The Effect of Discovery Learning in Improving SMAN 2 Tambang First-Year Students' Reading Comprehension at Recount Text

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Article Info	Abstract
	The research aims to enhance reading comprehension and text analysis skills through the Discovery Learning method. A quantitative approach was used, with data collected numerically and analyzed using SPSS. A quasi-experimental design was implemented over six sessions (one month and two weeks), involving experimental and control groups of Class X students. Both groups took pre-tests and post-tests to assess their performance before and after the treatment. The experimental group received Discovery Learning in recount texts. The results showed an improvement in the scores of the experimental group. Pre-test scores ranged from 52.8 to 95.7 with an average of 72.17, while post-test scores ranged from 72.6 to 95.7 with an average of 82.17. The control group's pre-test scores ranged from 29.7 to 100 with an average of 63.16, and post-test scores ranged from 52.8 to 100 with an average of 70.87. The average post-test score of the experimental group was higher than that of the control group (82.17 vs 70.87). These findings indicate that Discovery Learning significantly improves English reading comprehension in recount texts at SMAN 2 Tambang.

Artikel Info	Abstrak
	Penelitian ini bertujuan untuk meningkatkan pemahaman membaca dan keterampilan analisis teks melalui metode Discovery Learning. Menggunakan pendekatan kuantitatif, data dikumpulkan secara numerik dan dianalisis dengan SPSS. Desain kuasi-eksperimental diterapkan selama enam sesi (satu bulan dua minggu), melibatkan kelompok eksperimen dan kontrol dari siswa kelas X. Kedua kelompok mengikuti pre-test dan post-test untuk menilai kinerja sebelum dan setelah perlakuan. Kelompok eksperimen menerima pembelajaran Discovery Learning dalam teks recount. Hasil penelitian menunjukkan peningkatan skor kelompok eksperimen. Skor pre-test berkisar antara 52,8 hingga 95,7 dengan rata-rata 72,17, sedangkan skor post-test berkisar antara 72,6 hingga 95,7 dengan rata-rata 82,17. Skor pre-test kelompok kontrol berkisar antara 29,7 hingga 100 dengan rata-rata 63,16, dan skor post-test berkisar antara 52,8 hingga 100 dengan rata-rata 70,87. Rata-rata skor post-test kelompok eksperimen lebih tinggi dibandingkan kelompok kontrol (82,17 vs 70,87). Temuan ini menunjukkan bahwa Discovery Learning secara signifikan meningkatkan pemahaman membaca bahasa Inggris dalam teks recount di SMAN 2 Tambang.

I. INTRODUCTION

English is a global language and is widely used in various fields such as science, technology, business, and education. Therefore, the ability to read English is crucial for students to succeed in their academic and future careers (Munisah, 2021). English is taught as a foreign language in Indonesia. In schools, the majority of adolescents begin studying it in their first year of high school, even in the first year at SMAN 2 Tambang. Proficiency in reading in a foreign language, especially English, is a crucial ability that is also taught to first-year students at SMAN 2 Tambang. One of the most important aspects is understanding text genres. One of the text genres that students need to grasp to improve their English reading comprehension is recount texts.

Recount texts are a type of text that tells about past experiences or events that have already happened. It usually contains a series of events that are organized chronologically. Therefore, reading a recount text requires a good understanding of past tenses and the ability to follow the chronological order of events.

However, the English language proficiency of first-year students at SMAN 2 Tambang is still lacking due to a lack of vocabulary knowledge, understanding of the given reading materials, and a lack of confidence caused by a lack of discussion and presentation in English in front of the class, both in groups and individually. One of the reasons is the inadequacy of the teaching method used by teachers, who tend to teach conventionally by giving questions and

assignments without presenting the material effectively. To overcome the above problems, students need a technique or method that can help them understand reading materials easily. Techniques or methods are tools to achieve a goal. The method needed to improve reading comprehension of recount texts is a method that can facilitate students in expressing their ideas and organizing words into good sentences. One method that can facilitate students in expressing and organizing their ideas is the Discovery Learning Method.

Discovery learning is a student-centered approach to learning that emphasizes the role of students in constructing their knowledge through active engagement with the learning material. Discovery learning encourages students to explore, experiment, and discover knowledge by themselves with the guidance of the teacher. Several studies have shown the effectiveness of discovery learning in improving students' English reading skills, especially in comprehension and critical thinking.

According to Baturay and Uslu (2016), the insights shed light on the transformative potential of discovery learning in the realm of education, particularly in enhancing students' reading comprehension. They emphasize that active engagement with the text, coupled with a critical analysis approach, catalyzes this improvement. By encouraging students to delve deeper into the content, pose questions, and explore various perspectives, discovery learning becomes a dynamic tool for cultivating a comprehensive understanding of the material. Similarly, the research conducted by Sari and Mahanani (2020) aligns with these findings, expanding the scope to encompass the broader development of students' critical thinking skills. The observations made by these scholars underscore the multifaceted impact of discovery learning. It is not merely confined to enhancing reading comprehension but extends its influence to the broader domain of critical thinking. The nurturing of curiosity, stimulation of creativity, and honing of problem-solving abilities are identified as key components contributing to this holistic improvement.

According to Khatib and Al-Khasawneh (2015), discovery learning provides opportunities for students to learn actively by exploring and experimenting with the learning material. Discovery Learning encourages students to construct their knowledge and make connections between different concepts, leading to a deeper understanding of the material. In various studies,

including those by Li (2018), Wirawan (2019), Pratama (2020), and Mardiah and Lubis (2017), the collective evidence underscores the significant impact of discovery learning on students' reading comprehension and critical thinking skills. Li (2018) highlights the enhancement of reading comprehension through the improvement of metacognitive skills, as discovery learning prompts students to monitor and reflect on their learning processes, facilitating necessary adjustments. Building upon this, Wirawan (2019) emphasizes the role of active participation in the learning process, asserting that discovery learning allows students to independently explore and analyze texts, resulting in a more profound understanding of the material.

Similarly, Pratama's (2020) study accentuates the positive correlation between discovery learning and heightened critical thinking skills. By providing opportunities for problem-solving and encouraging creative and independent thinking, discovery learning facilitates the development of a holistic understanding of various concepts. In a parallel vein, Mardiah and Lubis (2017) contribute to this discourse by showcasing how discovery learning improves English reading comprehension. Through active engagement strategies such as questioning, prediction-making, and critical text analysis, students attain a deeper comprehension of the material. Collectively, these studies endorse the multifaceted benefits of incorporating discovery learning into educational practices, affirming its potential to enhance both reading proficiency and critical thinking skills among students.

Similarly, in a study by Sari and Mahanani (2020), it was found that discovery learning can improve students' analyzing skills by fostering their curiosity, creativity, and problem-solving abilities. Discovery learning encourages students to think critically and independently, leading to a more holistic understanding of the material. According to Jonassen (2011), discovery learning is an effective approach to learning that emphasizes the role of students in constructing their knowledge.

In conclusion, Because of the lack of reading comprehension in SMAN 2 Tambang researchers implementing discovery learning in English education shows promise in enhancing both reading comprehension and text-analyzing skills among students. Based on the problems discussed previously, the researcher makes a study under the title "The Effect of Discovery Learning in Improving SMAN 2 Tambang First-

Year Students' Reading Comprehension at Recount Text" This research aims to contribute to existing knowledge by examining the specific impact of discovery learning on the reading comprehension of first-year students in recount texts at SMAN 2 Tambang.

II. METHOD

In this study, the researcher utilize a quantitative approach to generate the data. The chosen approach is quantitative because it prioritizes the systematic measurement and quantification of variables, with the data collected being numerical and analyzed using SPSS. The study employed a quasi-experimental design over six meetings (one month and two weeks), consisting of both experimental and control groups, with both groups being composed of first-year students (Class X). Both groups undergo pre-and post-tests, with the pre-test assessing their achievement before the treatment and the post-test assessing their achievement after receiving the designated exercise task. The experimental group alone received the treatment, which involves the use of discovery learning in recount texts. The research has one dependent variable (i.e., students' improvement in reading English) and one independent variable (i.e., the use of discovery learning in recount texts).

The research instrument comprises tests. For data collection purposes, the researcher utilizes tests (pre-test and post-test) as research instruments. The tests were used to assess the student's reading comprehension ability and to determine the difference in achievement between the experimental and control groups before and after the treatment. The treatment involves using recount texts to teach English reading comprehension, which be administered over four 90-minute sessions to first-year students in class X at SMA Negeri 2 Tambang, serving as the experimental group.

The test focused on the research material, which was recount text, aiming to measure students' scores before and after implementing Discovery Learning in English instruction. Both the experimental group and the control group were administered two tests in this study. Although the pre-test and post-test were distinct, they had a similar number and composition of questions. After giving a post-test, the last step was to find out whether the hypothesis was accepted or rejected. To acquire statistical analysis data for the hypothesis, the researcher used the T-test formula. According to Schervish

(1996), in testing the hypothesis, the null hypothesis (ho) is rejected and the alternative hypothesis (ha) is accepted if the p-output (sig.2-tailed) is smaller than 0.05 and the t-value is higher than the t-table (2.021) at the 5% significant level; similarly, if the mean score of the pre-test is higher than the post-test, the null hypothesis (ho) is accepted and the alternative hypothesis (ha) is rejected.

III. RESULT AND DISCUSSION

A. Result

In this section, the researcher explains the findings of the research that has been conducted to find out for the research.

Table 1. The Result of the Students' Score Control Class

Students	Pre-test	Post-Test	Mean	Total Mean
Student 1	29,7	59,4	29,70	
Student 2	36,3	49,5	13,20	
Student 3	39,6	52.8	13,20	
Student 4	46,2	52.8	6,66	
Student 5	49,5	56,1	6,66	
Student 6	56,1	62,7	6,66	
Student 7	59,1	66	6,90	
Student 8	66	69,3	3,33	
Student 9	69,3	75,9	6,66	
Student 10	75,9	79,2	6,66	
Student 11	79,2	85,8	6,66	
Student 12	85,8	85,8	0	
Student 13	89,1	92,4	3,33	
Student 14	95,7	95,7	0	
Student 15	100	100	0	7,71
Student 16	33	49,5	16,5	
Student 17	39,6	52,8	13,2	
Student 18	46,2	56,1	9,99	
Student 19	52,8	66	13,2	
Student 20	62,7	75,9	13,2	
Student 21	66	82,5	16,5	
Student 22	72,6	75,9	3,33	
Student 23	79,2	75,9	-3,33	
Student 24	82,5	82,5	0	
Student 25	85,8	85,8	0	
Student 26	92,4	95,7	3,33	
Student 27	36,3	49,5	13,2	
Student 28	42,9	52,8	9,9	
Student 29	56,1	72,6	16,5	
Student 30	69,3	69,3	0	

The data were collected from the pre-test and post-test results of the control class at SMAN 2 Tambang. The scores for the control class students are detailed in Table 1, showing both the pre-test and post-test results. In the pre-test, the control class had a mean score of 63.16 out of 30 students. The table also includes the post-test scores, which show an increased mean score of 70.87. This increase

occurred without the use of Discovery Learning in the learning activities, as the control class did not receive the treatment applied to the experimental group. Instead, the teacher focused on enriching the students' knowledge of reading comprehension through standard instructional methods.

Table 2. The Result of the Students' Experiment Class

Students	Pre-test	Post-Test	Mean	Total Mean
Student 1	69,3	82,5	13,2	
Student 2	89,1	89,1	0	
Student 3	79,2	82,5	3,33	
Student 4	52,8	72,6	19,8	
Student 5	85,8	95,7	13,2	
Student 6	66	75,9	9,99	
Student 7	95,7	95,7	0	
Student 8	62,7	75,9	13,2	
Student 9	82,5	82,5	0	
Student 10	92,4	82,5	-6,66	
Student 11	62,7	89,1	26,4	
Student 12	56,1	79,2	16,5	
Student 13	66	79,2	13,2	
Student 14	62,7	79,2	16,5	
Student 15	89,1	92,4	9,99	
Student 16	85,8	92,4	9,99	9,79
Student 17	82,5	89,1	6,6	
Student 18	69,3	72,6	3,33	
Student 19	75,9	85,8	16,5	
Student 20	72,6	85,8	16,5	
Student 21	52,8	72,6	19,8	
Student 22	59,4	79,2	13,2	
Student 23	56,1	75,9	13,2	
Student 24	82,5	85,8	3,33	
Student 25	66	75,9	9,99	
Student 26	79,2	82,5	13,2	
Student 27	59,4	72,6	19,8	
Student 28	69,3	72,6	13,2	
Student 29	75,9	82,5	9,9	
Student 30	72,6	75,9	9,9	

The data were collected from the pre-test and post-test results of the experimental class at SMAN 2 Tambang. The scores for the experimental class students are detailed in Table 2, which presents both the pre-test and post-test results. These scores were obtained after applying the Discovery Learning treatment. The mean pre-test score was 72.38, while the mean post-test score was 82.17, showing an increase of 9.79 points. This indicates that, on average, the students improved their reading comprehension through the use of Discovery Learning.

Based on the data comparing pre-test and post-test results, it can be concluded that Discovery Learning has a positive effect on students' reading comprehension of recount texts. The overall differences in scores

between the experimental and control groups indicate that Discovery Learning is an effective method for enhancing students' reading comprehension.

Table 3. The Result of the Normality Test in Pre-Test and Post-Test

Kolmogorov-Smirnov			
	Statistic	df	Sig.
Pretest Experiment	.110	30	.200*
Posttest Experiment	.133	30	.183
Pretest Control	.096	30	.200*
Posttest Control	.129	30	.200*

Table 3 displays the results of the normality test, indicating that the significance levels for the pretest in both classes were 0.200, while for the post-test, they were 0.183 for the experimental class and 0.200 for the control class. The significance levels for both classes exceeded 0.5, indicating they were higher than the 5% significance threshold (α = 0.05). Thus, it can be concluded that the test data were normally distributed.

Table 4. The Result of the Homogeneity Test in Pre-Test and Post-Test

Test of Homogeneity of Variance				
	Levene Statistic	df1	df2	Sig.
Pretest Experiment	4.111	1	32	.051
Posttest Experiment	3.393	1	32	.075
Pretest Control	3.393	1	31.361	.075
Posttest Control	4.089	1	32	.052

The criterion for determining the outcomes of the homogeneity test is as follows: if the significance value (sig) based on mean > 0.05, the data is considered homogeneous; conversely, if the significance value (sig) based on mean < 0.05, the research data is deemed non-homogeneous. According to the homogeneity test results table provided above, the data is deemed homogeneous, as the significance value based on mean > 0.05, specifically 0.051 > 0.05.

Table 5. The Result of Paired t-Test

Test of Homogeneity of Variance								
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1 Pretest-Posttest	9.566	8.109	1.480	12.594	6.538	6.538	6.461	.000

The decision-making basis for the paired t-test is as follows: if the significance value (two-tailed) is less than 0.05, then the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted; conversely, if the

significance value (two-tailed) is higher than 0.05, which mean Ho is accepted and Ha is rejected. Referring to the table above, the significance value (two-tailed) of 0.00 is less than 0.05, indicating the rejection of Ho and acceptance of Ha. This implies that there is an influential difference resulting from the implementation of discovery learning in enhancing English reading comprehension of recount texts.

B. Discussion

Based on the explanation above the result of the research showed that the mean score on the test of students' ability in reading comprehension of recount text, obtained from class X of SMAN 2 Tambang who were taught by the Discovery Learning method, was higher than the mean score on the test of students' ability in reading comprehension of recount text obtained from class X who were taught by the conventional method. This indicates that the application of the Discovery Learning method was more effective in increasing the students' ability in reading comprehension of recount text. This could be accepted because teaching activities using the Discovery Learning method encouraged students to comprehend the text and be more critical thinkers.

Based on the data analysis, it was found that students taught with the Discovery Learning method showed improvement in their scores. The lowest score of the pre-test was 52,8, the highest score was 95,7 and the mean was 72,17. In contrast, the lowest score of the post-test was 72,6, the highest score was 95,7, and the mean was 82,17. In the control group, the lowest score of the pre-test was 29,7, the highest score was 100, and the mean was 63,16. The lowest score of the post-test was 52,8, the highest score was 100, and the mean was 70,87. The mean score of the post-test in the experimental group was higher than the mean score of the post-test in the control group (82.17 > 70,87). The total mean scores in the experimental and control groups showed a significant improvement in students' scores between the pre-test and post-test.

In summary, after conducting calculations using Paired t-test statistics, the resulting Asymp. Sig. (2-tailed) value of 0.000 is less than 0.05. Consequently, the alternative hypothesis (Ha) is accepted, while the null hypothesis (Ho) is rejected. This indicates a favorable impact of employing Discovery Learning on enhancing reading comprehension among eleventh-grade students at SMAN 2 Tambang. This research is supported by Jonassen's research in 2011, which showed a significant influence of discovery learning in improving English reading ability in recount texts.

In conclusion, both the mean scores and the parametric statistical hypothesis testing indicate that there are influences and differences from discovery learning in improving the English reading ability in recount texts of students at SMAN 2 Tambang.

IV. CONCLUSION AND SUGGESTION

A. Conclusion

Based on the results and discussion of the research, the conclusion obtained is that discovery learning has an effect on improving English reading comprehension in recount text for class X SMAN 2 Tambang in accordance with the results of the parametric statistical analysis of the paired sample t-test. Where the test results show the number Asym,sig 0.00 < 0.05, this number criterialy rejects Ho, which means there is a significant influence from the implementation of discovery learning in improving English reading comprehension in recount text. This influence can also be seen from the average English reading comprehension in recount text between control class and experimental class students. During the pre-test, the control class was indeed better than the experimental class, namely with an average of control pre-test 63,16 > experimental pre-test 72,16. However, after the author carried out the treatment, namely using a conventional approach in the control class, and using a discovery learning approach in the experimental class, the average was the opposite, meaning that at the post-test the control class was no better than the experimental class with an average, namely, control post-test 70,87 < experimental post-test 82,17.

B. Suggestion

Based on the research's result and conclusion, the researcher gives suggestions and recommendations, as follows:

1. The Students

Furthermore, For students who want to improve their English reading comprehension in recount text in a better

direction, they can follow the discovery learning approach applied by teacher in learning English.

2. The Teachers

The Researcher coveys to teachers to make the discovery learning approach one of the approaches in learning English, this is accordance with the result of research that has been conducted which shows that there is a positive influence of implementing the discovery learning approach in improving the ability to read English in recount text.

3. The Other Researchers

The researchers hope that this research would help anyone who reads it, provide new information, and serve as a reference for learning. The researcher wishes that soon another researcher could conduct other research on the same topic or not because there may be a loss in this research. This would allow other authors to expand their knowledge of education.

4. For the institution

The result of the review can be utilized as an instructive activity for school, understudies and as an aide for speakers in esteeming understudies' understanding perception, utilizing a revelation learning method.

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