

## THE EFFECT OF USING THE PROBLEM BASED LEARNING MODEL ON STUDENTS' PROCEDURE TEXT IN WRITING SKILL AT THE EIGHT GRADE OF SMP NEGERI 3 BINJAI

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### ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh model Pembelajaran Berbasis Masalah (PBL) terhadap kemampuan menulis siswa kelas VIII SMP Negeri 3 Binjai. Masalah dalam penelitian ini adalah rendahnya kemampuan siswa dalam menulis teks prosedural. Penelitian ini menggunakan metode kuantitatif dengan desain quasi-eksperimental non-ekuivalen dan pre-test & post-test. Populasi penelitian ini adalah 188 siswa dengan sampel 30 siswa dari kelas eksperimen dan 30 siswa dari kelas kontrol. Sampel diambil dengan metode purposive sampling. Instrumen penelitian berupa tes esai tentang menulis teks prosedural. Hasil analisis Uji T Sampel Independen menunjukkan bahwa nilai signifikansi (sig) 2-tailed 0,00 lebih rendah dari tingkat signifikansi (0,05) dan ditentukan bahwa koefisien t hitung adalah -5,390 yang menunjukkan lebih tinggi dari koefisien t tabel (2,002) dengan tingkat signifikansi ( $\alpha$ ) = 0,00 (2-tailed) dengan derajat kebebasan (df) = 58, yang mana hasil tersebut menunjukkan bahwa  $H_a$  diterima dan  $H_0$  ditolak.

**Kata kunci:** Pembelajaran Berbasis Masalah, Keterampilan Menulis, Teks Prosedur

### ABSTRACT

This research aims to determine the effect of the Problem Based Learning (PBL) model on the writing ability of class VIII students of SMP Negeri 3 Binjai. The problem in this study is the low ability of students to write procedural texts. This research uses quantitative methods with quasi-experimental nonequivalent design and pre-test & post-test. The population of this research was 188 students with a sample of 30 student from experimental classes and 30 student from control classes. The sample was taken by purposive sampling. The research instrument was an essay test on writing procedure texts. The result of *Independent Samples T Test* analysis shown that the significance (sig) 2-tailed value 0.00 was lower than the significance level (0.05) and determined that coefficient of  $t_{counted}$  was -5.390 indicating higher than the  $t_{table}$  coefficient (2.002) with significance level ( $\alpha$ ) = 0.00 (2-tailed) with degree of freedom (df) = 58, which those results shown that  $H_a$  was accepted and  $H_0$  was rejected.

**Keyword:** Problem Based Learning, Writing Skill, Procedure Text.

## **I. INTRODUCTION**

### **1. Background**

Writing is a form of self-expression conveyed through written language, allowing us to share our thoughts, emotions, and ideas with others. It serves as a platform for creativity and self-expression, allowing us to share our unique thoughts and experiences with the world. Writing is a productive skill that serves as a form of indirect communication. Its characteristics differ significantly from those of spoken language, making writing an essential ability for constructing and conveying meaning (Miranti & Conny, 2018). Writing skills are essential to learn when studying English, alongside speaking. Although both are categorized as productive skills, writing differs fundamentally from speaking. In writing, a person must depend solely on written words to convey ideas and meaning (Yultisa et al., 2021). Procedure text is an important text that can help people who have difficulty in the process of movement and doing things more easily. In the procedure, there are many steps or instructions required to make or do something. These instructions are usually presented systematically and are often written in the imperative form (Panjaitan & Silalahi, 2019). A procedure text is a type of text that provides instructions on how to do or make something. The primary purpose of a procedure text is to describe the steps required to complete a specific task or process accurately and systematically (Ulfa & Indari, 2020). Problem-based learning is an educational strategy that focuses on the application of information and abilities to real-world problems, allowing students to think systematically and creatively to find result. This instructional approach encourages active participation and teamwork, enabling students to deepen their understanding of the material and enhance their skills in solving problems. Problem-Based Learning (PBL) is a learning model that encourages students to explore and understand objects or concepts through real situations. In mathematics, this approach actively engages students in the learning process, allowing them to construct knowledge through problem-solving experiences. This approach encourages them to participate more and exposes them to practical problems that serve as a foundation for understanding mathematical concepts. (Servant-Miklos, 2019). The students of grade VIII-1 at SMP Negeri 3 Binjai also experience. Similarly students often regard writing as the most challenging skill to master, which is evident in the quality of their written work. A primary difficulty they face is generating and organizing ideas. In addition, many students make frequent grammatical errors, fail to begin sentences with imperative verbs, and occasionally use Indonesian words in their writing. These issues are likely linked to their limited vocabulary knowledge. Such problems may stem from the teaching method, instructional materials, techniques, media, or a combination of these factors. To encourage active participation in classroom activities, teachers need to be both communicative and creative. Many English teachers express their concern about the weakness of the students in writing. According to them the learners are not interested in learning to write because they are confused how to start their writing. For the purpose of improving the students' ability in writing, the writer assumes that Problem Based Learning Model can facilitate the teaching on writing. The Problem-Based Learning (PBL) model not just helps teachers connect learning materials to students' real-life contexts but also increases students' motivation to engage in the learning process. This approach is particularly effective in teaching writing, especially procedural texts. In this research, the writer identifies several problems, namely:

1. The students cannot write procedure texts.
2. Many English teachers express their concern about the weakness of the students in writing.
3. The students are not interested in learning to write because they are confused how to start their writing.

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4. The students showed low motivation in learning English, as they perceived the subject to be challenging and difficult to master.

In this case, the writer is motivated to do research named: "The Effect of Using the Problem Based Learning Model on Students Procedure Text in Writing Skill at the Eight Grade of SMP Negeri 3 Binjai in Academic Years 2024/2025". The writer formulates the problem of the research as the following: "Is there any significant effect of using the Problem Based Learning Model on students' procedure text in writing skill at the Eight Grade of SMP Negeri 3 Binjai in Academic Years 2024/2025?" The objective of this study is to determine whether the Problem-Based Learning (PBL) model has an effect on students' achievement in writing procedural texts. In this context, the researcher believes that the Problem-Based Learning (PBL) Model can be an effective method to assist learners in writing procedure texts. PBL offers several advantages in the writing classroom. Firstly, it helps students generate ideas and arrange them in a logical order. Secondly, the problems used in PBL are usually drawn from real-life problems, make learns more relevant and relatable to students. PBL also creates a more engaging and enjoyable classroom environment, which can boost student motivation. Moreover, it provides opportunities for improving essential writing components like vocabulary and language use. Therefore, teaching writing through the Problem-Based Learning model is considered to be an effective approach for enhancing learners writing skills, particularly in writing procedure texts..

## **2.Problem Formulation**

The research problem formulation in this study is how the research, entitled "The Effect of Using the Problem-Based Learning Model on Students' Procedure Text in Writing Skills at the Eighth Grade of SMP Negeri 3 Binjai," can be implemented according to procedure and on time.

## **3.Research Objectives**

The research problem formulation in this study is how the research, entitled "The Effect of Using the Problem-Based Learning Model on Students' Procedure Text in Writing Skills at the Eighth Grade of SMP Negeri 3 Binjai," can be implemented according to procedure and on time..

## **4.Benefits of Research**

The research problem formulation in this study is how the research, entitled "The Effect of Using the Problem-Based Learning Model on Students' Procedure Text in Writing Skills at the Eighth Grade of SMP Negeri 3 Binjai," can be implemented according to procedure and on time. This research can provide benefits for other research and the academic world in the region.

# **II.RESEARCH METHOD**

## **Research of design**

This research employs a quasi-experimental design, specifically the nonequivalent control group design. In this design, the experimental group is taught using the Problem-Based Learning (PBL) model, while the control group receives instruction through conventional teaching methods. This design is chosen to allow the researcher to provide treatments to the participants and measure the outcomes before and after the treatment as a comparison group without the PBL treatment. Design of the research is an experimental research. It mean that two groups use namely, experimental and control groups. A quasi-experimental design involves the assignment of participants to groups, but without the use of random assignment. The researcher uses intact groups in the experiment, such as classes or schools already organized into groups (Creswell, 2012).

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#### **Location and Time of the Research**

The researcher carried out the research at SMP Negeri 3 Binjai of eight years students of the 2024/2025. Jalan Sukarno Hatta No. 17 Kota Binjai. The writer choose this location because the English research has never been done in this school. It was conducted in April 2025.

#### **Population and sample of the Research**

The population is defined as the entire group of individuals, events, or objects that share common characteristics and represent a well-defined class (Donald Ary et al., 2016). The population of this research are the students of eight grade at SMP Negeri 3 Binjai to find out the information about their difficulties in procedure text writing. The students whom the writer selected are the students that had lowest score in procedure text writing test about offering and suggesting by threads as a problem-based learning model that will suggest by English teacher at SMP Negeri 3 Binjai. So, the population in the research carried out at eight grade 188 students. This research uses a purposive sampling technique. The researcher chose this technique because the sample selection not random. The research sample are students of VIII-1 & VIII-2 as the class which high score in procedure text writing test. The total of students are 60 students in the classroom. The research object will relate to what the research meant to do. Object of the research will the difficulties of students' procedure text writing in expressing offering and suggesting by threads as a problem-based learning model.

#### **Instrument of the Research**

The researcher use of essay test to writing procedure text. The criteria of scoring the test following generic structure and grammatical feature score of procedure text. The score ranges are between 0-100.

#### **The data Collection Technique**

The data collection technique in this research used the pretest & posttest technique, for the pre-test the researcher tested students using an essay test without using a problem-based learning model, after that the researcher gave treatment and formed groups of students to carry out the second essay test, namely the posttest, and in this posttest the researcher also used a problem-based learning model, the material used was procedural text to determine students' understanding of the procedure text. (Hikmawati, 2020:16) states that operational definition is specifications of the researcher's activity in measuring and manipulating variables. Operational definition will give limitation or meaning of variables in elaborating matter which will to be conduct by the researcher to measure the variable. This research focuses on analysis students' procedure text writing in expressing offering and suggesting.

#### **The Technique of Data Analysis**

Data analysis will be carried out to assess the effectiveness of the Problem-Based Learning (PBL) model on students' ability to write procedural texts. The analysis includes several statistical tests: the normality test, homogeneity test, hypothesis testing, and the independent samples t-test.

### **III. RESULT AND DISCUSSION**

Data on the writing proficiency of eighth-grade students at SMP Negeri 3 Binjai in the Procedure Text in Writing Skills during the 2024–2025 academic year was collected using identical tests in two groups, as previously mentioned. Students can be given related tests to obtain both kinds of information. After gathering and examining the students' responses to the writing test, the author assigned a score for each essay test. The result scores of students' pretest and posttest in the assessment of writing skill in Procedure Text in Writing Skill for group experiment that was taught using cooperative learning: Problem

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Based Learning Model were different. The data analysis and displayed in tabular form provided valuable insights for determining the research findings. In this research, the researcher analyzed the test scores to evaluate the effectiveness of cooperative learning through the Problem-Based Learning (PBL) model on the writing achievement in procedure texts at the eighth-grade students of SMP Negeri 3 Binjai during the 2024–2025 academic year.

Table 1. Tests of Normality

|                 | Groups                | Statistic | df | Sig. |
|-----------------|-----------------------|-----------|----|------|
| Students Result | Posttest Experimental | -.939     | 30 | .071 |
|                 | Posttest Control      | -.935     | 30 | .067 |

Shapiro-will

Normality Analysis of Data Distribution, based on the results of the Shapiro–Wilk normality test, the significance value of the post-test in the experimental group was 0.71, and in the control group, it was 0.67. Since both values are greater than the significance level of 0.05, it can be concluded that the data in both groups are normally distributed.

Table 2. Test of Homogeneity of Variance

| Levene Statistic |                                      |      |      |        |      |
|------------------|--------------------------------------|------|------|--------|------|
|                  |                                      |      | df 1 | df2    | Sig. |
| Students Result  | Based on Mean                        | .580 | 1    | 58     | .449 |
|                  | Based on Median                      | .390 | 1    | 58     | .535 |
|                  | Based on Median and with adjusted df | .390 | 1    | 57.889 | .535 |
|                  | Based on trimmed mean                | .618 | 1    | 58     | .435 |

Homogeneity Analysis of Data Variances, according to the homogeneity of variance test, the significance value in the "Based on Mean" column was 0.449, which is greater than the significance threshold of 0.05. This indicates that the data variance is homogeneous, thereby satisfying the assumption required for conducting an independent samples t-test.

Table 3. Independent Sample T Test

| Levene's Test for Equality of Variances      t-test for Equality of Means |                             |      |      |        |        |               |                 |           |                                                               |
|---------------------------------------------------------------------------|-----------------------------|------|------|--------|--------|---------------|-----------------|-----------|---------------------------------------------------------------|
|                                                                           |                             | F    | sig. | t      | df     | sig.(2tailed) | mean difference | Std Error | 95% Confidence interval of the Difference<br>lower      upper |
| Students' Result                                                          | Equal variances assumed     | .216 | .644 | -5.390 | 58     | .000          | -9.333          | 1.731     | -12.799      -5.867                                           |
|                                                                           | Equal variances not assumed |      |      | -5.390 | 57.783 | .000          | -9.333          | 1.731     | -12.800      -5.867                                           |

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The Data Analysis of Hypothesis, the significance (sig) 2-tailed value was 0.00, as determined by the independent Samples T Test analysis above. To determine the effect of variable X on Y, the value was compared to the significance level to see if it was higher or lower (0.05). Because the result was  $0.00 < 0.05$ ,  $H_a$  was approved and  $H_0$  was rejected. Furthermore, the independent -Samples T Test analysis revealed that the coefficient of t counted was -5.390, which was higher than the t table coefficient (2.002) in appendix x, indicating that  $H_a$  was accepted and  $H_0$  was rejected, with significance level ( $\alpha$ ) = 0.00 (2-tailed) and degree of freedom (df) = 58, indicating that  $H_a$  was accepted and  $H_0$  was rejected. The Research Finding, this shows that the different between the experiment and control group is statistically significant. As a result, the hypothesis of the research was accepted, In experimental group the pretest, students had an average score of 71.83. While the average posttest score of students was 81.17. In the control group taught conventionally through regular learning; the pretest produced an average score of 72.50 and an average posttest score of students was 80.17. Thus, the use of the Problem Based Learning model has an effect and there is a significant increase in students' ability to write procedure texts. indicating that cooperative learning: Problem Based Learning Model has a substantial effect on students' writing skill in Procedure Text of Eight Grade students at SMP Negeri 3 Binjai in academic years 2024-2025.

#### IV.CONCLUSION

As a result of this research, the writer came to the following conclusion: there is a significant effect of Learning: Problem Based Learning Model on students' writing skill in Procedure Text of the Eight Grade students of SMP Negeri 3 Binjai in academic year 2024/2025. Target to that, the writer had worked on the prerequisite test analysis; the normality and homogeneity tests. From the result of tests normality through *Shapiro-wilk* analysis, this can be get the data was in normal distribution for that both of them significance values were higher than the level of significance (0.05); the significance value on posttest in the group experiment was  $0.71 > 0.05$ , and the significance value on posttest in the control group was  $0.67 > 0.05$ . Also, from the result of homogeneity test variance, it was get the data variance was homogeneous because the significance value at "Based on Mean" column was 0.449 was higher than the level of significance (0.05). The result of *Independent Samples T Test* analysis shown that the significance (sig) 2-tailed value 0.00 was lower than the significance level (0.05) and determined that coefficient of  $t_{counted}$  was -5.390 indicating higher than the  $t_{table}$  coefficient (2.002) with significance level ( $\alpha$ ) = 0.00 (2-tailed) with degree of freedom ( $df$ ) = 58, which those results shown that  $H_a$  was accepted and  $H_0$  was rejected. The last, result of the study could make the contribution for developing a better educational world in future.

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