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Improving Concentration through Sensory Play in 5–6-Year-Old Children at PAUD Permata Ibu

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ABSTRACT

This classroom action research aimed to improve the concentration ability of 5–6-year-old children through sensory play activities at PAUD Permata Ibu. The problem addressed in this study was the low ability of children to maintain focus during learning activities. The research was conducted in two cycles: Cycle I utilized water-based media, and Cycle II used bead-based media. The research subjects consisted of 12 children in group B. Data were collected through observation, interviews, and documentation. The results showed a significant improvement in children's concentration, increasing from an average of 66.5% in Cycle I to 95.7% in Cycle II. The study concludes that sensory play is proven to be an effective strategy to enhance concentration in early childhood, particularly when implemented gradually and in an enjoyable manner.

Introduction

Childhood is often referred to as the golden period because it is during this stage that the foundations for physical, cognitive, social, and emotional development are significantly formed. Especially at the ages of 5–6, children are in the preoperational phase, which according to Piaget's theory, is marked by a tendency to understand their

environment through concrete experiences and a need for multisensory stimulation (Piaget, 2023; Hurlock, 2020). At this stage, a child's ability to concentrate is a crucial cognitive aspect. Good concentration not only supports children's ability to understand instructions and complete tasks but also allows them to actively participate in the learning process (Susanto, 2021). A strong ability to concentrate enhances children's engagement in activities and helps them develop responsibility and independence.

However, the developmental characteristics of early childhood show that they do not yet possess long attention spans. Children tend to be easily distracted by sounds, movements, or other more attractive objects around them. This is understandable considering their brain's attention-regulating systems are still developing and not yet functioning optimally for sustained focus (Susanto, 2021). Environmental factors, such as monotonous teaching methods and lack of exploratory activities, often worsen this condition. Nevertheless, in the right environment and with appropriate approaches, children's ability to focus can actually be gradually improved (Santrock, 2022).

A similar condition was observed at PAUD Permata Ibu, particularly in Group B. Many children struggled to maintain attention, appeared disinterested during activities, and were easily distracted. This is suspected to be due to the lack of sensory-based learning media and activities that encourage direct interaction with objects or teaching materials. In fact, approaches that involve multiple senses—such as

seeing, touching, hearing, or smelling—have been shown to be more effective in maintaining children's attention during specific activities (Munandar, 2020). When children are fully engaged in enjoyable activities that match their interests, concentration tends to form naturally and last longer (Marlina, 2020).

One approach aligned with these developmental characteristics is sensory play. This activity engages children's senses directly through hands-on experiences such as touching water, feeling the texture of sand, or observing object movement. Through such activities, children not only learn cognitively but also build deeper connections with their environment (Hurlock, 2020). In the long run, these multisensory experiences help strengthen neural pathways that support attention, problem-solving, and motor coordination (Fisher et al., 2024; Gascoyne, 2022).

This study is supported by several relevant studies demonstrating the effectiveness of play-based approaches in enhancing early childhood concentration. Pratiwi and Asi'ah (2018), in their research at TK Al-Kautsar, found that simple sewing activities improved the learning focus of 4–5-year-old children, with results increasing from 8% to 92% over two classroom action research cycles. Syaputri and Istiarini (2021) showed that traditional games like congklak and snakes and ladders gradually improved the concentration of 5–7-year-olds, reaching 96% in the third cycle. Nurhaliza and Apriani (2022) studied sensory play's impact on the social skills of 5–6-year-old children at

PAUD Cendekia and found increased social engagement and cooperation through sensory material exploration such as water and sand. All three studies indicate that play-based activities positively affect children's engagement and focus.

Water has been widely used in sensory activities due to its calming and flexible nature. Activities such as pouring, mixing, or filtering water encourage children to engage multiple aspects of themselves simultaneously, including concentration, fine motor movement, and emotional regulation (Berkowitz, 2022). Similarly, beading activities require children to pay attention to order, color, and patterns with detail and consistency (Dowling, 2021). Repeated experiences with textured materials can help children sustain attention longer, ultimately strengthening their focus (Macintyre, 2022).

From the above explanations, it can be concluded that sensory play activities hold great potential in improving concentration among young children. However, there remains a gap between theory and practice in early childhood education institutions, where sensory-based approaches are not yet optimally utilized in formal learning. This study seeks to bridge that gap by developing and implementing a classroom action model using two types of sensory media—water and beads—across two cycles. Observations were made based on five indicators of concentration: the ability to maintain attention, show interest, complete tasks, ignore distractions, and understand and respond to instructions appropriately.

By combining sensory approaches with systematic action planning, this study aims to contribute meaningfully to improving the effectiveness of learning in early childhood education. Moreover, the findings are expected to serve as a reference for educators in designing activities suited to young children's learning styles—through concrete experiences, sensory stimulation, and direct exploration. Thus, learning activities become not merely routines but truly meaningful and enjoyable developmental opportunities for children.

Methods

This study employed Classroom Action Research (CAR) using the spiral model of Kemmis and McTaggart, which consists of four iterative stages: planning, action, observation, and reflection. This model was chosen because it enables teachers or researchers to improve the learning process systematically based on findings from previous cycles (Kemmis & McTaggart, 2000). The research was conducted at PAUD Permata Ibu, located in Kampung Bojong Manuk, RT 003 RW 004, Kubang Village, Sukamulya District, Tangerang Regency. The research subjects were 12 Group B children aged 5–6 years selected from a total of 20 children.

The study took place over two months and included two action cycles. Cycle I used water as the sensory play medium, while Cycle II used beads. The researcher acted as the planner and facilitator of the learning activities, in collaboration with the classroom teacher as a co-facilitator. Prior to implementation, the researcher developed Daily

Learning Implementation Plans (RPPH) incorporating sensory activities aligned with the learning theme and concentration development goals. During the activities, the researcher directly observed the children's concentration behaviors using observation sheets previously validated through content validity (expert judgment).

Data collection instruments included observation, interviews, documentation, and field notes. Observations focused on five concentration indicators: the ability to maintain attention for 15–20 minutes, show interest and enthusiasm, complete tasks, ignore irrelevant distractions, and understand/respond to instructions correctly. Interviews were conducted with teachers and parents to gather supporting information on behavioral changes at home and school. Documentation (photos and videos) served as visual evidence of the actions, while field notes recorded spontaneous events and unanticipated observations.

Collected data were analyzed both qualitatively and quantitatively. Qualitative analysis was used to interpret findings from field notes, interviews, and documentation, while quantitative data were derived from children's observation scores using an assessment rubric based on the Early Childhood Directorate's developmental scale (2020): Not Yet Developed (BB), Beginning to Develop (MB), Developing as Expected (BSH), and Very Well Developed (BSB). To ensure instrument reliability, the Cronbach's Alpha technique was applied to measure internal consistency (Hidayat, 2021). Success criteria were based on a Criterion-

Referenced Assessment approach (Sudjana, 2021), requiring at least 75% of children to reach the BSH or BSB categories post-intervention. Through sensory-based interventions using water and beads, this study aimed to deliver measurable and impactful improvements in young children's concentration within an engaging and exploratory learning context.

Results and Discussions

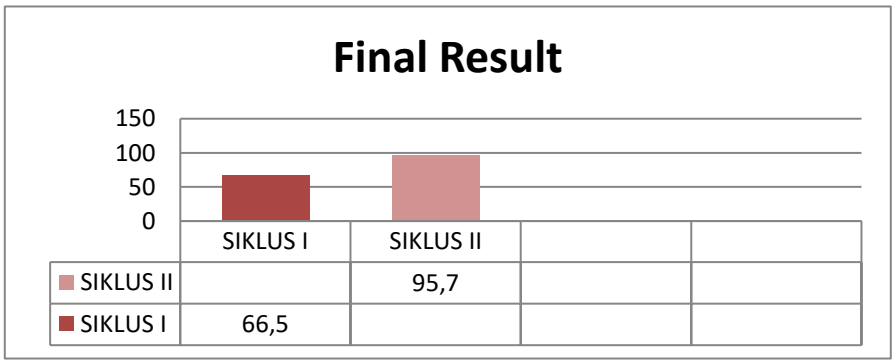
This study aimed to test the hypothesis that implementing sensory play methods could improve the concentration abilities of 5–6-year-old children at PAUD Permata Ibu. The implementation was conducted in two action cycles, each using a different medium: water in Cycle I and beads in Cycle II. The data collected were analyzed using descriptive quantitative analysis to observe changes in the average concentration observation scores before and after each cycle. The observed indicators covered five aspects of concentration: maintaining attention, showing interest, completing tasks, ignoring distractions, and understanding/responding to instructions. Scores were converted on a 1–4 scale based on the Early Childhood Directorate's (2020) categories: Not Yet Developed (BB), Beginning to Develop (MB), Developing as Expected (BSH), and Very Well Developed (BSB). The table below presents the average concentration scores of children based on observations during Cycle I and Cycle II.

Table 1. Average Concentration of 5–6-Year-Old Children at PAUD Permata Ibu

Cycle	Number of Children	Average Score	Percentage (%)	Achievement Category
Cycle I	12	2.66	66.5%	Developing as Expected (BSH)
Cycle II	12	3.83	95.7%	Very Well Developed (BSB)

Based on Table 1, it is evident that the children's average concentration score increased from 2.66 in Cycle I to 3.83 in Cycle II. The achievement percentage rose from 66.5% to 95.7%, marking an improvement of 29.2%. In Cycle I, most children began to show more stable concentration skills, though some still struggled to maintain focus for optimal durations or were easily distracted by environmental stimuli. After additional interventions in Cycle II using bead media, there was a significant improvement in aspects such as perseverance, task completion, and responsiveness to instructions. This improvement is further illustrated in the visual chart below, which depicts the comparative results across the two cycles.

Chart 1. Concentration Improvement Chart of 5–6-Year-Old Children



The chart shows that most children in Cycle I were in the "Developing as Expected" category, while in Cycle II, nearly all reached the "Very Well Developed" category. This demonstrates the effectiveness of the sensory play strategy when implemented gradually and in a fun way. Water play in Cycle I allowed children to explore through simple sensory experiences such as moving water using sponges and pipettes or mixing colored water. These activities provided calming sensory input that helped stabilize emotions and increase focus. Meanwhile, in Cycle II, bead activities—including stringing, transferring beads with tweezers, and placing beads along pattern lines—promoted eye-hand coordination, precision, and optimal concentration.

The improvement from Cycle I to Cycle II also indicated that the children became increasingly trained in sustaining attention, completing tasks without being easily distracted, and showing heightened interest in the activities. The researchers noted that the children were more enthusiastic, able to ignore environmental distractions, and demonstrated increased persistence throughout the sessions. This strengthens the argument that multisensory approaches play a significant role in enhancing early childhood concentration.

Figure 1. Children Engaged in Sensory Learning

On the qualitative side, before the sensory play activities were introduced, both teachers and parents observed that the children had low concentration levels. They tended to get bored quickly, were easily distracted, and found it difficult to complete tasks. This was reflected in the teacher's statement:

"Before the children started sensory play, they had a hard time focusing. They would begin an activity but want to switch to something else shortly after."

(CW1.1)

Parents also shared similar observations about their children's behavior at home:

"My child struggles to focus when coloring or being asked to tidy up toys. After a short while, they want to do something else." (CW1.3)

These findings were supported by field notes, where many children were unable to maintain focus during pipette water transfer activities. Some joked around while fetching water or were distracted by surrounding noises.

Sensory play activities involving physical movement and exploration—such as water transfer, color mixing, and squeezing water

with sponges—began to capture the children's attention. The teacher observed an increase in engagement:

> *"After two days of playing with water, the children started to show more interest and could sit for longer periods. They also began to complete the activities." (CW3.1)*

One parent also noted a behavioral change in their child:

> *"My child can now finish a game without quickly getting bored." (CW3.3)*

However, field notes also revealed that not all children showed significant changes at first. Some were still distracted by peers, failed to follow instructions properly, or did not complete assigned tasks.

These research results support the initial hypothesis that sensory play can improve the concentration of 5–6-year-old children. The findings align with previous studies by Pratiwi and Asi'ah (2018), who found that sewing activities significantly increased children's learning focus, and Syaputri and Istiarini (2021), who showed that traditional games could enhance listening and task completion skills. However, this study offers new contributions by demonstrating that using both liquid (water) and solid (beads) sensory media in a structured and phased manner can optimize children's concentration better than single-type stimulation.

In conclusion, the implementation of sensory play as a teaching strategy through two action cycles proved effective in enhancing the concentration of 5–6-year-old children. The significant improvement from Cycle I to Cycle II not only confirms the success of the intervention

but also underscores the importance of exploration-based sensory learning approaches in early childhood education.

Conclusion

Based on the classroom action research conducted over two cycles at PAUD Permata Ibu, it can be concluded that sensory play is proven to be effective in enhancing the concentration abilities of children aged 5–6 years. The implementation of play activities using water media in Cycle I and bead media in Cycle II significantly improved the children's ability to maintain attention, show interest, complete tasks, ignore distractions, and understand and respond to teacher instructions. This was evidenced by the increase in the average observation score from 2.66 in Cycle I to 3.83 in Cycle II, with the percentage of concentration achievement rising from 66.5% to 95.7%. These findings address the initial issue identified in the study: children's low concentration during learning activities that lacked exploratory and sensory elements.

The study also proposes that a multisensory experience-based learning strategy can serve as an innovative approach to improving concentration in early childhood. Sensory play allows children to engage actively, calmly, and attentively, as these activities align with their developmental characteristics that require concrete experiences and sensory stimulation. Thus, this approach not only enhances learning engagement but also helps cultivate thinking skills and persistence from an early age.

The implications of these findings suggest that early childhood

educators should make greater use of varied, well-structured sensory learning media in their daily teaching practices. Early childhood education institutions are also encouraged to provide facilities and dedicated time for sensory exploration as part of core learning. This research offers practical contributions to the development of enjoyable teaching methods while strengthening the literature on the effectiveness of sensory play in supporting children's concentration development. For future development, this study can serve as a foundational reference in designing long-term interventions or integrating sensory play into the broader thematic curriculum of early childhood education.

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