



Natural Material-Based Art Learning Model Increases Aesthetic Experiences in Early Childhood

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ABSTRAK

Permasalahan yang ada saat ini adalah pemahaman masyarakat terhadap seni khususnya mengenai pendidikan masih perlu ditingkatkan. Guru masih perlu meningkatkan pengalaman estetis anak melalui pembelajaran dan kegiatan berbasis alam. Tujuan penelitian ini yaitu menganalisis model pembelajaran seni berbasis bahan alam dalam meningkatkan pengalaman estetika pada anak usia dini. Pendekatan penelitian yang digunakan adalah kuantitatif dengan pengujian efektivitas menggunakan Quasy Experiment dan Non-Equivalent Control Group Design. Populasi dalam penelitian ini adalah siswa dari 3 (tiga) Taman Kanak-Kanak yang berjumlah 33 anak. Sampel penelitian dalam penelitian ini berjumlah 33 anak. Metode yang digunakan untuk mengumpulkan data adalah observasi, wawancara, dan tes. Data dianalisis dengan menggunakan uji normalitas dan homogenitas. Uji-t juga digunakan untuk menganalisis keefektifan pembelajaran. Hasil analisis data menunjukkan terdapat perbedaan yang signifikan antara pre-test dan post-test pada kelompok eksperimen 1 dan 2. Perbedaan antara pre-test dan post-test pada kelompok kontrol tidak cukup signifikan (dalam tingkat kepercayaan 95%). Terdapat perbedaan rata-rata pengalaman estetis anak usia dini yang diberi tindakan sebelum dan sesudah menggunakan pembelajaran seni berbasis bahan alam. Disimpulkan bahwa penerapan model pembelajaran seni berbasis bahan alam efektif meningkatkan pengalaman estetika pada anak usia dini.

ABSTRACT

The current problem is that people's understanding of art, especially regarding education, still needs to be improved. Teachers must still improve children's aesthetic experiences through nature-based learning and activities. This research aims to analyze art learning models based on natural materials to improve early childhood aesthetic experiences. The research approach used is quantitative, testing effectiveness using quick experiments and a non-equivalent control group design. The population in this study were students from 3 (three) kindergartens, totaling 33 children. The research sample in this study consisted of 33 children. The methods used to collect data are observation, interviews, and tests. Data were analyzed using normality and homogeneity tests. The t-test is also used to analyze learning effectiveness. The data analysis results show a significant difference between the pre-test and post-test in experimental groups 1 and 2. The difference between pre-test and post-test in the control group must be more significant (within the 95% confidence level). There is a difference in the average aesthetic experience of young children who were given action before and after using art learning based on natural materials. It was concluded that the application of an art learning model based on natural materials was effective in increasing aesthetic experiences in young children. The research implications can provide a theory of early childhood creativity in cognitive, affective and psychomotor development.

1. INTRODUCTION

The learning process aims to develop all the potential children possess, starting from psychological, social, linguistic, and emotional aspects (Rahayuningsih, 2020; Salehudin & Asiyani, 2022). Appropriate learning activities are needed to provide psychological and physical balance in building a dignified generation of the nation. Early childhood education is the foundation for creating superior and quality human resources (Dong et al., 2020; Prawoko et al., 2019; Suryani & Seto, 2020). Early childhood, especially at the age of 5-6 years, is a sensitive period for children; children are sensitive to receiving various stimuli to develop all the potential that exists in children (Ashar & Sadaruddin, 2019; Dong et al., 2020; Prawoko et

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al., 2019; Suryani & Seto, 2020; Wijayanti & Fauziah, 2020). Therefore, childhood is called the golden age in early childhood, so you must get the best service. A child's experience will determine the quality of his life in the future. Children are the generation that will determine the nation's fate in the future (Fitria & Juwita, 2018; Yuniarni et al., 2020). Children's character is formed from an early age, so they have superior character when they grow up. A child's character will be well-formed if the child's growth and development are stimulated and given enough space to express themselves freely (Setiawan et al., 2022; Taulany & Ilham Prahesti, 2019). Fun learning activities for children have an essential or strategic role in developing self-confidence, innovative and creative attitudes, and behavior (Aghnaita et al., 2020; Damayanti et al., 2018; Ningrum et al., 2022). One of the forms of education that young children receive at school is art (Setiawan et al., 2022; Yulianti, 2016). Arts education as a subject in schools is based on: First, the concept of arts education is characterized by multilingual, multidimensional, and multicultural aspects of children's development (Nurjanah, 2020; Setiawan et al., 2022; Yulianti, 2016). The multilingual concept in art aims to develop the ability to express oneself in various ways, such as through visual language, sound, and movement (Nugraheni & Pamungkas, 2022; Sri Cahya Dewi & Suyanta, 2019). Multidimensionality is an art concept to develop students' essential competencies, including perception, knowledge, understanding, analysis, evaluation, appreciation, and productivity. Apart from that, art learning can also balance the functions of the right and left brain by combining elements of logic, ethics, and aesthetics, as well as multicultural means (Irani et al., 2021; Setiawan et al., 2022; Tanto & Sufyana, 2020; Yulianti, 2016). The position of art is to develop awareness and respect for local cultural diversity as a form of respect, tolerance, democracy, politeness, and living in harmony in a pluralistic society and culture.

However, the current problem is that people's understanding of art, especially regarding education, still needs to be improved (Prahesti et al., 2020a; Sartika & Erni Munastiwi, 2019). This problem concerns (1) curriculum arts and teaching materials; (2) students, including learning activities, abilities, appreciation, and creative processes; (3) teaching methods or teaching and learning processes; (4) educators related to competence and social roles; (5) schools as social institutions or organizations; and (6) family, peer and community environment (Muthmainnah et al., 2016; Prahesti et al., 2020b). Developing arts education, especially in kindergartens, still uses a subject-centered curriculum approach. Apart from that, it needs to be clarified that competencies children must achieve after following a series of art lessons. Arts education loses its flexibility to adapt to local environmental conditions.

Based on observations in several kindergartens in Bajarsari District, several problems were found. The observation results are that so far, teachers still need to improve children's aesthetic experiences through learning and nature-based activities. In learning activities, children should be given the best possible guidance and coaching to express themselves creatively and appreciate the emotions that fluctuate within them; then, with the power of fantasy or imagination, creative power, and aesthetic feelings, children receive stimulation to develop together with them. Every child has the desire to create something. Existing desires and abilities are stimulated and nurtured to gain the ability to create something and feel satisfied with the results of their creation. Satisfaction with these results encourages children to always create something new, encouraging them to be more creative. Based on this, a learning model must be applied to develop children's artistic abilities and gain aesthetic experience. Artistic ability is one of the basic skills developed to increase children's creativity in character formation (Prahesti et al., 2020a; Sartika & Erni Munastiwi, 2019). This basic idea is important because it can introduce art as a work and increase the aesthetic experience of young children (Nugraheni & Pamungkas, 2022; Sri Cahya Dewi & Suyanta, 2019). The role of arts education provides alternative learning with a particular competency approach in anticipating global competition. Artistic competency is an educational element that focuses on mastering aesthetic abilities and basic knowledge in fulfilling self-actualization (Storli & Hansen Sandseter, 2019; Wahyuningsih et al., 2020). Mastery of knowledge, skills, and attitudes in art learning fosters an independent, expressive, and creative spirit.

Art activities can provide children with experiences to increase social sensitivity and foster a positive spirit in the process of physical and spiritual growth (Irani et al., 2021; Setiawan et al., 2022; Tanto & Sufyana, 2020; Yulianti, 2016). Artistic competence is essential for children's cognitive, affective, and psychomotor learning growth in the classroom and the environment (Sommer, et al., 2013; Veraksa, 2014). Arts education with a competency approach as an alternative solution and anticipation of competitive global competition (Watini et al., 2020; Yetti, 2012). Competency-based education focuses on mastering the ability or competency to do or do something (Mega Lestari et al., 2018; Wira Dharma et al., 2018). Arts education requires mastery of knowledge, skills, and attitudes to do this (Antara, 2015; Setiawan et al., 2022). For example, to be able to dance requires mastery of competencies consisting of knowledge, skills, and attitudes. The significant contribution of arts education in early childhood causes teachers to apply arts learning to children (Antara, 2015; Setiawan et al., 2022; Watini et al., 2020; Yetti, 2012). The focus of arts education can be presented optimally in the children's competency-based education curriculum for a better

development period. Brain function in children can be developed with stimulation from artistic activities, patterns of appreciation, and artistic creation. In addition, brain function results from the interaction of genetic blueprints and environmental influences (Salsabila et al., 2023; Sri Cahya Dewi & Suyanta, 2019). When a child is born, there are 100-200 billion brain cells (which are ready to be developed and actualized to achieve the highest developmental potential. This number includes several billion types of information in human life. Unfortunately, research shows that only 5% of this ability is utilized. Using a complex brain system to manage processes determines personality intelligence and the quality of life experienced by a person (Arbibah et al., 2018; Lestarinigrum & Handini, 2017; Ulfah et al., 2021).

Previous research findings also reveal that implementing appropriate learning models can impact children's growth and development (Nurjanah, 2020; Riwayati Zein & Vivi Puspita, 2021; Yetti, 2012). Other research findings also reveal that using natural materials in learning can help stimulate children (Febiharsa & Djuniadi, 2018; Sartika & Erni Munastiwi, 2019). Based on this, a suitable learning model can stimulate children well, especially in children's aesthetic development. Aesthetic development in early childhood can be interpreted as new empirical data to reveal the problem of feeling happy with positive attitudes such as neatness and liking for beauty as well as an attitude of appreciating other people's work. (Setiawan et al., 2022; Yulianti, 2016). In practice, children's aesthetic attitudes can be seen from various positive behaviors of children. The aesthetic experience of early childhood is able to awaken individual and social sensitivity as a basis for self-development towards the surrounding environment.

The novelty of this study is to stimulating aesthetic experiences for young children using art learning models. There has not been much research on art learning models based on natural materials in stimulating aesthetic experiences for young children that analyze the influence significantly. Based on this, the research objective in this article is to analyze the influence of art-based learning models based on natural materials in stimulating the aesthetic experiences of young children. It is hoped that this model can stimulate children so that it has an impact on their growth and development emotionally and psychologically.

2. METHOD

This research was done by quantitative data analysis with a quasi-experiment design. Quantitative research uses and analyzes numerical data to describe characteristics and test hypotheses. Quasi quasi-experiment design is chosen because a true random control trial cannot be done. The sample was obtained using cluster random sampling with a non-equivalent control group design. This method was used to ensure the integrity of sample data (Creswell, 2014; Leavy, 2017). The data was measured from three groups, experiment 1, experiment 2, and a control group. The population in this study were students from 3 (three) kindergartens in Banjarsari District, Surakarta City, totaling 33 children. The research sample in this study were 10 students from Level B of Aisyiyah Al Amiin Kindergarten (Experiment group 1), 11 students from Level B TKIU Al Khoir (Experiment group 2), and 12 students from Level B TPP Al Firdaus (Control group). The school institution used for early childhood is located in Banjarsari District, Surakarta City, Central Java Province Indonesia. The methods used to collect data are observation, interviews, and tests. Interviews were conducted to explore the needs of teachers and students in stimulating aesthetic experiences in children aged 5-6 years in Kindergarten in Banjarsari District, Surakarta City, with the interview subjects being teachers and parents of Kindergarten students in Banjarsari District, Surakarta City. This observation aims to discover how children develop during teaching and learning using the PBA model. The test method is given to students by experimenting with nature-based art-based learning to determine children's aesthetic experiences. The instruments used to collect data were questionnaire sheets and test questions. The instrument grid is presented in Table 1 and Table 2.

Table 1. Interview and Observation Instrument Grid for Teacher Needs

No	Observation Focus	Number of Items
1	Interview teachers' needs for learning models	10 questions
2	Teacher response interview after using the learning model	10 questions
3	Observation of the use of learning models	7 Observation Aspects
4	Observation of children's asthetic experiences and interest in models	7 Observation Aspects

Table 2. Instrument Grid for assessing Children's Aesthetic Experience

No	Indicator	Description
1	Drawing Objects Around	1. Make doodles 2. Draw following the shape of the hand

No	Indicator	Description
2	Forming based on the object seen	3. Draw familiar parts around students 4. Form buildings, trees and other objects
3	Mixing Colors	5. Combine colors according to the original object 6. Color the image beautifully
4	Maintain cleanliness and neatness of the work	7. Maintain the cleanliness of the work 8. Draw with a pattern without going outside the specified lines
5	Has artistic value to the work	9. The work produced has artistic value

The technique used to analyze data is inferential statistical analysis. Data validity was tested using normality and homogeneity test. A normality test was used to ensure that data came from a population with normal distribution. The normality test was done using one-sample Kolmogorov-Smirnov statistics. A homogeneity test was used to determine that sample groups came from homogenous samples. Homogenic means groups come from populations with the same distribution and characteristics. Data was collected from the sample using a non-equivalent control group with a pre-post design. Each group was measured before (pre-test) and after (post-test) treatment. To measure the difference between pre-test and post-test, paired t-test analysis was used. The significance cut-off used to decide the hypotheses was 95%. This ensures difference observed in the data was statistically significant.

3. RESULT AND DISCUSSION

Result

The explanation of research findings is described by presenting the effectiveness results of each early childhood learning group by analyzing normality, homogeneity, and Paired Sample T-Tests. The aesthetic experiences of early childhood in three group B kindergartens. Aisyiyah Al Amiin kindergarten, in this research, is the experimental group 1, where the experimental class 1 is the class subjected to learning actions by using the development of art-based learning models based on natural materials. The results of the pretest and posttest of the aesthetic experience of children at Aisyiyah Al Amiin Kindergarten can be described based on statistical calculations using the SPSS for Windows 24 program showed in [Table 3](#).

Table 3. Descriptive Statistics of Aisyiyah Al Amiin Kindergarten Children’s Aesthetic Experience

Group	N	Minimum	Maximum	Mean	Std. Deviation
Pre_Exs1	10	40	60	50.00	6.236
Post_Exs1	10	80	100	86.00	6.146
Valid N (listwise)	10				

Based on [Table 3](#), it can be explained that the pretest value, namely the aesthetic experience of the child before using the development of an art-based learning model based on natural materials, gets a minimum score of = 40; maximum value = 63; mean = 50.0; standard deviation = 6.236. Then after using the art-based learning model based on natural materials (posttest) obtain a minimum value = 80; maximum value = 100; mean = 86.0; standard deviation = 6.146. Based on data analysis explains that before using the art-based learning model based on natural materials, the majority of children’s aesthetic experiences were in the developing category, then after using the art-based learning model based on natural materials, children were in the very well-developed category. These results prove that the development of art-based learning models based on natural materials to enhance children's aesthetic experiences is appropriate for use in learning. Group B TKIU Al Khoir in this study was experimental group 2, where experimental group 2 was a class subjected to learning actions using the development of art-based learning models based on natural materials. The results of the pretest and posttest of the aesthetic experience of children in group B TKIU Al Khoir can be described based on statistical calculations using the SPSS for Windows 24 program, showed in [Table 4](#).

Table 4. Descriptive Statistics of Children’s Aesthetic Experience Group B TKIU Al Khoir

Group	N	Minimum	Maximum	Mean	Std. Deviation
Pre_Exs2	12	40	60	50.42	6.201
Post_Exs2	12	80	95	86.25	4.827
Valid N (listwise)	12				

Based on Table 4 it can be explained that the pretest value, namely the aesthetic experience of the child before using the development of an art-based learning model based on natural materials, gets a minimum score of = 40; maximum value = 60; mean = 50.42; standard deviation = 6.201. Then after using the song-based center learning model development (post-test) obtain a minimum score = 80; maximum value = 95; mean = 86.25; and standard deviation = 4.827. Based on data analysis explains that before using the art-based learning model based on natural materials, the majority of children's aesthetic experiences were in the developing category, then after using the art-based learning model based on natural materials, the children's aesthetic experience was in the very well-developed category. These results prove that the development of an art-based learning model based on natural materials to enhance children's aesthetic experiences is appropriate for use in learning. Group B of TPP Al Firdaus, in this study, is a control class, where the control class is a class that does learning to improve aesthetic experiences not using art-based learning models based on natural materials. The control group used conventional methods only in front of the blackboard or playing with APE in the room. The results of the pretest and post-test of the aesthetic experience of children at TPP Al Firdaus can be described based on statistical calculations using the SPSS for Windows 24 program showed in Table 5.

Table 5. Descriptive Statistics of Children's Aesthetic Experience Group B TPP Al Firdaus

Group	N	Minimum	Maximum	Mean	Std. Deviation
Pre_Kon	11	45	60	50.45	5.222
Post_Kon	11	55	70	64.09	4.908
Valid N (listwise)	11				

Based on Table 5 it can be explained that the pretest score gets a minimum value = 45; maximum value = 60; mean = 50.45; and standard deviation = 5.222. Then the post-test results obtained a minimum value = 55; maximum value = 70; mean = 64.09; and standard deviation = 4.908. The normality test is used to determine whether the data to be analyzed is normally distributed or not. A data that is normally distributed if the amount of data above and below the average is the same, as well as the standard deviation. In this study, the normality test used the chi-square or chi-square formula. Statistical results using the SPSS for Windows 24 program for normality showed in Table 6.

Table 6. Normality Test Results

Variable	Class	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Aesthetic Experience of Children	Pre-test Experiment 1	0.189	10	0.200	0.940	10	0.550
	post-test Experiment 1	0.265	10	0.076	0.841	10	0.075
	Pre-test Experiment 2	0.223	12	0.101	0.903	12	0.172
	Post-test Experiment 2	0.198	12	0.200	0.894	12	0.134
	Pre-test Control	0.216	11	0.162	0.871	11	0.079
	Post-test Control	0.210	11	0.191	0.896	11	0.165

The results of the normality test as show in Table 6 for the pretest and posttest data for the aesthetic experience of the children in the table above show that the significance value is greater than the 5% or 0.05 significance level so that it can be concluded that the data is normally distributed. This normality assumption is necessary because if normality is not met, the decision to test the hypothesis (t-test) obtained becomes invalid. The homogeneity test is used to measure whether the two classes come from a homogeneous population. The homogeneity test in this study serves to see the homogeneity of the control class and the experimental class, which means that the abilities of all children are the same. Data from the results of the calculation of the homogeneity test of the two classes, both experimental and control showed in Table 7.

Table 7. Homogeneity Test Results

Parameters		Levene Statistic	df1	df2	Sig.
Aesthetic Experience	Based on Mean	0.084	2	30	0.920
	Based on Median	0.027	2	30	0.973
	Based on the Median and with adjusted df	0.027	2	26.203	0.973
	Based on trimmed mean	0.040	2	30	0.961

Based on Table 7 show the output results of SPSS version 24.0 it is known that the results of the significance value (sig) based on the mean is $0.920 > 0.05$ at the 5% level so it can be concluded that the abilities of the children in the experimental and control classes are the same or homogeneous. Thus, the requirements of the paired sample t-test are met. After the results of the pretest and posttest found that the data were normally distributed and homogeneous, then a paired-sample t-test was carried out to find out whether the average aesthetic experience of children after using the art-based learning model based on natural materials was better than before using the model. The results of the paired-sample t-test showed in Table 8.

Table 8. Paired Samples T-Test Children’s Aesthetic Experience

Pair	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre - Post_Ex1	36.000	9.944	3.145	43.114	28.886	11.448	9	0.000
Pre - Post_Ex2	35.833	5.967	1.723	39.625	32.042	20.803	11	0.000
Pre - Post_Kon	5.522	8.970	2.704	19.662	7.610	2.042	10	0.068

Based on Table 8 show results of the paired-sample t-test for the aesthetic experience of children in both the experimental and control classes, it can be concluded that: Experimental Group 1 at Aisyiyah Al Amiin Kindergarten obtained a Sig. (2-tailed) of $0.000 < 0.05$, or t-count $11.448 > t$ -table 2.26216, it can be interpreted that there is a difference in the average aesthetic experience of children before and after using art-based learning models based on natural materials. Thus, it can be concluded that the development of an art-based learning model based on natural materials is effective in stimulating the aesthetic experience of children in Aisyiyah Al Amiin Kindergarten. Experimental Group 2 in Group B TKIU Al Khoir obtained a Sig. (2-tailed) of $0.000 < 0.05$ or t-count $20.803 > t$ -able 2.20099, it can be interpreted that there is a difference in the average aesthetic experience of children before and after using art-based learning models based on natural materials. Thus, it can be concluded that the development of an art-based learning model based on natural materials is effective in stimulating the aesthetic experience of children in Group B TKIU Al Khoir. Then to strengthen the results of the study whether there is effectiveness or not the effectiveness of natural material-based art-based learning models for increasing children's aesthetic experiences. So the next step is to compare the means or average values in the pretest and post-test in both the experimental class and the control class in the results of the paired samples statistics showed in Table 9.

Table 9. Paired Samples of Children’s Aesthetic Experience Statistics

Pair	Pair	Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Ex1	50.00	10	6.236	1.972
	Post_Ex1	86.00	10	6.146	1.944
Pair 2	Pre_Ex2	50.42	12	6.201	1.790
	Post_Ex2	86.25	12	4.827	1.393
Pair 3	Pre_Cont	50.45	11	5.222	1.575
	Post_Cont	64.09	11	4.908	1.480

Based on Table 9 show the results of the paired samples statistic, it is known that the aesthetic experience of the experimental class children is learning by using the development of an art-based learning model based on natural materials, at Aisyiyah Al Amiin Kindergarten, the post-test score is 86.0 and the post-test score at TKIU Al Khoir is 86.25. These results can be interpreted that the average value of the aesthetic experience of children from the experimental class both at Aisyiyah Al Amiin Kindergarten and at Al Khoir TKIU who both carry out learning using the art-based learning model based on natural materials has relatively the same aesthetic experience. Based on the results of the paired samples statistic, it is known that the aesthetic experience of the experimental class children is learning by using the development of an art-based learning model based on natural materials, at Aisyiyah Al Amiin Kindergarten, the post-test score is 86.0 and the post-test score at TKIU Al Khoir is 86.25. These results can be interpreted that the average value of the aesthetic experience of children from the experimental class both at Aisyiyah Al Amiin Kindergarten and at Al Khoir TKIU who both carry out learning using the art-based learning model based on natural materials has relatively the same aesthetic experience.

Discussion

The results of the data analysis show that the natural material-based art learning model influences the aesthetic experience of early childhood. Several factors cause this. First, art learning models based on natural materials can be used in learning because they can increase aesthetic experiences in young children. The aesthetic experience of group B children at Aisyiyah Al Amin Kindergarten in the experimental class, after using an art-based learning model based on natural materials, the Drawing Objects indicator, is included in the well-developed category. Good childhood experiences can increase knowledge and skills (Febiharsa & Djuniadi, 2018; Gusmayanti & Dimiyati, 2021; Setiawan et al., 2022). This is because, in learning, children learn to create art so that it provides a direct experience to students. Most of the children's aesthetic experiences are in the developing category; then after using the natural material-based art learning model, the children are in the very well-developing category. These results prove that developing an art-based learning model based on natural materials to improve children's aesthetic experiences is worthy of use in learning. This is based on the child's increased aesthetic experience after using this learning model. Previous research findings also confirm that the right learning model for children can have an impact on increasing children's skills and abilities (Nurjanah, 2020; Sri Cahya Dewi & Suyanta, 2019; Wulandari & Suparno, 2020).

Second, art learning models based on natural materials can be used in learning because they increase children's learning motivation. Learning activities combined with the environment have an impact on creativity and social sensitivity in children (González et al., 2021; Martínez López de Castro, 2020). This is what causes children to be very motivated when learning takes place. Thus, it can be concluded that developing art learning models based on natural materials can increase children's enthusiasm for learning. In learning activities, children learn about art in the surrounding environment (Dewi, 2020; Hidayatulloh, 2014; Nandwijawa & Aulia, 2020). Children can make various shapes using leaves. Ships, dragonflies, trees, mountains, rivers, and birds can be made from several leaves. Leaves allow children to explore. Various shapes, sizes, and colors of leaves can be found in the surrounding environment. Teachers can use this material to hone children's creativity (Mardiyah et al., 2021; Nurjanah, 2020; Wisnu & Komang, 2019). When introducing activities that use leaves, the teacher can give examples at the beginning of what children can do with these materials. This process is important because it is a stepping stone for children's creative minds to start running. Creative learning can increase learning motivation in young children (Risnawati & Nuraeni, 2019; Zaini & Dewi, 2017).

Third, art learning models based on natural materials can be used in learning because they can create fun learning. Nature-based learning is also carried out in the classroom by moving all materials and tools related to nature into the classroom, for example, small plants, vegetables, fruit, leaves, stones, sand, soil, twigs, animals, and so on, which makes it possible to bring into class. Then, students are made into groups to observe, see, and interact with objects directly. This makes children enthusiastic and creates enjoyable learning (Storli & Hansen Sandseter, 2019; Wallace et al., 2020; Zhu et al., 2021). Activities that use natural materials provide opportunities for children to be actively involved. Natural materials available in the environment are among the most important components in developing educational goals, content, and processes. The essence of education in early childhood is helping children understand their environment and adapt creatively (Bennett et al., 2018; Munawwarah & Sri, 2015; Sutrisno et al., 2021).

Previous research findings also emphasize that art learning can increase the creativity of young children (Miskawati, 2019; Sartika & Erni Munastiwi, 2019). Other research also states that playing while learning can stimulate children's growth and development (Prawoko et al., 2019; Ratna & Utami, 2018; Zahwa et al., 2018). Art learning models based on natural materials can be useful for young children. Children can learn about their surroundings using natural materials like leaves, rocks, or sand while developing creativity and artistic skills. This approach allows children to engage directly with nature but can also help them understand the importance of preserving the environment. This is done by the early childhood learning approach, emphasizing direct experience and exploration. The implications of the results of this research can be used for preschool teachers to improve the quality of the learning process so that it can bring out creative thinking processes in children using materials that are easily obtained. Apart from being easy, this material also only requires a little money.

4. CONCLUSION

The data analysis results show a difference in children's average aesthetic experience before and after using the art learning model based on natural materials. The results of the effectiveness test show that developing an art learning model based on natural materials effectively stimulates children's aesthetic experiences. Thus, the art learning model based on natural materials effectively stimulates children's

aesthetic experiences. The art learning model based on natural materials creates a pleasant learning atmosphere, motivating children to learn and increasing children's aesthetic experience.

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