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Effectiveness of the Inquiry-Based Learning (IBL) Method on Eighth-Grade Students' Ability to Write Narrative Texts

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Abstract

Inquiry-Based Learning (IBL) is a process that involves asking questions and finding answers to those questions. The aim of this research was to assess the effectiveness of the inquiry-based learning method on students' ability to write narrative texts. The research design employed for this study was pre-experimental. The target population consisted of eighth-grade students at MTS Tarbiyatul Banin Tanjung Belit. For the sample, all twenty-five eighth-grade students were included. Data collection was carried out using pre-test and post-test assessments. The collected data were analyzed using the Paired Sample T-Test. The results revealed that the obtained value of -57.511 was less than the critical value of -2.064, indicating a statistically significant positive effect on students' ability to write narrative texts. This improvement was observed when using the Inquiry-Based Learning (IBL) method among the eighth-grade students at MTS Tarbiyatul Banin Tanjung Belit."

Keywords

Inquiry-Based Learning (IBL), Effectiveness, Students' Ability, Writing, Narrative Text

1. Introduction

Among the most popular international languages is English for various activities, especially in today's modern era where English is indispensable for communication with people from various countries. There are four English skills that would need to be taught, namely listening, speaking, reading, and writing. In order to employ those four abilities as a method of speaking

or writing in English, students must develop their language skills in the classroom. Writing is a crucial skill during the English teaching and learning process (Onozawa, 2010).

It requires both physical and mental effort to write. Writing is, at its most fundamental level, the actual activity performed ideas or words to a surface, whether it be email sent through a computer or hieroglyphics written in ink on parchment. Writing is the conceptual activity of developing ideas, thinking through how to communicate them, and organizing them into clear words and paragraphs for the reader (Nunan, 2003).

Related to researcher's observation of some students at MTS Tarbiyatul Banin Tanjung Belit, they have several difficulties when writing narrative text and this subject is not interesting for them. Here are some reasons why students lack enthusiasm in this subject. First, a few of them inadequacy vocabulary and are wrong in their writing. As a result, they are unable to express their thoughts clearly. That is caused by two factors, namely internal factors, and external factors. Individual awareness of writing ability, as well as students' self-confidence and motivation, are still low. And external comes from how teachers can manage the learning process in a classroom by using some method. The interesting method will be fun for students and enthusiastic about the learning process.

In solving the problem, the educator should use a suitable approach to teaching writing narrative text because it does not only make the teaching and learning process interesting and fun, but also helps the students' writing skills (Zakaria et al, 2016). In this study, the researcher used the Inquiry Based Learning (IBL) method in order to see the effectiveness when writing narrative text. This method is hoped to be effective for the skills of the students to make narrative writing (Voet & De Wever, 2016).

The word inquiry, which is based from the English word inquiry, means to ask questions and discover the answers to such questions. According to Harada and Yoshina (2004b, p. 22), Inquiry Based Learning (IBL) is a pedagogical strategy that actively engages students in a process of knowledge construction by having them create questions that can be answered. According to them, determining issues, developing hypotheses, planning experiments, gathering data, and making conclusions about the problems are all steps in the inquiry process. It is further said that the goal of teaching inquiry is to create a learning environment or atmosphere where students are focused on learning by giving them enough direction to acquire scientific concepts and principles (Chu, et al. 2021).

In the inquiry learning approach, students educate themselves on the best practices for narrative text writing. The inquiry learning approach can be used by teachers to teach writing, especially narrative text. Antext is a text containing a fictional or imaginary stories created with the aim of entertaining the reader that contains an exaggerated fantasy, fairy tale, or true story.

Harald A. Mieg argues that inquiry-based learning is a pedagogic paradigm in higher education that depends on students abilities and learning by independent investigation (Mieg, 2019). According to Joe Exline, a question suggests a "need or desire to know" assumption. Instead of determining the best response to a question, students arrive to the problem's solution (Sangadah, et al. 2024).

With inquiry-based learning, students take an active role in their education, create questions, conduct extensive research, and then develop new insights, interpretations, and knowledge. The students unfamiliar information might be applied to solve problems, support positions, or

provide answers to questions. The information is typically shared with others and may prompt an action (Alberta Learning, 2004). The purpose of the research is to determine the students' ability in writing narrative text before using the Inquiry-Based Learning Method at the Eighth Grade of MTS Tarbiyatul Banin Tanjung Belit, to know the students' ability in writing narrative text after using the Inquiry-Based Learning Method at the eighth grade of MTS Tarbiyatul Banin Tanjung Belit and to find out the effectiveness of the inquiry-based learning method toward students' ability to write narrative text.

2. Research Method

In this study the researcher used a pre-experimental design. The design used in this study was "one group pretest-posttest design". In this design there was a pretest before being given treatment. Thus the results of the treatment can be known more accurately, because it can compare with the situation before being given treatment (Sugiyono, 2015).

$O_1 \text{ X } O_2$

Description:

O_1 = pretest score (before giving treatment)

X = treatment

O_2 = posttest score (after giving treatment)

There was no group control in this research design. The researcher offered the students a pre-test before guiding them about how to write a narrative text paragraph. And then the researcher conducted treatment before giving a post-test to the students.

This research was taken place at MTS Tarbiyatul Banin Tanjung Belit and was conducted in the second semester of the academic year 2021-2022, from March 2022 to June 2022. The population of this research was the eighth-grade students at MTS Tarbiyatul Banin Tanjung Belit, which consisted of 25 students, and there is only one class. The researcher used a non-probability sample, which was taken from eighth grade as the sample for this research. A non-probability sampling is a sampling method that doesn't provide every component or person in the population an equal chance to be chosen as a sample (Sugiyono, 2015). The students total number in this class is 25. Therefore, the technique used to take this sample is saturated sampling.

Saturated sampling is a sampling method that takes samples from the whole population. When the population is quite small, fewer than 30, or the researcher wishes to develop generalizations with very small mistakes, this is frequently done. A census, which samples the whole population, is another name for a saturated sample (Sugiyono, 2015).

This research used test to collect the data. There were pretest and posttest. Before starting treatment, students took a pre-test to evaluate their ability. A pre-test would assess the students' knowledge of writing narrative text in paragraph form as well as their knowledge of the course material. Without employing the inquiry style of instruction in the classroom during the pre-test, the students begin writing the first draft. The post-treatment test was conducted by the researcher. The post-test matter is similarly to that of the pre-test. Finding out how well the treatment worked is the goal of the post-test. To assess the students' writing, it was used

methods of scoring which require a separate score for each of a number of aspects of a task are said to be analytic scale by Jacob et al (Hughes, 1989). that consisted of content, organization, vocabulary, language use and mechanic. To analyze the data, it was measured normality and homogeneity to determine what test was used. The data were normal and homogeny, so it was used paired sample t-test to analyze the data. Paired samples t-test is used to determine whether there is a difference in the average between two groups of samples that are paired (related) meaning that here is a sample but does not experience two different treatments (Priyatno, 2010).

The calculation formula is as follows:

$$t = \frac{x_1 - x_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} - 2r \left(\frac{s_1}{\sqrt{n_1}} \right) \left(\frac{s_2}{\sqrt{n_2}} \right)}}$$

Description:

- x_1 = sample mean 1
- x_2 = sample mean 2
- s_1^2 = sample variation 1
- s_2^2 = sample variation 2
- s_1 = sample standard deviation 1
- s_2 = sample standard deviation 2
- n_1 = number of samples 1
- n_2 = number of samples 2
- r = correlation between two samples

3. Results And Discussion

The researchers collected data and explanations from the fields using the data required for this study. A test was used to gather the information. Two different types of test the pre-test and the post-test were employed as the instrument in this study to get the appropriate score writing narrative text for the students' ability.

The pre-test was given before the students taught by using IBL method. The researcher gave the test that instruct the students to choose of the narrative topics and write the story based on the students' ability in writing narrative text. This was subjective test given to know the basic competence for all students and to know their earlier knowledge before they got treatment. It is clear from the data above that 25 people were present for the pre-test. For the content aspect the mean is 17,74, the mean for the organization is 12,78, the mean for the vocabulary is 12,68, the mean for language use is 13,74, and the mean for mechanics is 3,32. The fair category's mean for the overall average of all aspects is 60,26.

Post-test was given after the students' were taught by using IBL method. The test items in the post-test are exactly the same as those in the pre-test. It was done to know the final score and to know the students' difference ability in writing narrative text before and after they getting treatment. It is clear from the table above that 25 people were observed during the post-test. The students' high level of ability in every aspect is clear. The average in all four categories is 21,56 for content, 14,8 for organization, 14,78 for vocabulary, 15,2 for language use, and

4,44 for mechanics. The average across all criteria is 70,78, which is in a fairly good category.

This research was relevant to Nurul Syahrul from Muhammadiyah University of Makassar. The title is "The Effectiveness of Inquiry-Based Learning in Teaching the Writing of Descriptive Text". The improvement of students' ability in terms of content it has been showed by the data that students' score in pre-test were only in the level of fair to very poor. But after the treatment was given, the students had a good progress it has been showed by the table that the students score was significantly higher. The percentage in post-test that students very good score was higher than percentage in pretest. The mean score of the pre-test was 2.21 while mean score of the post-test increased 3.36 (Syahrul, 2019). After getting score pre-test and post-test, the researcher determined normality testing because it was a basic requirement that should be fulfilled in parametric analysis before doing a further analysis towards the data. Normality distribution test is a test to measure whether our data has a normal distribution. To know the normality, the researcher used Kolmogorov-Smirnov test with SPSS Statistic 23. The hypotheses for testing normality are:

H_a : Data is distributed normally.

H_o : Data are not distributed normally.

With $\alpha \geq 0,05$, so H_a is accepted, and H_o will be rejected

But if $\alpha \leq 0,05$, so H_o is accepted, and H_a will be rejected

Table 1. Normality Test

		Kolmogorov-Smirnov ^a		
		Statistic	Df	Sig.
Student learning outcomes	pre-test	.117	25	.200*
	post-test	.159	25	.101

Based on the output from SPSS 23 is known that the sig value must be bigger than 0,05. It means that H_a is accepted and H_o is rejected and the data is in normal distribution. So, it can be interpreted that both of data (pre-test and post-test score) are normal distribution. Homogeneity testing is intended to know whether the variance of data is homogeneity or not. In this case, the homogeneity will be tested to the sample that was used to collect the data. To know the homogeneity, the researcher used One Way Anova with SPSS 25 version the hypotheses for testing homogeneity are:

H_a : The distributions of the two populations are the same

H_o : The distributions of the two populations are not the same.

With $\alpha \geq 0,05$, so H_a is accepted, and H_o will be rejected

But if $\alpha \leq 0,05$, so H_o is accepted and H_a will be rejected

The conclusion can be seen in Table 2.

Table 2. Test of Homogeneity of Variance

		Levene			
		Statistic	df1	df2	Sig.
Student learning	Based on Mean	.176	1	48	.677
	Based on Median	.066	1	48	.798

outcomes	Based on Median and with adjusted df	.066	1	46.876	.798
	Based on trimmed mean	.154	1	48	.697

Based on the result in Table 2, it can be concluded that this test is homogeneity because the significant show $0,677 > 0,05$, so H_a is accepted and H_o is rejected. It means that there is significant different between pretest and posttest using Inquiry Based Learning method. A paired samples t-test is applied to identify whether or not there is a variation in the average between two groups of paired (related) samples, which means that this sample does not receive two different treatments. To analyze the paired samples t-test, the researcher applied SPSS 23. The table below shows the outcome presented in Table 3.

Table 3. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Before	60.2600	25	3.95843	.79169
	After	70.7800	25	4.26976	.85395

Based on Table 3, it is clearly seen the average score of the experiment class in the pre-test is 60.26. And then, the average score of the experiment class in the post-test is 70.78.

The hypothesis for this research is developed as follows:

H_a : There is any significant effect of the students' ability in writing narrative text taught by using inquiry based learning method of the eighth grade at MTS Tarbiyatul Banin Tanjung Belit.

H_o : There is no significant effect of the students' ability in writing narrative text taught by using inquiry based learning method of the eighth grade at MTS Tarbiyatul Banin Tanjung Belit.

With $t_o \geq t_t$, so H_a is accepted, and H_o will be rejected.

But if $t_o \leq t_t$, so H_o is accepted and H_a will be rejected.

Table 4. Paired Samples Test

	Paired Differences						T	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Mean	95% Confidence Interval of the Difference		Error			
				Lower	Upper				
Pair 1 before – after	10.52000	.96264	.19253	-10.91736	-10.12264	-54.642	24	.000	

A significance level of $\alpha=5\%$ or 0.05, is the standard measure that is often used in research. From the table above, the value of t_o is -54,642. Then to determine the t_{table} with degrees of freedom (df) $n-1$ or $25-1=24$. Based on the standard in research for $df = 24$ then the value of t_{table} is 2,064.

It is clear from the test criteria that H_o is rejected while H_a is accepted. because of $-t_o < -t_{table}$ or $-54,642 < -2,064$ and the significant $0,000 < 0,05$. It indicates that there is a contrast between the average value before (pre-test) and after (post-test). In the table of paired samples statistics,

it is obvious that the average value for the pre-test is 60,2600 and the post-test is 70,7800, this indicates that the pre-test average is lower than the post-test average. A negative value means that the average pre-test is lower than the post-test. H_o is rejected and H_a is accepted, it means there is any significant effect of the students' ability in writing narrative text taught by using Inquiry Based Learning (IBL) method of the eighth grade at MTS Tarbiyatul Banin Tanjung Belit

4. Conclusion

Considering the results among the data presentation and data analysis, it can be conclusion as follows: the writing students' ability before using IBL at the eighth grade of MTS Tarbiyatul Banin Tanjung Belit has a mean score 60,26 in the fair category. Then the writing students' ability after using IBL at the eighth grade of MTS Tarbiyatul Banin Tanjung Belit has a mean score 70,78 in the fairly good category. Last, there is any significant effect using IBL method toward the students' writing ability at the eighth grade of MTS Tarbiyatul Banin Tanjung Belit. H_o is rejected and H_a is accepted because $-t_o < -t_{table}$ or $-54.642 < -2,064$ and the significant $0,000 < 0,05$. The average value for the pre-test is 60,2600 and the post-test is 70,7800, which means that the average pre-test is lower than the post-test. A negative value means that the average pre-test is lower than the post-test. So the method can improve the students ability in writing narrative text

Based on the conclusion of this research, the researcher gave a few recommendations to teachers and students at MTS Tarbiyatul Banin Tanjung Belit increase English learning and teaching process in general. First suggestions for the teacher to keep taking an interest students in learning English, the instructor must use a variety of teaching techniques. Then teacher should make the class interesting and effective, the teacher should use creativity in the process of teaching and learning. To encourage students to write well and to be excited about studying English, the teacher should give rewards for doing so. Suggestions for students, first students should develop more fluent in English writing, then to get better their writing, the students should modify their behavior so that they pay close attention to the instructor while they are explaining anything.

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