Abdul Rahman Rahman

The Influence of the Campus Teaching Program on the Mathematical Literacy Ability of Parepare Students

JURNAL DOSEN

LP2M

Universitas Muhammadiyah Pare-Pare

Document Details

Submission ID

trn:oid:::1:3288829667

Submission Date

Jul 2, 2025, 9:31 AM GMT+7

Download Date

Jul 2, 2025, 9:53 AM GMT+7

File Name

m_on_the_Mathematical_Literacy_Ability_of_Parepare_Students.docx

File Size

639.1 KB

14 Pages

5,508 Words

32,116 Characters

16% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Small Matches (less than 12 words)

Exclusions

- 13 Excluded Sources

Match Groups

46 Not Cited or Quoted 15%
Matches with neither in-text citation nor quotation marks

4 Missing Quotations 1%
Matches that are still very similar to source material

0 Missing Citation 0%
Matches that have quotation marks, but no in-text citation

0 Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

13% Internet sources
9% Publications
5% Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Match Groups

- **46** Not Cited or Quoted 15%
  Matches with neither in-text citation nor quotation marks
- **4** Missing Quotations 1%
  Matches that are still very similar to source material
- **0** Missing Citation 0%
  Matches that have quotation marks, but no in-text citation
- **0** Cited and Quoted 0%
  Matches with in-text citation present, but no quotation marks

Top Sources

13% Internet sources
9% Publications
5% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Internet	mafiadoc.com 1%
2	Internet	ijsshr.in 1%
3	Internet	www.jonedu.org <1%
4	Internet	eprints.uad.ac.id <1%
5	Publication	N Ratnaningsih, E Hidayat. "Error analysis and its causal factors in solving mathe... <1%
6	Student papers	Universitas Negeri Semarang <1%
7	Publication	Hurriyati Ratih, Tjahjono Benny, GafarAbdullah Ade, Sulastri, Lisnawati. "Advance... <1%
8	Internet	ojs.unm.ac.id <1%
9	Internet	proceeding.umsu.ac.id <1%
10	Internet	media.neliti.com <1%

11	Internet	
techniumscience.com		<1%
12	Publication	
N Nugraheni, EF Sari. "Mathematical literacy ability of the elementary school teac...		<1%
13	Student papers	
Universitas Musamus Merauke		<1%
14	Internet	
journal.uinmataram.ac.id		<1%
15	Publication	
D Trapsilasiwi, E Oktavianingtyas, I W S Putri, R Adawiyah, E R Albirri, F F Firmans...		<1%
16	Internet	
ejurnal.org		<1%
17	Internet	
www.slideshare.net		<1%
18	Publication	
Elen Firdaus. "Transformasi Pendidikan Abad ke-21 Melalui Penerapan Program K...		<1%
19	Internet	
jurnal.ustjogja.ac.id		<1%
20	Internet	
www.grafiati.com		<1%
21	Internet	
www.jsss.co.id		<1%
22	Publication	
S Syuhendri. "Effect of conceptual change texts on physics education students' co...		<1%
23	Publication	
Inayanti Fatwa, Hariani Harjuna. "The Influence of The Quizizz Paper Mode Applic...		<1%
24	Internet	
api.scienceweb.uz		<1%

25 Internet
eprints.hamzanwadi.ac.id <1%

26 Publication
Aan Putra, Selvia Erita, Mhmd Habibi, Rilla Gina Gunawanand Febria Ningsih. "Co... <1%

27 Internet
icomse.fmipa.um.ac.id <1%

28 Internet
matematika.fmipa.unp.ac.id <1%

29 Publication
What Can PISA 2012 Data Tell Us?, 2016. <1%

30 Publication
Yeni Fitriya, Ali Mustadi, Ikhlasul Ardi Nugroho, Andri Anugrahana. "Pre-service t... <1%

31 Internet
www.neliti.com <1%

32 Internet
zombiedoc.com <1%

33 Publication
Sellanidia Antika Sari, Rizqona Maharani, Salvador V. Briones II. "Development O... <1%

34 Publication
Selviyanti Selviyanti, Rusdi Rusdi, Dwi Cahyadi Wibowo. "PERAN MAHASISWA KAM... <1%

35 Student papers
The Hong Kong Polytechnic University <1%

36 Internet
abdiinsani.unram.ac.id <1%

37 Internet
www.jptam.org <1%

EDUMASPUL JURNAL PENDIDIKAN
Vol. x – No. x, year (xxxx), page
|ISSN 2548-8201(Print)|2580-0469)(On line)|

The Influence of the Campus Teaching Program on the Mathematical Literacy Ability of Parepare Students

Abdul Rahman[1], Arifin[2], Sofia[3], Desi Ratna Sari[4]
[1,2,3,4](Department of Mathematics Education, Universitas Muhammadiyah Parepare, Indonesia)

* Corresponding Author. E-mail:[1]rahmananyer01@gmail.com

Receive: dd/month/year	***Accepted:***	***Published:***

Abstrak

Penelitian ini merupakan penelitian eksperimen yang bertujuan untuk mengetahui pengaruh program kampus mengajar terhadap kemampuan literasi matematika siswa di kota Parepare. Populasi penelitian ini adalah Siswa SMP Sederajat Se-Kota Parepare. Sampel pada penelitian ini yakni salah satu penerima manfaat program kampus mengajar yakni SMP AL Badar Kota Parepare dengan teknik pengambilan sampel Purposive Sampling. Data penelitian ini diperoleh dengan menggunakan instumen berupa tes uraian yang terdiri dari 3 butir soal. Teknik analisis data yang digunakan adalah analisis data statistika deskriptif dan analisis data statistika infrensial. Hasil analisis statistika deskriptif hasil preetest menunjukkan bahwa rata-rata kemampuan literasi matematika untuk kelompok eksperimen 52,50 dan kelompok kontrol 53,15. Setalah penerimaan manfaat program kampus mengajar terhadap kelompok eksperimen nilai rata-rata kemampuan literasi matematika siswa sebesar 73,62 dan kelas kontrol 66,38. Hasil analisis statistika inferensial berdasarkan uji independent sample test menunjukkan bahwa nilai sig. 0,785 > α. Sehingga H_1 diterima dan H_0 di tolak. maka dapat disimpulkan bahwa ada pengaruh positif program kampus mengajar terhadap kemampuan literasi matematika siswa di Kota Parepare.

***Kata Kunci**: Kampus Mengajar, Literasi Matematika*

Abstract

This experimental research aims to determine the effect of the campus teaching program on students' mathematical literacy abilities in Parepare. The population of this study were students of junior high schools in Parepare. The sample in this study is one of the beneficiaries of the teaching campus program, namely SMP AL Badar, Parepare using the Purposive Sampling technique. The research data was obtained using an instrument in the form of an essay test consisting of 3 questions. The data analysis technique used is descriptive statistical data analysis and inferential statistical data analysis. The results of the descriptive statistical analysis of the pretest results showed that the average mathematical literacy ability for the experimental group was 52.50 and the control group was 53.15. After receiving the benefits of the teaching campus program for the experimental group, the average score for students' mathematical literacy was 73.62 and that of the control class was 66.38. The results of inferential statistical analysis based on the independent sample test show that the sig. 0.785 > α. So H1 is accepted and H0 is rejected. it can be concluded that there is a positive influence of the campus teaching program on students' mathematical literacy skills in Parepare.

Keywords: *Teaching Campus, Mathematical Literacy*

Introduction

Literacy is a person's ability to read, write, speak, calculate, and solve problems related to everyday life. Good literacy provides students with the basis for forming logical, creative, and analytical thinking. Therefore, it is hoped that students can master literacy skills, especially mathematical literacy, as a provision in determining their success in developing their knowledge, especially in solving problems in everyday life. Considering the importance of mathematical literacy skills, efforts are needed to develop these abilities. So the mathematics learning process has an important role in making this happen. Mathematics learning should provide opportunities for students to solve problems in various situations, not just provide routine questions. (Mansur, nd)

Mathematical literacy (OECG, 2013) is a comprehensive mathematical ability, involving the ability to formulate, apply, and interpret mathematics in various contexts, reason, and relate mathematics in everyday life. The report of the Expert Panel on Student Success in Ontario (Wiedy, 2019) states that mathematical literacy is a prerequisite for achieving success in life. With mathematical literacy, doors are open to every opportunity and a brilliant future. This is because having mathematical literacy skills will enable a person to make the right choices in life and be involved productively in society. This statement indicates the importance of someone having mathematical literacy skills.

In line with this opinion, Stecey & Tuner (Retno Kusumawardani, 2018) define literacy in the context of mathematics as having the power to use mathematical thinking in solving everyday problems in order to be better prepared to face life's challenges. Mathematical thinking in question includes a problem-solving mindset, reasoning logically, communicating, and explaining. This mindset was developed based on mathematical concepts, procedures, and facts that are relevant to the problem at hand. In addition, Stacey and Turner (Yuniati, 2020) describe that mathematical literacy can be interpreted as efforts to solve problems in mathematics and apply mathematical concepts in everyday life so that students can appreciate, understand, and face the challenges of the times.

In simple terms, mathematical literacy can be defined as a person's ability to understand and use mathematics in various contexts to solve problems in everyday life and be able to explain to others how to use mathematics. So, mathematical literacy skills are not just about knowledge in the numeracy aspect of mathematics. But it has a very broad meaning of knowledge. So mathematical literacy skills are not only interpreted as just counting but also the ability to understand concepts, solve problems, and relate mathematics to everyday life. The components of the mathematical process describe what a person does in an effort to solve problems in a situation, by using mathematical knowledge and the abilities needed for the process. When someone links the problem context with mathematical knowledge to solve the problem, he will formulate the problem mathematically, using concepts. Facts, procedures, and reasoning in mathematics as well as interpreting, applying, and evaluating a mathematical process.

For this reason, basic abilities are needed that underlie the mathematical process to assist in successful problem-solving. These basic abilities are described as follows (Putra & Vebrian. 2019):

a. Communication, Mathematical literacy involves communication skills, both written communication and oral communication.

b. Mathematization, Mathematical literacy involves mathematical abilities, namely the ability to change problems in a real-world context into mathematical sentences or interpret the results of solutions or mathematical models into problems in real-world contexts.
c. Representation: Mathematical literacy involves the ability to represent mathematical objects and situations through the activities of selecting, interpreting, translating, and using various forms of representation to present a situation. For example, representation in the form of graphs, tables, diagrams, equations, formulas, or concrete objects.
d. Reasoning, Mathematical literacy involves the ability to reason as a mathematical ability that is rooted in the ability to think.
e. Problem-solving, Mathematical literacy involves problem-solving in choosing or using various strategies in applying mathematical knowledge to solve problems.
f. Use of operations and formal symbol language and technical language. Mathematical literacy requires the use of operations and symbol language, formal language, and technical language which involves the ability to understand, interpret, manipulate, and make sense of the use of symbolic expressions in a mathematical context.
g. Mathematical Tools, Mathematical literacy requires the use of mathematical tools as assistance in order to solve problems. This involves knowledge and skills in using various tools that help mathematical activities, for example in the use of measuring instruments and calculators.

The literacy level criteria used are adjusted to the levels developed by PISA (OECD, 2017) as in Table 1 below:

Table 1. Mathematical Literacy Level Criteria

Levels		What students can do?
6	a	Conceptualize, generalize, and use information based on research and modeling in a complex situation and can use above-average knowledge.
	b	Connect different information sources and representations, and translate between them flexibly. Students at this level have high mathematical thinking and reasoning abilities.
	c	Apply knowledge, mastery, and relationships of mathematical symbols and operations, developing new strategies and approaches to deal with new situations
	d	Reflect on their actions and formulate and communicate their actions appropriately and illustratively in light of their findings, interpretations, opinions, and suitability to real situations.
5	a	Develop and work with models for complex situations, identify problems, and establish assumptions.
	b	Select, compare, and appropriately evaluate problem-solving strategies related to complex problems related to models.
	c	Work strategically using broad thinking and reasoning, and appropriately

		connecting symbolic representations and formal characteristics and knowledge related to situations.
	d	Reflect on their work and be able to formulate and communicate their interpretations and reasoning.
4	a	Work effectively with models in concrete but complex situations that may involve restrictions on making assumptions.
	b	Select and combine different representations, including symbols, relating them to real situations.
	c	Using a variety of limited skills and stating reasons with several views in a clear context.
	d	Provide explanations and communicate them accompanied by arguments based on their interpretations and actions
3	a	Carry out procedures clearly, including procedures that require sequential decisions.
	b	Solve problems, and apply simple strategies.
	c	Interpret and use representations based on different sources of information and reason directly.
	d	Communicate the results of their interpretations and reasons
2	a	Interpret and recognize situations with context that require immediate conclusions.
	b	Sort relevant information from a single source, and use a single presentation method.
	c	Work on basic algorithms, use formulas and carry out procedures or agreements.
	d	Give precise reasons for the results of the solution
1	a	Answer questions with a known context and all relevant information provided with clear questions.
	b	Identify information, and carry out common methods based on clear instructions.
	c	Shows an action in accordance with the stimulation given.

Source :(Syawahid & Putrawangsa, 2017)

However, seeing that the importance of mathematical literacy skills is not directly proportional to students' mathematical literacy abilities, this can be seen based on the Program for International Student Assessment (PISA) assessment conducted by the OECD (Organization for Economic Cooperation and Development). The assessment was carried out using surveys in a number of countries, in 2000, 2003, 2006, 2009, 2012, and 2015. The results of the PISA survey during that period showed that the average score for mathematical literacy was still below the average score for other countries. Thus, the position of Indonesian students' mathematical literacy is still below the mathematical literacy of other countries. Based on Gomes, Hirata, &

Oliveira (Habibi & Suparman, 2020), PISA is an assessment that is recognized worldwide,

In response to this problem, various policies have been taken by the government, one of which is MBKM (Free Learning Campus). One of the MBKM programs is the Teaching Campus. The teaching campus program is one of the programs of the Independent Campus Learning Program (MBKM) which aims to provide opportunities for students to learn and develop themselves through activities outside the classroom. The scope of campus teaching activities includes learning in all subjects focused on literacy, numeracy, and technology adaptation as well as school administration (Teaching Campus Team, 2022).

The campus teaching program is a learning and teaching activity in the basic education unit of the independent campus learning program which aims to provide opportunities for students to learn and develop themselves through activities outside the classroom. The campus teaching program opens up space for students to be able to apply their skills and knowledge in helping students in basic education units, especially in developing students' literacy and numeracy skills. Campus teaching programs provide opportunities for students to actualize student interests, enthusiasm, and desires. Apart from that, students are expected to be an inspiration for students to broaden their goals and insights.

Based on this description, the author is interested in conducting research with the title "The Influence of the Campus Teaching Program on the Mathematical Literacy Ability of Parepare Students".

Method

Types of research

This research is experimental research consisting of one experimental group or trial group and one control group. This research aims to determine the effect of campus teaching programs on students' mathematical literacy abilities.

Variables and Research Design

The variable in this research is students' mathematical literacy abilities. This research uses a pre-experimental design, namely a two-group pretest-posttest design. In this design, there is one experimental group. The class was given a pretest, then given campus teaching program treatment, and then given a posttest. The research scheme is presented in Table 3.1.

Table 3.1 Research Design

	Group	*Pre - Test*	*Treatment*	*Post - Test*
(R)	Experiment	Y1	X	Y2
(R)	Control	Y1	-	Y2

Source: (Sukardi, 2011, 185)

Information:

X :Treatment with the Teaching Campus Program at the Experimental School

Y1 : implementation pre-*test for the experimental group and control group*

Y2 : Score*post-test*

Population and Sample

The population of this research was Junior High Schools and equivalent Students in the even semester, academic year 2022/2023 in Parepare. From this population, one experimental group was then selected using a purposive sampling technique, namely SMP AL Badar Parepare. Apart from that, one of the control groups was chosen, namely SMP Negeri 13 Parepare.

Research Implementation Procedures

The procedures to be followed in this research are divided into two stages, namely the preparation stage and the implementation stage. The activities to be

carried out in these two stages are described as follows:

1. Preparation phase
   a. Conduct initial observations at all schools that receive the benefits of the campus teaching program for class 5 of 2023.
   b. Preparations were made for making instruments that will be used to measure students' mathematical literacy abilities.
   c. Test the validity of the instrument.
2. Implementation stage
   a. Give a pretest to the experimental schools that have been selected before the treatment is carried out.
   b. Conduct a pretest on several schools that have not benefited from the campus teaching program to serve as control schools that have students' mathematical literacy abilities that are equivalent to the experimental schools.
   c. Monitor experimental schools and control schools during the implementation period of the teaching campus program.
   d. Providing posttests to experimental schools and control schools to determine students' mathematical literacy abilities.
   e. Analyzing research data.

Research Instrument

The research instrument used in this research is a test instrument. The test instrument is a mathematical literacy ability test for pretest and posttest. The pretest is an initial test intended to measure the level of mathematical literacy abilities of students in the experimental group. In addition, the pretest was used to find a control group by looking at students' mathematical literacy abilities which were equivalent to the initial abilities of the experimental group. The posttest is intended to measure the level of students' mathematical literacy abilities after implementing the campus teaching program for the experimental group. Apart from that, the posttest is also used to see the results of mathematical literacy abilities in the control group.

The test proposed in this research measures level 3 mathematical literacy. This test was given to students before and after learning in two groups, namely the experimental group and the control group. The choice of question form is in the form of a description test whose question form contains aspects of mathematical literacy. Apart from that, choosing a test in the form of a description is intended to give students the freedom to use their mathematical literacy in solving the problems given. The pretest and posttest used have identical characteristics for each question item. The test tested in this study consisted of 3 questions with a time allocation of 60 minutes.

The assessment scores in this study are based on process capability assessments. According to Stacey (Jufri, 2014) Mathematical literacy in the process is students' ability to formulate, employ, and interpret to solve problems. Guidelines for scoring students' mathematical literacy were adopted from Linuhung (2013), based on a scoring technique adapted from the QUASAR General Rubric as follows:

Table 3.4. Mathematical Literacy Scoring Guidelines

Capabilities in Process Components	Indicator	Process Response	Score	Maximum Score
Formulate	Identifying facts and formulating	No answer	0	3
		Identifies but is less clear	1	

	problems mathematically	and precise		
		Identifying facts but incomplete and formulating problems but not yet precise	2	
		Identify facts and formulate problems completely, clearly and correctly	3	
Able to use concepts, facts, procedures and reasoning in mathematics	Strategies used at the problem solving stage	No answer	0	2
		The strategy used is not appropriate	1	
		the strategy used is correct	2	
	Carry out calculations based on certain rules or formulas	No answer	0	2
		Carrying out calculations but only partially correct	1	
		Carry out calculations clearly and correctly	2	
Interpret mathematics to solve problems	Drawing conclusions from one case based on a number of observed data	Completely wrong or don't answer at all	0	3
		It is completely wrong to draw conclusions from one case based on a number of observed data	1	
		Provides illustrations through relationships of existing facts, and can interpret but weak arguments. Draw a conclusion but it's still not true	2	

		Providing illustrations through models/ knowing the nature and relationships of existing facts, and interpreting them by providing strong arguments to draw a correct conclusion	3	
Total Score				10

Next, before the instrument is used for pretest and posttest. The instrument that will be used is first validated by two validators.

Data collection technique

Data collection to determine students' mathematical literacy abilities was carried out using technical tests. The test technique is carried out by giving pre-test and post-test questions.

Data analysis technique

Descriptive Statistical Analysis

Descriptive statistical analysis to describe the distribution characteristics of the experimental class includes average score, standard deviation, lowest score, and highest score. In addition, to determine students' mathematical literacy abilities in this study, they were interpreted using the four categories presented in table 3.2.

Table 3.2. Categorization of Students' Mathematical Literacy Abilities

Score Range	Category
$80 \leq skor \leq 100$	Tall
$60 \leq skor < 80$	Currently
$40 \leq skor < 60$	Low
$0 \leq skor < 40$	Very low

Source:(Prajono, 2018)

Meanwhile, the normalized gain formula will be used to determine the improvement that occurs in students' literacy abilities. The normalized gain formula developed by Hake (1999) is as follows:

$$Gain\ ternormalisasi(g) = \frac{skor\ posttest - skor\ pretest}{skor\ ideal - skor\ pretest}$$

The classification for normalized gain is presented in table 3.3.

Table 3.3. Normalized Gain Category

No	Score	Category
1	g 0.3≤	Low
2	0.3g<<0.7	Currently
3	g≥0.7	Tall

Source: Hake (1999)

Inferential Statistical Analysis

Data analysis techniques using inferential statistics were carried out for the purposes of testing research hypotheses. Before hypothesis testing is carried out, normality and homogeneity tests are first carried out. Normality and homogeneity testing was carried out using statistical methods with the help of SPSS. The normality test is used to determine whether the population studied is normally distributed or not. The normality test used the Kolmogorov-Smirnov test with a significance level of 5% with the following hypothesis:

H0: Data is not normally distributed

H1: Data is normally distributed

The normality test criteria are as follows:

H1 is accepted if the p-value≥*0.05*

*H0*rejected if the p-value is 0.05<

Homogeneity test to find out whether the two sample groups are homogeneous or not.

Next, the inferential statistics that will be used to test the hypothesis are as follows:

a. Students' mathematical literacy abilities
   To test the hypothesis of average mathematical literacy ability, the inferential statistics used was the independent sample t-test. The hypothesis for statistical testing purposes is formulated as follows:

$$H_0 : \mu_{g_1} = \mu_{g_2} \; Vs \;\; H_1 : \mu_{g_1} > \mu_{g_2}$$

Source: (Sugiyono, 2012: 88)

H0: The average mathematical literacy ability of school students who benefit from the campus teaching program is the same as the average mathematical literacy ability of school students who do not benefit from the campus teaching program.

H1: The average mathematical literacy ability of school students who benefit from the campus teaching program is greater than the average mathematical literacy ability of school students who do not benefit from the campus teaching program.

μ_{g_1}:Average mathematical literacy ability of school students who benefit from campus teaching programs.

μ_{g_2}:Average mathematical literacy abilities of school students who do not benefit from campus teaching programs

With Hypothesis acceptance criteria:

H0 is accepted if the p-value≥*0.05*

*H0*rejected if the p-value is 0.05<

Results and Discussion

Based on the results of the research that has been carried out, the research results will be described. This research uses two types of analysis results, namely analysis using descriptive statistics and inferential statistical analysis. Descriptive statistical analysis includes descriptive pretest and posttest results. Then, for the purposes of inferential statistical analysis, it includes testing the prerequisites for analysis and hypothesis testing.

Descriptive Statistical Analysis

a. Description of Pretest Results
   Descriptive statistics of mathematical literacy abilities before receiving the benefits of the Class 5 campus teaching program are presented in table 4.1 below.

   Table. 4.1 Descriptive Statistics of Pretest Results

Statistics	Pretest Statistical Values	
	Experimental Group	Control Group
Mean	52.50	53.15
Std. Deviation	10,575	8,846
Minimum	35	37
Maximum	72	70

   Based on table 4.1, it shows that the results of students' mathematical literacy abilities before coming to campus students taught Ang. 5 for the experimental group obtained an average of 52.50 with a standard deviation of 10.575. The minimum value is 35 and the maximum value is 72, while the skewness and kurtosis values are 0.204 and -0.550 respectively. Meanwhile, based on the results of the pretest carried out on the control group, the average was 53.15 with a standard deviation of 8.846. The minimum score is 37 and the maximum score is 70. The control group is students who did not benefit from the Class 5 campus teaching program.

If the results of students' mathematical literacy skills before receiving the benefits of the campus teaching program Ang. 5 are grouped in the form of categorization scale 4, then the frequency and percentage distribution is obtained as in Table 4.2. following:

Table 4.2. Frequency and Percentage Distribution of Pretest Results

Score Range	Category	Frequency		Percentage	
		K. Ex	K. Kon	K. Ex	K. Kon
$80 \leq skor \leq 100$	Tall	0	0	0	0
$60 \leq skor < 800$	Currently	8	11	23.5	32.4
$40 \leq skor < 60$	Low	23	23	67.6	67.6
$0 \leq skor < 40$	Very low	3	0	8.8	0

b. Description of Posttest results

Descriptive statistics of mathematical literacy abilities after receiving the benefits of the Class 5 campus teaching program are presented in Table 4.3. following.

Table. 4.3 Descriptive Statistics of Posttest Results

Statistics	Posttest Statistical Values	
	Experimental Group	Control Group
Mean	73.62	66.38
Std. Deviation	9,595	8,057
Minimum	55	51
Maximum	94	84

Based on Table 4.3, shows the results of students' mathematical literacy abilities after receiving the Ang campus teaching program. 5 for the experimental group obtained an average of 73.62 with a standard deviation of 9.595. The minimum value is 55 and the maximum value is 94, while the skewness and kurtosis values are 0.236 and -0.378 respectively. Meanwhile, based on the results of the posttest carried out on the control group, the average was 66.38 with a standard deviation of 8.057. The minimum value is 51 and the maximum value is 84.

If the results of students' mathematical literacy abilities after receiving the benefits of the campus teaching program Ang. 5 are grouped in the form of categorization scale 4, then a frequency and percentage distribution is obtained as shown in Table 4.4. following:

Table 4.4. Frequency Distribution and Percentage of Posttest Results

Score Range	Category	Frequency		Percentage	
		K. Ex	K. Kon	K. Ex	K. Kon
$80 \leq skor \leq 100$	Tall	11	2	32.4	5.9
$60 \leq skor < 800$	Currently	21	24	61.8	70.6
$40 \leq skor < 60$	Low	2	8	5.9	23.5
$0 \leq skor < 40$	Very low	0	0	0	0

c. Test n-gain

The n-gain test is used to see the magnitude of the increase that occurs in students' mathematical literacy abilities. Based on the results of the analysis, the n-gain for the experimental group was 0.4632, while the n-gain for the control group was 0.2894. If the n-

gain value is classified based on the gain normalization developed by Hake, it can be concluded that the n-gain for the experimental group is in the medium category while the control group's n-gain was in the low category.

Inferential Statistical Analysis

a. Prerequisite Test

The prerequisite tests referred to in this research are the normality test and the homogeneity test. This normality and homogeneity test was carried out using statistical methods with the help of SPSS 26. The aim of the normality test is to determine whether the population studied is normally distributed or not. Meanwhile, a homogeneity test was carried out with the aim of determining whether the two sample groups used had homogeneous samples. In this way, we can ensure that the experimental group and the control group have the same basic abilities. The test statistic used in this normality test is the Kolmogorov-Smirnov test with hypothesis

H0: The population is not normally distributed

H1: The population is normally distributed

With the criteria of rejecting H0 if the p-value is 0.05.<

Based on the results of data analysis using the Kolmogorov Smirnov and Shapiro-Wilk tests, sig results were obtained. = 0.200 and 0.558. The significant value obtained is greater than the significant value α = 0.05 where 0.200 > 0.05 and 0.558 > 0.005 so it can be concluded that the test data is normally distributed. So the normality test is fulfilled. Meanwhile, the homogeneity test results obtained sig. = 0.336. The significant value obtained was greater than the significant value α = 0.05 where 0.336 > 0.05 so it could be concluded that the test data was homogeneous.

b. Hypothesis Testing

The hypothesis in this research was tested using an independent samples test with the help of SPSS 26, where prerequisite tests had previously been carried out. The hypothesis to be tested is as follows.

$$H_0 : \mu_{g_1} = \mu_{g_2} \; Vs \;\; H_1 : \mu_{g_1} > \mu_{g_2}$$

With the criteria H0 is rejected if the p-value is 0.05.<

Based on the results of data analysis with inferential statistics, a sig value was obtained. = 0.785, then statistically the Ho hypothesis is rejected. So it can be concluded that H1 is accepted, namely that there is a positive influence of the campus teaching program on students' mathematical literacy skills in Parepare.

This research is experimental research which aims to determine the effect of the Teaching Campus Program on students' mathematical literacy abilities. The population of this research is junior high school and equivalent students Parepare. The research sample was taken from one of the groups of beneficiaries of the campus teaching program, namely Al Badar Middle School with a total of 34 students using purposive sampling. Apart from selecting one group as the beneficiary of the campus teaching program as the experimental group, one group was also determined as the control group, namely SMP Negeri 13 Parepare.

The results of descriptive statistical analysis show that the mathematical literacy skills of students who benefit from the campus teaching program have better abilities when compared to the control group. This can be seen from the average value of students' mathematical literacy abilities shown after the experimental group received the benefits of the campus teaching program as follows.

Table. 4.5. Comparison of Posttest Mathematical Literacy Ability

Group	Minimum Value	Maximum Value	Average	Standard

				Deviation
Experiment	55	94	73.62	9,595
Control	51	84	66.38	8,057

The results of the normality test data on students' mathematical literacy abilities after receiving the benefits of the campus teaching program showed that the sig. = = 0.200 and 0.558 (Kolmogorov-Smirnov Test). So, for the sig value. > α (α = 0.05), it can be concluded that the group data comes from a normally distributed population. Meanwhile, based on the homogeneity test results, the sig. = 0.336, so it can be concluded that the test data is homogeneous.

The hypothesis in this research was tested using an independent samples test with the help of SPSS 26. Based on the results of data analysis with inferential statistics, a sig value was obtained. = 0.785, then statistically the Ho hypothesis is rejected. So, it can be concluded that H1 is accepted, namely that there is a positive influence of the campus teaching program on students' mathematical literacy skills in Parepare. This is also in line with research conducted by Mian Siahaan, Rinawati Lumbansiantar, Dapot Tua Manullang, Vina Merina Br Sianipar (2023) with the title The Influence of the Class IV Teaching Campus Program in Improving the Literacy Competency and Numeracy Competency of Medan Al-Bukhari Muslim Integrated Middle School Students in 2020 Teachings 2022/2023.

Several factors influence the mathematical literacy abilities of students who receive the benefits of campus teaching programs, namely internal and external factors. These internal factors can come from intelligence, talent, interest, motivation, self-confidence, emotional stability, commitment, and health. Meanwhile, external factors are influenced by the school environment and learning facilities, in addition to several other external factors, namely the presence of students in campus teaching programs, learning models or methods, student programs.

One of the external factors that has an impact on Mathematics literacy skills is the presence of students from the Class 5 teaching campus program. This can be seen from the enthusiasm and enthusiasm of the students participating in learning with the programs provided. In the learning method, students learn more interactively by using all available facilities such as using learning media, from PowerPoint to using Canva. Apart from that, activating libraries, wall magazines and creating reading corners in each class are several alternative means in an effort to create a literacy culture. To improve students' mathematical abilities. Campus teaching program students actively provide assistance to students, starting from basic mathematical skills such as counting to practicing solving problems that require analysis such as story problems. Apart from that, campus teaching program students design learning that is not only focused on the classroom, but they try to carry out learning in a new atmosphere such as using the environment, the school yard, under the trees to study. This then provides enthusiasm and motivation for students in learning, especially studying mathematics.

Conclusion (5%)

Based on the results of research and discussion, it can be concluded that:

1. The average posttest results for the mathematical literacy skills of students in the experimental group were higher when compared to the control group, where the average score for the experimental group was 73.62 while the average score for the control group was 66.38.
2. The n-gain value for the experimental group was 0.4632 in the medium

category, while for the control group it was in the low category with a value of 0.2894.

3. There is a positive influence of campus teaching programs on students' mathematical literacy abilities.

Thank-you note

Thanks to Universitas Muhammadiyah Parepare for the APBU grant program, this research can be carried out.

Bibliography

Abidin, Y. et al. 2021. Literacy Learning. Jakarta: Bumi Literacy.

Danuri. 2017. Elementary School Mathematics Literacy. http://repository.upy.ac.id/

Habibi & Suparman. 2020. Mathematical Literacy in Welcoming PISA 2021 Based on the 21st Century. https://journal.lppmunindra.ac.id/index.php/jkpm/

Hake, R. 1999. Analyzing Cahnge/Gain Scores. Article.www.physics.indiana.edu/-sdi/AnalysingChange-Gain.pdf. (On line). Accessed 29 July 2016.

Jufri, Lucky Hriyanti. 2014. Application of Double Loop Problem Solving to Improve Mathematical Literacy Abilities and Self-Efficacy of Junior High School Students. UPI Bandung Thesis.http://repository.upi.edu/13750/

Linuhung, N. (2013). Application of the Wankat-Oreovocz Problem Solving Strategy and Probing Technique in Increasing the Mathematical Literacy of Middle School Students. UPI Bandung Thesis:http://repository.upi.edu/1829/

Mansur, N. (nd). Training Students' Mathematical Literacy with PISA Questions. https://journal.unnes.ac.id/sju/index.php/prisma/

PISA 2021: Mathematics Framework. Retrieved from:https://pisa2021-maths.oecd.org

Prajono, R. (2018). Profile of Mathematical Literacy Ability of Class VIII 1 Students at SMP Negeri 9 Kendari. Indonesian Digital Journal of Mathematics and Education, 5. http://idealmathedu.p4tkmatematika.org

Son, Yudi Yunika & Vebrian, Rajab. 2019. Mathematical Literacy PISA Model Mathematics Questions Using the Bangka Belitung Context. Yogyakarta: Deepublish.

Sugiyono. 2012. Statistics for Research. Bandung: Alphabeta.

Sukardi. 2011. Competency Education Research Methods and Practices. Jakarta : Earth of Letters.

Campus Teaching Team Director General of Higher Education, Research and Technology. 2022. Teaching Campus Guidebook Class 4 of 2022. Jakarta: Teaching Campus Program.

Retnawati, Heri. 2016. Quantitative Analysis of Research Instruments. Yogyakarta: Parama Publishing.

Retnawati, H. 2017. Proving the Validity of Research Instruments. Paper on Data Analysis Workshop Activities, Faculty of Economics and Business, IAIN Batusangkar.

Retno Kusumawardani, D et al. 2018. The Importance of Mathematical Reasoning in Improving Mathematical Literacy Skills. PRISMA, Proceedings of the National Mathematics Seminar. https://journal.unnes.ac.id/sju/index.php/prisma/

Syawahid, M., & Putrawangsa, S. (2017). Junior high school students' mathematical literacy abilities are viewed from learning styles. Beta: Journal of Tadris

Mathematics.https://doi.org/10.20414/betajtm.v10i2.121

Wiedy, Prasetyani. 2019. Analysis of Students' Mathematical Literacy Ability in Solving HOTS Type Questions Seen from the Learning Independence of MAN 1 Banyumas Students. Thesis: UM Purwekerto.https://repository.ump.ac.id/12563/

Yuniati, I., Juhana, A., Sudirman, S., Son, AL, & Gunadi, F. (2020). How is the Mathematical Literacy of Junior High School Students in Relations and Functions?: Exploratory Case Study. Journal of Mathematics Education.

Mian Siahaan, Rinawati Lumbansiantar, Dapot Tua Manullang, Vina Merina Br Sianipar. 2023. The Influence of the Class IV Teaching Campus Program in Improving the Literacy Competency and Numeracy Competency of Al-Bukhari Muslim Medan Integrated Middle School Students in the 2022/2023 Academic Year. Journal on Education Volume 05, No. 04, May-August 2023, pp. 14834-14849.

Author Profile

Abdul Rahman, Born in Parepare on January 1 1991. The researcher completed his undergraduate education in the Mathematics Education study program at the Universitas Muhammadiyah Parepare in 2013. In 2014 the researcher continued his undergraduate education at Universitas Negeri Makassar, Mathematics Education Masters Program. In 2022 he will be listed as a Mathematics Education Lecturer at the Mathematics Education Study Program, Universitas Muhammadiyah Parepare.

Arifin, Born in Watampone on September 5 1982. The researcher completed his undergraduate education in the Mathematics Education study program at Universitas Muhammadiyah Makassar in 2016. The researcher continued his undergraduate education at the Surabaya Institute of Technology, Master of Statistics Program and completed in 2018. Currently working as one of the Mathematics Education Lecturers at the Mathematics Education Study Program, Universitas Muhammadiyah Parepare.