



IMPLEMENTATION OF ANGKLUNG EXTRACURRICULAR ACTIVITIES IN SUPPORTING MEMORY DEVELOPMENT OF CHILDREN AGED 5–6 YEARS

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Abstract: This study aims to describe the implementation of angklung extracurricular activities and explore their role in supporting the memory development of children aged 5–6 years at Himawari Kindergarten. A descriptive qualitative approach was employed, involving 18 children from Group B, along with teachers and the school principal as participants. Data were collected through observations, interviews, and documentation, and analyzed using the Miles and Huberman interactive model. The findings indicate that angklung activities provide meaningful learning experiences that support children's memory development, as reflected in their ability to recall tones, rhythmic patterns, and teacher instructions during practice sessions. The activity implementation consisted of three main stages: preparation, core practice, and closing, utilizing learning strategies such as demonstration, repetition, and musical games. Several challenges emerged, including differences in children's abilities, limited equipment, and fluctuations in focus; however, these were addressed through adaptive and engaging teaching approaches. Overall, angklung extracurricular activities contribute not only to the development of auditory and motor memory but also to the enhancement of children's discipline, cooperation, and self-confidence.

Keywords: Extracurricular, Angklung, Early Childhood, Memory, Traditional Music

A. Introduction

Childhood is a golden age that is crucial for the development of children's cognitive abilities, including memory. At the age of 5-6, children enter a more complex stage of cognitive development, where they not only absorb information passively but also remember, repeat, and reuse it to complete specific tasks. Memory intelligence plays a crucial role in children's readiness for the learning process in elementary school, particularly in reading, writing, arithmetic, and understanding teacher instructions. Therefore, appropriate stimulation is necessary for optimal memory development.

According to Piaget's development theory, children aged 5-6 years are at the concrete operational stage, which is the stage when children are able to use simple logic, but still depend on real objects in the thinking process (Nafiah Nur Shofia Rohmah, Murfiah Dewi Wilandari, 2022). This means that children can remember and understand information better when it is presented through direct experience. Similarly, Vygotsky emphasized the importance of social interaction in children's cognitive development. Through the concept of the Zone of Proximal Development (ZPD), he explained that children can achieve higher levels of ability with the help of adults or peers. In musical activities, teachers and peers play an important role in providing guidance, making it easier for children to remember pitch and rhythm patterns.

Furthermore, several theories in cognitive psychology emphasize that music is closely related to memory and attention. According to Gardner's Multiple Intelligences theory (2011), musical intelligence is a form of intelligence that influences other cognitive abilities, including linguistic and logical-mathematical intelligence. Music stimulates areas of the brain associated with working memory, concentration, and auditory information processing (Alexandra, Laurenzia, Rahman, Wijanarko, & Farisandy, 2023). Research results by Dana L. Strait, Alexandra Parbery-Clark & Nina Kraus, (2013) Research shows that engaging children in musical activities can strengthen neural connections in auditory contexts and improve their ability to remember sound patterns. In other words, musical activities are not just entertainment but also effective in optimizing brain function in early childhood.

Previous studies have shown that musical activities positively influence children's memorization. For example, research by

Aprilia Ramadhin Said, Samsunuwiyati Marat (2020) found that children who regularly participate in music training have better verbal and spatial memory skills than those who don't. Meanwhile, research has shown that rhythmic training can improve short-term memory by strengthening attention skills and motor coordination.

However, most of these studies focus on modern music or on Western instruments, such as the piano, violin, or recorder. Studies on traditional Indonesian music, particularly the angklung, in the context of cognitive stimulation for early childhood are still very limited. Yet, as a traditional musical instrument, the angklung has unique educational value: children must memorize specific notes, follow rhythmic patterns collectively, and adapt to the group's tempo. This activity involves the integration of auditory, motor, and social aspects, all of which are important factors in strengthening memory (Alim, 2024).

Previous research has shown that the use of angklung in early childhood education has been widely studied in terms of musicality, creativity, and socio-emotional development. Research (Hapsari & Wardani, 2024) and other studies confirm that playing angklung can improve children's musical intelligence, motor coordination, and cooperation skills. Furthermore, research on traditional music learning in early childhood education tends to position the angklung as a medium for cultural introduction and a means of fostering art appreciation. However, the results of the literature search show a lack of studies that position the angklung as an instrument of cognitive stimulation, particularly in developing early childhood memory intelligence. Almost all previous research emphasizes the affective and psychomotor aspects, so the relationship between repetitive, structured, and auditory memory-based angklung training and improved memory abilities has not been explored empirically.

Playing the angklung requires a high level of concentration and coordination. Children need to remember the sequence of sounds, recognize pitch, and synchronize with other group members. This process repeatedly trains working memory and procedural memory, directly impacting the ability to remember and process information. Thus, angklung activities not only have cultural value but also have significant potential as a means of cognitive development.

However, to date, there has been little research systematically examining the implementation of *angklung* extracurricular activities as a means of developing early childhood memory. Most studies on *angklung* highlight its role in preserving local culture, character building, and developing children's artistic creativity, rather than its cognitive aspects, such as memory. Furthermore, studies examining how *angklung* activities are implemented in early childhood education institutions and their impact on children aged 5-6 years remain very limited.

Based on this description, a study entitled "Angklung Extracurricular Activities to Train the Memory Intelligence of Early Childhood 5-6 Years" was conducted to fill this gap. This study aims to describe the process of implementing *angklung* extracurricular activities at Himawari Kindergarten and to analyze their impact on children's memory intelligence. The results of the study are expected to enrich the literature on learning strategies based on traditional Indonesian arts, while also providing alternative extracurricular activities that are educational, contextual, and meaningful in stimulating the cognitive development of early childhood.

B. Method

This study uses a qualitative, descriptive research approach to describe in depth the implementation of extracurricular *angklung* activities for training the intelligence and memory of early childhood children (Winda Syahrums Badawi, 2022). The object of this research is the *angklung* extracurricular activities at Himawari Kindergarten, while the research subjects include 18 children aged 5-6 years in class B, the main participants, as well as the principal and private *angklung* teachers, as supporting informants (Moleong, 2017). The type of data used in this research is qualitative, consisting of observations of children's activities during *angklung* performances, transcripts of interviews with teachers and the principal, and documentation of learning activities. Primary data sources are obtained directly from observations and interviews, while secondary data sources come from supporting documents such as photos of activities, notes on learning outcomes, and school archives (Santika, Toharudin, & Mu'amar, 2022).

The research stages begin with (1) Pre-Field Stage, by determining the research location and applying for permission from the school. Compiling observation guidelines, interview guidelines, and a list of documentation needs. Conducting initial exploration at the school to identify the context, practice schedule, and characteristics of the participants. (2) Data Collection Stage, by conducting direct observation during angklung extracurricular activities to record children's behavior related to memory, such as the ability to remember notes, sound sequences, and rhythm patterns. Semi-structured interviews with the principal and private angklung teachers to gather information about the learning process, activity objectives, and child development. Documentation, including taking photos of activities.

(3) Data Analysis Stage, using an interactive model using Data Reduction, carried out by sorting relevant data, grouping findings related to the learning process, and the development of children's memory. Data presentation, in narrative form. Drawing conclusions or verification, by re-examining patterns and findings during the analysis process to ensure consistency. (4) Data Validity Checking Stage to ensure the credibility of the data, researchers use source triangulation techniques by comparing information from children, teachers, and the principal. Triangulation techniques involve comparing the results of observations, interviews, and documentation. (5) Research Results Reporting Stage, by compiling a systematic research report based on findings in the field. Describing the results of the analysis regarding the process of implementing the angklung and its influence on the intelligence of children aged 5-6 years. Making revisions based on input from supervisors or the school before the report is finalized (Ibrahim, 2023).

The main research instrument is the researcher himself as a human instrument, who plays a role in planning, collecting, analyzing, and interpreting data. The researcher is assisted by observation guidelines, semi-structured interview guidelines, and documentation formats to maintain consistency in data collection in the field. Data analysis is carried out using an interactive model, which includes three stages, namely (1) data reduction, (2) data presentation, and (3) drawing conclusions or verification to ensure the validity of the data, this study uses source triangulation

techniques and technical triangulation, by comparing the results of observations, interviews, and documentation (Nurfajriani, Arivan, Mahendra, Sirodj, & Afgani, 2024).

C. Results and Discussion

The research results show that extracurricular angklung activities have a significant positive impact on the development of memory skills in early childhood at Himawari Kindergarten. Based on observations during the three weeks of activities, children in class B showed improved ability to remember notes, rhythmic patterns, game sequences, and teacher instructions.

An unstructured interview with an extracurricular teacher explained that the angklung can develop memory skills in young children. The rhythm, tone, and repeated teacher instructions can help build children's memory. He also added that playing the angklung can improve children's concentration and focus.



Figure 1: a photo of the extracurricular activity

Angklung Activity Implementation Process

The angklung extracurricular activity at Himawari Kindergarten is held once a week and lasts 60 minutes. It is led by a private angklung teacher, assisted by the class teacher. The process is divided into three main stages:

1. Preparation Stage (Apperception and Warm-up)

At the beginning of the activity, the teacher invites the children to sing along with simple songs like "Balonku" or "Pelangi-Pelangi" to create a fun learning atmosphere. The children are then introduced to the angklung, its various notes, and how to hold and shake it correctly. The teacher also demonstrates hand movements and tempo cues to help the children become accustomed to attending to both visual and auditory instructions simultaneously.

2. Core Stage (Pitch and Rhythm Practice)

Children begin playing notes one by one in ascending pitch order (do, re, mi, fa, so, la, ti, do). The teacher uses demonstration and repetition methods to reinforce the children's memory of the notes and the sequence of sounds. Once the children have mastered the individual notes, the practice progresses to simple rhythmic patterns and group games. In this session, each child holds one or two notes and must play them alternately according to the teacher's cues. This activity requires high concentration and the ability to remember the sequence of sounds.

3. Closing Stage (Evaluation and Reflection)

At the end of the activity, the teacher provided feedback on the children's performance, reviewed the notes they had learned, and encouraged them to continue practicing. The children enthusiastically shared their angklung playing experiences and looked forward to the next activity.

Throughout the activity, the teacher used various learning strategies, such as guessing the notes, first-come, first-served games, and pair exercises, to add variety. These strategies not only kept the children engaged but also helped them memorize the note sequence in a fun way.

Analysis of Children's Memory Development

Through ongoing observations, the children's ability to memorize rhythmic patterns and tempo, and to coordinate movement, has improved. Children who were often late in shaking the angklung have begun to adapt to the group. This ability indicates a strengthening of auditory and motor memory, where children remember not only sounds but also the body movements associated with those notes. This finding supports Harahap et al.'s (2025) argument that early childhood learning becomes more meaningful and effective when children are engaged in concrete, hands-on experiences.

Apart from that, playing angklung has been shown to encourage children's multisensory engagement. They use the senses of hearing, sight and kinesthetic simultaneously. This principle aligns with the Montessori (2017) approach, which emphasizes the importance of concrete and multisensory experiences in early childhood learning.

Obstacles in the Implementation of Angklung Activities

Despite providing positive results, the study also found several obstacles during the implementation of extracurricular angklung activities, namely:

1. Differences in Children's Abilities

Every child has different memory, concentration, and coordination abilities. Some children seem to quickly grasp the sequence of notes and tempo, while others take longer to adjust to a group. This difference is natural due to the highly diverse developmental characteristics of early childhood. Teachers address these differences in ability by implementing individualized learning approaches and activity differentiation. Children who require more time are given additional practice with more frequent repetition and direct supervision. Teachers also divide children into small groups based on ability so they can learn at their own pace without feeling left behind. Furthermore, teachers implement scaffolding strategies (Prastyo, Suryanti, Susilo, Mardiani, & Reswari, 2025) which provides temporary assistance through visual guidance, hand signals, and concrete examples until the child is able to perform independently. This strategy helps children with memory impairments stay actively engaged and builds self-confidence.

2. Focus Disorders and Distractions

In the first few sessions, children easily lost focus due to the noisy classroom atmosphere or while waiting for their turn to play a note. Some children were also distracted by other sounds in the surrounding environment, such as different classes studying or outdoor activities. To address this, teachers implemented game-based learning methods by incorporating game elements into musical activities to maintain an engaging, dynamic learning environment. For example, with games like "Guess the Note," "First Come First Serve," and "Chain Rhythm," children remained active and engaged while practicing memorization of notes. Teachers also employed quick transition strategies between activities to prevent children from waiting too long for their turn, for example, by assigning simple tasks like imitating the tempo, tapping a rhythm, or singing along while others played. Furthermore, teachers created a conducive learning environment by arranging

seating in a circle so that all children could clearly see the teacher and instructions. This minimized distractions and maintained children's focus throughout the activity.

3. Tool and Coordination Limitations

The limited availability of angklungs constitutes a challenge, as it prevents all children from engaging with the instrument at the same time. As a result, some children are required to wait their turn, which may lead to decreased focus during the activity. Furthermore, coordination between children is sometimes out of sync, especially when playing songs together at a fast tempo. Teachers overcome limited equipment by dividing children into rotating groups, with each group taking turns playing specific notes or rhythmic patterns. When not holding the angklung, children are still involved in supporting activities such as clapping rhythmically, singing, or imitating the beat pattern with body movements. Furthermore, teachers create a weekly rotating schedule for instrument use, so that all children have equal opportunities to play several notes. To strengthen coordination, teachers use a step-by-step training method: starting with single-note exercises, then simple rhythmic patterns, and finally, full ensemble playing. Teachers also provide visual cues (such as head nods or hand gestures) to help children adjust to the group's tempo and rhythm. This effort effectively maintains the involvement of all children and strengthens a sense of community in musical activities.

4. Technical Constraints and Time Management

The relatively short practice time of 60 minutes per week presents a challenge in ensuring that all children receive equal practice opportunities. Time is often spent on preparation, instrument distribution, and transitions between activities. Furthermore, scheduling sometimes conflicts with other class activities. Teachers develop a structured weekly practice plan with an efficient time allocation: 10 minutes for apperception and warm-up, 35 minutes for core pitch and rhythm practice, and 15 minutes for reflection, evaluation, and playing. Teachers also prepare systematic angklung learning materials, such as colored note number sheets, rhythm cards, and simple video tutorials, so that children can more quickly grasp the concept of pitch

without much verbal instruction. Furthermore, teachers increase the intensity of practice leading up to group performances by adding additional practice sessions on certain days, packaged as “fun exercises” to reduce the burden on children. To strengthen communication, teachers also coordinate with parents through class groups so that children can practice simple exercises at home, such as tapping out the rhythm of a song using household instruments (bottles, spoons, or clapping). This ensures continuous learning between school and home.

5. Environmental Factors and Learning Atmosphere

Activities are often disrupted by environmental conditions such as traffic outside the school, hot weather, or limited practice space. These conditions can reduce learning comfort and hinder children’s concentration. Teachers anticipate this by moving activities to quieter or shaded areas within the school and scheduling activities in the morning when children are still physically fresh. Furthermore, teachers use visual aids and body language to ensure instructions can be followed even in less-than-ideal conditions. Teachers also create a pleasant classroom atmosphere through pre-activity rituals, such as singing together to build children’s emotional readiness before practice begins.

Based on the description above, it can be concluded that although extracurricular angklung activities face various challenges, all obstacles can be overcome through creative, flexible learning strategies that are appropriate to the developmental stages of early childhood. Approaches used by teachers, such as game-based learning, structured repetition, activity differentiation, and collaboration with parents, have proven effective in maintaining child engagement, improving memory, and ensuring all participants have a meaningful learning experience. By implementing these solutions, they also help build character, discipline, and cooperation in children from an early age.

The findings of this study reinforce the view that musical activities, particularly playing the angklung, can be an effective learning medium for stimulating memory intelligence in early childhood. These findings are consistent with previous research by Idarianty and Sri Hartati (2025), which suggests that music can stimulate right-brain development associated with creativity,

memory, and concentration. The results also support Rasyid's (2020) findings that traditional music enhances children's cognitive abilities by simultaneously engaging auditory-motor and motor skills.

Besides, angklung activities positively impact children's social-emotional development by fostering discipline, cooperation, and self-confidence. This is consistent with the findings of Pitri Andari & Rina Wijayanti (2025), which show that collective music activities can increase social cooperation and strengthen bonds between children.

Overall, the angklung extracurricular activity at Himawari Kindergarten can be seen as an effective, contextual, and enjoyable learning strategy for developing early childhood memory skills. This research makes a new contribution by emphasizing the importance of using local traditional music as an educational medium that stimulates both cognitive and socio-emotional aspects of children. The implication is that schools can integrate traditional music activities into the early childhood education curriculum, provide teachers with training in using music as a learning medium, and encourage collaboration between schools and local cultural communities.

However, this study's limitations lie in the relatively small number of subjects, only 18 children from one school, which limits the generalizability of the results. Therefore, further research is recommended that involves more participants from different schools and compares the effectiveness of angklung playing with that of other musical instruments to obtain more comprehensive results.

D. Conclusion

Based on the research results and discussion, it can be concluded that angklung extracurricular activities provide meaningful learning experiences that support the memory development of children aged 5–6 years at Himawari Kindergarten. Through a structured, repetitive, and enjoyable practice process, children in Group B demonstrated the ability to recall tones, rhythmic patterns, and teacher instructions during learning activities. Angklung activities support auditory and motor memory while also fostering concentration, coordination, and teamwork.

The learning process involved three main stages—preparation, core practice, and closing—implemented through teaching strategies such as demonstration, repetition, guessing games, and pair practice. These strategies encouraged children’s engagement and sustained participation during activities. Several challenges were identified, including differences in children’s concentration levels, limited musical instruments, and occasional distractions; however, these challenges were addressed through flexible instruction, playful approaches, and increased motivation.

Overall, angklung extracurricular activities can be viewed as an educational, contextual, and meaningful traditional arts-based learning strategy in early childhood education. In addition to supporting memory development, these activities also contribute to children’s socio-emotional growth, including discipline, cooperation, and self-confidence. This study supports previous research indicating that traditional Indonesian music, such as angklung, holds not only cultural value but also pedagogical potential in early childhood learning.

Future research is recommended to involve a larger number of participants from diverse educational settings and to explore comparisons with other musical activities in order to gain broader insights into the role of music-based learning in supporting early childhood memory development.

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