



The Effect of the Montessori Method on the Fourth-Grade Primary Students' Learning Outcomes in Theme VIII Region Where I Live

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ABSTRACT

This research aims to determine the effect of the Montessori method on the fourth-grade student learning outcomes in theme VIII in the area where I live at state elementary school 040491 Batukarang in the academic year 2022/2023. This research used quantitative methods. The research population was 25 class IV students at SD Negeri 040491 Batukarang, which consisted of 10 male and 15 female students. Sampling was taken using purposive sampling, which was 25 class IV students. The research results show that student learning outcomes using the Montessori method are in the good category with an average of 80,2 with a correlation test result of 0.937. It means that $t_{count} (0.937) \geq t_{table} (0.396)$, so H_0 is accepted. Therefore, there is a very strong effect between the use of the Montessori method on the fourth-grade student learning outcomes in theme VIII in the area where I live at SD Negeri 040491 Batukarang. It can be seen from the T-test research results where $t_{count} 12,918 \geq t_{table} 1.708$ so it can be stated that H_0 is accepted. This indicates that there is a significant positive effect from the use of the Montessori method on the fourth-grade student learning outcomes in theme VIII in the area where I live at SD Negeri 040491 Batukarang in the academic year 2022/2023.

Keywords: learning outcomes, montessori method, theme VIII region where I live

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INTRODUCTION

Education tools for searching for a variety of information. In the training process, the potential and skills of learners are honed in such a way that such opportunities are not hidden, but arise and eventually become reliable and professional human resources. Improving the quality of education must continue to be encouraged to continue to be updated in an effort to provide quality human resources. One indicator of quality education is that students achieve maximum learning outcomes, both learning outcomes in the form of cognitive, affective and psychomotor. Student learning outcomes are strongly influenced by the teaching and learning process, with several factors that determine whether or not the teaching and learning process is smooth.

According to Silaban et al, (2020: 103) "Education is one of the efforts to improve and build the quality of human resources towards the era of globalization which is full of obstacles so that it is based on that education is something that is very important for every individual". Therefore, educational activities cannot be ignored, especially in this millennium century entering an era of increasingly fierce, fierce competition. Education is organized systematically so that it is expected to achieve educational goals through effective and efficient learning activities.

Teaching activities, learning methods are also very important. Therefore, teachers must be able to master various learning methods that can make students more active and able to capture the learning. So far, most learning processes always use lecture and assignment methods, so the learning process is too monotonous and only teacher-centered. When giving material, many students do not understand what is conveyed by the teacher. In learning there are various kinds of learning methods, one of which is the

Montessori method which will applied to the learning process. The quality of good education and its development from time to time is certainly one of the success factors for learning. The success of student learning is determined by the teacher, how well he knows how to deal with the subject and how the teacher delivers the material to students. Due to the limited ability of students to understand learning, in the teaching and learning process teachers must choose learning methods that are in accordance with the material, so that effective interaction between teachers and students occurs, so that they can control and form an interesting teaching atmosphere and a pleasant atmosphere

Based on observations made by researchers with the Homeroom Class IV of SD Negeri 040491 Batukarang, data on student learning outcomes in learning the Theme of My Residence Area there are several problems found, namely: a) the methods used by teachers are less varied, b) lack of interest in student learning in following the learning process, c) low student learning outcomes, d) one-way communication in the learning process, e) teachers are more active in the learning process

Based on learning result data, it is known that student learning outcomes in the My Home theme lesson were obtained in the even semester as many as 25 students during the formative test, in Indonesian language learning, 13 students or 52% were incomplete and 12 students completed. students or 48% achieved the KKM, 15 students or 60% completed science and 10 students or 40% completed the KKM. Minimum Completeness Criteria (KKM) is 70 in Thematic learning. This means that the completeness of learning outcomes in thematic learning is very low. According to the fourth grade teacher at SD Negeri 040491 Batukarang, the problem of incomplete student learning outcomes occurs every semester.

Arum Research, (2019) "Improving Learning Outcomes of Grade 4 Elementary School Students with Montessori Method Science Learning Media in Plant Subjects". The results of this study showed that students' motivation and interest in space building subjects increased. This is reflected in the willingness of students to complete the task given by the teacher before the action from 46.5% (20 students) at the end of the round to 90.7% (39 students) and the attention of students during the lesson. is learning. before taking 0% at the end of the cycle to 75.67% (28 students). Student motivation and interest in learning increased when student learning outcomes reached 75% and achieved a pre-research score above 75, from 38.4% (15 students) at the end of the round to 86.04% (37 students). Based on the results of the study, it was concluded that learning geometric shapes with the Montessori method with teaching aids can increase student motivation and interest in learning by up to 75%.

After studying the above problems, researchers are interested in providing solutions to teachers to use the Montessori Method called learning while playing using learning media that suit student needs. According to Zahidi, (2020: 251) said that the Montessori Method is an educational method for children which in its preparation is based on the theory of child development The characteristics of this method are the emphasis on the activities produced by the child and the emphasis on adjusting the child's learning environment at the level of development, and the role of physical activity in acquiring practical learning concepts and skills. Something more important for the Montessori idea is that education must continue to go according to development. Most of the decisions taken by educators through the curriculum and its supporting activities are driven by curriculum goals or the necessity of students to do exam questions (material) based on a certain chronological age regardless of the child's individual developmental stage. Researchers hope that the application of this Montessori method will be able to improve student learning outcomes in thematic learning.

LITERATURE REVIEW

Learning Methods

Method is a method used to achieve a predetermined goal. In teaching and learning activities, methods are used by teachers and their use varies according to the goals to be achieved after teaching ends. A teacher will not be able to perform his duties if he does not master one teaching method. Djamarah, (2019:46). In teaching and learning activities, teachers should not be fixated on using one method, but teachers should use various methods so that the course of teaching is not boring, but attracts the attention of students,

Furthermore, Slameto, (2017: 82) said that a method is a way or path that must be passed to achieve a certain goal. Learning aims to gain knowledge, attitudes, skills and skills, the methods used will become habits. Study habits will also affect learning itself. This description discusses study habits that affect learning, especially making schedules and execution, reading and taking notes, starting study materials, concentration and doing assignments.

In line with Sabri, (Istirani 2018: 245), said that learning methods are ways or techniques of presenting learning materials that will be used by teachers when presenting learning materials, either individually or in groups. In order to achieve the teaching that has been formulated, a teacher must know various methods. Having knowledge about the nature of various methods, a teacher will find it easier to determine methods that are appropriate to situations and conditions. The use of teaching methods is highly dependent on learning objectives. The teaching method is the way used by teachers to convey learning to students. Because the delivery takes place in educational interactions, the teaching method can be interpreted as a way used by teachers in establishing relationships with students during teaching. Thus, the teaching method is a tool to create a teaching and learning process. "Method is a way that can be used to implement learning strategies". Meanwhile, B. Uno, (Istirani 2018: 245) said "learning methods are defined as different ways to achieve different learning objectives under different learning conditions".

In line with Heryanto, (2019: 124-125) said that the learning method is a way or path taken by teachers to deliver learning material so that learning material can be achieved or learning strategies used by teachers as a medium to achieve predetermined learning goals, this encourages teachers to find the right method in delivering their material so that it can be absorbed well by students. From some of the opinions of the experts above, researchers concluded that the learning method is a method used by teachers in teaching and learning activities so that learning activities are more interesting and the material delivered by teachers is easily accepted by students.

Method Montessori

Montessori is an educational method pioneered by a woman named Maria Montessori from Italy. This method combines medical science, child development psychology, and conventional education science that is hundreds of years old, but many parts of the method are still relevant today. This educational method has a strong philosophy and characteristics in terms of siding with and respecting the nature, fitrah, divinity, stage of growth and development, and uniqueness of each individual. So that the content of the method mostly facilitates individuals in preparing and living real life in the future, not just supporting their learning preparation for school. Because the long-term goal of this method itself is to be able to prepare skills for life, form an independent, manners, confident, resilient, and appreciate differences to become a reliable global citizen Savitri, (2019: 3). Some components of Montessori cash that distinguish it from the conventional education system that has been known in Indonesia include:

1. The existence of A learning environment that has been prepared with interactive and varied teaching patterns, and reinforces a positive individual approach.
2. Equipped with concrete educational aids that always involve all children's senses so that they are actively used in every exercise activity. Educational equipment and all activities are equipped with clear and systematic principles, procedures for implementation, functions, and ways of delivery.

Furthermore, Paramita, (2019: 7), said that the Montessori method is about stimulating children's senses. All senses, not only audio and visual as has been the focus taught in conventional schools. Similar to Wulandari et al, (2018: 2), said that the Montessori Method is a method designed according to the needs and interests of children, in the Montessori method children are freed in activities, and learning is very child-centered. Teaching the values of independence to children can be through practical daily activities so that children get the freedom to do what they need.

Then Zahidi, (2020: 251), said that the Montessori Method is an educational method for children which in its preparation is based on the theory of child development. The characteristic of this method is to emphasize the activities generated by the child and emphasize the adaptation of the child's learning

environment to the level of development and the role of physical activity in absorbing learning concepts and practical abilities. Something more important for the Montessori idea is that education must continue to go according to development. Most of the decisions taken by educators through the curriculum and its supporting activities are driven by curriculum goals or the necessity of students to do exam questions (material) based on a certain chronological age regardless of the child's individual developmental stage.

According to Meiliana, (2015: 25), said that the Montessori method is a method that emphasizes the importance of adjusting the child's learning environment to his level of development, and the role of physical activity in absorbing academic concepts and practical skills. Another feature is the use of self-taught (self-correction) equipment to introduce various concepts. The Montessori view of children can be understood through its concepts:

1. Child Child's Self Construction Children have the potential or strength within themselves to develop on their own. Children have a desire to be independent, this desire arises in the child spontaneously.
2. Masa-masa Sensitive Perodes: This period is an important period for child development, when this period comes, children must be immediately facilitated with learning tools that support the actualization of emerging potential.
3. Soul Children are able to absorb each experience in a powerful and direct way, through this kind of absorption process, the mind is completely formed, therefore, the child directly assimilates the physical and social environment in which they mingle.

Based on the opinions of the experts above, it can be concluded that the Montessori method is a method that can make it easier for teachers to deliver learning material and students can find relationships between materials, encouraging students to be able to apply their knowledge in everyday life. However, the content of the Montessori method mostly facilitates individuals in preparing and living real life in the future, not just supporting their preparation for school. Because the long-term goal of this method itself is to be able to prepare skills for life, form an independent, manners, confident, resilient, and appreciate differences to become a reliable global citizen.

Learning Outcomes

Learning outcomes are specific statements expressed in behavior and appearance that are embodied in written form to describe expected learning outcomes. This behavior can be concrete and visible facts and disguised data facts. Therefore, a learning outcome is a clear statement and shows the appearance or skill of a particular student that is expected to be achieved as a learning outcome. Furthermore, Kanusta, (2021: 69) "Learning outcomes are results that have been achieved after experiencing the learning process or after experiencing intraction with the environment in order to obtain knowledge that will cause behavior in accordance with the learning objectives".

According to R.Ibrahim, (Istirani 2018: 19) said that teaching and learning outcomes are the main component that must first be formulated by teachers in the teaching and learning process. The role of learning outcomes is very important, because it is the target of the teaching and learning process. The pouring of learning outcomes in RPP not only clarifies the direction to be achieved in a learning activity, but in terms of efficiency the direction to be achieved in a learning activity, but in terms of efficiency maximum results are obtained. The benefits that can be obtained through pouring the learning results are as follows:

1. Time Teaching can be allocated and utilized appropriately.
2. The subject matter can be made balanced, so that no learning material can or vice versa can be presented in each learning hour.
3. Teacher can establish some many subject matter that can or otherwise can be presented in each hour of learning.
4. Teacher can establish the exact order of the course material. This means that the placement of each subject matter will make it easier for students to learn the content of the lesson.
5. Teacher Can easily establish and prepare the most suitable and interesting teaching and learning strategies.

6. Teacher Can easily prepare various equipment and material needs for learning purposes.
7. Teacher can easily measure student success in learning.
8. Teacher can guarantee that the learning results will be better than the learning outcomes without clear results.

Furthermore according to Surya, (Sumarna 2016: 12) said the learning results will appear in:

1. Such habits of learners learning languages many times avoid the tendency to use wrong words or structures.
2. Skills such as writing and exercising are despite their motor nature
3. Observation is the process of receiving, interpreting, and giving meaning to incoming stimuli objectively so that students achieve the right character.
4. Associative thinking is thinking by associating something with others
5. Think rationally and critically
6. Appreciate quality works

Based on the opinions of the experts above, researchers concluded that learning outcomes are a statement that can be seen by teachers to find out the extent to which students' understanding of the learning process is ongoing. Learning outcomes are ultimately functioned and intended for the following purposes

- a. For diagnostics and development
- b. For selection
- c. For class hikes
- d. For placement

METHOD

Place and Time of Research

This research was carried out at SD Negeri 040491 Batukarang for the 2022/2023 Learning Year on Grade IV students. The place of this research is located at Batukarang Village, Kecamatan Payung, Kabupaten Karo, North Sumatra. This research was carried out in the even semester of the 2022/2023 Learning Year, from April to May 2023.

Population and Sample

The population in this study is all students of SD Negeri 040491 Batukarang Learning Year 2022/2023 which amounted to 25 learners. The sampling carried out in this study is by means of *sampel purposive*. Said *sampel purposive* is a sampling technique with certain considerations. The sample in this study is all grade IV students of SD Negeri 040491 Batukarang for the 2022/2023 learning year.

Table 1. Distribution of the Number of Class IV Students for the 2022/2023 Learning Year

No	Class IV		Number of Students
	Law – Law	Woman	
1	10	15	25

Research Methods

Analytical descriptive research method according to Sugiyono, (2018) asserts that "Research method is defined as a scientific way to obtain data with certain purposes and uses". This type of research that researchers use is an experimental method. Arikunto, (2014) argues that "The experimental method is a way to look for the relationship between two factors and see the consequences of a treatment". In this study, researchers intend to examine the effect of the independent variable, namely the talking stick learning model (X) on the dependent variable, namely the learning outcomes of students (Y).

Research Design

Sugiyono, (2018: 23) emphasized that in conducting quantitative research, one of the important steps is to make a research design. There are several forms of experimental design, namely Pre-Experimental Design, True Experimental Design, Factorial Design, and Quasi Experimental Design. There are 3 design forms of Pre-Experimental design, namely One-Shot Case Study, One-Goup Pretest-Posttest and Intact-Group Comparison. The design used by researchers in this study is experimental research, namely One-Group Pretest-Posttest design. In this design, researchers provide a pretest, before being given treatment so that the results of the treatment can be known more accurately because it can compare with the situation before and after treatment.

Data Collection Techniques

The data collection technique used in this study is test, non-test, documentation and observation. The test is given by giving pre-test and post-test questions to respondents. Pre-test is given before treatment while post-test is given after giving treatment.

Table 2. Standard Test scores

Mastery Percentage	Value category	Value Criteria
100-85	A	Excellent
84-75	B	Good
74-60	C	Enough
59-40	D	Less
39-0	E	Bad

Questionnaire is one of the data collection techniques by providing or distributing a list of questions to respondents. Sugiyono, (2018) emphasized that "Questionnaire is a data collection technique carried out by giving a set of questions or written questions to respondents to answer". The statements that will be given by researchers to students amount to 15 questions. According to Arikunto, (2014) argues that "Documents are looking for data on things or variables in the form of notes, transcripts, books, newspapers, magazines, inscriptions, meeting minutes, lengger, agendas, and so on". In this study, researchers used documentation in the form of student learning results that had passed, as well as photos to be taken in this study. This researcher uses documentation studies to prove that the researcher correctly conducted research at the school.

Validity Test

According to Arikunto, (2014) argues that "Validity is a measure that shows the levels of validity or validity of an instrument". A valid instrument has high validity. Conversely, instruments that are less valid mean that they have low validity. For test-shaped instruments, validity testing can be done by comparing the content of the instrument with the learning material that has been taught. To prove the data is feasible or not, the questions are tested using the formula known as the correlation formula *product moment*.

Rumus *product moment*:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{(N \sum X^2 - (\sum X)^2)(N \sum Y^2 - (\sum Y)^2)\}}}$$

Information:

- R_{XY} = Correlation coefficient between variables X and Y
- $\sum xy$ = The sum of multiplications x by y
- N = The number of test takers
- X = Trial result value
- Y = Average Daily Value

To determine whether or not an instrument is valid, SPSS program assistance is needed *Version 22.0* and Test criteria if the price of $r_{calculate} \geq r_{table}$ with $\alpha = 0.05$ and n samples studied, then the measuring instrument is valid and vice versa if the calculation is $\leq r_{table}$ then the measuring instrument is invalid. In this validity test, the price of r_{table} is 0.396 with a significant level of 5% and the number of students or N as much as 25.

Reliability Test

According to Arikunto, (2014) asserts that "Reliability test is an instrument reliable enough to be used as a data collection tool because the instrument is good". Therefore, for reliability tests researchers use the KR20 formula (Kuder Richardson). Formula *K-R20* (Kuder Richardson) as follows:

$$r_i = \left(\frac{k}{k-1} \right) \left(\frac{s_t^2 - \sum p_i q_i}{s_t^2} \right)$$

Information:

- r_i = reliabilitas instrument
- k = Number of items inside the instrument
- p_i = Proportion of the number of subjects who answered in item 1
- q_i = $1 - p_i$
- S_t^2 = varian total

A data is said to be reliable if the calculation $\geq r_{table}$. Vice versa, data is said to be unreliable when calculated $\leq r_{table}$

S_t^2 = varian total

To find the total variance used the following formula:

$$S_t^2 = \frac{\sum X^2 - \frac{(\sum X)^2}{N}}{N}$$

Information:

- S_t = varian total
- $\sum x$ = Total score count
- $\sum x^2$ = jumlah kuadrat soal
- N = The number of test-taking learners

Normality Test

Before hypothesis testing is carried out, data normality testing is first carried out. Normality test is to test the normal distribution of data to be analyzed. The normality test is carried out on the variables studied, namely the independent variable (X) and the dependent variable (Y). The formula used to test the normality of the data is the formula *Chi Kuadrat* (X^2):

$$X^2 = \sum_{i=1}^k \frac{(f_o - f_h)^2}{f_h}$$

Information:

- X^2 = Chi Kuadrat
- F_o = Observed frequency
- F_h = Expected frequency
- If $X^2_{counts} \leq X^2_{table}$ then X^2 is normally distributed
- If $X^2_{counts} \geq X^2_{table}$ then X^2 is not normally distributed

Correlation Test

To find out whether there is an influence between the independent variable (X) and the dependent variable (Y) there is also The requirement for the correlation coefficient test is to look at $t_{count} \geq t_{table}$ or can be used correlation formula *product moment*, which is as follows:

$$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)\}}}$$

Information:

- r_{XY} = Correlation correlation *Product moment*
- N = Number of X and Y data pairs
- $\sum X$ = Total sum of variables x
- $\sum X^2$ = Square of the total of the number of variables X
- $\sum Y$ = Total The sum of the variables y
- $\sum Y^2$ = Square of the total number of variables Y
- $\sum XY$ = Multiplication result of total "X" and total "Y"

Table 3. Interpretation of Correlation Test

Coefficient Interval	Relationship Level
0.00-0.199	Very Low
0.20-0.399	Low
0.40-0.599	Keep
0.60-0.799	Strong
0.80-1.000	Very Powerful

Uji Hipotesis

Hypothesis testing is carried out to find out whether X has a significant (meaningful) relationship to variable Y is done by testing the hypothesis using uni-t as follows:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Information:

- r = Correlation Correlation
- n = Sample
- t = Significant Level (t count)

The hypothesis is accepted, if $t_{count} \geq t_{table}$ is so good, if $t_{count} \leq t_{table}$ then the hypothesis is rejected.

RESULTS AND DISCUSSION

Class IV Pre-Test Results

Students in grade IV SD Negeri 040491 Batukarang totaled 25 students. Researchers first use a pretest before starting learning to find out students' abilities. The results of the pretest that have been carried out by students show that the ability of student learning outcomes in learning Theme VIII My Living Area, Sub-theme 1 My Living Environment. For more clarity about the results of class IV Pre-Test scores, below the frequency table of class IV Pre-Test scores can be seen briefly as follows:

Table 4. Pre Test Data Frequency Distribution

X	F	FX	$\sum X = \sum X - \bar{X}$	X^2	FX^2
50	3	150	50	2500	7500
55	5	275	55	3025	15125
60	5	300	60	3600	18000
65	7	455	65	4225	29575
75	1	75	75	5625	5625
80	3	240	80	6400	19200

85	1	85	85	7225	7225
	25	1580	470	32600	102250

Average

M = Mean

$\sum f$ = Total Number of Values

N = Number of Students

$$M = \frac{\sum f}{N}$$

$$M = \frac{1.580}{25}$$

$$M = 63.2$$

Mean Ideal (mi)

$$Mi = (\text{Score Highest} + \text{Score Lowest}) + 2$$

$$Mi = (85 + 50) + 2$$

$$Mi = 135 + 2$$

$$Mi = 137$$

Standard Deviation (sdi)

$$Sdi = (\text{Score Highest} - \text{Lowest Score}) : 6$$

$$Sdi = (85 - 50) : 6$$

$$Sdi = 35 : 6$$

$$Sdi = 5.83$$

To find out the success rate of the actions given, the results of student Pre-test scores can be seen from the picture below

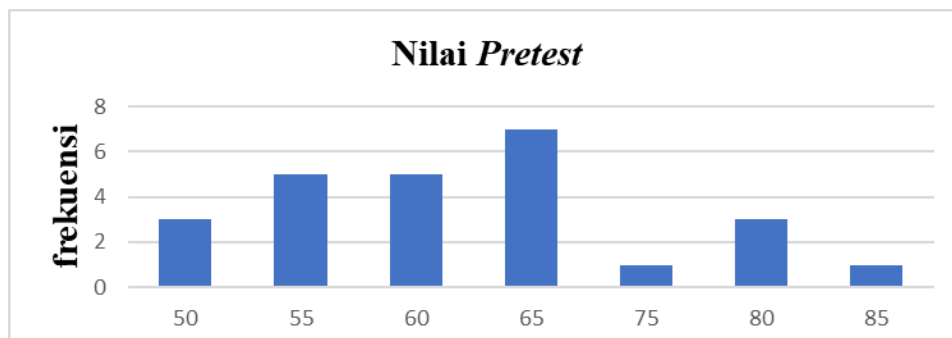


Figure 1. Histogram Frequency Distribution of Pretest Values

Based on the frequency distribution table of class IV pretest scores, the highest value is 85 and the lowest value is 50, then the average (Mean) is 63.2.

Class IV Post Test Results

At the end of learning, all subject matter is taught using the Montessori method, then the researcher provides a posttest that aims to determine the success rate of the actions given the results of student posttest scores can be seen in the table below: then based on the data obtained from thematic learning My Living Environment using the Montessori Method above, it is known that the class IV posttest score has an average of 80.2 while KKM 70 can It was concluded that the incomplete number was 3 people and the complete one was 22 people. For more clarity about the results of Post Test class IV scores, below the frequency table of Post Test class IV values can be seen briefly as follows:

Table 5. Frequency Distribution

X	F	FX	$X - \bar{X}$	X^2	FX^2
65	3	195	65	4225	12675
70	2	140	70	4900	9800
75	3	225	75	5625	16875
80	7	560	80	6400	44800
85	5	425	85	7225	36125
90	3	270	90	8100	24300
95	2	1815	465	36475	144575
	25	3630	930	72950	289150
Average		80,2			

Average

M = Mean

$\sum f$ = Total Number of Values

N = Number of Students

$$M = \frac{\sum f}{N}$$

$$M = \frac{2005}{25}$$

$$M = 80.2$$

Mean Ideal (mi)

$$Mi = (\text{Score Highest} + \text{Score Lowest}) + 2$$

$$Mi = (95 + 65) + 2$$

$$Mi = 160 + 2$$

$$Mi = 162$$

Standard Deviation (sdi)

$$Sdi = (\text{Score Highest} - \text{Lowest Score}) : 6$$

$$Sdi = (95 - 65) : 6$$

$$Sdi = 30 : 6$$

$$Sdi = 5$$

So obtained (M) of 80.2, Ideal Mean (Mi) 162 and Standard Deviation (sdi) 5. After the score is obtained, we can distribute it into frequencies. The distribution of questionnaire data can be seen below:

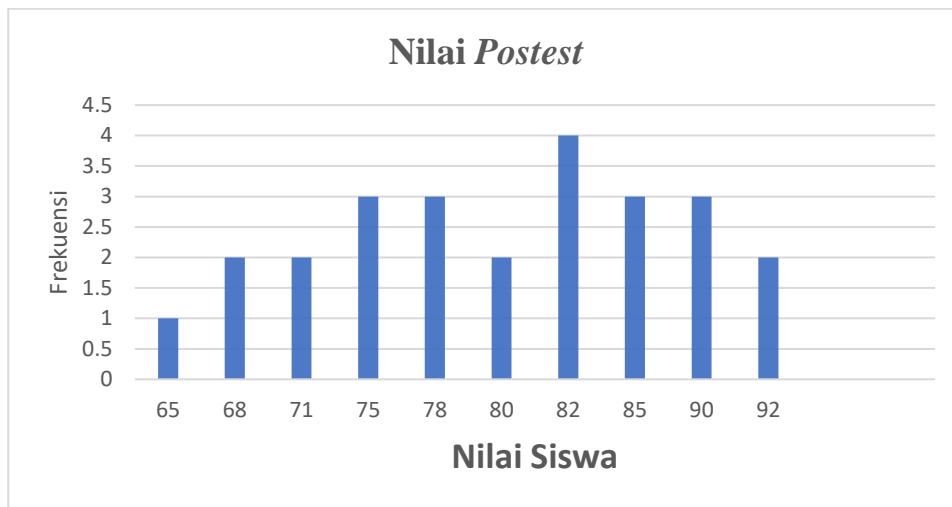


Figure 2 Histogram Distribution of Post Test Value Frequency

Based on the frequency distribution histogram, the highest value of class IV posttest was 95 and the lowest value of 65 was obtained on average (Mean) of 80.2. The results of the posttest score show that there is an increase in the learning completeness of grade IV students. This result can be seen from the posttest higher than the pretest value. Where the average posttest score is 80.2 while the pretest value is 63.2. For more details, it can be seen from the average value of pretest and posttest in the diagram below:

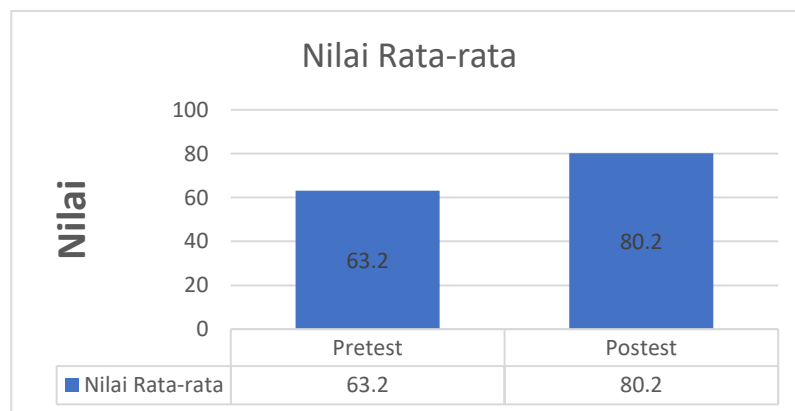


Figure 3 Pre Test and Post Test Average Score Diagram

Based on the diagram above, it can be seen that the average value of the posttest is higher than the average value of the pretest.

Table 6. Judging Criteria

Correlation Coefficient	Makna
80-100	Very Good
70-79	Good
60-69	Enough
50-59	Less
0-49	Fail

Based on table 5. above, it can be seen that the average score obtained is 80.2 with the Good category.

Montessori Method Questionnaire Results

At the end of the lesson, the researcher gave a questionnaire to students, this aims to determine the success rate and how students are doing after being given learning using the Montessori method.

Table 7. Frequency Distribution of Questionnaire Results

X	F	FX	X=X - \bar{X}	X ²	FX ²
59	2	118	-8,72	76,0384	152,0768
60	3	180	-7,72	59,5984	178,7952
62	1	62	-5,72	32,7184	32,7184
63	2	126	-4,72	22,2784	44,5568
65	2	130	-2,72	7,3984	14,7968
68	2	136	0,28	0,0784	0,1568
69	1	69	1,28	1,6384	1,6384
70	3	210	2,28	5,1984	15,5952
72	2	144	4,28	18,3184	36,6368
73	3	219	5,28	27,8784	83,6352
74	1	74	6,28	39,4384	39,4384
75	3	225	7,28	52,9984	158,9952
810	25	1693	-2,64	343,5808	759,04
				$\sum X$	810
				X	70
				N	25
				Average	67,72

Average

M = Mean

$\sum f$ = Total Number of Values

N = Number of Students

$M = \frac{\sum f}{N}$

$M = \frac{1,693}{25}$

M = 67.72

Mean Ideal (mi)

Mi = (Score Highest+Score Lowest) + 2

Mi = (75 + 59) + 2

Mi = 134 + 2

Mi = 136

Standard Deviation (sdi)

Sdi= (Highest Score–Lowest Score) : 6

Sdi= (75 – 59) : 6

Sdi= 16 : 6

Sdi= 2,6

Based on the table above, the number is 1,693 with an average of 67.72 with the highest value of 75, while the lowest value is 59 mean ideal (Mi) of 136 with an ideal deviation (SDi) of 2.6. For more details can be seen from the diagram below:

Normality Test

A normality test was performed using the Liliefors test. Here are the calculation results of SPSS Version 22.

Table 8. Normality Test

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Learning Outcomes	,171	25	,058	,944	25	,179

Based on the results of the Liliefors test, a significance of 0.179 was obtained where the significance level value used by researchers was a significance level of 5% or 0.05. Based on the Liliefors test (*Kolmogorof Smirnov*), decision making using the 5% sigifikan level is a significant value (sig) ≥ 0.05 , which is $0.179 \geq 0.173$, then class IV data is normally distributed.

Coleration Coefficient Test

The correlation coefficient test determines whether there is an influence between the independent variable (X) and the dependent variable (Y) and the conditions for the correlation coefficient test i.e. by looking at $r_{count} \geq r_{table}$ with product correlation formula The moments are: To see the influence of the two variables can be done by comparing between rcalculate and rtable. From the calculation above manually, it can be seen that the value of the correlation coefficient is 0.953. While the correlation coefficient test assisted by SPSS Version 22 below.

Table 9. Coleration Coefficient Test

		Influence of the Montessori Method	Learning Outcomes
Influence of the Montessori Method	Pearson Correlation	1	.953**
	Sig. (2-tailed)		,000
	N	25	25
Learning Outcomes	Pearson Correlation	.953**	1
	Sig. (2-tailed)	,000	
	N	25	25

From the table above shows that the value of the correlation coefficient is 0.953. If $r_{count} \geq r_{table}$. r_{count} (0,953) $\geq r_{tabel}$ (0.396). So there is a 95,3% influence between the Montessori Method on student learning outcomes and 4,7% influence of other factors. It can be concluded that there is a very strong influence between the Montessori Method on the learning outcomes of grade IV students of SD Negeri 040491 Batukarang.

Table 10. Correlation Test Intervention

No	Value	Interprehensions
1	0.00-1.199	Very Low
2	0.20-0.399	Low
3	0.40-0.599	Keep
4	0.60-0.799	Strong
5	0.80-1.000	Very Powerful

Hypothesis Testing

If the data are declared normally distributed and the sample comes from the same population or homogeneous, then the statistical "t-test" used to test the hypothesis is the t-test, then the hypothesis proposed is:

Has : There is an influence of the Montessori method on student learning outcomes

Ho :No There is an influence of the Montessori method on student learning outcomes.

Table 11 T-Test Results

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Say.
		B	Std. Error	Beta		
1	(Constant)	28,484	4,051		7,031	,000
	Influence of the Montessori Method	,818	,063	,937	12,918	,000

To determine whether there is an influence can be seen significant results obtained from the t-test calculation results of SPSS ver 22 of 12.918. To find out whether the hypothesis is accepted or rejected, then $t_{\text{calculate}} \geq t_{\text{table}}$ which is $12.918 \geq 1.708$ which means there is an influence of the Montessori Method on student learning outcomes. To support the t-test results of SPSS ver 22, the following are the test results manually:

$$\begin{aligned}
 t &= \frac{r \sqrt{n-2}}{\sqrt{1-r^2}} \\
 &= \frac{0,937 \sqrt{25-2}}{\sqrt{1-(0,937)^2}} \\
 &= \frac{0,937 \sqrt{23}}{\sqrt{1-0,877969}} \\
 &= \frac{(0,937) (4,795)}{\sqrt{0,122031}} \\
 &= \frac{4,492915}{0,3493293574837} \\
 &= 12,918
 \end{aligned}$$

The results of the manual t-test above of 12,918 can be known from the t-calculated value of $t_{\text{table}} >$, which is $12.918 > 1.708$ which means that there is a positive influence of the Montessori Method on student learning outcomes.

Discussion of Research Results

This research was conducted at SD Negeri 040491 Batukarang, Batukarang Village, Payung District. To determine the initial ability of students, researchers conducted a Pretest with the number of multiple-choice questions and with the same type of questions, obtained results with an average of 63.2 so that it can be said that the initial ability failed. After conducting the pretest, researchers delivered the material using the

Montessori Method. At the end of the lesson, the researcher again gave a posttest to determine the success rate. The results of the posttest have increased success from the pretest results given earlier. The posttest results that have been tested are 80.2 so that it can be said that the success rate of student learning outcomes has increased. Researchers also used questionnaires as a data collection tool with a total research sample of 25 students. The purpose of conducting this study was to find out how much influence the Montessori Method had on grade IV students at SD Negeri 040491 Batukarang.

a. Validity Test

The processing of validity test data is known that out of the 40 number of questions there are 23 valid questions and it is known that from the 30 number of existing questionnaires there are 18 valid questionnaires. Based on the results of this validity, it can be seen that the number of questions and questionnaires that are already valid researchers can continue research.

b. Normality Test

From the results of data processing, the significance value is 0.179. Based on the results of these calculations, it can be seen that the significance value of the Montessori Method on student learning outcomes is greater than 0.05, it can be concluded that the data from the Montessori Method on student learning outcomes are normally distributed.

c. Correlation Test

The results of this study show that the Montessori Method has an influence on student learning outcomes. This is evident from the value of r_{xy} 0.953. Based on the interpretation table of r values, the correlation r_{xy} 0.953 lies in the range of r values 0.800-1.000 so, it can be concluded that the level of relationship between Montessori Method variables and student learning outcomes has a very strong influence.

d. Uji Hipotesis

The Montessori method is a method that has a positive impact on student learning outcomes through the behavior or actions of a teacher to transfer knowledge, so the method used by teachers is very instrumental in students at school because a teacher has many roles at once, one of which is as a motivator. Based on the results of this study shows that the Montessori method has a positive and significant influence, this is evident from the calculated t -value of t -table \geq of $12.918 \geq 1.708$. Thus, H_0 is accepted, that is, there is a significant influence between the numeracy literacy learning model (X) and student learning outcomes (Y).

CONCLUSIONS AND RECOMMENDATION

Based on the discussion of this chapter, the researcher describes the conclusions, implications, limitations of the study, and suggestions compiled based on all research activities regarding the influence of the Montessori Method on Student Learning Outcomes in Theme VIII of the Area Where I Live Class IV SD Negeri 040491 Batukrang Learning Year 2022/2023 as follows: 1. The implementation of the Montessori Method on Student Learning Outcomes in Theme VIII of the Area Where I Live Class IV SD Negeri 040491 Batukarang is by giving Pretest and Posttest to respondents, the test is lightened by 20 questions each. Before being given treatment, researchers provide a Pretest to determine the extent of students' knowledge about the material in theme 8, subtheme 1 learning.

1. The process of implementing the Montessori method on student learning outcomes in theme VIII of the area where I live grade IV SD Negeri 040491 Batukarang is to give Pretest and Posttest to students, the test is given 20 questions each. Before being given treatment to students, researchers give a Pretest to determine the extent of students' knowledge about the material in theme VIII, subtheme 1, learning 1. After getting the Pretest results, the researcher gave treatment to students using the Montessori Method, after giving treatment to students the researcher gave Posttest, this was done so that researchers knew the extent of the student's ability after being given treatment.
2. Student learning outcomes with the application of the Montessori Method in Theme VIII of the Area Where I Live Class IV SD Negeri 040491 Batukarang increased. This can be seen from the average score

of Pretest students of 63.2 which is in the Less category, while the average Posttest score of 80.2 which is in the very good category.

3. The influence of the Montessori Method on Student Learning Outcomes in Theme VIII of the Area Where I Live in Class IV of SD Negeri 040491 Batukarang is very strong. This can be proven by the value of the correlation coefficient of 0.953 which is in very strong interspersion. To find out whether the hypothesis is accepted or rejected, $t_{\text{calculate}} \geq t_{\text{of the table}}$, which is $12.918 \geq 1.708$, which means that there is an influence of the Montessori Method on student learning outcomes. Thus H_a is accepted and H_0 is rejected.

Implication

Based on the results of this research, the theoretical and practical implications

1. Theoretical Implications

The theoretical implications in this study are:

- a. The results of this study are expected to determine the influence of the Montessori Method on Student Learning Outcomes in Theme VIII of the Area Where I Live Class IV SD Negeri 040491 Batukarang Learning Year 2022/2023.
- b. The results of this study are expected to enrich the insight or knowledge of researchers, especially in the field of education and can be a useful reference for other research.

2. Practical Implications

- a. The results of this research are expected to be one of the considerations for the Elementary School Teacher Education (PGSD) study program of Santo Thomas Catholic University Medan in the context of improving and improving elementary school teacher education graduates.
- b. The results of this study are expected to be a discourse for other students who want to conduct further research on the influence of the Montessori Method on student learning outcomes.

Research Limitations

1. This research was conducted in a very short time due to the situation and lack of funding from researchers because this research was carried out outside the city.
2. At the time of filling out the test given by the researcher, there were still many students who answered the test was unclear and the student's name was incomplete.
3. The implementation of the Montessori Method can be done on theme VIII of the Area Where I Live Subtheme 1 My Living Environment Learning 1 in grade IV SD Negeri 040491 Batukarang which invites students to be more active and aims to make students have a spirit of independence in learning and grow student courage, but students who tend to be shy.

Suggestion

Based on the results of research that has been carried out by researchers, suggestions can be put forward that can develop learning success in schools, including the following:

- a. For Teachers As input material in developing the quality of learning to be fun and consideration to further motivate students in learning.
- b. For Schools As information material and one of the evaluations of how important the application of the Montessori method is to help overcome difficulties in the learning process.

For Further Researchers As further reference material on the Montessori method on student learning outcomes. This research is expected to be one of the bases and inputs in developing further research

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