menores de 5 Años* [Tesis de Segunda Especialidad, Escuela Profesional de Educación, Facultad de Ciencias Sociales, Universidad Nacional de Tumbes]. Repositorio Institucional. <https://repositorio.untumbes.edu.pe/handle/20.500.12874/1441>
- Pucha Sivilapa, J. A. (2013). *Elaboración de un texto de solfeo sustentado en ritmos Ecuatorianos, para el primer año del nivel técnico del conservatorio Salvador Bustamante Celi de la Ciudad de Loja* [Tesis de Maestría, Universidad de Cuenca (Ecuador)]. Repositorio Institucional. <https://repositorioslatinoamericanos.uchile.cl/handle/2250/1112152>
- Ruiz, E. B., Gómez, F. J. B., & Guerrero, I. M. M. (2017). Ansiedad de los alumnos en la asignatura de Lenguaje Musical y estrategias para reducirla. *Revista Internacional de Educación Musical*, 5, 41–48. <http://www.revistaeducacionmusical.org/index.php/rem1/article/view/112>
- Rusique Conejo, G. A. (2019). La euritmia, como estrategia didáctica: el ritmo en la música como proceso de formación de bandas musicales juveniles. In *Universidad Militar Nueva Granada*. <http://hdl.handle.net/10654/32838>
- Salas, J. (2018). Estrategias de aprendizaje en el estudio del solfeo entonado en el curso de lenguaje y percepción musical. *Investigación y postgrado*, 33(1), 131-151. <https://dialnet.unirioja.es/servlet/articulo?codigo=6736269>
- Vernia Carrasco, A. M., Gustems Carnicer, J., & Calderón Garrido, C. (2016). Ritmo y procesamiento temporal. Aportaciones de Jaques-Dalcroze al lenguaje musical. *Magister*, 28(1), 35–41. <https://doi.org/10.1016/J.MAGIS.2016.06.003>
- Vernia Carrasco, A. M. (2014). *El ritmo a través del cuerpo como herramienta de aprendizaje musical. La competencia rítmica*. Universidad Jaime I (Castellón, España). <http://repositorio.uji.es/xmlui/handle/10234/153011>