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THE EFFECT OF PROJECT BASED LEARNING (PjBL) MODEL ON STUDENTS' ABILITY IN EXPOSITION WRITING AT GRADE XI SMA NEGERI 2 TANJUNGBALAI

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Abstract

This research aims to determine the effect of the project-based learning model on students' ability to write expositions in class XI high school students. This research is quantitative research using the True Experiment method. The population in this study were all class XI students of SMA Negeri 2 Tanjungbalai, totaling 252 students. Determination of the sample using the Cluster random sampling technique. Based on this technique, a sample group was obtained with a sample size of 62 students, namely the Experimental Group with a sample size of 31 students and the Control Group with a sample size of 31 students. Data collection techniques use tests, namely pre-test and post-test. The data collection process involves assigning students to work on Exposition questions. Before analyzing the data, a normality test was first carried out. The results of the research show that there are differences in the ability to write exposition questions for class students who use the project-based learning model, and those without using the project-based learning model. This difference is shown from the results of the independent sample t-test, namely tcount=6,818, ttable 2.000, with a df value of 60, so the hypothesis testing criteria for this research is the Tcoun > Ttable, so the hypothesis value (HO) is rejected, and the alternative hypothesis (Ha) is accepted. This proves that there is a significant effect of the project-based learning model compared to no conventional learning model on the writing ability of class XI students at SMA Negeri 2 Tanjungbalai for the 2023/2024 academic year.

Keywords: *Project Based Learning, Exposition Text, Writing Ability*

INTRODUCTION

English is a language recognized as an international language. (Chairina, 2019) states that English is a language that is recognized as an international language that must be mastered to keep up with increasingly sophisticated developments. In Indonesia, English is a second language that must be studied. The Indonesian government introduced English as the first foreign language used in Indonesia. English is included in the curriculum and is an important subject in various educational institutions in Indonesia. In learning English, there are four skills that students must master. Namely listening, speaking, reading, and writing. By mastering these four skills, students can express their ideas and thoughts using English both orally and in writing. This research discusses one of the skills in English, namely writing. Writing is a very important skill compared to other skills.

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According to (Graham & Perin, 2007) in (Sinaga, 2021), writing is an important skill for every student. Writing can be used to explain, convey information, persuade, or convey experiences, as a form of self-expression expressed through writing. However, writing skills are the most difficult skills because to be able to write well students must understand how to arrange words in a sentence structure that is in accordance with linguistic rules. According to (Harris and Cunningham, 1994) in (Sinaga, 2021) writing is the skill that is considered the most difficult for students to master in learning English. This is because writing skills are not a skill that is acquired naturally or can be done autodidactically, but rather a skill that requires a long process and practice. Based on the results of research observations at SMA Negeri 2 Tanjungbalai, the results of writing text exposition for class XI students were not optimal or the students' abilities in writing activities were lacking. Students cannot develop ideas and organize exposition texts based on their generic structure. This research shows that students at SMA Negeri 2 Tanjungbalai have difficulty writing English texts. This difficulty is caused by students having difficulty determining topics and ideas in writing. students have difficulty developing ideas that will be developed in written form and students are not yet able to write analytical expository texts based on the generic structure of expository texts, namely: thesis, argumentation, and reiteration.

Based on existing problems, efforts need to be made to overcome these problems. The research was conducted by connecting the Project Based learning model with the writing learning process. According to (Holm, 2011) in (Alotaibi, 2020) project-based learning is "teaching that makes students the center of learning, where students choose, plan, investigate and produce a product, presentation or performance that answers real world problems. (Chen & Yang, 2019), in (Meng, 2023) explains that project-based learning has two important components, namely questions and products. Questions organize and encourage learning activities while products represent solutions, resulting from the activities carried out are used to answer driving questions. The first research conducted by Woro (2015) found that the Project Based learning model is a constructivist and student-centered approach that allows students to more easily apply the knowledge gained in real life situations (Kinanti, 2021). By connecting the Project Based Learning Model with students' ability to write analytical exposition texts, we can find out the influence of the project-based learning model on the ability to write analytical exposition texts.

METHOD

This research was conducted in February 2024 at SMA NEGERI 2 Tanjungbalai. This school is located on Jl. Jendral Sudirman Km. 4.5 Sijambi, Pahang, Datuk Bandar, Tanjungbalai City, North Sumatra. This research is included in the quantitative research category. This research methodology uses a true experimental design. According to (Sugiyono, 2016) in (Rahman et al., 2020), A true experimental design is research that can control all external variables and influence the course of the experiment. The main characteristic is that the samples used in the experimental and control groups were taken randomly from a certain population. This research used a class XI population of 252. Population is the total number of research objects. Population is also defined as a group of people, objects,

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or things that are the source of sampling, a group that meets the requirements of the research problem. According to (Arikunto suharsimi, 2019), Population is all the objects used as research samples. This research used a class XI population of 252.

Sample

(Arikunto suharsimi, 2019) said a sample is a part or representative that has representative characteristics of the population. (Arikunto, 2002: 109). If the number of respondents is less than 100, all samples are taken so that the research is population research. Meanwhile, if the number of respondents is more than 100, then sampling is 10% - 15% or 20% - 25%. the sampling in this research was 25% of the existing population, because the population exceeded 100, namely 252 students. This means 252 x 25% / 100 = 62, so the sample used in this research was 62 students consisting of 31 class Experimental group students and 31 class Control group students calculated based on a percentage of 25%. The sampling technique used in this research is cluster random sampling. Cluster random sampling is a subset of probability sampling. Cluster sampling is a sampling technique by creating cluster groups where this research creates several clusters based on the results of the entire population by looking at the results of each student's English learning scores. This technique was chosen because the researcher wanted to provide equal opportunities to each cluster group that was created.

Table 1. The Students' Sample

No	Students	Group
1	31	Experimental Group
2	31	Control Group

Test

The test was used in this research were written tests and questionnaires. The writing tests given are pre-test and post-test. The purpose of the pre-test is to determine students' initial writing abilities and the purpose of the post test is to determine students' writing abilities after being given treatment. namely the application of project-based learning to the experimental group. The assessment technique in this research uses an assessment rubric giving a score will be fairer because the components assessed are not the same by considering the importance of the component, the level of difficulty of the component and it is in accordance with writing performance (Nurgiyantoro, 2015: 110).

In this research, the Hamp-Lyons research theory was used. The following is an Assessment according to the Hamp-Lyons theory.

Table 2. Assesment Techniques of Expostion Text

A. Thesis

No	Score level	Thesis Criteria

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1	85-100	1. Thesis statement and main idea related to the topic stated very clearly. 2. This section explains the author's position on the topic. 3. Has a clear and specific topic and opinion.
2	70-85	1. Thesis statement relevant to the topic. 2. shows the author's position on the topic. 3. Broad topic and opinion.
3	50-70	1. Thesis statement is present but unclear. 2. Does not state the author's position on the topic. 3. Has a non-specific topic and opinion.
4	10-50	1. There is no thesis statement related to the topic. 2. No mention of the author's position on the topic. 3. Unclear topic and opinion.

B. Argument

No	Score level	Criteria
1	85-100	1. There is one very clear topic sentence related to the thesis statement. 2. Has supporting details related to the topic sentence. 3. Supported by arguments in knowledge such as definitions, data, examples, and analysis based on facts that support the statement.
2	70-85	1. there is one topic sentence related to the thesis. 2. Has supporting details related to the topic sentence. 3. Arguments are not supported by sufficient knowledge such as definitions, data, examples, and fact-based analysis.
3	50-70	1. there is one topic sentence 2. there are inappropriate supporting details. 3. Has supporting details Arguments are not supported by clear data.
4	10-50	1. There is one topic sentence, but it does not match the thesis. 2. The argument has supporting details that do not match the thesis. 3. Has no supporting knowledge of the arguments.

C. Reiteration

No	Score level	Criteria
1	85-100	1. Restating the thesis or the author's position that differs from the thesis statement. 2. A brief conclusion that is relevant to the topic. 3. Reiteration does not describe new material or explanation of the topic.
2	70-85	1. It has a thesis statement that related to the topic.

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		2. It indicates the writer's position about the topic. 3. Having broad topic and opinion
3	50-70	1. It has a thesis statement but not clearly stated. 2. Didn't mention the writer's position about the topic. 3. Having too broad topic and opinion.
4	10-50	1. It does not have a thesis statement or not related to the topic 2. The writer's position about the topic is not stated. 3. Having too broad topic and opinion.

Adapted from Hamp-Lyons (1994) by combining with the generic structure of analytical exposition text. The total score of students writing from each part of generic structure was obtained by using the following formula:

$$TS = \frac{T + A + R}{3}$$

TS = Total Score
T = The scores of students' Thesis
A = The scores of students' Argument
R = The scores of students' Reiteration

RESULTS AND DISCUSSION

This research data was collected from the pre-test and post-test results of class XI students at SMA Negeri 2 Tanjungbalai for the 2023/2024 academic year. Students are taught using a project-based learning model. The data is described in a table to show the students' pre-test and post-test scores and the scores they obtained. Based on the results of the pre-test data, post-test data from the experimental group and control group above, the first step is to carry out descriptive statistical analysis. The purpose of descriptive statistical analysis is to explain and describe research data. Descriptive statistical analysis in this research used *IBM SPSS Statistics version 29.0*. The results of descriptive statistics calculations are presented in table 3.

Table 3. Descriptive Analysis of pre-test, post-test Experimental group and Control group scores.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experimental Group	31	56	77	67.10	6.358

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Post-Test Experimental Group	31	80	92	85.84	3.597
Pre-Test Control Group	31	55	84	68.06	8.099
Post-Test Control Group	31	67	89	77.32	5.952
Valid N (listwise)	31				

In Table 3, the pre-test and post-test results of students in the Experiment group consisting of 31 students, and the Control Group consisting of 31 students. The minimum scores obtained were 56 for the Pre-test Experimental group, 80 for the Post-test Experimental group, 55 for the Pre-test Control group, and 67 for the Post-test Control group. Then the maximum scores were obtained, namely 77 Pre-test Experimental group, 92 Post-test Experimental group, 84 Pre-test Control group, and 89 Post-test Control group with standard deviations (Standard Deviation) respectively 6,358 Pre-test Experimental group, 3,597 Post-test Experimental group, 8,099 Pre-test Control group and 5,952 Post-test Control group While the average value (Mean) is 67.10 Pre-test Experimental group, 85.84 Post-test Experimental group, 68.06 Pre-test Control group, and 77.32 Post-test Control group.

Normality test

The test for normality of the results of writing Exposition text in the Pre-Test and Post-Test in the Experimental group and Control group in this research used the Kolmogorov-Smirnov test which is part of the Lilliefors test. Kolmogorov–Smirnov test this is used to test the null hypothesis that the data comes from a normally distributed population. The results of the data normality test using *IBM SPSS Statistics version 29.0* can be seen in the table below.

Table 4 The Normality test of Pre- Test and Post-Test Scores in the Experimental and Control Group

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Class	Statistic	df	Sig.	Statistic	df	Sig.
Pre-Test Experimental Group	.139	31	.132	.942	31	.097

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Post-Test Experimental Group	.117	31	.200*	.943	31	.099
Pre-Test Control Group	.125	31	.200*	.953	31	.193
Post-Test Control Group	.131	31	.188	.952	31	.177

Data is normally distributed if the significance value (Sig.) in the Kolmogorov-Smirnov column is more than 0.05. Based on the output above, it is known that the significance value in the pre-test post-test experimental group is 0.132>0.05 for the pre-test and 0.200>0.05 for the post-test. it can be concluded that if the two significance values are greater than 0.05, the data is normally distributed. in the pret-test, post-test control group, the significance value was 0.200>0.05 for the pre-test and 0.188>0.05 for the post-test. So, it can be concluded that the two control group data are normally distributed. It can be said that this research has a normal distribution.

Paired Sample T-Test

The next step is to carry out a paired sample t test. The paired Sample T-test is a test used to assess the effectiveness of treatment which is characterized by the difference in the average before and the average after treatment is given. In this research, the Paired Sample T-test was used to find out whether the project-based learning model had an effect on students' ability in writing Exposition text. Paired sample T-test was carried out on the pre-test and post-test data of the experimental group and the pre-test and post-test data of the control group. A paired sample T-test was carried out using *IBM SPSS Statistics version 29.0 software*. The results of the data Paired Sample T-Test using *IBM SPSS Statistics version 29.0* can be seen in the table below.

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Table 5 The result of Paired Sample T-test of Pre- Test and Post-Test Scores in the Experimental and Control Group

Paired Samples Test

	Paired Differences					t	df	Significance	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			One-Sided p	Two-Sided p
Pair 1	-18.742	7.452	1.338	-21.475	-16.009	-14.003	30	<,001	<,001
Pair 2	-9.258	5.802	1.042	-11.386	-7.130	-8.884	30	<,001	<,001

In the table above, a significant value was obtained in pair 1, namely 0.01 <0.05 So, it can be concluded that there is a difference in the average student learning outcomes for the pre-test and post-test for the experimental Group. by using a project-based learning model as a treatment. In pair 2, a significant value of 0.01<0.05 was obtained, so it can be concluded that there is a difference in the average student learning outcomes for the pre-test and post-test in the control group. Based on the discussion of output pair 1, it can be concluded that there is an effect of the project-based learning model on students' ability in exposition texts.

Homogeneity Test

The homogeneity test is a test used to determine whether a variant (diversity) of data from two or more groups is homogeneous. In this study, the homogeneity test was used to determine whether the variance of the experimental group post-test data and the control group post-test data were homogeneous or not. The results of the data homogeneity test using *IBM SPSS Statistics version 29.0* can be seen in the table below.

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Table 6. The result of Homogeneity test of Post-Test Scores in the Experimental and Control Group

Test of Homogeneity of Variance

	Levene Statistic	df1	df2	Sig.
Based on Mean	3.971	1	60	.051
Based on Median	3.971	1	60	.051
Based on Median and with adjusted df	3.971	1	46.307	.052
Based on trimmed mean	3.942	1	60	.052

In the table above, a significant value is obtained for the mean, namely 0.051 > 0.05, so it can be concluded that the variance of the experimental group post-test data and the control group post-test data is the same or homogeneous. If the results obtained are homogeneous then the non-absolute conditions in the independent sample t-test have been fulfilled. However, if the data is not homogeneous, you can still carry out an independent sample t-test.

Independent Sample T- Test

The independent sample T-test is a parametric statistical test used to determine whether there is a difference in the means of two unrelated or unpaired samples. The Independent Sample t-test test requirement is that the data is normally distributed. In this research, the sample t-test was carried out by testing the experimental group's post-test scores with the control group's post-test scores using the help of *IBM SPSS version 29.0 software*. The results of the independent sample t-test, experimental post-test data and control group post-test data using *IBM SPSS Statistics version 29.0* can be seen in the table below.

Table 7. The result of Independent Sample T-Test Post-Test Scores in the Experimental and Control Group

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means					
					Significance			
	F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference

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Equal variances assumed	3.971	.051	6.818	60	<,001	<,001	8.516	1.249
Equal variances not assumed			6.818	49.336	<,001	<,001	8.516	1.249

Based on the data output above, the significance value for equal variances assumed is 0.01 < 0.05, so it can be concluded that there is a significant difference in the experimental group post-test value and the control group post-test value.

Hypothesis Testing (Final Analysis)

After calculating the data normality test and other things, the final test is a hypothesis test to determine the effect of project-based learning model on students' writing abilities. The T-test formula is used as follows: Some of the statistical tests used are validity, reliability, paired sample t-test, homogeneity test, independent sample T-test. The research was conducted using Project based learning model as an independent variable which influence students' writing ability which is the dependent variable. then the results of the research can be known. The research results show that the average learning outcome of students who apply the Project based learning model is 85.84. Meanwhile, the average student learning outcomes in classes that do not apply the Project based learning model is 77.32. The average value of learning outcomes proves that the group that applies the based learning model is higher than the group that does not apply the based learning model. The average learning outcomes of the two classes can be compared in Table 4.7.

Table 8. The result of T-Test Experimental and Control Group

Group Statistics

Group	N	Mean	Std. Deviation	Std. Error Mean
Post-test Experiment Group	31	85.84	3.597	.646
Post-test Control Group	31	77.32	5.952	1.069

Discussion

This research focuses on students' writing ability in exposition text using a project-based learning model in class XI of SMA Negeri 2 Tanjungbalai for the 2023/2024 academic year. This research was carried out in two tests, namely, pre-

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test and post-test. The pre-test is given to students before being given treatment, and the post-test is given to students after being given treatment. Research findings show that the project-based learning model has a significant effect on students' writing ability. After being given treatment, students can answer the test better than the pre-test. This means that students successfully answered the post-test. This research was carried out through several steps using a project-based learning model. The steps in the PJBL model are: Start with an essential question. Students will be given trigger questions to determine students' initial abilities in exposition material. explain the general structure and grammatical characteristics of exposition text, ask students to make several groups to create a product. Asking students to plan products to be made in groups, asking students to make short exposition texts with the theme of free Palestine based on a generic structure.

Based on the Data analysis The minimum scores obtained were 56 for the Pre-test Experimental group, 80 for the Post-test Experimental group, 55 for the Pre-test Control group, and 67 for the Post-test Control group. Then the maximum scores were obtained, namely 77 Pre-test Experimental group, 92 Post-test Experimental group, 84 Pre-test Control group, and 89 Post-test Control group with standard deviations (Standard Deviation) respectively 6,358 Pre-test Experimental group, 3,597 Post-test Experimental group, 8,099 Pre-test Control group and 5,952 Post-test Control group While the average value (Mean) is 67.10 Pre-test Experimental group, 85.84 Post-test Experimental group, 68.06 Pre-test Control group, and 77.32 Post-test Control group. Based on the average value obtained, it can be concluded that there is an influence of implementing project-based learning in the experimental class. This can be seen from the mean value obtained by the experimental class. Apart from that, based on the t test carried out, it shows that the value of Tcount > Ttable.This difference is shown from the results of the independent sample t-test, namely tcount=6,818, ttable 2.000, with a df value of 60, so the hypothesis testing criteria for this research is the tcount table, so the hypothesis value (HO) is rejected, and the alternative hypothesis (Ha) is accepted. This proves that there is a significant effect of the project-based learning model compared to no conventional learning model on the writing ability.

CONCLUSION

From the results and discussion about the influence of the based learning model, this research found that students' writing skills became better after receiving treatment (Project based learning model) in the English teaching and learning process. This can be seen from the pre-test average of 67.10 to 85.84 in the post-test, which means it increased after implementing the based learning model in the Experimental class. Students' responses were also very good when giving their opinions on the results of other friends' writing. This can be seen from the way they speak and the confidence of student participation. It was found that teaching writing using the base learning model can improve students' writing abilities during the learning process.

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