

Seed Collage: The Golden Key to Concentration in Early Childhood

Siti Umroh^{1*}, Wahyuni Nadar², Hisham Abdul Malik³

¹ Early Childhood Teacher Melati, Jakarta, Indonesia

^{2,3} Early Childhood Teacher Education, STKIP Kusuma Negara Jakarta, Indonesia

sitiumroh1781@gmail.com

Abstract

Collage activities are an effective tool for training and improving children's concentration. This activity requires patience and perseverance, where each step of pasting becomes a process that strengthens children's ability to complete tasks with focus. This study aimed to train the concentration of children aged 5–6 years through bean collage activities at PAUD Nusa Indah Makasar, East Jakarta. The research subjects consisted of 14 children. A quantitative approach was used with a pre-experimental method. Based on hypothesis testing using a t-test, the average concentration score before the treatment was 15.85 with a standard deviation of 6.549, and after the treatment, the average increased to 24.14 with a standard deviation of 7.262. The calculated t-value was 11.043, and the significance value (Sig. 2-tailed) was $0.000 < 0.05$, indicating a significant effect. The results concluded that bean collage activities significantly improve the concentration of children aged 5–6 years. Teachers can implement seed collage activities as a practical and proven effective learning tool for improving early childhood concentration.

Keywords: Early Childhood, Collage, Concentration, children, PAUD

1 INTRODUCTION

Early childhood is a period of rapid development, often referred to as the golden age. According to Law No. 20 of 2003 concerning the National Education System, the age range for early childhood is 0-6 years (Law No. 20, 2003). Between the ages of 5-6, children are at a crucial stage of development, both in cognitive, social, and emotional aspects. At this age, children begin to develop basic skills that serve as the foundation for entering formal education, such as the ability to think logically, communicate using language, and improve their ability to focus. One important aspect that supports future academic success is the ability to concentrate.

However, in reality, young children, especially those aged 5-6, often struggle to maintain concentration. They tend to be easily distracted and have difficulty focusing on a single activity for long periods. This poses a significant challenge to the learning process and the development of other skills. Various factors, such as environmental factors, emotional factors, and teaching methods, can affect children's concentration abilities at this age. Therefore, the right approach is needed to help improve their concentration.

One activity believed to stimulate creativity and simultaneously improve children's concentration is art, particularly collage. Collage is an art technique that involves attaching materials such as paper, cloth, seeds, or other materials to a base medium like paper or cardboard. Collage activities not only encourage children to think creatively but also require them to focus on the work at hand. Collage requires precision and full attention, so it can

be an effective tool in training children's concentration. In addition, art activities such as collage can also develop fine motor skills, problem-solving skills, and children's ability to organize their ideas. (Harsono, T., 2019).

However, despite ample evidence that art activities can improve children's concentration, specific research examining the effect of collage activities on the concentration of children aged 5-6 years is still very limited. Most existing research focuses on other art activities, such as drawing or painting. Therefore, this study aims to fill this research gap by directly testing whether collage activities, particularly those involving beads, can improve the concentration of children aged 5-6 years.

The Essence of Concentration

Concentration is the focusing of the mind on one thing to the exclusion of all unrelated matters (Slameto, 2021). Concentration means focusing the mind on the subject matter and ignoring other unrelated things. For children aged 5-6, the world is a place full of new and interesting things. Every sound, color, and movement can be a potential distraction that attracts their attention. Therefore, the ability of children aged 5-6 is still in the early stages of development.

Concentration is the ability to focus attention on a task, without being influenced by external or internal stimuli (Komarudin, 2015). In other words, it is the process of focusing awareness on a specific object or activity for a specific period of time. This means that when someone concentrates, they are able to ignore distractions, such as surrounding noise, wandering thoughts, or other desires that arise.

Concentration is closely related to selective attention, the process by which children learn to choose relevant information and ignore unimportant distractions. (Papalia, D, E., Martorell, G., 2023). Concentration is an important part of the brain's abilities, consisting of three main components: first, focus, which is the child's ability to pay attention to one thing and not be easily distracted by other things; second, working memory, which is the child's ability to remember and use information in a short time, for example, remembering instructions from a teacher; and third, impulse control, which is the child's ability to restrain themselves from immediately doing something they want. In early childhood, these three abilities are very important because they help them learn to follow rules and get along with friends. For example, when children are studying in class, they need to focus on listening to the teacher, remembering what to do, and refraining from speaking or moving carelessly. Therefore, concentration in early childhood is not just about sitting still, but also about how they can pay attention, remember, and control themselves. All of this is very important for children to learn and develop well.

Based on the expert opinions above, it can be concluded that concentration is a cognitive ability that allows children to selectively focus and sustain attention on an activity, while eliminating irrelevant stimuli. Therefore, concentration in early childhood is holistic and influenced by brain development, the environment, and the child's emotional involvement in an activity.



Figure 1. Grain Collage

The Essence of Collage

Collage is a creative activity that can improve children's fine motor and cognitive skills. The process of tearing, cutting, selecting, and pasting materials provides direct stimulation for hand-eye coordination and encourages visual thinking (Wahyuni, 2021). Furthermore, this activity is a fun and free form of self-expression, as children can combine various visual elements according to their imagination.

Collages are an important part of early childhood learning because they integrate various aspects of development, including motor, cognitive, social, and emotional skills (Suhartini, 2022). Children not only learn to arrange shapes or recognize colors, but also learn to make decisions and solve problems when choosing materials and placement of stickers.

Collage is a flexible educational art medium that allows children to explore a variety of sensory experiences and strengthens aesthetic development from an early age. She stated that collage activities provide a broad space for children to build self-confidence, hone creativity, and cultivate patience and perseverance. (Rofiah, L., 2023).

Based on the previously discussed description of the nature of collage, it can be concluded that collage is a form of fine art that holds significant educational value for early childhood. Therefore, collage is not merely an artistic activity but also an effective and comprehensive learning medium that supports optimal child growth and development.

Several previous studies have shown that collage activity have a positive effect on children's development. Research by Sri Indrawati (2022), Seftyani (2021), and Rizqia Salsabila maharani (2023) proved that collage activity significantly improve children's fine motor skills, meanwhile, fatihah, Nirmala & Putri (2023) found that seed collage activities increase children's learning interest and focus, and Hasanah et al. (2019) showed that collage strengthens hand-eye coordination and persistence.

However, all off these studies focused mainly on fine motor and learning motivation aspects, and have not specifically examined the effect of collage activities on children's concentration. Therefore, this study present a research gap by directly investigating the effect of collage activities on children's concentration.

2 RESEARCH METHODS

This research is a pre-experimental pre-test-post test research model design, the research aims to investigate the possibility of a causal relationship by introducing one or more experimental groups to one or more treatment conditions and comparing the results with one or more control groups that are not subjected to treatment conditions (Sugiyono, 2013). From this pre-experimental design, the researcher the one group pre-test – post-test design, the results of the research can be know from the results of the post-test experiment at Paud Nusa Indah, Makasar Village, East Jakarta.

Table 1. Research Design

Group	Pre-Test	Treatment	Post-Test
One group	Y1	X	Y2

The population is the entire research subject. The population in this study were all group B students aged 5-6 years who were students of Early Childhood Education (PAUD) in the Makasar sub-district of East Jakarta. The sample selected and used in this study was a group of children aged 5-6 years who had varying levels of attention and concentration, with a total sample of 14 children. All of these samples will be the experimental group, namely the group off students who will be participate in the collage activity using seeds.

The sampling technique used in this study is the purposive sampling technique, namely selecting samples based on certain criteria that are relevant to the research objectives.

3 RESULTS AND DISCUSSION

The presentation sequence includes data processing results in the form of data descriptions, testing of data analysis requirements, and testing of research hypotheses. At the end of the chapter, there is an explanation of the research results and limitations.

3.1 Description of Pre-Test and Post-Test Data on Children's Concentration

Table 2. Description of Pre-Test and Post-Test Data for Collage Activities on Children's Concentration

Statistics		Pre-Test	Post Test
N	Valid	14	14
	Missing	0	0
Mean		15,8571	24.1429
Standard Error of Mean		1.75053	1.94105
Median		13,0000	23,5000
Mode		10.00	19.00 ^a
Standard Deviation		6.54989	7.26273
Variance		42,901	52,747
Minimum		10.00	13.00
Maximum		29.00	37.00
Sum		222.00	338.00

Based on the results of the pre-test data processing of children's concentration obtained by 14 students, the following values were obtained: Average 15.85; Mode 10.00 and the highest value 29.00. Next, a summary of the description of the group's data is presented in the table and histogram as follows:

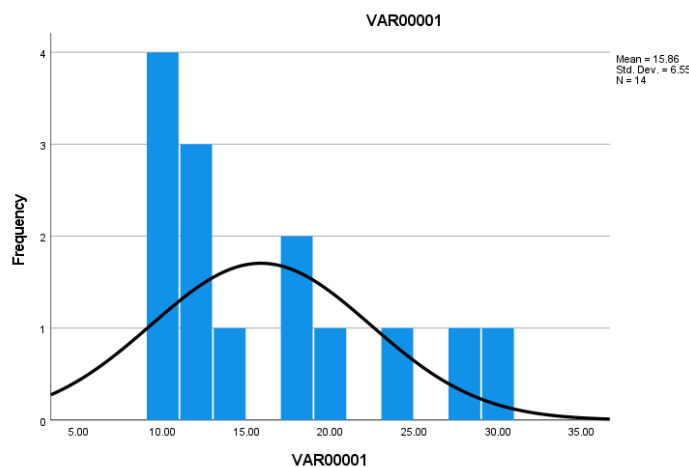


Figure 2. Histogram of Children's Concentration Pre-Test

Based on the results of the Post-test data processing of children's concentration obtained from 14 students, the following values were obtained: Average 24.14; Median 23.50; Mode 19.00 and the highest value 37.00. Furthermore, a summary of the description of the group's data is presented in a table and histogram as follows:

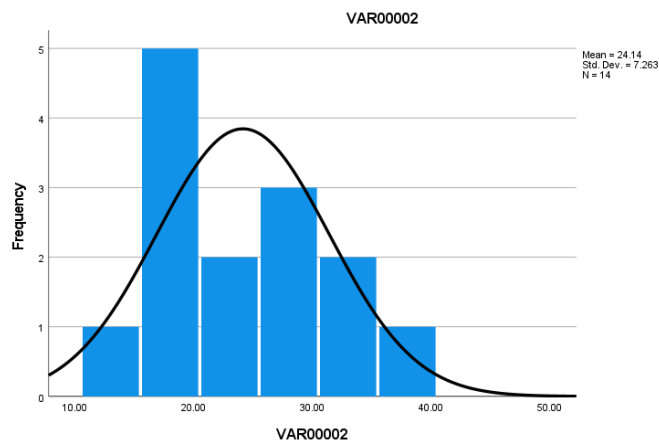


Figure 3. Histogram of Children's Concentration Post-Test

3.1.1 Normality Test Results

Based on the results of the table below, the Shapiro-Wilk statistical value is 0.961 and the sig or p-value is $0.747 > 0.05$. Thus, the children's concentration data is normally distributed.

Table 3. Normality Test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
VAR00001	.144	14	.200 *	.961	14	.747

3.1.2 Homogeneity Test

From the analysis results in the Test of Homogeneity of Variances table, $f = 0.602$; $df1 = 1$; $df2 = 12$, and $p\text{-value} = 0.453 > 0.05$ or H_0 is accepted. Thus, the children's concentration data is homogeneous.

Table 4. Homogeneity Test

Tests of Homogeneity of Variances					
		Levene			
		Statistics	df1	df2	Sig.
Children's Concentration	Based on Mean	.602	1	12	.453
	Based on Median	.513	1	12	.487
	Based on Median and with adjusted df	.513	1	11,951	.487
	Based on trimmed mean	.587	1	12	.458

3.1.3 Hypothesis Test Results

Paired Samples Test, obtained a mean difference of 22.64 which means the difference in children's concentration scores between before and after being given treatment. A positive value means that after being given treatment the children's concentration scores are higher than before being given treatment. Furthermore, in this table, Std. Error of the mean is obtained which shows an error rate of 2,050 for the average difference. Furthermore, from this table, the statistical value of $t = 11,043$ with $df = 13$ and a sig number or p-value = $0.000 < 0.05$ or H_0 is rejected. Thus, it is concluded that there is a significant difference in collage activities for children's concentration between before and after being given treatment.

Table 5. Paired Samples Test

Paired Samples Test								
Paired Differences			95% Confidence Interval of the Difference					
	Mean	Standard Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1 Children's Concentration - class	22,643	7,672	2,050	18,213	27,073	11,043	13	.000

3.2 Discussion

Based on the results of the hypothesis testing that has been done using the t-test, the average result of children's concentration before being given behavior was 15.85 and a standard deviation of 6.549 and after being given behavior was 24.14 and a standard deviation of 7.262. This means that descriptively there is a difference in the average results of children's concentration before and after being given treatment. The grain collage activity is considered appropriate and has an effect on the concentration of children aged 5-6 years, because the grain collage activity affects the learning atmosphere to be more enjoyable. This activity combines fine motor and visual aspects that require children to focus, follow patterns, and arrange the grains carefully. This process trains children's ability to maintain attention and complete tasks consistently.

These results align with Jean Piaget's theory of cognitive development, which states that children aged 5-6 are in the pre-operational stage, where concrete experiences, such as collage, significantly support the development of attention and concentration. Furthermore, art activities such as collage have been shown to improve children's coordination, organization, and perseverance. Therefore, it can be concluded that bead collage is not only an artistic medium but also an effective tool for stimulating concentration in early childhood.

4 CONCLUSION

Based on the results of the research and data analysis that has been carried out, it can be concluded that:

There is a significant influence of the grain collage activity on the concentration of children aged 5-6 years at Paud Nusa Indah. Seed collage is an effective learning method because it combine fine motor and visual aspect that train children's ability to focus, follow pattern, and complete tasks consistently, in line with jean piaget's theory off cognitive development The grain collage.

Teacher are advised to implement this activity as a practical and proven effective learning tool to enhance concentration in early childhood.

Further research is needed with a more rigorous control design, examining long-term effect, comparing differents types of collages, and conducting quality studies to understand emotional engagement.

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