

**THE EFFECT OF DISCOVERY LEARNING METHOD ON STUDENTS' READING COMPREHENSION ( A QUASI EXPERIMENTAL AT THE ELEVENTH GRADE STUDENTS' SMA N 6 BENGKULU TENGAH)**

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**ABSTRACT**

*The purpose of this study was to determine the effect of Discovery Learning Method on Students' Reading Comprehension (Quasi Experimental on Eleventh Grade Students of SMA N 6 Bengkulu Tengah). The method in this research is quantitative method with experimental research type. The population of this research was the eleventh grade students of SMA N 6 Bengkulu Tengah. This research was conducted with two groups, namely the experimental class using the Discovery Learning method and the control class without using the Discovery Learning method. First, researchers gave a pre-test to both classes. After that, researchers gave a post-test to both classes. The pre-test and post-test scores were collected from multiple choice. The findings of this study show that teaching students' reading comprehension using the discovery learning method is very effective. The mean score of the experimental class pre-test was 52.32 and the post-test was 64.32. This is evidenced by the calculated t value (12.247) greater than the table at 5% significance level. Furthermore, the hypothesis test obtained 2-tailed sig (p) of 0.00 while alpha ( $\alpha$ ) is 0.05 ( $0.00 < 0.05$ ). This means that  $H_0$  is rejected and  $H_1$  is accepted. So, the use of discovery learning method in teaching reading comprehension has a significant effect*

*Keywords: Discovery Learning and Reading Comprehension*

**ABSTRAK**

*Tujuan dari penelitian ini adalah untuk mengetahui Pengaruh Metode Discovery Learning Terhadap Pemahaman Membaca Siswa (Quasi Eksperimental pada Siswa Kelas Sebelas SMA N 6 Bengkulu Tengah). Metode dalam penelitian ini adalah metode kuantitatif dengan jenis penelitian eksperimen. Populasi penelitian ini adalah siswa kelas XI SMA N 6 Bengkulu Tengah. Penelitian ini dilakukan dengan dua kelompok, yaitu kelas eksperimen dengan menggunakan metode Discovery Learning dan kelas kontrol tanpa menggunakan metode Discovery Learning. Pertama, peneliti memberikan pre-test kepada kedua kelas. Setelah itu, peneliti memberikan post-test kepada kedua kelas. Skor pre-test dan post-test dikumpulkan dari pilihan ganda. Temuan penelitian ini menunjukkan bahwa pengajaran pemahaman membaca siswa menggunakan metode pembelajaran penemuan sangat efektif. Nilai rata-rata pre-test kelas eksperimen adalah 52,32 dan post-test adalah 64,32. Hal ini dibuktikan dengan nilai t hitung (12,247) lebih besar dari tabel pada taraf signifikansi 5%. Selanjutnya uji hipotesis diperoleh 2-tailed sig (p) sebesar 0,00 sedangkan alpha ( $\alpha$ ) sebesar 0,05 ( $0,00 < 0,05$ ). Artinya  $H_0$  ditolak*

*dan H diterima. Jadi, penggunaan metode pembelajaran penemuan dalam pengajaran pemahaman membaca mempunyai pengaruh yang signifikan.*

*Kata Kunci: Discovery Learning, Pemahaman Membaca*

## **A. Introduction**

Recognizing the significance of English in Indonesia, the government has integrated English into the educational curriculum at various levels, including middle schools, high schools, universities, and institutes. As a foreign language, English encompasses four core skills: reading, listening, speaking, and writing, with reading forming the foundation. According to Dulman (2017: 5), reading is a cognitive process where information is extracted from written material, playing a crucial role in the learning process. Abidin, Tita, and Hana (2018: 160) further explain that reading is an essential linguistic skill that enhances literacy and helps students engage critically with different types of texts, ultimately fostering knowledge and skills.

Reading comprehension, in particular, is key to academic success, as it involves not only understanding the surface meaning of texts but also engaging deeply with the content. Healy (2002), cited in Stella (2020), defines reading comprehension as the ability to grasp written words and

derive meaning from them, which enables students to acquire information, expand their knowledge, and develop a more active and creative use of language. As students prepare for higher education, their ability to comprehend informational texts becomes increasingly critical. However, given that English is taught as a foreign language in Indonesia, achieving high levels of epistemic literacy presents challenges.

Efforts to enhance national education quality, such as implementing the 2013 curriculum, emphasize that knowledge cannot merely be transferred from teachers to students. Instead, students are encouraged to actively construct and apply knowledge, as permanent behavioral changes indicate successful learning (Nurhayati, Wardani, & Totalia, 2015). Reading ability, therefore, is fundamental to students' educational success, as much of their learning comes from reading activities.

Despite the importance of reading, it remains a neglected activity among many students. Teachers often

note that students find reading tedious and time-consuming. To address this, students must be trained to read, write, and think critically, especially when engaging with English texts, a skill that continues to be a significant obstacle for many Indonesian learners. Observations of eleventh-grade students at SMA N 6 Bengkulu Tengah, particularly in the social studies class, reveal widespread difficulties in reading comprehension and low motivation to expand vocabulary. Challenges such as understanding technical terms, synonyms, antonyms, and words with multiple meanings hinder their ability to comprehend texts. Additionally, the lack of engaging teaching methods, combined with inconsistent application of learning techniques, contributes to students' disinterest in reading.

In light of these challenges, the Discovery Learning method, initially developed by psychologist Jerome Bruner, presents a promising solution for improving students' reading comprehension. Bruner (1966), as cited in Rahmayanti (2021), argues that discovery learning, where students actively seek knowledge and discover solutions to problems, leads to more meaningful and long-lasting learning outcomes. This method

encourages students to connect their experiences with concepts and principles, fostering a deeper understanding of texts. Therefore, this research aims to explore the effect of the Discovery Learning method on the reading comprehension of eleventh-grade students at SMA Negeri 6 Bengkulu Tengah.

## **B. Research Method**

This research employed a quantitative research method, which emphasizes in-depth data collection and is capable of recording as much data as possible from a wide population. According to Sugiyono (2018: 35-36), quantitative research is defined as a research method based on the philosophy of positivism, used to study specific populations or samples, with data collection using research instruments, and data analysis being quantitative or statistical in nature. The main objective of this method is to test predetermined hypotheses.

The research design is crucial as it determines the study's internal validity, meaning its ability to draw valid conclusions about the effect of the experimental treatment on the dependent variable. In other words, an

experimental design is a research design used to determine the influence of one variable on another.

In this study, the experimental method was employed. According to Sugiyono (2018), the experimental method is a research method used to determine the effect of a specific treatment on other variables under controlled conditions. Therefore, it can be concluded that this research method involves manipulation of the research object and control to determine the existence of cause-and-effect relationships by providing specific treatments to the experimental group and using a control group for comparison.

There are two main types of quasi-experimental methods: the post-test-only control group design and the pre-test post-test group design. In this research, the quasi-experimental pre-test post-test group design was applied. The researcher assigned intact groups to the experimental and control groups, administered a pre-test to both groups, conducted treatment activities with the experimental group only, and then administered a post-test to assess the differences between the two groups.

To analyze the data, the researcher used statistical tools,

specifically the \*Statistical Package for the Social Sciences\* (SPSS) version 26 for Windows, as recommended by Sufren and Yonata (2002).

### **C.Result and Discussion**

This research data was obtained through a research process carried out by researchers from 19 July 2024 to 15 August 2024 in classes XI IPS 1 and XI MIPA of SMA N 6 Bengkulu Tengah, totaling 25 students, 13 female students and 12 male students. This study presents data about the effect of discovery learning in reading comprehension.

The sampling technique in this research was purposive sampling, samples were taken from two classes, namely class XI IPS 1 as the experimental class and class XI MIPA as the control class.

The first procedure carried out by the researcher was to ask permission from the principal of SMA N 6 Bengkulu Tengah on July 17 2024 to conduct research at the school.

**Table 1**  
**Result Descriptive Statistic**

	N	Min	Max	Mean	Std. Deviation
Pre-Test Experiment	25	40	64	52.32	5.528
Post-Test Experiment	25	56	76	64.32	5.023
Pre-Test Control	25	32	60	46.24	6.936
Post-Test Control	25	48	68	57.92	5.901
Valid N (listwise)	25				

From the table above, in the experimental class, it can be seen that the average pretest in the experimental class was 52,32, while in the posttest it was 64,32. The lowest score on the pretest was 40 and the highest was 64. Meanwhile, on the posttest the lowest score was 56 and the highest was 76

And in the control class, it can be seen that the average pretest in the control class was 46,24, while in the posttest it was 57,92. The lowest score on the pretest was 32 and the highest was 60. Meanwhile, on the posttest the lowest score was 48 and the highest was 68.

Based on the table above, the average score for both the experimental class and the control class has increased. However, the experimental class's score increased more significantly than the control class.

Based on data analysis on class XI students at SMA N 6 Bengkulu Tengah, there is a significant influence on the mastery of understanding of students who are taught using the Discovery Learning. The test data results are divided into pre-test and post-test. Students who were taught using Discovery Learning Method had higher scores than students who were taught without Discovery Learning Method. In analyzing the data, the researcher analyzed the pre-test and post-test hypotheses for both the experimental class and the control class to find out whether the use of the Discovery Learning Method was significant for students' mastery of mathematics or not. Researchers analyzed by carrying out a t test using SPSS with a significance level of 5% (0.05), so the criteria were a pot t value of 4,129 and a table of 2,011 signs. (2-tailed) is  $0.000 < 0.005$ . The calculation means that the null hypothesis (H) is rejected and the alternative hypothesis (H<sub>2</sub>) is

accepted. It can be concluded that there is a significant difference in students' reading comprehension by using discovery learning method in the learning process.

Based on the explanation above, the researcher concludes that the use of the discovery learning method has a significant effect on students' reading comprehension, especially for students at SMA N 6 Bengkulu Tengah.

After calculating the normality test using SPSS, it can be proven that the pre-test and post-test data of the experimental and control classes are normally distributed. It can be stated that the data of the experimental class and control class are much smaller than the calculation of the Lilliefors table where the critical point is 30. The pre-test data results for the experimental class were 0.286, while the data for the control class were 0.475 and the post-test data results for the experimental class were 0.119, while the data for the control class were 0.138. It can be concluded that all data used in this study are normal.

Furthermore, based on the results of the data homogeneity test, the experimental class and control class became homogeneous data groups. This can be seen from the

results of the pre test significance of the control and experimental classes being greater than the significance value of 0.005 and the results of the post test significance of the control and experimental classes being 0,475 which is higher than the significance value of 0.005. significant value 0.005. Therefore, the data group is proven to fall into the homogeneous data category.

The results of this test are also in line with research conducted by Nofianti (2020). Entitled The Effect of the Discovery Learning Model on Learning Competencies of VII Grade Students at SMP Negeri 16 Padang, it can be concluded that the competence of student knowledge count value  $5.96 >$  table value 1.67, attitude competence count value  $6.36 >$  table value 1.67, and skill competence count value  $1.69 >$  table value 1.67. This shows that the hypothesis is accepted. It is concluded that the application of the Discovery Learning model has a positive effect on student science learning outcomes in knowledge competencies. The results of the second researcher Dwijayanti (2020). Titled The Effect of Discovery Learning Assisted by Mind Mapping on Student History Learning

Outcomes at SMAN 1 Tangerang, the results showed that: 1) there is a significant influence between the Discovery Learning model with Mind Mapping on learning outcomes because the significance value is 0.000; 2) there is a significant influence between the Discovery learning model without mind map on learning outcomes because the significance value is 0.000; 3) there is a difference in influence between the discovery = learning model with mind Mapping and Discovery Learning without Mind Mapping because the significance value is 0.000. The results of Salmi's last research (2019). Titled Application of Discovery Learning Model to students of class XII IPS.2 SMA Negeri 13 Palembang, it can be concluded that there is a significant change in learning outcomes between before and after being given learning actions with the application of the disclosure learning model to students of class XII IPS.2 SMA Negeri Open 13 Palembang, so this research can be said to be a success. Hopefully the results of this study can be useful for both teachers and students will provide progress in learning English, especially on students' reading comprehension.

#### **D. Conclusion**

After conducting experiments on teaching reading comprehension using the discovery learning method in the experimental class, and without using this method in the control class, the researcher obtained the following results: the experimental class had scores ranging from 40 to 76, while the control class had scores ranging from 32 to 68. After analyzing the data, the researcher concluded that there was a significant difference in reading comprehension between the students in the experimental and control classes. The statistical analysis, conducted using SPSS version 26, revealed that the Independent Samples t-test yielded a t-value (t-count) of 4.129, with a t-table value of 2.011 and a p-value of 0.000. Since t-count > t-table and p-value < 0.05, it can be concluded that there is a statistically significant difference between the reading comprehension of students in the experimental and control classes. This indicates that the discovery learning method has a significant positive effect on reading comprehension.

Based on these findings, it can be concluded that the implementation of the discovery learning method in classroom instruction significantly

improves students' reading comprehension.

The researcher suggests the For Teachers, English teachers can consider using the discovery learning method as an alternative approach to teaching reading comprehension, encouraging students to become more active learners. For Researchers, Future researchers may consider utilizing the discovery learning method in further studies to potentially achieve improved outcomes. For Future Researchers, This study provides valuable insights into the discovery learning method, which can inform future research on teaching reading comprehension in classroom settings.

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