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ELEMENTARY SCHOOL STUDENTS' CREATIVITY IN EXPLORING TIMBRE THROUGH ENVIRONMENTAL-BASED LEARNING

Utari Dayya Suci Nurani[1], Resa Respati[2], Muhammad Rijal Wahid Muharram[3]
[1,2,3]PGSD, Kampus Tasikmalaya, Universitas Pendidikan Indonesia
[1]utaridayya@upi.edu, [2]respati@upi.edu, [3]rijalmuharram@upi.edu

ABSTRACT

This study aims to determine the level of creativity among elementary school students in exploring timbre through environmental-based learning. Creativity in this context encompasses four main aspects: fluency, flexibility, originality, and elaboration. The research employed a quantitative approach with a pre-experimental one-shot case study design, involving 20 second-grade students as participants. The instrument used was a timbre exploration task using objects from the surrounding environment, assessed through a creativity rubric. The results showed that 20% of students demonstrated a high level of creativity, 55% fell into the moderate category, and 25% were in the low category. In the aspect of fluency, more than half of the students showed adequate ability to generate sound variations. However, the aspects of flexibility, originality, and elaboration were still dominated by low to moderate scores, indicating that students had not yet fully developed their ideas in diverse, original, and detailed ways. Environmental-based learning has proven to provide a positive stimulus in fostering students' musical creativity, although further learning strategies are needed to optimize all aspects of creativity. This study recommends the use of contextual approaches and exploratory learning in music education at the elementary school level.

Keywords: creativity, timbre, environmental-based learning, music education, elementary school

A. Introduction

Elementary education plays a crucial role in shaping students' character and skills from an early age. Safitri et al. (2024) explain that elementary education is organized with the aim of developing students' attitudes and abilities, as well as providing them with basic knowledge and skills necessary for life in society. This reflects that elementary education does not merely emphasize cognitive aspects but also plays a role in nurturing students' potential in a holistic manner. One of the strategic means to achieve the goals of elementary education is through arts education, particularly music education. Music education provides training for students to express and

appreciate art creatively to develop personality, attitude, emotional maturity, and to foster creativity by utilizing various elements found in music (Respati & Fuadah, 2018). Furthermore, according to Oktari and Desyandri (2023), music can serve as an effective medium to develop positive character, build social skills, express emotions, appreciate cultural diversity, and enhance students' cognitive abilities.

One of the key musical elements emphasized in the elementary school curriculum is timbre. According to Istifadah (2024), timbre in the context of music education is an essential element that can be explored by children through various activities, such as experimenting with sound effects from both conventional and non-conventional instruments. Through sound exploration and imitation activities, students are not only invited to recognize the characteristics of various types of sounds but also trained to create simple sound patterns creatively. In line with Maharani et al. (2022), exploring timbre enables students to enrich their knowledge by fostering curiosity in discovering a variety of sounds from objects around them. This process stimulates imagination and creativity as students utilize sound sources from their bodies, simple musical instruments, or surrounding objects. Therefore, music education particularly in the topic of timbre exploration plays an important role in developing students' creativity.

However, in practice, music learning in elementary schools especially on the topic of timbre exploration still faces various challenges. Many students have not been actively involved in sound exploration activities and tend to merely follow the teacher's instructions without developing ideas independently. This condition indicates that students' creative potential has not been optimally facilitated in the learning process. Several contributing factors include the lack of variety in teaching approaches and limited use of contextual learning media that align with the students' environment and interests. Moreover, limited facilities also pose a challenge. As a result, timbre exploration tends to be passive and confined to basic sound

recognition activities, without providing sufficient space for students to create and develop musical ideas in an original and creative manner.

One approach believed to optimize students' creativity in timbre exploration is by utilizing the surrounding environment as a learning resource. The local environment offers various objects and phenomena that can produce unique and interesting sounds, such as the sounds of leaves, water, wood, stones, or other man-made items commonly found around students. By using objects from their environment, the learning process becomes more contextual, closer to students' daily experiences, and encourages them to actively explore different sound sources independently. When teachers use the surrounding environment as a learning resource, learning becomes more meaningful as students are directly exposed to real situations and events. This is in line with the Contextual Teaching and Learning (CTL) approach as proposed by Johnson (2002), which emphasizes that learning becomes more effective when linked to students' real-life experiences and environment, thereby fostering deeper and more meaningful understanding.

Based on the explanation above, this study aims to determine the creativity level of elementary school students in exploring timbre after the implementation of environmental-based learning, specifically in the context of second-grade music lessons. This research is expected to provide insights into the effectiveness of utilizing the surrounding environment as a learning resource to foster students' creative ideas and musical abilities in an original and meaningful way.

B. Method

This study employed a quantitative approach with a pre-experimental method using a one-shot case study design. In the one-shot case study design, a single group is given a treatment, and the results are subsequently observed (Sugiyono, 2013). The population of this study consisted of 20 second-grade students at SDN 2 Karangpanimbal. The sampling technique used was the saturated sampling technique. According to Sugiyono (2013), saturated sampling is a technique in which all members of the population

are used as the sample. This method is often applied when the population is relatively small, fewer than 30 individuals, or when the research aims to generalize findings with a very small margin of error. Since the total population was 20 students, the sample size was equal to the population. The data collection technique used in this study was a test, which was assessed using a creativity scoring rubric that includes four main aspects of creativity based on Guilford (in Fatmawati, 2022), namely fluency, flexibility, originality, and elaboration.

Assessment Aspect	Indicator	Assessment Scale
Fluency	The student's ability to spontaneously and diversely generate variations of timbre from various surrounding objects	1 – 4
Flexibility	The student's ability to use various techniques or methods to produce timbre from a single object	1 – 4
Originality	The student's ability to create unique sounds that are not imitations of peers or teacher instructions, using the same object	1 – 4
Elaboration	The student's ability to develop timbre into more complex and meaningful patterns or sequences	1 – 4

Table 1 Student Creativity Test Blueprint

C. Result

The analysis results of a single class that participated in sound color exploration learning using an environment-based approach revealed variations in students' creativity levels. Using a one-shot case study method, this study found that students' creativity was reflected through diverse responses and outcomes in their sound exploration activities, particularly in the aspects of fluency, flexibility, originality, and elaboration. Based on descriptive statistical analysis, the distribution of creativity scores indicated a range of creativity levels among students, with the detailed breakdown presented in the following table.

Tabel 2 Interval Classification of Students' Creativity in Timbre Exploration

Category	Interval	Frequency	Percentage
High	X ≥ 13	4	20%
Medium	8 ≤ X < 13	11	55%
Low	X < 8	5	25%

Based on the categorization results, out of a total of 20 students involved in this study, 4 students (20%) were in the high category, 11 students (55%) were in the medium category, and 5 students (25%) demonstrated low creativity. This indicates that the majority of students have shown potential in developing musical creativity through the exploration of their surrounding environment. Students in the medium category displayed the ability to generate moderately varied musical ideas, although not fully original or complex. This suggests that learning approaches that integrate the surrounding environment as a learning source have provided a positive stimulus for the development of student creativity. This is in line with Muslich (as cited in Haryati, 2016), who explains that through direct interaction with the environment, students not only gain real-life experiences but can also engage in various activities such as recreation, innovation, and cognitive development. Therefore, environment-based learning needs to be continuously developed and adapted to the characteristics of students to maximize their creative potential.

Meanwhile, the presence of students in the high creativity category indicates that contextual learning strategies are effective in fostering students' creative thinking. These students were able to explore various

objects to produce unusual sounds, compose patterns with their own creativity, and confidently present the results of their explorations. This shows that utilizing the surrounding environment as a learning source not only provides concrete experiences but also opens up space for creativity development through exploratory activities. Again, this is consistent with Muslich (as cited in Haryati, 2016), who asserts that through environmental interaction, students gain authentic experiences that support innovation and mindset development. In the context of music education, this aligns with one of the key functions of music learning described by Desyandri & Mansurdin (2019), which is as a medium for fostering creativity, where music serves as a tool to nurture creative abilities related to the act of creating.

However, there were still 5 students (25%) who exhibited low levels of creativity. These students appeared to struggle with developing ideas for timbre, tended to imitate their peers or follow teacher instructions, and lacked the confidence to experiment with environmental sounds. This situation indicates the need for more targeted strategies, such as providing more varied examples and offering guided exploration. Additionally, teachers can utilize small group learning to support students who have not yet optimally developed in terms of creativity.

Students' creativity in exploring timbre was analyzed in more detail through four main aspects: fluency, flexibility, originality, and elaboration. These four aspects were chosen because they comprehensively represent key dimensions of creative thinking according to Guilford (1966). The analysis of these aspects provides a more complete picture of how students' musical creativity has developed through learning that leverages the surrounding environment as a source. Through this exploratory activity, students are not only introduced to sounds from nearby objects but are also trained to create, modify, and arrange sounds independently. To understand the dynamics of this creativity in greater depth, the following is an explanation of the results and interpretation of each analyzed aspect.

1. Fluency

Table 3 Frequency of Student Scores in Fluency Aspect

Score	Frequency	Percentage
1	0	0%
2	7	35%
3	8	40%
4	5	25%

Guilford (1996) explained that fluency is the ability to produce numerous ideas, answers, or solutions quickly and smoothly based on existing information. In this context, fluency refers to students' ability to generate sound ideas from their surrounding environment. Based on the observations, it was found that 8 students (40%) obtained a score of 3 and 5 students (25%) reached a score of 4. These findings indicate that more than half of the students demonstrated relatively high fluency, marked by their ability to generate a variety of sound ideas without significant difficulty. Students in this category appeared active in trying out different sounds from their surroundings.

On the other hand, 7 students (35%) were still at a basic level, scoring 2. Students in this group tended to be limited in producing sounds, either due to a lack of initiative or limited flexibility in thinking when interacting with objects. However, none of the students received the lowest score of 1, which indicates that all students had a tendency to think creatively, although at varying levels.

2. Flexibility

Tabel 4 Frequency of Student Scores Flexibility Aspect

Score	Frequency	Percentage
1	6	30%
2	10	50%
3	4	20%
4	0	0%

Flexibility refers to students' ability to produce varied ideas and avoid being fixated on a single method or approach. In line with Hendrik et al. (2022), flexibility is the ability to generate multiple ideas within a given time frame. This aspect emphasizes the ability to think openly or flexibly by generating diverse ideas or solutions and not being limited to a single perspective. In the context of music education, particularly in timbre exploration, flexibility is reflected in how students can produce diverse sound variations using different techniques from the same object.

Based on the data obtained, it was revealed that most students were still in the low to moderate category. A

total of 6 students (30%) scored 1, and 10 students (50%) scored 2. Only 4 students (20%) demonstrated a reasonably good level of flexibility with a score of 3, and none reached the highest score of 4. This condition shows that students' ability to apply various techniques in generating timbres is still limited and has not fully developed. Students in the low category tended to try only one method of sound exploration, such as striking, without attempting other methods like scraping, shaking, or using different parts of an object. Meanwhile, students in the moderate category generally showed two or three variations in sound production but had not yet demonstrated full creativity in using new techniques or approaches.

The absence of students scoring a 4 indicates that none had reached the highest level of flexibility. This could be due to a lack of experience, limited exposure to exploratory examples, or underdeveloped confidence and habits in free experimentation. This is a critical point, suggesting that the flexibility aspect requires special attention in the learning process. Learning approaches that encourage free experimentation, challenge-based learning, and providing longer exploration time would be highly beneficial in helping students develop flexible thinking.

3. Originality

Tabel 5 Frequency of Student Scores in Originality Aspect

Score	Frequency	Percentage
1	4	20%
2	10	50%
3	6	30%
4	0	0%

According to Susilawati et al. (2025), originality is the ability to think in new or unique ways. Originality is a key indicator in assessing students' creativity, especially in the context of music education. It refers to students' ability to produce ideas or works that are unique and different from those commonly done or shown by others. In the activity of timbre exploration, this aspect is seen in the students' ability to create timbre that are uncommon or have not been demonstrated by the teacher or their peers.

Based on the collected data, 4 students (20%) scored 1, indicating that the sounds they produced were very similar to the examples or merely

imitated their peers without modification. Meanwhile, 10 students (50%) received a score of 2, meaning their work showed slight variation but still closely resembled the ideas already presented. Only 6 students (30%) received a score of 3, indicating that they had begun to demonstrate originality, although not entirely free from external influences. No student reached the highest score of 4, meaning that none displayed truly new and significantly different ideas.

This condition suggests that most students are still at the stage of imitation or making limited modifications to others' ideas. This is common, especially at the elementary school level, where creativity is still strongly influenced by the environment and external stimuli. However, the absence of students in the highest category indicates the need for teaching strategies that better support the creation of a pressure-free space for expression. Teachers should design activities that encourage students to think beyond the ordinary. Creating a learning environment that supports creativity and does not overly focus on final outcomes will lead to more original ideas from students. In line with Simaremare et al. (2024), a supportive learning environment, freedom to explore new ideas, and encouragement from teachers and peers are crucial factors in fostering student creativity.

4. Elaboration

Tabel 6 Frequency of Student Scores in Elaboration Aspect

Score	Frequency	Percentage
1	1	5%
2	13	65%
3	6	30%
4	0	0%

Susilawati et al. (2025) describe elaboration as the ability to add to or refine an idea. Elaboration, or idea development, is an essential dimension of creativity that reflects students' ability to expand, refine, and develop an idea into a more complex and meaningful form. In music education, particularly in timbre exploration activities, elaboration is seen in how students not only create simple sound patterns but also develop them into more varied and structured compositions.

According to the data, 13 students (65%) scored 2, indicating that most students were only able to

create simple sound patterns without significant development. This suggests that while students may understand the basic form of a sound pattern, they still need encouragement and guidance to further develop their ideas. Six students (30%) received a score of 3, indicating efforts to develop their sound patterns, although still limited in variation or structure. Only one student (5%) was in the lowest category, scoring 1, and none of the students reached the highest score of 4, which would indicate the ability to compose sound patterns that are complete, varied, and meaningful.

This condition shows that students' elaboration ability in creating musical works has not yet been fully optimized. These limitations may be due to a lack of examples of advanced exploration, limited practice time, or students' unfamiliarity with composing longer and more organized sound patterns. Therefore, teachers need to provide broader opportunities for students to engage in deeper exploration.

D. Conclusion

Based on the research findings, it can be concluded that the implementation of environmental-based music learning is effective in facilitating the development of elementary school students' creativity, particularly in timbre exploration activities. The majority of students demonstrated a moderate level of creativity, with a small number reaching the high category. The fluency aspect was the most prominent, indicating that students were fairly proficient in generating sound ideas from objects around them. However, students' flexibility, originality, and elaboration skills still need improvement to enable them to create more diverse, unique, and in-depth expressions. Therefore, more varied, contextual, and exploratory learning strategies are needed to optimally develop all aspects of musical creativity. Teachers are encouraged to utilize the surrounding environment as a meaningful and relevant learning medium to support an engaging and creative music education process.

REFERENCES

Desyandri, D., & Mansurdin, M. (2019). *Bahan ajar (hand out) pembelajaran seni musik SD*. Universitas Negeri Padang.

Fatmawati, F. (2022). Kreativitas dan intelegensi. *Jurnal Pendidikan Dan Konseling (JPDK)*, *4*(5), 188-195.

Guilford, J. P. (1966). Measurement and creativity. *Theory into practice*, *5*(4), 185-189.

Haryati, D. (2016). Efektivitas pemanfaatan lingkungan sekolah sebagai sumber belajar terhadap hasil belajar IPA peserta didik kelas IV SD Inpres BTN IKIP I Makassar. *AULADUNA: Jurnal Pendidikan Dasar Islam*, *3*(2), 80-96.

Hendrik, B., Ali, M. N., Nayan, N. M., Mat Isa, N. A., & Masril, M. (2022). A New Robotic Learning Activity Design to Increase the Figural Creativity: Originality, Elaboration, Flexibility, and Fluency. *International Journal on Advanced Science Enginering Information Technology*, *12*(1), 114- 120

Istifadah, I., Mahrus, M., Rahmawati, R., & Usriyah, L. (2024). Pelatihan Mencipta Lagu Sederhana untuk Mengembangkan Kreatifitas Guru Pendidikan Anak Usia Dini. *Murhum: Jurnal Pendidikan Anak Usia Dini*, *5*(1), 366-378.

Johnson, E. B. (2002). *Contextual teaching and learning: What it is and why it's here to stay*. Thousand Oaks, CA: Corwin Press.

Maharani, I., Efendi, N., & Oktira, Y. S. (2022). Studi Literatur Seni Musik Dalam Pembentukan Karakter Siswa Di Sekolah Dasar. *Jurnal Pendidikan dan Konseling (JPDK)*, *4*(6), 13090-13098.

Nurhamidah, U. (2018). Pengaruh Model Creative Problem Solving (CPS) Terhadap Keterampilan Berpikir Kreatif Siswa Dalam Pemecahan Masalah Pada Mata Pelajaran IPA Kelas IV Sekolah Dasar. *Jurnal Penelitian Pendidikan Guru Sekolah Dasar*, *6*(6), 1009-1019.

Oktari, S. T. (2023). Pembentukan Karakter Siswa di Sekolah Dasar Melalui

Pendidikan Seni Musik. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, *9*(2), 1771- 1779.

Respati, R., & Fuadah, U. S. (2018). Pembelajaran Ansambel Musik untuk Siswa Kelas Tinggi Sekolah Dasar. *Indonesian Journal of Primary Education*, *2*(1), 30-37.

Safitri, E. D., Octavia, O. T., Prasetyo, E., & Feni, R. (2024). Penerapan Penguatan Literasi dalam Pembelajaran Amancalistung pada Pendidikan Anak Sekolah Dasar. *Jurnal Pengabdian Pendidikan Masyarakat (JPPM)*, *5*(2), 342-348.

Simaremare, W. L., Hutagalung, M. E., Marpaung, E. K., & Nababan, D. (2024). KREATIVITAS SISWA PADA TEKNOLOGI MASA KINI. *Jurnal Ilmiah Multidisiplin Ilmu*, *1*(2), 72-79.

Sugiyono. (2013). Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif dan R&D). Bandung: Alfabeta.

Susilawati, A. E., Jaenudin, A., & Yusuf, Y. (2025). Analisis Kemampuan Berpikir Kreatif Siswa dalam Menyelesaikan Masalah Sistem Persamaan Linear Dua Variabel (SPLDV). *Proximal: Jurnal Penelitian Matematika dan Pendidikan Matematika*, *8*(1), 206-217.

Yuni, Q. F. (2017). Kreativitas dalam pembelajaran seni musik di sekolah dasar: Suatu tinjauan konseptual. *ELEMENTARY: Islamic Teacher Journal*, *4*(1).