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The Effect of Self-Directed Learning Strategy on Students Reading Comprehension at SMP Swasta Pembda 2 Gunungsitoli

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A B S T R A C T

This study aims to evaluate the effect of self-directed learning (SDL) strategies on students' reading comprehension at PEMBDA 2 Gunungsitoli Private Junior High School. The background of this study shows that students experience difficulties in understanding reading texts, which has a negative impact on their academic development. The research method used was quasi-experimental with a pretest-posttest design involving two groups: an experimental group using the SDL strategy and a control group using conventional methods. The results showed a significant increase in students' reading comprehension skills in the experimental group compared to the control group. The average pretest score of the experimental group was 43.47 and increased to 89.47 on the posttest, while the control group only increased from 36.27 to 48.13. The t-test showed a significance value ($p < 0.05$), indicating the effectiveness of the SDL strategy in improving reading comprehension. In addition, the N-Gain value for the experimental group was 0.814 (high category), while the control group was only 0.185 (low category). The conclusion of this study is that the application of the SDL strategy significantly improves students' reading comprehension skills, creating a more independent, enjoyable, and meaningful learning experience. This study recommends the use of the SDL strategy in English teaching at the junior high school level as an effective method for improving student learning outcomes.

Keywords: *Self-Directed Learning (SDL), Reading Comprehension, Educational Strategies, Quantitative Research*

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INTRODUCTION

Reading proficiency is one of the fundamental abilities that students need to have in the rapidly evolving field of education since it is a key component of learning English and has a significant impact on both text comprehension and general language proficiency. Reading ability not only serves as a tool for understanding information, but also as a foundation for learning in various fields. Reading proficiency can be understood as a component of larger literacy, which encompasses all language skills, including speaking, listening, reading, and writing, according to Bu'ulolo (2021). With good reading skills, students can not only understand the information contained in various types of texts, such as articles, stories, or reports, but can also develop critical and analytical thinking skills. In addition, regular reading can enrich vocabulary and improve grammar, which in turn will support their speaking and writing skills. The Ministry of Education and Culture (MoEC) defines reading ability as the capacity to read, write, search, explore, process, and absorb information. As a result, in order to accomplish objectives, gain knowledge, and engage with society, students must be able to evaluate, react to, and utilize textual materials. Therefore, the development of reading ability should be a major focus in the English language learning curriculum, so that students can achieve higher language competence and be ready to face the challenges of communication in a globalized world.

Reading is an intricate and dynamic activity where people try to comprehend and assimilate information presented in written form. This process involves not only recognizing letters and words, but also understanding the context, meaning, and message that the author wants to convey. Reading, according to Linse (2005) in Fadia et al. (2024), is a set of abilities involved in deriving meaning and comprehending what is intended from printed words. Reading is a way to communicate, learn a language, and exchange ideas and information, claim Fitri & Lisa (2024). Based on the above definitions, it can be concluded that reading is a complex process that involves various skills to understand the meaning of printed text. In addition, reading also functions as a tool to master language, communicate, and share information and ideas with others. Reading is therefore more than just a mechanical exercise; it also fosters social interaction and the growth of linguistic abilities. According to Mufidah et al. (2022), reading comprehension is the process by which readers create meaning from the material they have read by combining information from the text with previously acquired knowledge. Therefore, reading is the act of comprehending every word in order to receive information from reading books, texts, etc.

Currently, Indonesia uses the Merdeka Curriculum where the curriculum provides flexibility to educators and learners to determine how to learn. Generally speaking, a strategy is a plan, tool, or technique used to complete a task. According to Yuni S. R. et al. (2024), learning strategies can also be understood as patterns of learning activities that teachers select and employ contextually, based on the characteristics of students, school settings, the surrounding environment, and the established learning objectives. According to Knowles (1975) in Westhuizen et al. (2022), SDL strategy is a process where people take the initiative, with or without assistance, to diagnose their learning needs, formulate learning objectives, identify human and material resources for learning, choose and apply appropriate learning strategies, seek and utilize the necessary resources, and evaluate learning outcomes. Students using this method should be able to recognize their own learning needs, such as comprehending difficult sentence structures or new terminology, rather of merely waiting for the teacher to give them instructions.

SDL is an appropriate strategy because it aims to increase learners' self-awareness of their needs and strengths, and help them formulate clear and specific learning goals. Thus, SDL supports more effective, sustainable and adaptive learning, enabling learners to better manage and direct their own learning experiences. Through SDL, teachers expect students to be able to read and understand every reading text given to students. In the reading process, students are expected to choose appropriate learning strategies, such as noting important ideas, making summaries, or discussing with classmates about the content. After reading, it is important for students to evaluate how well they understand the material they have read, for example, by answering questions or reflecting on what they have learned. This process not only develops their reading skills, but also increases their sense of responsibility and independence in learning, which is the essence of self-directed learning. Thus, students not only learn English academically, but also develop the ability to learn independently and effectively throughout their lives.

At SMP Swasta PEMBDA 2 Gunungsitoli, the students have trouble understanding reading texts, which is a serious problem in their academic progress. There are several things that contribute to this challenge; it doesn't just happen for no reason. Lack of good reading strategies is one of the primary causes, which means that pupils may not have the appropriate approaches or procedures to aid in their comprehension and analysis of the text's content. Additionally, low motivation to learn is also a contributing factor, as students who are not interested or enthusiastic about learning tend not to try their best to understand reading texts. It's also crucial to actively participate in the learning process; if students are not actively involved, either in discussions or other learning activities, they may not be able to absorb information well. These difficulties can hinder students' overall academic development. When students are unable to comprehend reading material well, this can have a negative impact on their performance in various subjects, as many subjects require good reading and text comprehension skills. In other words, difficulties in understanding reading material can be an

obstacle to students' academic success, which ultimately affects their ability to learn and achieve at school.

Based on the above phenomenon, this study was conducted by researchers to determine the effect of self-directed strategy in reading comprehension at SMP Swasta PEMBDA 2 Gunungsitoli with the title of quantitative research entitled.

METHOD

The researcher uses a thorough quantitative approach in this study to investigate the effects of the SDL Strategy on seventh-grade students at SMP Swasta PEMBDA 2 Gunungsitoli. The quantitative approach places a strong emphasis on analyzing data that has been transformed into numerical form using statistical techniques. Because it has complied with the scientific norms in a tangible or empirical, objective, quantifiable, logical, and systematic way, quantitative research—which is grounded in the positivist philosophy— is a scientific approach, according to Sugiyono (2019, p. 5). This indicates that positivism, an ideology that stresses data collection through scientific procedures, is the foundation of quantitative research. Because it adheres to measurable and empirically testable principles, this is seen as scientific.

In quantitative research, statistical methods for analyzing data include parametric and non-parametric studies. Each has unique characteristics related to the methods and assumptions used.

Parametric Analysis

Parametric analysis is a type of statistical analysis that assumes that the data being studied has a certain distribution, most often a normal distribution. When the data meets the assumptions of homogeneity of the variance and normal distribution, parametric analysis can produce more accurate and robust conclusions. Several assumptions are required for parametric tests, including: Information on a ratio or interval scale. 1) A population with a normal distribution provides the data. 2) There is homoscedasticity, or uniformity, in the variance between the groups under comparison. The t-test compares the means of two groups, ANOVA compares the means of more than two groups, and linear regression determines the relationship between independent and dependent variables. These are three examples of commonly used parametric tests. This approach can provide more reliable and efficient results in situations where these assumptions are met.

Nonparametric Analysis

When the data does not satisfy the assumptions required for parametric analysis, such as when the data is solely ordinal or categorical or is not regularly distributed, nonparametric analysis is used. Nonparametric methods are more adaptable because they don't rely on certain distribution assumptions. According to Siegel and Castellan (1988), nonparametric tests are better suited for data that do not meet parametric assumptions or have uncertain distributions. The T-test is very effective in identifying significant differences between groups when the data meets certain criteria, such as normal distribution and equal variance. Depending on the research methodology and the type of data, different T tests might be used: 1) Independent Samples T-test Compare the means of two unrelated groups, such as the average test scores of two separate classes. The main assumptions are simply that the two groups have homogeneous variances (homoscedasticity) and are normally distributed. 2) Paired Samples T-test Compares the means of two measures in a group, such as measures taken before and after treatment (e.g., test scores before and after training), where the data are paired or dependent. 3) One-Sample T-test Utilized for comparing a sample's mean to a known population mean or a certain standardized value.

Quasi-Experimental Method

The method used in this research is the Quasi-Experimental method. Quasi-experiment is a research method used to determine the effect of an intervention or treatment on measured outcomes, without random placement of subjects in treatment and control groups (Shinta A. L., et al., 2024). Quasi-experimentation is an approach in research that aims to assess how an intervention or treatment can affect certain outcomes. In quasi-experiments, research subjects

are not randomly placed into groups that receive treatment and groups that do not. This means that the researcher selects the groups based on certain criteria, rather than randomly, which may affect the outcome of the study. As such, while quasi-experiments can provide insight into the relationship between interventions and outcomes, they may have limitations in terms of variable control and potential bias compared to more rigorous randomized experiments. In this research design, a comparison of the effect of certain treatments with certain treatments with different treatments, namely the experimental group and the control group, is carried out. But before that, a trial (try out) is first carried out without conducting an evaluation afterwards on a group outside the experimental group and control group. The try out is an early phase in research that is important for evaluating research instruments before they are widely applied.

Nonequivalent Pretest-Posttest Design

This study applied an unequal pretest-posttest design in accordance with Cook & Campbell (1979), which involved two groups: an experimental group that used the Self-Directed Learning strategy during the learning process and a control group that followed the usual teaching method. Both groups underwent a pretest to assess their initial reading comprehension abilities, and after the intervention, a posttest was conducted to measure the improvements that had occurred. This design 25 enabled researchers to compare the performance of the two groups, thereby providing evidence of the effects of Self-Directed Learning.

Table 1 Nonequivalent Pretest-Posttest Design

Group	Pretest	Treatment	Posttest
Control group	O_1	X_1	O_2
Experimental group	O_1	X_2	O_2

Description O_1: Pretest
O_2: Posttest
X_1: Without Self-Directed Learning
X_2: With Self-Directed Learning

Variables of the Research

Two categories will be used to classify the variables in this study independent and dependent variables. These factors will be crucial in establishing how the intervention (self-directed learning) and the result (students' reading comprehension abilities) relate to one another.

Independent Variable: Use of Self-Directed Learning

The variable that is added or altered by the researcher in order to see how it affects the dependent variable will be referred to as the independent variable. Variable of independent will be the cause or factor that affects a study's outcome, claims Sugiyono (2020). This study will use the Self-Directed Learning as a teaching tool, and it will be the independent variable. Self-Directed Learning will be used as a learning tool to increase student engagement and cognitive retention during reading activities. The reason for choosing this technique lies in its ability to create an interactive and enjoyable independent learning experience.

Dependent Variable: Students' reading comprehension ability

By examining the outcomes, namely the dependent variable, this study seeks to quantify the impact of independent variables. A dependent variable is one that depends on or is impacted by independent variables, according to Sugiyono (2020). The reading comprehension skills of the pupils are the dependent variable in this study. Effective comprehension, analysis, and interpretation of texts are all part of this skill set. Reading proficiency is essential for academic performance since it facilitates comprehension of a variety of courses and fosters the growth of critical thinking abilities in children (Larasaty & Sulastri, 2019). Since reading proficiency is a crucial component of learning English, it is imperative that it be prioritized. Mukhlis et al. (2024) emphasise that students with stronger reading comprehension abilities will be better prepared to understand complex material and perform well academically. The selection of this variable is in line with the researcher's objective to assess the extent to which self-directed learning improves students' comprehension and

interpretation abilities. To demonstrate the effectiveness of creative game-based learning approaches in addressing literacy issues at the junior high school level, this study will examine the connection between self-directed learning use and students' reading comprehension abilities.

Population

In this study, the population refers to all individuals or objects that have the same characteristics and are the subject of the study. According to Sugiyono (2020), the population is a collection of elements that meet certain criteria related to the focus of the study. The population in this study consists of all seventh-grade students at SMP Swasta PEMBDA 2 Gunungsitoli in the 2024/2025 academic year, including the Archimedes and Gregomendel seventh-grade classes. This population was selected because these students are at a critical stage in developing reading comprehension skills, which will be key to their academic success. Additionally, challenges such as low motivation and limited vocabulary will be identified in this group, making it an appropriate population for evaluating the impact of memory games on reading comprehension.

Sample

The research sample is a subset of the population selected to represent the entire population in a study or part of the characteristics of the object under study. Sugiyono (2014) explains that the sample is part of a population that has the number and characteristics determined to be the target of research. In the context of research, population refers to all individuals, objects, or entities that has certain characteristics that want to be studied. However, due to limited resources, time, or cost, researchers cannot always collect data from the entire population. Therefore, they select a sample that is considered representative.

Cluster Random Sampling is the method of sampling that is employed. With this sampling technique, the population is separated into groups, or "clusters," and several of these clusters are chosen at random to be sampled. Cluster sampling is a sampling approach that involves selecting samples based on geographic regions or groupings within a certain population (Sugiyono, 2011). This technique aims to analyze something that exists to characterize a certain area by grouping research objects according to the area where the population resides. Researchers have selected classes, namely VII Archimedes class as group control many as 30 students and VII Gregomendel as group experiment many as 30 students as experimental classes with a total of 60 students at SMP Swasta PEMBDA 2 Gunungsitoli.

In this study, the main too be used is series of tests, including a pretest and a posttest, to measure the reading comprehension abilities of seventh grade students at SMP Swasta PEMBDA 2 Gunungsitoli. The pretest will be administered before the intervention to evaluate the students' basic reading comprehension abilities, while the posttest will be conducted after the intervention to assess the improvements resulting from the use of memory games. The tests will be designed based on a well-structured test grid to ensure validity and reliability. Using this test grid, the pretest and posttest will be carefully tailored to the research objectives and will provide a comprehensive assessment of students' reading comprehension abilities. This systematic approach will ensure that the data collected is reliable and accurately measures the effects of Self-Directed Learning.

A multiple-choice exam intended to gauge pupils' reading comprehension abilities will be the tool utilized in this investigation. There will be 25 questions on the test, five multiple-choice questions from each of the reading materials. Both pre-tests and post-tests will use these questions to gauge how well students have improved their reading comprehension. Intense reading will be the chosen reading style.

Instrument Test of Questions Items

This study will use a pretest-posttest method to collect data to assess the progress made by seventh-grade students in their reading comprehension skills. The pretest will be administered before the implementation of the SDL strategy to determine the baseline level of students' reading comprehension abilities. The pretest will consist of reading texts and comprehension questions designed to evaluate several levels of comprehension, such as literal,

inferential, and critical comprehension. The analysis of the effectiveness of the Independent Learning technique in improving reading comprehension will be based on the pretest results. To guarantee the accuracy and dependability of the results, the instrument will undergo a number of tests:

Validity Test

Each item is analyzed by examining the correlation between the item score and the total score. An item is considered valid if:

r count > r table → Valid
Sig. <0.05 → Valid

Reliability Test

Cronbach's Alpha is used to measure the instrument's reliability. The instrument is considered reliable if:

$\alpha > 0.7$ or $\alpha > 0.6$ → Reliable

Difficulty Level Test

The difficulty level of each item is going to be measured based on the proportion of correct answers.

0.0 – 0.30 → Difficult question
0.31 – 0.70 → Moderate difficulty question
0.71 – 1.00 → Easy question

Discriminating Power Test

An item's ability to discriminate is going to be measured using a discrimination index that indicates how well the item is going to be able to differentiate between high and low performers.

0.40 – 1.00 → Question suitable for use/acceptable
0.30 – 0.39 → Acceptable question, but need improvement
0.20 – 0.29 → Question needs revision
0.0 – 0.19 → Question unusable

Paired-sample t-test

The pretest and posttest results for the same group will be compared using a paired-sample t-test. If the p-value is less than 0.05, the difference will be regarded as significant.

Independent-sample t-test

To compare two unpaired groups, an independent-sample t-test will be used. Should the p-value be less than 0.05, a difference between the two groups will be deemed significant.

FINDINGS AND DISCUSSION

Research Findings

The Setting of the Research

This research was conducted at SMP Swasta PEMBDA 2 Gunungsitoli. Situated in Gunungsitoli City, Kecamatan Gunungsitoli City, Kabupaten Nias, Provinsi Sumatera Utara, the research environment

Technique of Analyzing the Data

Results of the Research Instrument Trial

The assessment tool was tested at SMP Swasta PEMBDA 2 Gunungsitoli, located in Gunungsitoli City, Gunungsitoli District, Nias Regency. The test was given to 60 seventh-grade students.

The Validity Test

The learning outcome test's validity was evaluated utilizing IBM SPSS Statistics 25.0, yielding the subsequent results: In order to assess the validity of the instrument, the researcher used a significance criterion of less than 0.05 to compare the calculated r value to the tabulated r value. When the calculated r value is greater than the table r value, the instrument is considered valid.

Tabel Validity Test Statistics R count > R table

Validity Statistics

Test Item	R count	R table	Remark
1	0.417	0.254	Valid
2	0,501	0.254	Valid
3	0.553	0.254	Valid
4	0.421	0.254	Valid
5	0.387	0.254	Valid
6	0.408	0.254	Valid
7	0.433	0.254	Valid
8	0.395	0.254	Valid
9	0.417	0.254	Valid
10	0.398	0.254	Valid
11	0.433	0.254	Valid
12	0.466	0.254	Valid
13	0.490	0.254	Valid
14	0.478	0.254	Valid
15	0.421	0.254	Valid
16	0.425	0.254	Valid
17	0.428	0.254	Valid
18	0.415	0.254	Valid
19	0.495	0.254	Valid
20	0.399	0.254	Valid
21	0.425	0.254	Valid
22	0.408	0.254	Valid
23	0.491	0.254	Valid
24	0.404	0.254	Valid
25	0.412	0.254	Valid

According to this data, r count > r table is confirmed to be valid for every test instrument.

Table Validity Test Statistics Sig. < 0.05

Validity Statistics

Test Item	Sig. Value	Remark
1	0.001	Valid
2	0.000	Valid
3	0.000	Valid
4	0.001	Valid
5	0.002	Valid
6	0.001	Valid
7	0.001	Valid
8	0.002	Valid
9	0.001	Valid
10	0.002	Valid
11	0.001	Valid
12	0.000	Valid
13	0.000	Valid
14	0.000	Valid
15	0.001	Valid
16	0.001	Valid
17	0.001	Valid
18	0.001	Valid
19	0.000	Valid
20	0.002	Valid
21	0.001	Valid
22	0.001	Valid

23	0.000	Valid
24	0.001	Valid
25	0.001	Valid

According to this data, it was determined that Sig. < 0.05 is valid for all testing tools.

Reliability Test

Once the instrument was validated, the researchers performed a reliability assessment employing Cronbach's Alpha formula. The objective of this test was to assess the degree of consistency or reliability of the instrument, enabling its flexible use in different scenarios. The researchers utilized the SPSS application to conduct the reliability calculation.

Table Reliability Test Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
0,823	25

Data calculations conducted with IBM SPSS Statistics 25.0 indicate that the total reliability score, as measured by Cronbach's Alpha, is 0.823. In comparison to the reliability index standard, this value suggests that the instrument's reliability level is elevated. Consequently, it can be inferred that the tool is dependable.

Difficulty Level Test

Table Difficulty Level Test Statistics

Difficulty Level Test Statistics		
Test Item	Mean	Remark
1	0.55	Moderate
2	0.41	Moderate
3	0.46	Moderate
4	0.40	Moderate
5	0.41	Moderate
6	0.36	Moderate
7	0.46	Moderate
8	0.36	Moderate
9	0.43	Moderate
10	0.43	Moderate
11	0.46	Moderate
12	0.40	Moderate
13	0.33	Moderate
14	0.35	Moderate
15	0.36	Moderate
16	0.35	Moderate
17	0.36	Moderate
18	0.40	Moderate
19	0.38	Moderate
20	0.35	Moderate
21	0.35	Moderate
22	0.40	Moderate
23	0.35	Moderate
24	0.43	Moderate
25	0.35	Moderate

The results of the difficulty level test conducted using SPSS showed that the 25 questions used by the researcher had a moderate level of difficulty, indicating that the questions were appropriate for seventh grade students and not too simple or excessively complex.

Discriminating Power Test

Table Discriminating Power Test

Discriminating Power Test		
Test Item	Correlation	Remark
1	0.335	Accepted
2	0.427	Accepted
3	0.482	Accepted
4	0.341	Accepted
5	0.304	Accepted

6	0.328	Accepted
7	0.352	Accepted
8	0.315	Accepted
9	0.335	Accepted
10	0.315	Accepted
11	0.352	Accepted
12	0.389	Accepted
13	0.418	Accepted
14	0.404	Accepted
15	0.342	Accepted
16	0.348	Accepted
17	0.349	Accepted
18	0.334	Accepted
19	0.421	Accepted
20	0.320	Accepted
21	0.348	Accepted
22	0.327	Accepted
23	0.418	Accepted
24	0.322	Accepted
25	0.334	Accepted

According to the findings of the discrimination test, all questions were considered suitable as they successfully differentiated between students with strong and weak reading skills.

Hypothesis Test (Comparative)

Paired Sample T-test

Paired Samples Test				
	Paired Differences	t	df	Sig. (2-tailed)
	95% Confidence Interval of the Difference			
Pair 1	Pre-test Control – Post-test Control	-4.644	29	0.000
Pair 2	Pre-test Experiment – Post-test Experiment	-10.613	29	0.000

Independent Sample T-test

Independent Samples Test				
	Score			
			Equal Variances Assumed	Equal Variances Not Assumed
Levene's Test for Equality of Variances	F		1.073	-
	Sig.		0.305	-
t-test for Equality of Means	t		-24.566	-24.566
	df		58	54.992
	Sig. (2-tailed)		0.000	0.000
	Mean Difference		-10.333	-10.333
	Std. Error Difference		421	421
	95% Confidence Interval of the Difference	Lower	-11.175	-11.176
		Upper	-9.491	-9.490

Test of N-Gain

$$\text{N} - \text{Gain Control} = \frac{\text{Posttest score} - \text{Pretest Score}}{\text{Maximum score} - \text{Pretest Score}}$$

$$\text{N} - \text{Gain Control} = \frac{48.1 - 36.3}{100 - 36.3}$$

$$\text{N} - \text{Gain Control} = \frac{11.8}{63.7}$$

$$\text{N} - \text{Gain Control} = 0.185$$

$$\text{N} - \text{Gain Experiment} = \frac{\text{Posttest score} - \text{Pretest Score}}{\text{Maximum score} - \text{Pretest Score}}$$

$$\text{N} - \text{Gain Experiment} = \frac{89.5 - 43.5}{100 - 43.5}$$

$$\text{N} - \text{Gain Experiment} = \frac{46}{56.5}$$

$$\text{N} - \text{Gain Experiment} = 0.814$$

Conclusion:

Table N-Gain Results

Group	N-Gain	Category
Control	0.185	Low
Experiment	0.814	High

$$\frac{\text{Posttest score} - \text{Pretest Score}}{\text{Maximum score} - \text{Pretest Score}}$$

Disscussions

The Common Response of the Research Finding

This section describes general responses to the research results, particularly those related to students' responses and observations during the treatment process. During the learning process that applied the Self-Directed Learning strategy, researchers noted significant changes in the learning behaviour of students in the experimental group. Students who were previously unenthusiastic about reading lessons began to show a more active attitude, becoming independent, proactive, and responsible for their own learning process in learning activities related to reading. The classroom atmosphere also became more lively, interactive, and participatory. In contrast, some pupils in the control group, which persisted in using traditional teaching techniques, seemed docile, disinterested, and unmotivated.

Student responses to the use of the SDL strategy were very positive. They stated that this strategy made the learning process more enjoyable and less monotonous. This activity is very effective as students and teachers interact with each other and share knowledge on descriptive text material using the SDL strategy. Many students in the experimental group said that with this SDL strategy, they felt challenged to focus more on reading and understanding the text in order to answer questions correctly. Even students who were previously quiet and lacked confidence in English class began to show the courage to participate and answer questions.

In addition, educators also responded positively to this approach. Based on teachers' observations during the teaching process, the SDL method succeeded in creating a supportive learning environment because students participated actively without feeling pressured. Teachers observed that students found it easier to understand vocabulary through texts and reading skills, thanks to visual elements, movements, and games that aided memory. Overall, feedback from teachers and students regarding the implementation of memory games was very positive and showed that this technique could be applied in everyday learning as an innovative alternative to increase student engagement and learning outcomes, particularly in reading skills.

Interpretive Analysis of Research Results

The results of statistical data processing, including validity, reliability, question difficulty level, discrimination power, normality, homogeneity, t-test, and N-Gain test, form the main basis of this study. Each of these statistical methods offers a detailed explanation of how the SDL approach aids in children's reading proficiency development. The findings of the paired sample t-test showed that scores for both the experimental and control groups increased between the pre-test and post-test. However, the score gain of the experimental group was much more than that of the control group. A significant difference before and after the treatment was also indicated by a significance value (Sig. 2-tailed) of 0.000 in both groups. But compared to the control group, the experimental group's t-value (-10.613) was higher, indicating that the SDL method treatment had a greater effect on improving learning outcomes.The independent sample t-test results confirmed the prior findings and showed a significant difference in posttest scores between the experimental and control groups. The average difference of 10.3 and a Sig. value of 0.000 < 0.05 show how successful the SDL strategy was compared to traditional learning techniques. The experimental group students were able to understand the reading material more effectively, as seen from this statistically significant difference. The SDL strategy played a role in this because it combines social contact, visual components, cognitive obstacles, and emotional involvement into one integrated activity that is known to improve text comprehension.

The N-Gain score, which evaluates how well learning progress is working, lends more credence to these conclusions. The control group only received an N-Gain score of 0.185, which is classified as low, whereas the experimental group had an N-Gain value of 0.814, which is classified as high. This data shows that memory games not only directly affect students' test scores, but also influence the learning process itself. Students become more engaged, challenged, and focused, all of which are critical components of constructivist education.

CONCLUSIONS

The findings of this study are supported by earlier data gathering and computations, which are described below: 1) According to the average test score computations, the control group's average pretest score was 36.27, while their average post-test score was 48.13. 2) The experimental group's average score was 43.47 on the pre-test and 89.47 on the post-test. 3) The results of this study based on hypothesis tests prove that the use of the SDL strategy has a significant effect on improving the reading comprehension skills of seventh-grade students at SMP Swasta PEMBDA 2 Gunung Sitoli. The paired sample t-test indicated a substantial improvement in learning outcomes for both the experimental and control groups, with a significance value of 0.000 ($p < 0.05$) for both groups. This led to the acceptance of the initial null hypothesis (H01: there is no significant difference between the pre-test and post-test results of the control group) and the alternative hypothesis (Ha1: there is a significant difference between the pre-test and post-test results of the control group). Similarly, the second null hypothesis (H02: there is no significant difference between the experimental group's pre-test and post-test results) was rejected for the experimental group, while the alternative hypothesis (Ha2: there is a significant difference between the experimental group's pre-test and post test results) was accepted. An N-Gain value of 0.814 (high category) in the experimental group and just 0.185 (low category) in the control group, however, show that the experimental group's rise in learning outcomes was much greater than that of the control group. Moreover, the results of the independent sample t-test between the post-test control group and the experimental group also showed a significance value of 0.000, with an average difference of 10.3 points, so that the third null hypothesis (H03: there is no significant difference in post-test results between the control and 42 experimental groups) was rejected, and the alternative hypothesis (Ha3: there is a significant difference in post-test results between the control and experimental groups) is accepted. Thus, statistically and empirically, it can be concluded that the SDL strategy is an effective, innovative, and superior learning strategy in improving students' reading comprehension skills compared to conventional methods, and is able to create a more independent, enjoyable, and meaningful learning experience that has a real impact on student learning achievement. 4) The SDL strategy has a significant impact on students' reading abilities compared to students who are not taught using the SDL strategy. Based on the data collection and statistical calculations that have been carried out, which show the significant impact of memory games on the reading comprehension abilities of seventh-grade students at SMP Swasta PEMBDA 2 Gunungsitoli. On the post-test, the control group's average score rose from 36.27 on the pre-test to 48.13. The experimental group, on the other hand, demonstrated a more notable improvement, as their average pre-test score of 43.47 rose to 89.47 on the post-test. There was a substantial difference before and after the treatment, as indicated by the paired sample t-test findings, which showed a significant rise in both groups with Sig. (two tails) = 0.000. But compared to the control group, the experimental group displayed a significantly greater gain. This conclusion is further supported by an independent sample t-test, which compares the post-test results of the two groups and also produces a significance value of 0.000 with an average difference of 10.3 points, indicating a significant effect of memory games compared to conventional methods. These conclusions are further supported by the N-Gain data, which show that the experimental group had a high N Gain score of 0.814 compared to the control group's low score of 0.815. Thus, the following conclusions might be made in light of this statistical analysis: a. The alternative hypothesis (Ha1) was adopted after the first null hypothesis (H01), which stated that there was no appreciable difference 43 between the pre-test and post-test results for the control group, was accepted. b. The alternative hypothesis (Ha2) is accepted while the second null hypothesis (H02), according to which there is no discernible difference between the pre-test and post-test findings for the experimental group, is accepted. c. The alternative hypothesis (Ha3) was accepted after the third null hypothesis (H03), according to which there is no discernible difference between the experimental group's and the control group's post experimental test scores, was rejected. In summary, students' reading comprehension abilities are significantly and favorably impacted by the application of the SDL technique. Compared to traditional teaching approaches, it not only enhances their learning results but also produces a more autonomous, pleasurable, participatory, and significant learning experience. The SDL approach has

been demonstrated to be a superior, creative, and successful learning method that is advised for usage in junior high school English language instruction, particularly in reading comprehension. The Self-Directed Learning (SDL) strategy has a significant and positive effect on students' reading skills.SDL has been proven to be more effective, innovative, and superior than conventional learning methods.Learning with SDL encourages independence, emotional involvement, and meaningful learning experiences for students.

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