GAWI
Journal of Action Research
Vol. 6 No. 1 2026

Implementation of Music Learning for Autistic Students in Grade VI at a Special School (SLB)

Muhammad Budi Zakia Sani[1]*, Muhammad Iqbal[2], Rachmat[2], and Vivi Ervina Dewi[3]

[1]Performing Art Education, Faculty of Education and Teacher Training, Lambung Mangkurat University, Indonesia
[2]Performing Art Education, Faculty of Art and Design, Makassar State University, Indonesia
[3]Departement of Music Education, Faculty of Language and Art, Surabaya State University, Indonesia

*mbudizakiasani@ulm.ac.id

Received	Accepted	Published
02/04/2026	17/06/2026	31/07/2026

DOI
10.59329/gawi.v6i1/267

ABSTRACT

This study aims to describe the implementation of music learning for students with Autism Spectrum Disorder (ASD) at SLB-C Negeri Pembina South Kalimantan. Using a descriptive qualitative method, the participants of this study consisted of three autistic students in the sixth grade. Data were collected through observation, interviews with the teacher, and documentation. The data analysis process included data reduction, thematic data display, and conclusion drawing. The results indicate that music learning was implemented by modifying a combination of question-and-answer and direct practice methods using the pianica instrument. This learning approach indicated positive support for student learning engagement, as evidenced by increased focus in the classroom, the ability to remember instructions on how to use musical instruments (cognitive), and improved motor coordination between the fingers, eyes, and mouth. In conclusion, music learning practices can serve as an adaptive alternative approach to support the learning process of autistic students.

Keywords: autism spectrum disorder, learning methods, music education, qualitative case study, special education

How to cite:
Sani, M. B. Z., Iqbal, M, Rachmat, R., & Dewi, V. E. (2026). Implementasi Pembelajaran Musik pada Peserta Didik Autis Kelas VI di SLB. *Gawi: Journal of Action Research, 6(1),* 283-293.

This work is licensed under a Creative Commons Attribution 4.0 International License.
© 2026, Gawi: Journal of Action Research

INTRODUCTION

Inclusive and special education for students with neurodevelopmental disorders, particularly Autism Spectrum Disorder (ASD), remains a central concern in contemporary pedagogical studies. ASD is a complex developmental disorder characterized by challenges in social interaction, verbal and non-verbal communication, as well as repetitive behavioral patterns and restricted interests (Buijsman, 2023). This condition requires educational interventions that are specifically designed and individualized. One approach that has proven effective in accommodating the needs of students with ASD is through music education and artistic experience (Korošec, 2024; Weining et al., 2025).

Children with autism require specialized educational treatment. Various methods are available to provide education for autistic children, one of which is through music education. Music education offers many advantages for autistic children, particularly in supporting non-verbal communication. Music learning can effectively develop various aspects of autistic children, both psychological and physical, including attention span, bodily movement, and emotional regulation. Activities within music education that can be undertaken by autistic children include singing, playing instruments, rhythmic movement, and listening to music (Maenner, 2021; Boileau et al., 2025).

In this context, SLB-C Negeri Pembina of South Kalimantan Province, which holds the vision of "realizing skilled students who are faithful and devoted to God Almighty," is one of the schools that accommodates students with autism. Classes at SLB-C are separated according to each category of students with special needs. This school also has a scheduled music subject with a clear learning trajectory and structured instructional stages (Urbaniak & Mitchell, 2025).

Given the urgency of fulfilling the educational rights of every child with special needs, an in-depth understanding of their learning characteristics becomes essential. Therefore, this study focuses on exploring the implementation of music learning among sixth-grade students at SLB-C Negeri Pembina, South Kalimantan, as an effort to provide new insight into methods of managing the focus of autistic children through art. The selection of autistic children as research subjects is grounded in the researchers' view that every child with special needs holds equal rights to education, although not all of them receive it. In addition, many members of the public still lack understanding of the characteristics of autistic children; therefore, the researchers aim to offer a new perspective on educational practices that can help autistic children become more controlled and focused (Killingly et al., 2025).

Unlike academic subjects that rely on logic and conventional language, music offers a non-verbal medium of communication that is more accessible to students on the autism spectrum. Prior literature has extensively documented that clinical music interventions can reduce anxiety levels, extend attention span, and facilitate motor coordination in children with ASD. However, most of the current state of the art remains dominated by studies on music therapy within the clinical psychological domain (Wang et al., 2023). A significant research gap still exists regarding how music learning practices and modifications are actually implemented within formal special education classrooms, particularly in the context of special schools (SLB) in Indonesia (Supiarza & Sarbeni, 2021).

This study aims to fill that gap by taking the context of SLB-C Negeri Pembina, South Kalimantan Province. This institution was selected because of its position as one of the leading special education references in South Kalimantan, one that systematically accommodates students with ASD and has implemented a learning trajectory integrating music into its adaptive curriculum. Unlike the common perception that often marginalizes art education for children with special needs, this institution positions music as one of the primary instruments for classroom management and cognitive-motor stimulation. The students examined in this study were classified within the ASD spectrum based on medical records and psychological assessments documented in the school's official records, so that the observed intervention was specific to the characteristics of that spectrum (Levitin et al., 2018; Fernholz et al., 2026).

Based on the background and arguments presented above, this study was designed to describe empirical practices in the field. Specifically, this study seeks to answer two main research questions: (1) how is the process of planning and implementing music learning carried out for students with ASD in grade VI at SLB-C Negeri Pembina, South Kalimantan? and (2) how does this learning practice affect students' learning engagement, focus, and cognitive and motor responses in the classroom? Through this study, it is expected that new understanding and evidence-based pedagogical recommendations can be generated for special education teachers.

METHODS

This study employed a qualitative approach using a descriptive case study design. The research was conducted at SLB-C Negeri Pembina, Banjarbaru City, South Kalimantan, from February to May 2024. The researcher served as the main instrument and acted as a non-participant observer. Data were collected through observation, interviews, and documentation. Observations were conducted to examine the music learning process for grade VI students with ASD. Interviews were conducted with the music subject teacher, while documentation was used to obtain supporting data such as teaching modules, the learning trajectory (ATP), and archives of learning activities. Data were analyzed through the stages of data reduction, data display, and conclusion drawing (Bos, 2020).

The data sources in this study included respondents, namely autistic children at SLB-C Negeri Pembina, South Kalimantan. These sources consisted of both primary and secondary data. Primary data were obtained from three grade VI students with Autism Spectrum Disorder (ASD) and one music subject teacher at SLB-C Negeri Pembina, South Kalimantan. Secondary data were obtained from various documents related to the implementation of music learning, including teaching modules, the Learning Trajectory (Alur Tujuan Pembelajaran/ATP), student development records, and documentation of learning activities obtained from the school. The main instrument in this study was the researcher, who was responsible for collecting, interpreting, and analyzing the data. To support the data collection process, the researcher used observation guidelines, a semi-structured interview guide, an audio recorder, and documentation in the form of photographs and learning documents (Ainin, 2018).

Observations were conducted using a structured observation sheet based on a sign system. The researcher recorded every occurrence of behavior relevant to the implementation of music learning among students with ASD. The observed indicators included the ability to follow the teacher's instructions, the level of focus during the lesson, responses to the use of the pianica as a learning medium, motor coordination while playing the instrument, interaction with the teacher and peers, and the occurrence of distractive or off-task behavior. Recording was carried out directly during the music learning process. Each indicator that appeared during the observation period was marked on the observation sheet. The resulting data were then used to describe students' responses and the effectiveness of music learning implementation in the classroom (Martino & Jazuli, 2019).

The research subjects were not selected randomly but through purposive sampling based on specific inclusion criteria designed to optimize the acquisition of information-rich cases. These inclusion criteria were: (1) the student was actively enrolled in grade VI of a Special Elementary School (SDLB); (2) the student had a medical diagnosis or an official psychological assessment from an authorized institution classifying them within the Autism Spectrum Disorder (ASD) spectrum; and (3) the student regularly attended music art lessons. The heterogeneity of behavioral manifestations among the three selected subjects provided a basis for source triangulation, enriching the diversity of data regarding the effectiveness of the learning method. To comply with ethical principles in clinical and educational research, all participant identities were anonymized using an initial-based coding system (see Table 1).

Table 1. Profile of research participants based on initial assessment

Initial	Gender	Recorded Diagnosis (School Documents)	Initial Behavioral Characteristics and Barriers in Class
MI	Male	*Autism Spectrum Disorder*	Short attention span, frequent repetitive vocalization (mumbling), and limited expressive language ability.
MR	Male	*Autism Spectrum Disorder*	Difficulty with postural regulation (hyperactivity/difficulty sitting still) and susceptibility to auditory distraction from the surrounding environment.
MZ	Male	*Autism Spectrum Disorder*	Social withdrawal, fixation on internal routines, and reluctance to initiate two-way interaction.

Data Collection Techniques and Procedures

Empirical data collection was carried out through a multi-method investigation to capture the phenomenon from various dimensions, consisting of:

1. **Passive Participatory Observation**
   Field observations were conducted as a micro-longitudinal study across 8 music learning sessions, each lasting 2 x 35 minutes. The observation focused on micro-behaviors, including the level of eye contact, motor synchronization while using the instrument, frequency of tantrums, and the effectiveness of the teacher's instructions in managing the classroom (Zarza-Alzugaray et al., 2020).
2. **Semi-Structured Interview**
   Verbal data were obtained through in-depth interviews with the music teacher (lasting 45 to 60 minutes) and the school principal (lasting 30 minutes). Semi-structured interviews were used to allow the researcher flexibility in exploring the pedagogical rationale behind the teacher's method modifications, the emotional challenges faced, and behavioral mitigation strategies. Interviews were digitally recorded based on informed consent and transcribed verbatim (Zulfa, 2021).
3. **Documentary Study**
   To complement the primary data, the researcher conducted a discourse analysis of administrative and academic documents. The documents examined included the teaching module, the elaboration of the Learning Trajectory (ATP) (see Table 2) within the Merdeka Curriculum framework, the formative assessment format, and the daily behavioral development evaluation records (home-school communication book) of the students (Sani, 2021).

Table 2. Matrix of indicators and data collection instruments

Investigation Aspect	Field Observational Indicators	In-depth Interview Focus (Teacher/Principal)
Pedagogical Design	Synchronization between the module/ATP and actual practice; implementation of combined question-and-answer and direct practice methods.	Rationale for material selection (e.g., use of regional songs); strategies for visual and auditory instructional modification.

Investigation Aspect	Field Observational Indicators	In-depth Interview Focus (Teacher/Principal)
Cognitive and Motor Response	Memory retention of instructions for using the instrument; tactile and visual coordination while operating the pianica.	Teacher's analysis of students' progress in finger, eye, and breathing (mouth) coordination across sessions.
Emotional Regulation and Attention	Decrease in the frequency of off-task behavior (e.g., disturbing peers); increase in the duration of independent engagement.	Positive reinforcement approach versus punishment; dynamics of students' mood transitions before and after playing music.

The determination of research subjects was not conducted randomly but through purposive sampling based on specific inclusion criteria to ensure information-rich cases (Nugraheni et al., 2024). These inclusion criteria included: (1) the student was actively enrolled in grade VI of SDLB; (2) the student had a medical diagnosis or an official psychological assessment from a relevant institution classifying them within the Autism Spectrum Disorder (ASD) spectrum; and (3) the student regularly attended music art lessons. The heterogeneity of behavioral manifestations among the three selected subjects provided source triangulation that enriched the variation of data regarding the effectiveness of the learning method. To comply with the ethical principles of clinical and educational research, all participant identities were anonymized using an initial-based system (Zhang, 2023).

The raw data collected were analyzed using an interactive thematic analysis approach, following a systematic sequence: (1) Data Condensation, in which the researcher filtered, summarized, and converted verbatim transcripts and field notes into initial analytical codes; (2) Data Display, in which these codes were organized into a categorical matrix mapping patterns of behavioral change and the effectiveness of the teaching intervention; and (3) Conclusion Drawing/Verification, in which the findings were cross-checked against the research questions (Knight & Lasczik Cutcher, 2018). To ensure the trustworthiness and methodological rigor of this qualitative study, the researcher applied technique triangulation (comparing the teacher's interview claims with actual classroom observation findings and the corresponding ATP documents) and source triangulation (comparing responses from the three ASD subjects, each with different characteristics, to the same learning stimulus). Through this mechanism, researcher subjectivity could be minimized, so that the resulting conclusions possess empirical validity that can be scientifically justified (Raharjo et al., 2021).

RESULT AND DISCUSSION

Result

Based on data condensation and thematic analysis of field observations, in-depth interviews, and document review, the practice of implementing music learning for students with Autism Spectrum Disorder (ASD) at SLB-C Negeri Pembina can be classified into five main themes. These themes summarize the entire process, from instructional planning through the empirical record of behavioral change in the classroom.

Planning Music Learning Through the Teaching Module and Learning Trajectory (ATP)

The suitability and success of pedagogical interventions for children with special needs begin with a highly adaptive instructional design. Based on the administrative data collected, it was found that teachers at SLB-C Negeri Pembina had developed learning materials based on the Merdeka Curriculum for grade VI. This planning was manifested through the creation of a Teaching Module and a Learning Trajectory (ATP) specifically designed to align with the students' cognitive capabilities. The approach used no longer treats music as a rigid theoretical

discipline but instead integrates it through a thematic learning system that is more relevant to the children's daily lives (Zhang, 2021).

In more detail, observation and document review show that implementation was carried out within a specific sub-theme. The module for this sub-theme was projected to be completed over five lessons distributed across three face-to-face meetings. The use of this thematic system allows the teacher to combine various subjects under a single contextual umbrella, so that transitions between materials do not impose excessive cognitive load on students with ASD. The material delivered also represents a strategic repetition of competencies that had not been fully mastered at the previous grade level (grade V), to ensure more permanent retention of understanding (Supiarza & Sarbeni, 2021).

Referring to the analyzed Phase C ATP document, the essential objective of this learning does not require advanced technical mastery of music. The learning target is focused on students' independent ability to play a rhythmic instrument individually. This learning is categorized under the "reflection" element, indicating that the primary outcome is the child's ability to recognize and express impressions of musical practice, whether through rhythmic singing or instrument use, in a form that can be communicated in general terms.

> *"In developing this Merdeka Curriculum module for grade 6, the target in the ATP is not for them to memorize musical notation, but rather how they can sit, reflect on sound, and practice the instrument independently..." (Music Teacher Interview, March 23, 2024).*

Modification of the Question-and-Answer and Practice Method According to Student Characteristics

The social communication barriers and short sustained attention typical of individuals with ASD require fundamental differentiation of instruction. Field practice shows that teachers at SLB-C Negeri Pembina do not rely on a single monolithic teaching method. Instead, the teacher constructs a tactical combination of proactive question-and-answer and direct practice methods, specifically modified to accommodate the unique needs of the students. The strategy for delivering material also relies heavily on the principle of repetition, a crucial technique in special education aimed at ensuring that instructions are transmitted clearly and fully understood by the students (Liang et al., 2024).

In designing a psychologically safe learning ecology, the teacher applies an approach that mitigates the risk of sensory and cognitive overload. This is demonstrated by the teacher's deliberate policy of never assigning homework for the subject of music. This pedagogical decision is grounded in the concern that adding tasks outside school hours would degrade the children's enjoyment of music, which in turn could undermine the intended learning outcomes. The teacher makes a strong effort to make music class a zone free from rigid academic demands (Larkin et al., 2023).

In line with eliminating homework, the disciplinary approach within the classroom was also drastically modified. The teacher strictly avoids the use of punishment. Punishment is considered to carry a high risk of triggering regressive effects in autistic students, such as severe tantrums during the lesson or even complete refusal to participate in subsequent sessions. As compensation, the teacher consistently applies positive reinforcement, in which every effort made by the students, however small, is always acknowledged with praise to nurture and build their self-confidence.

> *"Observation session 3. When MZ failed to press the correct key, the teacher did not correct him in a raised tone, but instead gently held his hand and offered praise, 'Good, your finger is now in the right position on the key, now blow again.' MZ did not have a tantrum and was willing to try again." (Observation, February 16, 2024).*

Use of the Pianica and Children's/Regional Songs as Concrete Media

The cognitive characteristics of individuals with autism, which inherently require stimulation based on concrete objects, make learning media a vital component. The use of media is intended to allow children to see, touch, and operate objects concretely, given that their abstract processing differs from that of typically developing children. In this study, the pianica was chosen as the primary learning medium. The pianica plays an outstanding role because the instrument not only produces auditory stimulation (sound) but also simultaneously requires visual processing (observing the keys) and tactile interaction (pressing the keys) (Setiartin, 2021).

Beyond the instrument itself, musical preference plays a key role in shaping the students' level of motivation. The introduction of song repertoire was structured progressively by the teacher, beginning with the most elementary arrangement, the children's song "Cicak-Cicak di Dinding," to build initial habits. Once students became accustomed to basic coordination, the teacher escalated the level of difficulty by introducing the regional folk song "Ampar-Ampar Pisang." The selection of these songs was not without pedagogical reasoning but was based on rhythmic beats capable of stimulating motor movement in accordance with the children's mood.

The appeal of the concrete medium and the choice of repertoire culminate in a high level of learning engagement. Interview data indicate that the music lesson occupies a position as the favorite subject when compared to other academic disciplines. This level of enthusiasm is manifested in students' spontaneous proactive requests, such as calling out, "*Bu*, Ampar-Ampar Pisang." This demonstrates that music intervention using concrete media is able to reconstruct the classroom atmosphere into an enjoyable environment without imposing excessive intellectual pressure on students.

> *"The children love it most once the song Ampar-Ampar Pisang begins. The atmosphere becomes enjoyable for them because the various sounds make them want to move..." (Music Teacher Interview, March 23, 2024).*

Indications of Change in Focus, Behavioral Control, and Motor Coordination

There is empirical and fundamental evidence of behavioral change among students as a result of this music learning intervention. During observation, it was found that the children's psychological state in music class contrasted sharply with their state in other subjects. The behavior of the three research subjects appeared far more controlled; no large-scale tantrum incidents were recorded during the instructional process. Although minor disturbances occasionally arose, such as random mumbling or small teasing of classmates, these distractions could be quickly mitigated, allowing the students to refocus on the material (Yang, 2024).

The therapeutic impact of the musical instrument is particularly evident in minimizing repetitive vocalization habits or off-task behavior. Students who typically spoke incoherently gradually reduced the intensity of their mumbling shortly after being instructed to blow into the pianica. Similarly, children with hyperactive tendencies that disturb their surroundings became absorbed in their attention once occupied with the instrument's keys. This intervention demonstrates the function of music as a therapeutic medium capable of channeling children's sensory energy (Cooper et al., 2023).

Furthermore, in terms of cognitive and psychomotor aspects, this activity demonstrates positive neurological adaptation outcomes. Cognitively, students showed the capacity to retain memory regarding the procedures for operating the instrument. Motorically, there was an alignment of complex fine motor coordination. Students had to manage an intricate synchronization rhythm simultaneously, namely between the eyes identifying the position of the keys, the fingers' movement in pressing the notes, and the mouth regulating the air supply for blowing into the pianica.

> *"This pianica forces them to focus. A child who used to chatter to himself, once instructed to blow and press the keys, automatically locks his focus onto the instrument. He has to align the note his eyes see with his fingers..." (Teacher Interview, April 14, 2024).*

Teacher's Challenges in Maintaining Emotional Regulation and Consistency of Student Responses

Despite these positive achievements, the delivery of art education for children with ASD remains surrounded by persistent classroom management challenges. One of the greatest obstacles stems from fluctuations in students' mood, which plays a crucial role in determining the overall success of the learning climate. The emotions of autistic children are a highly fragile variable that demands extra vigilance from educators. It is impossible for the teacher to force knowledge transfer if the child's psychological stability has not yet been achieved. Therefore, the stage of stabilizing the child's emotions before beginning the core activity becomes an absolute prerequisite that cannot be ignored (Gu, 2022).

Another technical challenge manifests when students have difficulty identifying an instrument suited to their capability. In practice, autistic children often disregard standard instructions and produce their own improvised musical rhythms. Faced with this reality, teachers at SLB-C Negeri Pembina must accept that field observation outcomes do not always align precisely with what has been designed in the learning materials. This flexibility is necessary because children with special needs cannot be reduced to the success standards of typically developing children; the most fundamental outcome is the growth of their courage to try and to perform in front of others (Waldman et al., 2023).

In response to these complex challenges, the school implemented a transformation of its evaluative assessment system. Teachers no longer treat daily cognitive-academic scores as the sole parameter. The weight of evaluation is predominantly shifted toward the affective domain, encompassing changes in attitude, behavioral improvement during classroom interaction, attendance rate, and the child's capacity for collaboration. This evaluative paradigm underscores the institution's philosophy of valuing the process of behavioral adaptation over instant final outcomes. Ultimately, the holistic goal of this education is not merely to transfer knowledge, but to provide vocational competence so that students can lead skilled lives in accordance with their innate talents.

> *"Here, we never rely on daily numerical scores. The more important assessment is from the affective side. If a child is willing to come, brave enough to try the instrument, and able to control his emotions when asked to cooperate, that is already an extraordinary achievement..." (Teacher Interview, April 14, 2024).*

Discussion

The main finding of this study confirms that the use of concrete media in the form of the pianica instrument has a positive impact on the neurological and psychomotor adaptation of students with Autism Spectrum Disorder (ASD). The pianica proved highly effective because it requires simultaneous multi-sensory processing from its users. Students must manage an intricate synchronization rhythm, involving visual processing to identify key positions, tactile interaction as the fingers press the notes, and breath control of the mouth to regulate air supply. Cognitively, this sustained practical activity also proved capable of training students' capacity to retain or remember the teacher's instructions regarding how to operate the instrument (Widodo et al., 2021).

The intense physical and cognitive engagement through this instrument directly contributes to improved behavioral control and attention span among students in the classroom. Field observation shows that children's focus, previously prone to distraction, became more firmly locked onto the instrument they were playing. The therapeutic impact of this intervention is particularly evident in minimizing off-task behavior, such as repetitive vocalization (aimless mumbling) and hyperactive tendencies that often disturb the surrounding environment. During the music instructional process, the children's psychological state was observed to be far more controlled, and no large-scale tantrum incidents were recorded (Korošec et al., 2025).

This high level of learning engagement is also strongly supported by the teacher's strategy in selecting an appropriately targeted song repertoire. The stages of musical introduction were structured progressively, beginning with simple children's songs to build habits, then escalating to regional songs with stirring rhythmic beats such as "Ampar-Ampar Pisang." This pedagogical decision proved capable of stimulating children's motor movement in line with their mood. The high level of enthusiasm was clearly manifested in students' proactive requests to play their favorite songs, demonstrating that music can reset the classroom atmosphere into an enjoyable environment without imposing excessive intellectual pressure (Sinn et al., 2022).

Furthermore, the success of this motor and emotional stimulation is facilitated by the creation of a classroom ecology designed to be psychologically safe. The teacher applies teaching modifications that combine proactive question-and-answer methods with direct practice, relying heavily on the principle of instructional repetition. As a form of risk mitigation against sensory overload that could trigger tantrums in autistic children, the educator deliberately eliminates homework assignments and strongly avoids the use of punishment. As compensation, the teacher consistently applies positive reinforcement to acknowledge every effort made by the children, in order to nurture their self-confidence and emotional stability when facing technical difficulties.

In terms of macro instructional design, the integration of music learning into the thematic system within the Merdeka Curriculum framework (for instance, in the sub-theme "Soil") allows the transition between materials to be more relevant to students' daily lives without adding to their cognitive burden. Based on the review of the Learning Trajectory (ATP) documents, the essential target of music education at SLB-C Negeri Pembina has shifted: from initially requiring advanced technical mastery, to an emphasis on the elements of independence and reflection on the children's ability. This approach shows that the institution positions music not as a rigid theoretical discipline, but as an adaptive instrument for classroom management tailored to the actual capabilities of individuals with autism.

This adaptive pedagogical practice ultimately leads to a fundamental transformation in the learning evaluation system. The institution no longer treats daily cognitive-academic scores as the primary success parameter but rather shifts the weight of assessment predominantly toward the affective domain, such as the courage to try, the ability to regulate emotions, and the child's attendance rate. This comprehensive finding reinforces prior literature affirming the function of music as an essential therapeutic medium for individuals on the autism spectrum. At the same time, this study successfully fills the research gap regarding the real-world implementation of music art within educational classrooms, providing evidence that instructional flexibility and psychological accommodation are the primary foundations for the success of special needs education.

Based on the results of this research, it can be concluded that music learning at SLB-C Negeri Pembina, South Kalimantan, has been carried out in accordance with the module used, namely the module with the sub-theme "Soil" and the ATP previously developed by the teacher. In general, it can be stated that music learning for autistic children at SLB-C Negeri Pembina, South Kalimantan, constitutes one form of educational service capable of producing positive change, in terms of behavior, cognition, and motor skills alike. This change is evident from the results obtained, including behavior becoming more controlled, the ability to remember and use the musical instrument that has been learned, and the skill of playing songs using the pianica. The findings of this study on music learning are also consistent with previous research on the role of music as an appropriate learning strategy for autistic children capable of encouraging behavioral change. In addition, it was found that students' mood conditions influence their receptiveness to the material during the teaching and learning process, as well as contribute to increased self-confidence, enabling them to perform in front of others. This study shows that practice- and repetition-based music learning has the potential to support the learning engagement of autistic students within the context of a special education classroom. However, these findings are contextual in nature and require stronger evidence through systematic observation and documentation of student development.

CONCLUTION

This study concludes that the implementation of music learning for Grade VI students with Autism Spectrum Disorder (ASD) at SLB-C Negeri Pembina South Kalimantan is successfully operationalized through adaptive instructional modifications. By integrating the Merdeka Curriculum's thematic framework with a combination of modified direct practice and question-and-answer strategies, music education shifts from a rigid theoretical discipline into a flexible classroom management and therapeutic tool. The utilize of the pianica alongside familiar song repertoires serves as an effective concrete medium that drives simultaneous multi-sensory engagement. This approach yields tangible improvements in students' focus, cognitive retention of instrument operations, and fine motor coordination between the fingers, eyes, and breath control. Crucially, the non-punitive learning environment paired with positive reinforcement effectively mitigates off-task behaviors, emotional outbursts, and repetitive vocalizations, promoting higher learning engagement.

These findings offer practical implications for special education practitioners, emphasizing that art-based interventions should prioritize affective adaptability and behavioral regulation over strict technical mastery. Nevertheless, this study is subject to context-specific limitations, as it focused on a small sample within a single institution. Future research should employ longitudinal methods and broader multi-center cohorts to systematically track the long-term impact of music learning on the holistic development of autistic learners.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

REFERENCES

Ainin, M. (2018). Penelitian pengembangan pembelajaran. *Jurnal Pendidikan Dan Pengajaran*, *5*(1), 18–52. http://ejournal.iainmadura.ac.id/index.php/okara/article/view/449

Boileau, K., Stanson, N., Fang, Z., Barbeau, K., Hansen, U., Comeau, G., & Smith, A. (2025). Examining how brief mindfulness training influences communication within the brain of musicians with music performance anxiety: A resting state fMRI study. *Psychology of Music*, *53*(6), 833–851. https://doi.org/10.1177/03057356241288551

Bos, J. (2020). *Research Ethics for Students in the Social Sciences*. Springer. https://doi.org/https://doi.org/10.1007/978-3-030-48415-6

Buijsman, R. (2023). 'Autistic person' or 'person with autism'? Person-first language preference in Dutch adults with autism and parents. *Autism*, *27*(3), 788–795. https://doi.org/10.1177/13623613221117914

Cooper, K., Russell, A. J., Lei, J., & Smith, L. G. E. (2023). The impact of a positive autism identity and autistic community solidarity on social anxiety and mental health in autistic young people. *Autism*, *27*(3), 848–857. https://doi.org/10.1177/13623613221118351

Fernholz, I., Hering, C., Kunte, H., Mumm, J., Ströhle, A., Schmidt, A., Bendau, A., & Plag, J. (2026). Psychiatric diagnoses of professional musicians: Results of an outpatient service specializing in musicians' health. *Psychology of Music*, *54*(1), 139–156. https://doi.org/10.1177/03057356241307570

Gu, X. (2022). Multi-source domain transfer discriminative dictionary learning modeling for electroencephalogram-based emotion recognition. *IEEE Transactions on Computational Social Systems*, *9*(6), 1604–1612. https://doi.org/10.1109/TCSS.2022.3153660

Killingly, C., Bielinski, D., & Lacherez, P. (2025). An investigation of earworms and obsessive–compulsive traits using experience sampling and retrospective methods. *Psychology of Music*, *53*(6), 987–1004. https://doi.org/10.1177/03057356241300425

Knight Ed, L., & Lasczik Cutcher Ed, A. (2018). Arts-Research-Education: connections and directions. studies in arts-based educational research. *Studies in Arts-Based Educational Research*. https://doi.org/10.1007/978-3-319-61560-8

Korošec, K. (2024). “It is more Important than food sometimes”; Meanings and functions of music in the lives of autistic adults through a hermeneutic-phenomenological lense. *Journal of Autism and Developmental Disorders*, *54*(1), 366–378. https://doi.org/10.1007/s10803-022-05799-2

Korošec, K., Backman Bister, A., & Bojner Horwitz, E. (2025). “A space to be myself ”: Music and self-determination in the lives of autistic adults. *Psychology of Music*, *X*. https://doi.org/10.1177/03057356241305558

Larkin, F., Ralston, B., Dinsdale, S. J., Kimura, S., & Hayiou-Thomas, M. E. (2023). Alexithymia and intolerance of uncertainty predict somatic symptoms in autistic and non-autistic adults. *Autism*, *27*(3), 602–615. https://doi.org/10.1177/13623613221109717

Levitin, D. J., Grahn, J. A., & London, J. (2018). The Psychology of Music: Rhythm and Movement. *Annual Review of Psychology*, *69*, 51–75. https://doi.org/10.1146/annurev-psych-122216-011740

Liang, Q., Zeng, Y., & Tang, M. (2024). Mode-conditioned music learning and composition: a spiking neural network inspired by neuroscience and psychology. *Preprints,* 1–15. https://doi.org/10.48550/arXiv.2411.14773

Maenner, M. J. (2021). Prevalence and characteristics of autism spectrum disorder among children aged 8 years autism and developmental disabilities monitoring network, 11 Sites, United States, 2018. *MMWR Surveillance Summaries*, *70*(11), 1–16. https://doi.org/10.15585/MMWR.SS7011A1

Martino, T., & Jazuli, M. (2019). Makna simbolik pertunjukan Tari Topeng Klana Cirebon Gaya Palimanan. *Jurnal Seni Tari*, *8*(2), 161–175. https://doi.org/10.15294/jst.v8i2.30688

Nugraheni, E. Y., Artaria, M. D., Sutinah, & Lukens-Bull, R. (2024). The social construction of the Banjar ethnic society toward the Radap Rahayu dance. *Jurnal Ilmiah Peuradeun*, *12*(1), 51–70. https://doi.org/10.26811/peuradeun.v12i1.1029

Raharjo, E., Soesanto, Rohidi, T. R., & Utomo, U. (2021). Preserving gambang semarang music through the process of enculturation in the society. *Harmonia: Journal of Arts Research and Education*, *21*(1), 60–67. https://doi.org/10.15294/harmonia.v21i1.27722

Sani, M. B. Z. (2021). Musik tradisional Kuriding di Desa Ulu Benteng Kecamatan Marabahan Kabupaten Barito Kuala : bentuk dan fungsi pertunjukan. *Imajij*, *19*(2), 183–197.

Setiartin, R. T. (2021). Revitalization of oral traditions in Tasikmalaya district as a learning media to plant character education values and multicultural insights of students. *Journal of Language and Linguistic Studies*, *17*(3), 1379–1391. https://doi.org/10.52462/jlls.99

Sinn, O. S., Hwa, P. C., Wing, C. K., & Cooper, S. (2022). The effect of music-based intervention on linguistic skills: a systematic review. *Harmonia: Journal of Arts Research and Education*, *22*(1), 1–14. https://doi.org/10.15294/harmonia.v22i1.36313

Supiarza, H., & Sarbeni, I. (2021). Teaching and learning music in digital era: Creating keroncong music for gen z students through interpreting poetry. *Harmonia: Journal of Arts Research and Education*, *21*(1), 123–139. https://doi.org/10.15294/harmonia.v21i1.28585

Urbaniak, O., & Mitchell, H. F. (2025). The mock concert: How early-career performers decipher and develop stage mastery. *Psychology of Music*, *X*. https://doi.org/10.1177/03057356251320864

Waldman, J., McPaul, A., & Jahoda, A. (2023). A comparison of the content and nature of worries of autistic and neurotypical young people as they transition from school. *Autism*, *27*(3), 667–678. https://doi.org/10.1177/13623613221111313

Wang, L., Ong, J. H., Ponsot, E., Hou, Q., Jiang, C., & Liu, F. (2023). Mental representations of speech and musical pitch contours reveal a diversity of profiles in autism spectrum disorder. *Autism*, *27*(3), 629–646. https://doi.org/10.1177/13623613221111207

Weining, C., Meier, D., Wald-Fuhrmann, M., & Tröndle, M. (2025). From structural listening to daydreaming: Listening modes influence the individual experience in live concerts. *Psychology of Music*. https://doi.org/10.1177/03057356241310863

Widodo, Susetyo, B., Walton, S., & Appleton, W. (2021). Implementation of kupingan method in javanese karawitan music training for foreigners. *Harmonia: Journal of Arts Research and*

Education, *21*(1), 105–114. https://doi.org/10.15294/harmonia.v21i1.29993

Yang, Z. (2024). A Study on the Inheritance of Traditional Dance System by University Dance Performance in the Context of New Media. *Applied Mathematics and Nonlinear Sciences*. *9*(1), 1–15. https://doi.org/10.2478/amns-2024-1023

Zarza-Alzugaray, F. J., Casanova, O., McPherson, G. E., & Orejudo, S. (2020). Music Self-Efficacy for Performance: An Explanatory Model Based on Social Support. *Frontiers in Psychology*, *11*(June). https://doi.org/10.3389/fpsyg.2020.01249

Zhang, M. (2021). Creative thinking and musical collaboration: promoting online learning groups for aspiring musicians. *Thinking Skills and Creativity*. 42(1), 1-9. https://doi.org/10.1016/j.tsc.2021.100947

Zhang, Y. (2023). *Interaction and Knowledge Construction in Online English Teaching*. Routledge. https://doi.org/10.4324/9781003434474

Zulfa, K. (2021). Heriyadi Haris: biografi dan proses kreatif di Sanggar Perpekindo. *TANDIK: Jurnal Seni Dan Pendidikan Seni*, *1*(1), 14–23. https://doi.org/10.33654/tdk.v1i1.1237