

IMPROVING THE LANGUAGE SKILLS OF 3-4 YEAR OLD CHILDREN THROUGH THE APPLICATION OF SENSORY BOX MEDIA AT THE ANGGREK TEGALSONO KINDERGARTEN

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ABSTRACT

This study aims to improve the language skills of children aged 3–4 years through the application of sensory box media at the Anggrek Tegalsono Kindergarten. The problem faced in the learning process is the low ability of children to recognize, pronounce, and understand everyday vocabulary. This study uses a classroom action research (CAR) approach implemented in two cycles, with each cycle including the planning stage, action implementation, observation, and reflection. The research subjects consisted of 10 children from a playgroup aged 3–4 years. Data were collected through observation, interviews, and documentation, then analyzed descriptively qualitatively. The results showed that the application of sensory box media can significantly improve children's language skills. Children become more active in speaking, able to name objects, and use simple sentences in everyday communication. Play activities through sensory box media help children connect concrete experiences with language skills. Thus, sensory box media is proven effective in developing the language skills of early childhood at the Anggrek Tegalsono Kindergarten.

Keywords: language skills, early childhood, sensory box media, active learning

INTRODUCTION

Language is a crucial aspect of early childhood development because it forms the basis for communication, logical thinking, and socio-emotional development. Through language, children can express feelings, convey ideas, and understand their surroundings. At 3–4 years of age, children begin to enter a stage of verbal exploration, where they ask questions, imitate, and develop the ability to understand and construct simple sentences (Litna et al., 2025). Strong language skills at an early age also lay the foundation for readiness to read and write at subsequent levels of education (Sepsita & Wijaya, 2024).

However, in practice, early childhood language skills do not always develop optimally. Initial observations at the Anggrek Tegalsono Kindergarten showed that some children aged 3–4 years experienced delays in pronouncing simple words, had difficulty understanding teacher instructions, and were less active in communicating with peers. Teachers reported that children tended to be passive when spoken to and used more gestures than words. This situation indicates that the language stimulation provided was not fully engaging and did not align with the children's developmental characteristics.

In early childhood education, one of the important factors influencing language skills is the choice of learning media. Engaging and multisensory media can help children understand concepts concretely while motivating them to actively participate (Nurlina & Bahera, 2024). Early childhood learns most effectively through play and hands-on experiences that engage multiple senses (Khaddafi et al., 2025). Therefore, the use of sensory boxes can be a relevant alternative to stimulate children's language skills.

A sensory box is a container filled with various objects with different textures, shapes, and colors that children can explore and touch. Through this activity, children not only practice their sensory sensitivity but are also encouraged to name the objects they touch, such as smooth, rough, round, hard, or soft. This exploration activity encourages children to actively



participate in recognizing, naming, and describing the objects around them (D. Rahmawati et al., 2025) . Thus, sensory box activities support the natural development of receptive and expressive language.

Several previous studies support the effectiveness of sensory media on early childhood language development. Research by Chahyani & Istiyani (2025) showed that implementing sensory-based play activities successfully improved children's language skills in thematic learning. AF Rahmawati (2024) found that sensory play boxes not only helped improve children's fine motor skills but also enriched their vocabulary and speaking skills. Ali et al., (2023) also revealed that children were more active in using language when directly involved with concrete media and sensory play. These findings suggest that sensory media can bridge children's physical experiences and verbal abilities.

From this description, it can be concluded that stimulating early childhood language skills requires a contextual, fun, and multisensory approach. The use of sensory boxes is considered effective because it combines play experiences, sensory exploration, and verbal communication. Therefore, this study was conducted to improve the language skills of children aged 3–4 years through sensory boxes at the Anggrek Tegalsono Kindergarten.

This study uses a Classroom Action Research (CAR) approach designed to gradually improve learning practices through a cycle of action, observation, and reflection (Putri et al., 2025) . It is hoped that the results of this study can contribute to the development of more effective learning methods and media in improving early childhood language skills, as well as serve as a reference for PAUD teachers in implementing innovative sensory-based media.

METHODS

Classroom Action Research (CAR) approach , because it aims to improve the learning process and increase children's language skills through direct action in the classroom. The CAR model used refers to *Kemmis and McTaggart* in Sa'diyah & Dwikurnaningsih (2019) , which consists of four stages, namely: (1) planning , (2) implementing actions (*acting*), (3) observing, and (4) *reflecting* .

The study was conducted at the Anggrek Tegalsono Kindergarten in Tegalsono District, Probolinggo Regency, East Java. The subjects were 17 children aged 3–4 years, consisting of 9 boys and 8 girls. Subject selection was based on initial observations, which indicated that most children still had limitations in language skills, such as lack of vocabulary mastery and lack of courage in speaking.

This research is a Classroom Action Research (CAR) with simple qualitative and quantitative approaches. Qualitative data were obtained through observations of children's activities and responses during the learning process, while quantitative data were obtained from assessments of children's language development using a pre-designed instrument. This approach was chosen to comprehensively describe the process and results of children's language development.

This research was conducted in two cycles, and each cycle consisted of four stages of action, namely:

1. Planning:

The teacher prepares a Daily Lesson Plan (RPPH) that includes activities using sensory boxes. These boxes are filled with various textured objects such as rice, sand, seeds, cloth, rubber balls, and other small objects. The teacher prepares observation tools, language proficiency assessment sheets, and documentation of learning activities.



2. Implementation of Action (Acting)

The teacher carries out learning activities by actively involving children in a sensory box game. Children are asked to feel, find, and name, color, shape, or characteristics of objects found in the box. The activity is carried out using a play-while-learning approach to make children more comfortable and motivated to speak.

3. Observation:

Teachers and researchers conducted direct observations of children's engagement during the learning process. Observations focused on receptive (language comprehension) and expressive (the ability to express words or simple sentences) aspects using a language development observation sheet.

4. Reflection:

Observation data is analyzed to evaluate the success of the action. The reflection results are used to improve the learning plan for the next cycle, for example by adding more objects to the sensory box, extending the activity time, or increasing verbal interaction between the teacher and children.

Data was collected using three main techniques, namely:

1. Observation, to observe children's activities and language abilities during learning activities using observation sheets.
2. Interviews were conducted with class teachers to obtain supporting information regarding children's language development.
3. Documentation, in the form of activity photos, field notes, and assessment data from each action cycle.

The main instrument in this study was an observation sheet of language development of children aged 3–4 years, compiled based on language ability indicators according to *the Minister of Education and Culture Regulation Number 146 of 2014 concerning the 2013 Early Childhood Education Curriculum*. The aspects observed included:

1. Ability to understand simple instructions,
2. The ability to name objects and their properties,
3. Ability to express simple sentences,
4. Courage to speak and communicate with friends and teachers.

Each indicator is assessed on a scale of 1–4 (not yet developed, starting to develop, developing as expected, developing very well).

Data analysis was carried out using two approaches:

1. Qualitative analysis, through the stages of data reduction, data presentation, and drawing conclusions (Qomaruddin & Sa'diyah, 2024).
2. Simple quantitative analysis, to determine the increase in children's language abilities from pre-cycle to cycle II by calculating the percentage of developmental achievement using the formula:

$$P = \frac{n}{N} \times 100\%$$

Description:

P = percentage of achievement,

n = number of children who achieve the expected development criteria,

N = total number of children (17 children).



The results of the analysis are presented in the form of narrative descriptions and tables of improvements in each cycle.

RESULTS AND DISCUSSION

The results of this study demonstrate an improvement in the language skills of 3–4-year-old children after the implementation of sensory boxes at the Anggrek Tegalsono Kindergarten. The study was conducted in two cycles, each consisting of planning, action, observation, and reflection. Based on observations, teacher interviews, and activity documentation, it appears that the sensory boxes captured children's attention, fostered curiosity, and increased their communication skills.

In the pre-cycle, most children still demonstrated low language skills. They tended to be passive when spoken to, struggled to form simple sentences, and often used gestures to replace words. Assessment results showed that only about 35% of children were able to name objects correctly and were confident in speaking in front of peers. Teachers also reported that children quickly became bored when activities focused solely on direct conversation without engaging media. This aligns with the opinion of (Suryani, 2019) that early childhood requires multisensory stimulation so that the learning process is more meaningful.

cycle I, the teacher began implementing play activities using sensory boxes. The boxes were filled with various textured objects such as seeds, sand, soft cloth, sponges, and small rubber balls. The teacher asked the children to feel and guess the objects inside the boxes, then to name, color, or describe the objects. During the activity, the classroom atmosphere became more lively. The children appeared enthusiastic, competing to try, and began to dare to say new words. However, observations showed that not all children were actively speaking. Some still needed teacher guidance to express simple words or sentences. The percentage of children who achieved the *expected development criteria* increased to 65%.

Reflections from cycle I indicated the need for a variety of objects in the box and expanded activities to encourage children to use language more effectively. Therefore, in cycle II, the teacher added more objects with varying textures and conversational prompts, such as small stones, cotton wool, dried leaves, and miniature toys. The teacher also added follow-up activities, such as grouping objects by texture and color, and recounting their experiences exploring the box. These changes led to more active conversation and interaction among the children. They began using complete sentences, such as "this is soft like cotton wool" or "this is hard like a rock."

At the end of cycle II, improvements in language skills were clearly visible. Most children were able to understand teacher instructions, pronounce words with better articulation, and confidently express their opinions without being asked. Based on observations and assessments, approximately 88% of children achieved *the expected development and very good development categories*. Playing with sensory boxes helped children expand their vocabulary, improve their ability to describe objects, and develop confidence when speaking in front of peers.

This finding is in line with the research results (Rahayu et al., 2023) showed that *sensory play activities* not only stimulate children's fine motor skills but also enrich vocabulary and increase their speaking skills. Sensory activities engage children in real-life experiences that enable them to connect language with concrete objects. When children touch, feel, and name objects, they integrate motor, cognitive, and language functions simultaneously. This also aligns with Vygotsky's developmental theory, which emphasizes that children's language develops



through social interaction and direct experience with the environment (in (Salamah & Depalina, 2025) .

Furthermore, the use of sensory boxes provides teachers with the opportunity to pay attention to each child individually. Through direct observation during activities, teachers can assess vocabulary development, speaking skills, and children's ability to understand instructions. Previously quiet children begin to demonstrate active and enthusiastic participation. Teachers report that children who typically only stuttered when repeating words are now able to speak more fluently and clearly. This indicates significant progress in expressive language.

Children's improved language skills are also evident in their receptive abilities. They understand instructions such as "pick up the smooth object" or "find the red object" more quickly. This demonstrates that sensory activities help children connect words with concrete experiences. These activities support the view (Ifyati & Inganah, 2025) that sensory stimulation through exploration activities can accelerate conceptual understanding while strengthening children's memory.

In general, the results of this study demonstrate that play activities using sensory boxes significantly contribute to the language development of early childhood. This medium creates a fun learning environment, provides space for children to explore, and naturally develops language skills. Children learn to speak without pressure because the process is structured through play. This aligns with the concept of "learning by playing," where play is the primary means for children to learn and interact. (Andayani, 2021) .

Based on observations, interviews, and teacher reflections, it can be concluded that sensory boxes are highly relevant for language learning in early childhood education institutions. These activities do not require expensive equipment, are easily adapted to the learning theme, and are effective in fostering children's communication skills. With simple and engaging activities, teachers can foster verbal engagement in children who were previously passive. Therefore, sensory boxes can be used as an alternative learning strategy focused on the comprehensive language development of early childhood.

Table 1. Summary of Findings

Research Stages	Observed Aspects	Key Results	Percentage of Children Developing as Expected
Pre-cycle	Passive children, only a few dare to speak	Limited vocabulary, low interaction	35%
Cycle I	Children start to be active, dare to say words	Responses are increasing, but still limited	65%
Cycle II	Children actively speak, understand instructions, are able to describe objects.	Expressive and receptive language skills improve	88%

Improving the language skills of 3–4-year-old children through the use of sensory boxes at the Anggrek Tegalsono Kindergarten demonstrates that play activities involving hands-on experiences can significantly impact language development. The sensory boxes stimulate

children through the activity of touching, recognizing, and naming objects inside the box. This simple activity encourages children to use language spontaneously, expand their vocabulary, and develop speaking skills.

The gradual learning process demonstrated significant progress. In the early stages, most children were passive and only used gestures when communicating. After several applications of the sensory box, the children began to actively speak, answer the teacher's questions, and interact with their peers. This demonstrates that the multisensory stimulation provided was able to build a connection between physical experience and children's verbal abilities. This finding aligns with Vygotsky's (1978) view that children's language development occurs through social interaction and meaningful, direct experiences.

Besides enriching vocabulary, sensory box activities also play a role in fostering children's self-confidence and social skills. When playing together, children share roles, ask questions, and share opinions. The fun and non-pressurizing learning environment encourages them to try speaking without fear of making mistakes. According to (Lestari et al., 2023), positive experiences in communication will strengthen children's motivation to continue using language. Teachers, acting as mentors, also provide positive reinforcement, such as praise or simple appreciation, which fosters children's enthusiasm for speaking more fluently.

From a teacher's perspective, the use of sensory boxes facilitates the natural observation of children's language development. Through direct interaction during play activities, teachers can assess the child's ability to understand instructions, pronounce words, and develop simple sentences. This aligns with the principles of authentic assessment in early childhood education, which emphasizes observing children's learning processes and outcomes in real-world contexts. (Hidayat & Andriani, 2020).

Besides being easy to implement, sensory boxes are also flexible and can be adapted to suit learning themes. Teachers can use simple materials like sand, rice, cloth, or small stones, keeping the activity engaging without requiring significant expense. This activity supports the concept of "learning by play," which is fundamental to early childhood education: learning through enjoyable play experiences. (Wahyuni & Azizah, 2020).

Thus, learning through sensory boxes not only improves children's expressive and receptive language skills but also strengthens their social and emotional aspects. Children learn to communicate, interact, and express themselves naturally. These results suggest that sensory boxes can be an effective alternative learning strategy for improving early childhood language skills, particularly in early childhood education institutions with limited resources.

CONCLUSION

Based on the results of research conducted at the Anggrek Tegalsono Kindergarten, it can be concluded that the application of sensory boxes has a positive effect on improving the language skills of children aged 3–4 years. Through sensory exploration activities, children have the opportunity to feel, recognize, and name various objects directly, so that the language learning process becomes more meaningful and enjoyable. This activity stimulates children's expressive and receptive language skills simultaneously, allowing children to understand teacher instructions while also boldly expressing ideas and opinions in their own words.

Children's language skills improve through increased confidence in speaking, increased vocabulary, and the ability to combine words into simple sentences. Furthermore, playing with sensory boxes fosters self-confidence and positive social interactions among children. The relaxed and enjoyable learning environment allows children to feel comfortable communicating



without fear of making mistakes, while the teacher acts as a facilitator, providing support and reinforcement throughout the activity.

Overall, sensory play has proven effective as an innovative learning strategy for developing language skills in early childhood. This tool is easy to implement, uses simple materials, and can be adapted to various learning themes. The implementation of sensory play activities not only helps children achieve optimal language development but also strengthens their social-emotional aspects and learning independence. Therefore, sensory play activities are a suitable alternative for child-oriented learning in early childhood education institutions to support the achievement of the Merdeka Curriculum goals, which emphasize active, meaningful, and enjoyable learning.

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