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THE EFFECTIVENESS OF THE "LANCIPMAS–PRESISIMAS" MNEMONIC STRATEGY ON JUNIOR HIGH SCHOOL STUDENTS' ACCURACY IN DISTINGUISHING PYRAMIDS AND PRISMS

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ABSTRACT

This study aims to examine the effectiveness of the "LANCIPMAS–PRESISIMAS" mnemonic strategy in improving junior high school students' ability to accurately distinguish between pyramids and prisms. The study employed a quantitative approach using a quasi-experimental method with a non-equivalent control group design. The research population consisted of all eighth-grade students of SMP Negeri 3 Susoh during the second semester of the 2025/2026 academic year. The sample was selected through purposive sampling and comprised one control class consisting of 19 students and one experimental class consisting of 20 students. The research data were collected through a multiple-choice achievement test administered during the pretest and posttest phases, supported by documentation. The data were then analyzed using descriptive and inferential statistics. Inferential analysis was conducted using Welch's t-test, followed by the calculation of the effect size using Glass's delta index with the aid of SPSS software. The results indicated a significant difference in learning outcomes between the two groups. The experimental class achieved a mean posttest score of 89.47, while the control class obtained a mean score of 50.68. Welch's t-test yielded a p-value of < 0.001, indicating that the difference was statistically significant. Furthermore, the Glass's delta value of 6.654 was classified as a very large effect. Based on these findings, it can be concluded that the "LANCIPMAS–PRESISIMAS" mnemonic strategy is effective in helping students reduce cognitive load, improve memory retention, and enhance their accuracy in distinguishing and understanding the concepts of pyramids and prisms.

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INTRODUKTION

Education is one of the main elements in improving the quality of human resources. Through the learning process, students are expected to develop thinking skills, solve various problems, and understand scientific concepts in a structured manner. One of the subjects that plays an important role in achieving these objectives is mathematics. Mathematics learning is not only

oriented toward mastering computational skills but also aims to develop students' logical, critical, analytical, and systematic thinking skills, enabling them to understand and apply various mathematical concepts in different situations.

At the junior high school (SMP) level, students are required to master various abstract mathematical concepts, including geometry. Geometry studies the characteristics, measurements, relationships, and properties of various geometric shapes, requiring both visualization skills and conceptual reasoning. Therefore, understanding geometry depends not only on the ability to recognize shapes but also on the ability to relate visual representations to abstract concepts. Nevertheless, classroom practice shows that many students still experience difficulties in understanding geometry, particularly the topic of three-dimensional geometric shapes.

One of the topics that often causes difficulties for students is distinguishing between pyramids and prisms. This difficulty arises because students are required to understand and remember various characteristics of three-dimensional geometric shapes, such as the shape of the base, the number of faces, the number of edges, and the number of vertices. In addition, classroom instruction is still largely based on teacher explanations and practice exercises, leading students to rely on memorization rather than developing a deep conceptual understanding. As a result, students experience difficulties in remembering and accurately distinguishing the characteristics of three-dimensional geometric shapes (Fauzi & Arisetyawan, 2020; Nurlatif, Muchyidin, & Nursuprianah, 2020).

Based on preliminary observations conducted at SMP Negeri 3 Susoh, it was found that some students still had difficulty distinguishing between pyramids and prisms. Several students were still unable to correctly identify the number of faces and the shape of the base of these two three-dimensional geometric shapes. This finding indicates that students need a learning approach that can help them remember and understand the material more easily.

One approach that can be used to address this problem is the implementation of mnemonic strategies. Mnemonics are instructional techniques that help students retain information through word associations, acronyms, or specific patterns. The use of mnemonic strategies enables students to simplify complex information into memorable keywords, thereby enhancing memory retention and improving conceptual understanding (Verdianingsih, 2020). According to the Dual Coding Theory, information is more easily understood when it is presented by combining visual and verbal representations, thereby strengthening students' understanding of the concepts being learned (Awwalin, 2021). In geometry learning, the ability to connect visual representations with mathematical concepts is essential for helping students accurately understand the characteristics of three-dimensional geometric shapes (Awwalin, 2021).

Various studies conducted in recent years have shown that students' ability to understand geometry remains relatively low and continues to pose challenges in the learning process. In particular, learning about three-dimensional geometric shapes remains a significant issue. A study conducted by Nurlatif, Muchyidin, and Nursuprianah (2020) found that junior high school students experienced misconceptions in distinguishing the characteristics of polyhedra due to limited visualization skills and the lack of instructional strategies that support conceptual understanding (Nurlatif, Muchyidin, & Nursuprianah, 2020).

Furthermore, a study conducted by Ellissi and Permata (2022) reported that learning methods that integrate verbal and visual representations improve students' understanding of geometric

concepts more effectively than conventional instructional methods. These findings highlight the importance of using instructional approaches that facilitate the encoding of information into students' memory.

In addition, a study by Verdianingsih (2020) revealed that innovative instructional strategies integrating verbal and visual elements improved students' learning outcomes and increased their engagement in mathematics learning. Based on the background of the problem described above, it is evident that students still experience difficulties in understanding and distinguishing the characteristics of pyramids and prisms. These difficulties indicate the need for an instructional strategy that can help students understand the concepts while improving their ability to remember the characteristics of these three-dimensional geometric shapes. Therefore, this study aims to analyze the effectiveness of the Indonesian-language mnemonic strategy, “LANCIPMAS–PRESISIMAS”, in improving students' accuracy in distinguishing between pyramids and prisms. Through the implementation of this mnemonic strategy, it is expected that students will be able to remember and understand the characteristics of each geometric shape more easily, thereby improving their accuracy in identifying and distinguishing pyramids and prisms..

In the context of this study, an Indonesian-language mnemonic strategy called “LANCIPMAS–PRESISIMAS” was developed as a set of keywords designed to help students distinguish the characteristics of pyramids and prisms quickly and accurately. This strategy is expected to provide a more meaningful learning experience, as it encourages students not only to memorize the concepts but also to associate them with easily remembered keywords. The "LANCIPMAS–PRESISIMAS" mnemonic strategy is a mnemonic developed in this study to help students distinguish between pyramids and prisms. LANCIPMAS is derived from the Indonesian words lancip (pointed) and limas (pyramid), while PRESISIMAS combines presisi (precise) and prisma (prism), serving as memory cues for the distinguishing characteristics of the two three-dimensional geometric shapes.

Considering the importance of students' ability to distinguish between pyramids and prisms in geometry learning, as well as the limited use of memory-based instructional strategies in mathematics classrooms, this study seeks to examine whether the Indonesian-language mnemonic strategy LANCIPMAS–PRESISIMAS is effective in improving junior high school students' accuracy in distinguishing between pyramids and prisms.

Based on the previous studies, it can be concluded that instructional strategies that support memory retention and conceptual understanding have considerable potential to improve students' learning outcomes in geometry. However, studies specifically focusing on the development and evaluation of keyword-based mnemonic strategies for distinguishing between pyramids and prisms remain limited. Therefore, this study offers a novel contribution by developing the Indonesian-language mnemonic strategy “LANCIPMAS–PRESISIMAS” as an alternative approach to teaching geometry at the junior high school level.

RESEARCH METHODOLOGY

This study employed a quantitative approach using a quasi-experimental method with a non-equivalent control group design. The use of numerical instruments and statistical analyses was intended to evaluate the effect of the treatment on the variables under investigation (Abraham & Supriati, 2022). Accordingly, the objectivity and validity of the research findings were ensured through measurable hypothesis testing.

The research employed a quasi-experimental design using a non-equivalent control group design. According to Saputri (2024), a quasi-experimental design is appropriate when researchers are unable to randomly assign participants to groups but still seek to evaluate the effect of a treatment on a particular group by comparing an experimental group with a control group.

In this study, the non-equivalent control group design consisted of two groups: an experimental group and a control group. The experimental group received instruction using the Indonesian-language mnemonic strategy LANCIPMAS–PRESISIMAS, whereas the control group was taught using conventional instructional methods. Both groups completed a pretest and a posttest to assess changes or improvements in students' ability following the implementation of the instructional intervention. The pretest was administered to identify students' initial level of ability, while the posttest was used to measure their learning outcomes after the instructional process had been completed (Maulia, 2023).

By administering a pretest and a posttest in both groups, this study measured the difference in students' improvement in accurately distinguishing between pyramids and prisms by comparing the experimental group with the control group.

Population and Sample

The population of this study consisted of all eighth-grade students at a junior high school during the second semester of the 2025/2026 academic year. Theoretically, a population refers to the entire group of individuals possessing specific characteristics identified by the researcher for investigation in order to draw research conclusions (BOKOLO & UWAH, 2024). The research sample was selected using a purposive sampling technique, in which participants were chosen based on specific considerations or criteria relevant to the objectives of the study (Wati et al., 2025). Two classes with comparable academic abilities were selected as the research sample. Based on the purposive sampling technique, which considered the similarity of students' initial abilities (Sugiyono, 2022), the two classes were assigned as the experimental group and the control group. The experimental group received instruction using the Indonesian-language mnemonic strategy “LANCIPMAS–PRESISIMAS”, whereas the control group continued to receive conventional instruction.

Research Instrument

The primary instrument used in this study was a learning achievement test consisting of multiple-choice questions designed to measure students' ability to distinguish the characteristics of pyramids and prisms. To ensure its appropriateness, the instrument was evaluated using the Pearson Product–Moment validity test and the Cronbach's Alpha reliability test. The instrument was considered suitable for use only after meeting the established standards of validity and reliability. The test items were developed based on geometry learning competency indicators relevant to the junior high school curriculum. The development of the research instrument followed established standards for constructing learning achievement assessment instruments. This was ensured by meeting appropriate validity and reliability requirements, thereby providing an accountable instrument for measuring students' learning outcomes (Qohar & Fauziyah, 2024).

Data Collection Technique

Pretetst and Posttest

In this quasi-experimental study, the administration of pretests and posttests was intended to measure students' learning progress following the implementation of the instructional intervention. By comparing students' performance before and after the learning process, the researcher was able to evaluate the effect of the intervention on students' learning achievement more objectively (Maulia, 2023). Furthermore, administering both pretests and posttests to the experimental and control groups enabled the researcher to compare changes in students' performance more accurately while controlling for differences in their initial abilities (Abraham & Supriyati, 2022). Therefore, the use of pretests and posttests in this study was intended to obtain quantitative data for analyzing the effectiveness of the Indonesian-language mnemonic strategy "LANCIPMAS–PRESISIMAS".

Documentation

Documentation was used to collect written and visual information that supported the primary data obtained in this study. The documentation included archives, records, photographs, and other documents related to the implementation of the research (Ardiansyah et al., 2023). In educational research, documentation plays an important role in providing authentic evidence of the research implementation process and strengthening the credibility of the data collected (Gagah Daruhado, 2024).

Data Analysis Techniques

To evaluate the effectiveness of the Indonesian-language mnemonic strategy LANCIPMAS–PRESISIMAS in improving students' accuracy in distinguishing between pyramids and prisms, the data analysis in this study was conducted in two stages. These stages consisted of descriptive statistical analysis and inferential statistical analysis.

Descriptive Statistics

The descriptive statistical analysis was conducted to describe the pretest and posttest results of both the experimental and control groups. According to Saputri (2024), this step is essential for providing an overview of the data and examining its distribution before hypothesis testing is performed. The descriptive analysis included the calculation of the mean, standard deviation, maximum score, and minimum score. In addition, descriptive statistics were used to organize and summarize the data, enabling the research findings to be interpreted more clearly before further statistical analyses were conducted (Gagah Daruhadi, 2024).

To ensure that the data met the underlying assumptions before proceeding to hypothesis testing, a series of prerequisite analyses was conducted using the following procedures:

Normality Test

A normality test was conducted to determine whether the data collected in this study satisfied the assumption of a normal distribution. Normality was assessed using the Shapiro–Wilk test for small sample sizes or the Kolmogorov–Smirnov test for larger samples. The data were considered to be normally distributed when the significance value (p-value) exceeded 0.05 (Qohar & Fauziyah, 2024). The validity of parametric statistical analyses, such as the

independent-samples t-test, depends on whether the assumption of normality is satisfied. According to Delacre et al. (2022), this is the reason why a normality test should be conducted as part of the prerequisite analyses prior to hypothesis testing.

Homogeneity of Variance Test

To ensure that the variances of the experimental and control groups were homogeneous, a homogeneity of variance test was performed. Equality of variances was examined using Levene's test. The data were considered homogeneous when the significance value was greater than 0.05 (Saputri, 2020). According to Delacre et al. (2022), the assumption of homogeneity of variance is required for the independent-samples t-test to ensure that the test results can be interpreted accurately.

Hypothesis Testing (Independent-Samples t-Test)

This study employed the independent-samples t-test to test the research hypothesis by comparing the mean posttest scores of the experimental and control groups. Theoretically, this parametric statistical test is appropriate when researchers intend to compare the means of two independent groups. Using this statistical technique, the significance of the difference in learning outcomes between the two groups following the instructional intervention can be accurately determined (Bokolo & Uwah, 2024). The use of the independent-samples t-test is also consistent with the characteristics of experimental research, in which the test is commonly applied to compare the means of two independent samples (Abraham & Supriyati, 2022). The research hypotheses were formulated as follows:

- H_0 : There is no significant difference in the mean learning outcomes between the experimental group and the control group.
- H_1 : There is a significant difference in the mean learning outcomes between the experimental group and the control group.

The decision criterion was as follows: if the significance value (p-value) was less than 0.05, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted, indicating that the Indonesian-language mnemonic strategy “LANCIPMAS–PRESISIMAS” was effective.

Effect Size Calculation

In addition to examining statistical significance, this study calculated the effect size using Cohen's d to determine the magnitude of the effect of the Indonesian-language mnemonic strategy “LANCIPMAS–PRESISIMAS” on students' learning outcomes. Effect size was calculated to measure the strength of the instructional intervention in this experimental study, enabling the researcher not only to determine whether a statistically significant difference existed but also to evaluate the magnitude of the intervention's effect on the variable under investigation (Verdianingsih, 2020).

- 0,20 = Small effect
- 0,50 = Medium effect
- 0,80 = Large effect

Calculating the effect size is essential because statistical significance alone does not always indicate the magnitude of the effect of an intervention in a research study (Delacre et al., 2022).

RESULTS AND DISCUSSION

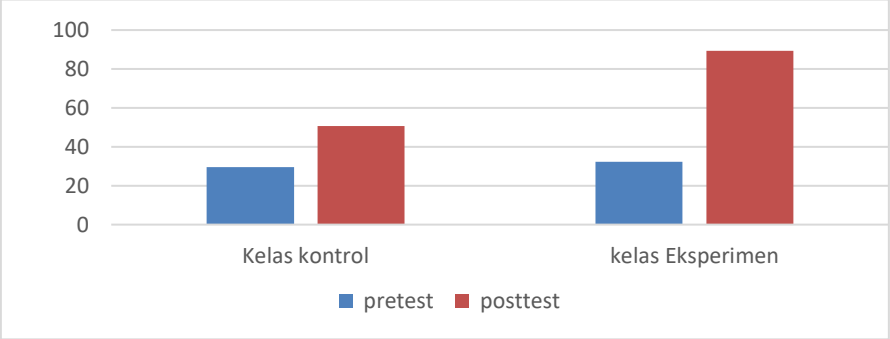
Descriptive statistical analysis was first conducted to describe the profile and general characteristics of the research data before proceeding to hypothesis testing. A summary of the descriptive statistical analysis is presented in the table below:

Table 1. Descriptive Statistics Summary for the Experimental and Control Groups

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Control Group Pretest	19	19	38	29.47	4.993
Control Group Prosttest	19	25	81	50.68	15.738
Experimental Group Pretest	20	16	55	32.30	9.663
Experimental Group Posttest	20	80	100	89.45	5.826

As presented in Table 1, the analysis of students' initial abilities indicated that the two groups were relatively comparable. The control group obtained a mean pretest score of 29.47 (SD = 4.993; range = 19–38), while the experimental group achieved a mean pretest score of 32.30 (SD = 9.663; range = 16–55). These findings indicate that the participants had comparable academic performance prior to the implementation of the intervention. Following the implementation of the instructional intervention, improvements in learning outcomes were observed in both groups. The mean posttest score of the control group increased to 50.68 (SD = 15.738). In contrast, the experimental group achieved a substantially higher mean posttest score of 89.45 (SD = 5.826). The difference of 38.77 points in the mean posttest scores between the two groups suggests that the Indonesian-language mnemonic strategy “LANCIPMAS–PRESISIMAS” had a substantial positive effect on improving students' learning outcomes.

Figure 1. Comparison of the Mean Scores of the Experimental and Control Groups



As shown in Figure 1, the data indicate that the two groups had relatively comparable initial competencies before the instructional intervention was implemented. However, following the intervention, the experimental group demonstrated a marked increase in its posttest performance, achieving a mean score of 89.45, whereas the control group attained a mean score of only 50.68. This substantial difference in posttest performance between the two groups provides strong evidence that the Indonesian-language mnemonic strategy “LANCIPMAS–PRESISIMAS”, implemented in the experimental group, had a considerable positive effect on improving students' learning outcomes.

A normality test was conducted to verify whether the pretest and posttest scores of both the control group (Class A) and the experimental group (Class B) followed a normal distribution. This analysis is a fundamental prerequisite that must be satisfied before conducting parametric statistical analyses. Since the sample size in this study was relatively small ($N \leq 50$), consisting of 19 students in the control group and 20 students in the experimental group, the Shapiro–Wilk test was selected as the primary method for assessing normality. The data were considered to be normally distributed when the significance value (p-value) was greater than 0.05 ($p > 0.05$).
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Table 2. Results of the Shapiro–Wilk Normality Test

Tests of Normality					
		Shapiro-Wilk			
Class		Statistic	df	Sig.	Kesimpulan
Class A (Control Group)	Pretest	0.971	19	0.796	Normal
	posttest	0.956	19	0.495	Normal
Class B (Experimental Group)	pretest	0.963	20	0.609	Normal
	posttest	0.937	20	0.211	Normal

Source: Primary data processed using SPSS

Based on Table 2, the results of the Shapiro–Wilk test showed that the significance values of all pretest and posttest data for both the control and experimental groups exceeded the threshold value of 0.05. These findings confirm that the assumption of normality was satisfied, indicating that all data were normally distributed. Therefore, the data analysis could proceed to the next stage using parametric statistical tests.

The homogeneity test was conducted to evaluate the equality of variances between the two research groups. Using Levene's Test, the statistical decision was determined based on the significance value (Sig.). If the significance value was less than 0.05 (Sig. < 0.05), the data variances were considered not homogeneous.

Table 3. Results of Levene's Test for Homogeneity of Variance

Test of Homogeneity of Variance				
	Levene Statistic	df1	df2	Sig.
Based on Mean	11.806	1	37	0.001
Based on Median	10.035	1	37	0.003
Based on trimmed mean	11.520	1	37	0.002

Source: Primary data processed using SPSS

Based on Table 3, the results of Levene's Test showed a significance value of 0.0001 ($p < 0.05$), indicating that the variances of the two groups were not homogeneous. However, this condition does not imply that the research data were unsuitable for further analysis. A violation of the homogeneity assumption is a common occurrence in experimental research, particularly when the intervention produces different levels of variability between groups. This condition is reflected in the standard deviation of the experimental group (SD = 5.826), which was considerably lower than that of the control group (SD = 15.738), indicating that the experimental group experienced a more consistent and uniform improvement. To address this condition, the analysis was continued using Welch's t-test, which has been demonstrated

to be a robust and valid method when the variances of two groups are unequal (Delacre, Lakens, & Leys, 2022).

Before conducting the main hypothesis testing, the analysis began by examining the equivalence of initial abilities between the control and experimental groups using Welch's t-test on the pretest data. The test results showed that the mean pretest score of the control group (M = 29.47; SD = 4.993) was not significantly different from that of the experimental group (M = 32.30; SD = 9.663), as indicated by the value of t(28.780) = 1.151 with a significance value of p = 0.257 (> 0.05).

Therefore, it can be concluded that the two groups had comparable initial abilities, indicating that differences in the subsequent results were more likely attributable to the intervention provided rather than to differences in students' initial abilities.
The main hypothesis testing was conducted using Welch's t-test (equal variances not assumed). The selection of this test was based on the results of the homogeneity test, which indicated that the data variances between the control and experimental groups did not meet the assumption of homogeneity, as shown by the value of F = 11.806 with a significance level of p = 0.001 (< 0.05). Therefore, Welch's t-test was selected as a more appropriate analytical method to accommodate the unequal variances between the groups.

Table 4. Results of Welch's t-Test for Hypothesis Testing

Kelompok	N	Mean	Std. Deviation	t	df	Sig.
Kelas Kontrol	19	50,68	15,738			
kelas Eksperimen	20	89,45	5,826			
Hasil Uji Welch's t-test				10,100	22,629	<0,001

Source: Primary data processed using SPSS

Based on Table 4, the results of the Welch's t-test showed a value of t(22.629) = 10.100 with a significance level of p < 0.001. The significance value, which was lower than 0.05, indicated that the null hypothesis was rejected and the alternative hypothesis was accepted. Therefore, there was a statistically significant difference in learning outcomes between the experimental and control groups. The mean posttest score of the experimental group (M = 89.45; SD = 5.826) was higher than that of the control group (M = 50.68; SD = 15.738), with a mean difference of 38.77 points. The 95% confidence interval estimated that the population mean difference ranged from 30.818 to 46.713 points. Since the entire interval was above zero, it can be concluded that the improvement in learning outcomes in the experimental group was statistically significant and not attributable to random variation.

The effect size was measured using Glass's delta because the variances of the two groups were not homogeneous. The analysis resulted in a value of 6.654, which was categorized as a very large effect (Delacre et al., 2022). Therefore, there was a significant difference in learning outcomes between the control and experimental groups, and the intervention provided to the experimental group had a very large effect on students' learning outcomes.

After identifying a significant difference in the mean learning outcomes between the two groups through Welch's t-test, a further analysis was conducted to determine the magnitude

of the effect size of the intervention provided. The effect size analysis was performed by examining the point estimate value obtained from IBM SPSS Statistics.

Table 5. Results of the Independent Samples Effect Size Analysis

	Independent Samples Effect Sizes				
		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
	Cohen's d	11.744	3.301	2,314	4,269
	Hedges' correction	11.989	3.233	2,266	4,182
	Glass's delta	5.826	6.654	4,456	8,835

Source: Primary data processed using SPSS

Based on Table 5.5, the effect size calculation using Glass's delta yielded a value of 6.654. Glass's delta was selected as the primary effect size indicator because the variances of the two groups were not homogeneous, making the use of the control group's standard deviation as the denominator more appropriate. Based on Cohen's d criteria, the threshold values for a small effect, medium effect, and large effect are 0.20, 0.50, and 0.80, respectively. Since the obtained Glass's delta value in this study greatly exceeded the minimum threshold for a large effect (6.654 > 0.80), the effect strength of the "LANCIPMAS–PRESISIMAS" mnemonic strategy implementation was categorized as a very large effect.

The finding of a very large effect size confirms that the implementation of the LANCIPMAS–PRESISIMAS mnemonic strategy in the experimental group not only produced a statistically significant effect (rather than occurring by chance), but also demonstrated a strong and meaningful practical impact in improving students' learning outcomes in the classroom.

Discussion

Based on the research data collected directly from SMP N 3 Susoh, Southwest Aceh Regency, the results of in-depth inferential statistical analysis revealed that the implementation of the "LANCIPMAS–PRESISIMAS" mnemonic strategy had a significant and meaningful impact on students' accuracy in distinguishing between pyramids and prisms. This empirical evidence was clearly demonstrated by the results of Welch's t-test, which showed a substantial difference in the mean posttest scores between the two groups. The experimental group that received the mnemonic strategy intervention achieved a mean score of 89.45, whereas the control group that received conventional instruction obtained a mean score of only 50.68. Furthermore, the effect size analysis using Glass's delta produced an estimated effect size value of 6.654, confirming that the implementation of this strategy had strong practical significance and was categorized as a very large effect.

The superior learning outcomes observed in this study cannot be separated from the characteristics of the "LANCIPMAS–PRESISIMAS" mnemonic strategy in optimizing students' working memory during the geometry learning process. Three-dimensional geometry is often considered abstract and confusing for junior high school students, particularly when they are required to identify and differentiate the structural components of pyramids and prisms. Through the use of a structured acronym or mnemonic device, this strategy successfully integrated new mathematical information into students' existing

cognitive schemas. The ease of recalling the keywords "LANCIPMAS–PRESISIMAS" helped students organize information and retrieve the main distinguishing characteristics of the two geometric solids more efficiently when solving geometry problems. Operationally, the acronym LANCIPMAS was introduced to students with the meaning "Limas itu Berujung Lancip" ("A pyramid has a pointed apex") to strengthen their understanding that the primary characteristic of a pyramid is the presence of a single vertex or apex. Conversely, the acronym PRESISIMAS represents "Presisi Sisi Alas dan Atapnya itu Prisma" ("A prism has precise and congruent base and top faces"), guiding students' conceptual understanding that a prism always has congruent and parallel base and top faces.

Theoretically, the success of this data interpretation is consistent with the principles of cognitive information processing, which state that organizing learning materials through mnemonic association techniques can reduce students' intrinsic cognitive load. Compared with the control group, where students tended to rely on mechanical memorization without a strong memory structure, students in the experimental group demonstrated more stable and long-lasting memory retention. Therefore, the actual implementation results at SMP Negeri 3 Susoh provide scientific evidence that the "LANCIPMAS–PRESISIMAS" mnemonic strategy is not merely a short-term memorization aid, but rather an effective cognitive strategy for mapping students' understanding of pyramids and prisms in a precise, meaningful, and systematic manner.

CONCLUSION

The results of this study revealed a significant difference in learning outcomes between students who received instruction using the "LANCIPMAS–PRESISIMAS" mnemonic strategy and those who participated in conventional learning. This difference was reflected in the mean posttest scores, where the experimental group achieved a score of 89.45, while the control group obtained a mean score of only 50.68. These findings indicate that the implementation of the "LANCIPMAS–PRESISIMAS" mnemonic strategy resulted in better learning outcomes compared with conventional instruction.

The implementation of the "LANCIPMAS–PRESISIMAS" mnemonic strategy was proven to have a very strong effectiveness and significant practical contribution in improving students' understanding of geometry in the classroom context. This finding was confirmed through effect size analysis using Glass's delta, which produced a value of 6.654 and was classified as a very large effect.

The use of mnemonic devices and structured acronyms in this strategy successfully minimized students' cognitive load in organizing, storing, and retrieving information related to the structural characteristics of pyramids and prisms, thereby improving memory retention in a precise and meaningful manner.

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