Ceria: Jurnal Program Studi Pendidikan Anak Usia Dini
Volume 14, Number 3, 2025 pages 1020-1033
P-ISSN: 2301-9905 E-ISSN: 2775-409X
Open Access: https://jurnal.umt.ac.id/index.php/ceria/index

The Effect of Fun Cooking Activities on the Creative Thinking Skills of 5-6 Year Old Children at DWP Kemanggen Kindergarten

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ARTICLE INFO

Article history:
Received: September 12, 2025
Accepted: October 22, 2025
Available online on:
October 31, 2025

Keywords:
Early Childhood; Vocabulary; English; Audio-Visual; Guess-The-Word Game

ABSTRACT

This research was motivated by the low creative thinking skills of children at DWP Kemangsen Kindergarten. The purpose of this study was to examine the effect of implementing fun cooking activities on the creative thinking skills of children aged 5-6 years at DWP Kemangsen Kindergarten. This study used a quantitative experimental approach with a Quasi-Experimental Design with a Non-Equivalent Control Group Design. The sample and population in this study were all children aged 5-6 years at DWP Kemangsen Kindergarten, divided into two classes, each with 20 children. The data collection technique used was an observation sheet. The collected data consisted of pre-test and post-test scores from the control group and the experimental group, which received treatment through fun cooking activities in three sessions, each with a different fun cooking activity. The data were then analyzed

and hypothesis tested using a Paired Sample T-Test. The analysis results showed a significance value <0.001, with a Sig. value of 0.001 less than 0.005, therefore, H0 was rejected and Ha was accepted. This indicates a significant change in the experimental group. The most significant improvement was in the fluency indicator, which is the child's ability to ask and answer many questions during the learning process. By rejecting H0 and accepting Ha, it can be concluded that the fun cooking treatment has an effect on the creative thinking skills of 5-6 year old children at DWP Kemangsen Kindergarten.

Introduction

Early childhood refers to individuals aged between 0 and 6 years who are in a period of rapid growth and development, often referred to as the golden age. Within this age range, children possess a high potential for thinking and acquiring knowledge (Untung et al., 2023). Consequently, every stimulus provided during this phase has a significant impact on their future development (Ratnaningsih et al., 2025). As stated in the Ministry of Education and Culture Regulation (Permendikbud, 2014), aspects of child development encompass multiple dimensions, including gross and fine motor skills, cognition (intellectual abilities), moral and religious values, socio-emotional skills, and language proficiency. These aspects are interrelated; if one of them is not adequately fostered, it may result in developmental delays in children (Rasmani et al., 2020).

Education is one of the most essential aspects of life. Learning activities

constitute a developmental process that involves both teachers and students in reciprocal interactions within the learning environment, aimed at achieving educational objectives (Winda et al., 2022). At the early childhood education (ECE) level, the learning process is grounded in an approach that emphasizes learning through play (Maulidiyah et al., 2023).

In 21st-century education, several key elements are commonly referred to as the 4C skills: Communication, Collaboration, Critical Thinking, and Creativity (Maulidah, 2021). By developing these competencies, children are not merely passive recipients or memorizers of learning materials, but are also able to generate new ideas (Widayanti & Maulidiyah., 2023). Furthermore, according to Hukamak and Ummah (2022) teachers must design and deliver learning activities in the most effective way possible.

Several previous studies have emphasized that the importance of creative thinking skills in early childhood should not be overlooked, as these skills provide the foundation for problem-solving, creativity, and future innovation (Rohmatun, 2021). This aligns with the view of Mardhiyana (2016), who argues that without creative thinking, individuals would be unable to find solutions to their problems, thereby hindering their personal development. Hence, creative thinking can be fostered through well-designed learning activities that are specifically intended to enhance children's creative thinking abilities.

Based on a preliminary study conducted by the researcher at DWP Kemangsen Kindergarten from December 26 to 27, 2024, several challenges were identified in efforts to enhance children's creative thinking skills. This

finding is consistent with the statement of the principal during an interview, who acknowledged that one of the contributing factors may be the lack of teacher creativity in designing learning activities. Classroom observations further revealed that many children were still unable to demonstrate creative thinking abilities during the learning process. From these observations, it can be concluded that children's creative thinking skills have not yet emerged optimally and therefore require stimulation particularly with regard to the indicators of creative thinking, namely originality and fluency.

To achieve the goal of enhancing creative thinking skills, teachers need to design unique and engaging activities that can stimulate and optimize the creative thinking abilities of young children. One such engaging activity that can be implemented is *fun cooking*. Relevant research by Setyawati (2013) indicates that many teachers still struggle to create learning experiences that are both creative and innovative, largely due to the limited availability of instructional media, which are often restricted to paper-based resources. Therefore, through *fun cooking* activities, the researcher expects to generate a positive impact on the development of children's creative thinking skills. In early childhood education, the learning process itself is presented in the form of play (Reza et al., 2022).

In light of the issues outlined above, particularly regarding children's creative thinking skills, the researcher was motivated to conduct an experimental study by implementing *fun cooking* activities. This approach has not previously been applied at DWP Kemangsen Kindergarten and is expected

to serve as an engaging activity for the children.

Methods

This study employed a quatitative approach, while the research type was experimental in nature. The research design applied in this study was a Quasi-Experimental Design, specifically the Non-Equivalent Control Group Design. In this design, the researcher utilized two groups with similar characteristics, consisting of a control group and an experimental group.

The population of this study consisted of all children aged 5–6 years at DWP Kemangsen Kindergarten, who were divided into two classes. The sampling technique employed was non-probability sampling. The sample included all children aged 5–6 years at DWP Kemangsen Kindergarten who shared similar characteristics, namely limited abilities in the aspect of creative thinking. The entire sample was then divided into two groups: Class B1, consisting of 20 children, served as the control group, while Class B2, also consisting of 20 children, served as the experimental group.

The data analysis techniques in this study involved normality testing, homogeneity testing, and hypothesis testing using the paired sample *t*-test. These analyses were conducted to determine whether there were differences in sample scores before (pre-test) and after (post-test) the treatment was administered. The data were analyzed with the assistance of the SPSS statistical software. The criteria for decision-making regarding the acceptance or rejection of the research hypothesis were as follows:

a. If the calculated significance value is less than 0.05, H_0 is rejected and H_a is

accepted.

b. If the calculated significance value is greater than 0.05, H_0 is accepted and H_a is rejected.

Result and Discussions

The Normality Test

The normality test was conducted using the Shapiro-Wilk test with the help of SPSS 31 statistical software. In this Shapiro-Wilk calculation, the research data can be said to be normally distributed if the significance value (p-value) is greater than 5% or 0.05. The following are the results of the Shapiro-Wilk normality test in this study

Table 1. The Result of Normality Test

Test	Group	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pretest	Control Group	,170	20	.133	,908	20	,059
	Experiment Group	,114	20	,200*	,984	20	,973
Posttest	Control Group	,149	20	,200*	,950	20	,360
	Experiment Group	1,92	20	,051	,939	20	,232

Based on the results of the Shapiro–Wilk normality test, the significance

values for all groups were greater than 0.05. The pre-test significance value for the control group was 0.059, indicating that 0.059 > 0.05. The pre-test significance value for the experimental group was 0.973, indicating that 0.973 > 0.05. Furthermore, the post-test significance value for the control group was 0.360, indicating that 0.360 > 0.05, while the post-test significance value for the experimental group was 0.232, indicating that 0.232 > 0.05. Accordingly, it can be concluded that all data were normally distributed, as all significance values exceeded 0.05. Therefore, subsequent data analysis could be performed using parametric statistical methods.

The Homogenity Test

To test homogeneity in this study, the researcher employed Levene's test with the assistance of SPSS version 31.

Tabel 2. The Result of Levense Homogenity Test

		Levene Statistic	df1	df2	Sig.
Result	Based on Mean	1,299	1	38	,262
	Based on Median	1,065	1	38	,309
	Based on Median and with adjusted df	1,065	1	37,936	,309
	Based on trimmed mean	1,295	1	38	,262

Based on the Levene's test of homogeneity table above, the results in the Based on Mean and Based on Trimmed Mean rows of the Sig. column show a significance value of 0.262, which means that 0.262 is greater than 0.05. Therefore, it can be concluded that the data from the two groups, namely the control group and the experimental group, have the same variance or are homogeneous.

Hypothesis Test of Paired Sample T-Test

This research hypothesis was tested using the Paired Sample T-Test method. The Paired Sample T-Test was used to determine whether there was a difference between the control group and the experimental group that received different treatments.

Table 3. Hypothesis Test of Paired Sample T-Test

Paired Samples Test

		Paired Differences							
					95% Confidance Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	f	Sig. (2-tailed)
Pair 1	Pretest Posttest Kontrol	,200	,951	,213	-,245	,645	,940	9	,179
Pair 2	Pretest	-1,85	1,755	,393	-2,672	-1,028	-4,71	9	<,001

Posttest Eksperimen	0						3		

Based on the table above, the results of the Paired Sample T-Test show that the Significance column has a value of < 0.001. It can be concluded that the Sig. value of 0.001 is smaller than 0.005, so H0 is rejected and Ha is accepted. With the decision to reject H0 and accept Ha, it can be concluded that there is a significant effect of treatment through fun cooking activities on the creative thinking abilities of 5-6 year old children at DWP Kemangsen Kindergarten.

Discussion

The research design is a quasi-experimental design with a non-equivalent control group design. The sample used in this study consisted of 40 children aged 5-6 years at the DWP Kemangsen kindergarten, divided into two classes. This study was conducted to determine whether fun cooking activities had an effect on the creative thinking abilities of children aged 5-6 years.

The pre-test results showed that the control group had a mean score of 9.7, while the experimental group had a mean score of 10.45. Following the treatment administered to the experimental group through *fun cooking* activities, it was evident that their creative thinking skills improved significantly. In contrast, the control group, which did not receive the treatment, experienced a decline in performance. The post-test results of the control group indicated a mean score of 9.5, reflecting a decrease of 0.2 points. Meanwhile,

the experimental group obtained a post-test mean score of 12.35, which was higher than their pre-test score, showing an improvement of 1.90 points.

The experimental group demonstrated an improvement in their ability to pose various questions and provide answers during the learning process. This improvement aligns with the fluency indicator in Torrance's theory, which suggests that children with high fluency in thinking are able to generate a wide range of ideas spontaneously and diversely. In contrast, the control group, which did not receive the treatment, showed a decline in ability. Children in the control group tended to be passive, less enthusiastic, and disinterested in active participation. This finding is consistent with Torrance's view that a monotonous learning environment may inhibit creativity. Furthermore, regarding the originality indicator, children in the experimental group demonstrated their ability to generate unique ideas during the three *fun cooking* activities, ranging from their choices of color combinations, shapes, and topping patterns to creating works distinct from those of their peers.

The Shapiro-Wilk normality test obtained a significance value for both groups greater than 0.05, so the overall data was declared to be normally distributed, indicating that the data was normally distributed. The homogeneity test results showed that the significance value in the *Based on Trimmed Mean* row was 0.262, which is greater than 0.05. This indicates that the data from both groups in this study were homogeneous. Based on the results of both the normality and homogeneity tests, the research data were confirmed to be normally distributed and homogeneous. Therefore, hypothesis testing was

carried out using parametric statistical methods.

Data analysis techniques were performed by testing hypotheses using the t-test. The results of the hypothesis testing showed that learning through fun cooking activities had an effect on the creative thinking abilities of 5-6 year old children. This was proven by the table of statistical calculation results using the Paired Sample T-Test, which showed that the scores of the experimental group after receiving treatment were significantly lower than the scores of the control group.

Based on the results of the hypothesis test using the Paired Sample T-Test, a significance value of <0.001 was obtained. This indicates a significant difference between the creative thinking abilities of the experimental group and the control group. Therefore, the null hypothesis (H0) is rejected, and the alternative hypothesis (Ha) is accepted. This decision reinforces the finding that fun cooking activities are effective as a learning strategy to provide a positive impact on the creative thinking skills of 5–6-year-old children at DWP Kemangsen Kindergarten.

These results are supported by the opinion (Kurniasih, 2022) which states that through various play activities that provide opportunities and freedom for children to explore and experiment, express themselves, and also use various media or play materials in learning, can stimulate optimal growth and development in children. This is also in line with the opinion (Widayanti & Maulidiya, 2023) that a crucial factor in achieving learning success is the learning strategy used by the teacher themselves, requiring effective learning

methods.

Thus, the results of this study prove that fun cooking activities are an effective learning method for improving creative thinking skills. There was a significant increase in the creative thinking skills of children in the experimental group who received treatment through fun cooking activities compared to the control group who did not receive treatment and only underwent conventional learning as usual with their classroom teachers.

Conclusion

Based on the data from the research conducted by the researcher and the discussion on the Effect of Fun Cooking Activities on the Creative Thinking Skills of 5-6 Year Old Children at DWP Kemangsen Kindergarten, it was proven that there was an increase in creative thinking skills in the B2 experimental group that received treatment through fun cooking activities. Conversely, the control group experienced a decline due to not receiving the treatment. The results of the Paired Sample T-Test hypothesis test showed a result in the Significance column of 0.001, which means 0.001 < 0.05. With these results, H0 is rejected and Ha is accepted, so it can be concluded that there is a significant effect of fun cooking activities applied in an effort to improve children's creative thinking skills.

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