THE EFFECT OF PROJECT BASED LEARNING MODEL ON STUDENTS' WRITING SKILL IN PROCEDURE TEXT AT GRADE X OF MAS AL-WASHLIYAH TANJUNG TIRAM

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Abstract

This research is quantitative research using the True Experiment method. This research aims to determine the effect of project-based learning models on students writing skills in procedure text at grade X of Mas Al-Washliyah Tanjung Tiram. The population in this research were all class X students totalling 170 students. Determination of the sample using random sampling techniques. Based on this technique, a sample class was obtained with a sample size of 68 students, namely class X-3 = 34 Experimental class, and class X-4 = 34 as the Control class. The data collection technique used a writing essay test, namely pre-test and post-test. in this study the researcher conducted a normality test, paired sample t-test, and independent sample t-test using SPSS version 25.0. The results showed that there were differences in the writing skills of students who used the project-based learning model, with those who did not use the project-based learning model. The difference is shown from the results of the independent sample t-test, namely the Tcount value at output = 4,890, while the T table value at the product moment table (0.05) = 1.668, with a df value of 66, then the criteria for testing the research hypothesis are Tcount > Ttable, so the hypothesis null (Ho) is rejected, and the alternative hypothesis (Ha) is accepted. This proves that there is a significant influence of the project-based learning model on the writing ability of class X students of MAS AL-Washliyah Tanjung Tiram.

Keywords: PjBL, Writing, Procedure Text

INTRODUCTION

English is a Germanic language that was first used in England in the Early Middle Ages and is now the most widely used language in the world. English has become an international language recognized throughout the world, including Indonesia. Learning English is very important to learn in the fields of economics, science, and cognitive (Alotaibi, 2020). There are four basic skills in learning English, namely listening, speaking, reading, and writing. Listening and reading are included in receptive skills, while speaking and writing are included in productive skills. Productive language skills are the focus that must be mastered by students.

Writing is considered a productive skill because language production must use clear knowledge for communicative and interactive purposes both in spoken

and written language. (Suharno, 2022) said that writing is a medium of communication to express thoughts into written or text form. In writing, an interactive process occurs between the writer and the reader, so that the writer can convey information, messages, or ideas to the reader. Writing skills are the most difficult skills to master compared to other skills. Writing skills really require an understanding of language rules in sentences, paragraphs, and texts. According to (Prabowo et al., 2024), writing skills include understanding the linguistic characteristics of written discourse, recognizing the social role of the target audience, composing the text as a coherent whole, and communicating effectively with the reader, including choosing a genre that suits the purpose of the writing to attract readers. In order to write well, students must understand how to arrange words in a sentence structure that is in accordance with language rules. Based on the results of research observations at MAS Al Washliyah Tanjung Tiram, it was found that students at MAS Al Washliyah Tanjung Tiram had difficulty in writing English texts, especially in writing procedural texts. This problem is caused because students are unable to arrange sentences according to language rules, and students have difficulty composing paragraphs according to the generic structure of procedural texts. This statement was emphasized by an English teacher at MAS Al Washliyah Tanjung Tiram who said that the main problem students have when writing is that students have difficulty arranging words into English sentences, and composing procedural texts based on the generic structure of the text.

From the problems above, efforts need to be made to overcome these problems. This research will be conducted by connecting the Project Based Learning model with the writing learning process. This project-based learning model makes students more creative and can produce projects from their learning outcomes. Project Based Learning focuses on the concepts and foundations of a course, allowing students to conduct research on the objects they are studying. (Meng, 2023) explains that project-based learning has two important components, namely questions and products. Woro found that the Project Based Learning Model is a constructivist and student-cantered approach that makes students the centre of learning. so that it is easier for students to apply the knowledge gained in real-life situations (Kinanti, 2021). In implementing the project-based learning model, this study uses Canva media as a medium for students to write procedural texts. Canva media is very effective to use as a place to write because in addition to being a technology-based media, Canva media also has a good design so that students do not get bored in writing procedural texts. By connecting the Project Based Learning Model to students' procedural text writing skills assisted by Canva media, the Effect of the Project Based Learning Model on Students' Procedural Text Writing Skills can be seen. Project-based learning model on the ability to write analytical exposition texts.

METHOD

This research was conducted in February 2025 at MAS AL Washliyah Tanjung Tiram. This school is located at Jln. Perinis Kemerdekaan No.25 Dusun VII Masjid Lama, Tanjung Tiram, Batubara, North Sumatra. This research is included in the

quantitative research category. The methodology of this research uses a true experimental design. (Rahman et al., 2020), a true experimental design is a study that can control all external variables and influence the course of the experiment. Its main characteristic is that the samples used in the experimental and control groups are taken randomly from a certain population. This study used a population of class X totaling 170. The population is the entire number of research objects that meet the requirements of the research problem. According to (Arikunto suharsimi, 2019) the population is all objects used as research samples. This study used a population of class X totalling 170 students.

Sample

A sample is a part of the object to be studied that represents a population so that it can describe the population optimally. (Arikunto suharsimi, 2019) said that a sample is a part or representative that has characteristics that are representative of the population. The research sample will be carried out on students in class X-3 as an experimental class and class X-4 as a control class. Each class consists of around 34 students, so the total research sample is around 64 students taken using random sampling techniques. According to (Arikunto 2002) Random Sampling is taking only a few students as samples.

Table 1. The Students' Sample

No	Class	Sample
1	X-3	34
2	X-4	34
	Total	**64**

Test

The test used in this study was a written test. The writing test given was in the form of a pre-test and post-test. The purpose of the pre-test was to determine students' initial writing skill, and the purpose of the post-test was to determine students' writing ability after being given treatment, namely the application of project-based learning in the experimental group. The assessment technique in this study used a writing assessment rubric. Scoring will be fairer because the components assessed are not the same by considering the level of importance of the components, the level of difficulty of the components and in accordance with writing performance (Nurgiyantoro, 2015: 110). This study used a writing assessment rubric from Jacobs. The following is a writing assessment according to giving scores for students' writing performance tasks using a writing rubric adapted from Jacobs et al. The rubric provides four aspects of writing, namely content, organization, vocabulary, language use, and mechanics.

Table 2. The Scoring Rubric for Writing Production

CONTENT	4	Excellent to very good	A well-developed, knowledgeable thesis that is relevant to its subject

	3	Good Average	toSome knowledge of subjects, limited average development of thesis, mostly relevant to topic, but lacks detail
	2	Fair to poor	Limited knowledge of subjects, inadequate development of topic
	1	Very poor	Does not show knowledge of subject, not enough to evaluate
ORGANIZATION	4	Excellent to very good	toFluent expression, ideas clearly stated, well-organized, logical sequencing, cohesive
	3	Good average	Loosely organized but the main ideas stand out, imited support, logical but incomplete sequencing
	2	Fair to poor	Non-fluent, ideas confused or disconnected, lacks logical sequencing and development
	1	Very poor	Does not show knowledge of subject, not enough to evaluate.
VOCABULARY	4	Excellent very good	toSophisticated range, effective word choice, word form mastery
	3	Good average	Adequate range, sometimes errors of Average word choice, usage but meaning not obscured
	2	Fair to poor	Limited range, frequent errors of word choice, usage but meaning confused or obscured
	1	Very poor	Essentially translation, little knowledge of English vocabulary, not enough to evaluate
LANGUAGE USE	4	Excellent very good	toEffective complex constructions, few errors of agreement, tense, number, word order, articles, pronouns and preposition
	3	Good Average	toEffective but simple constructions, minor problems in complex constructions, several errors of agreement, tense, number, word order, articles, pronouns and preposition

	2	Fair to poor	Major problems in simple/complex constructions, frequent errors of negation, agreement, tense, number, word order, articles, pronouns and preposition, meaning confused or obscured.
	1	Very poor	Almost no mastery of sentence construction rules, dominated by errors, does not communicative, not enough to evaluate.
MECHANICS	4	Excellent to very good	Few errors in spelling, punctuation, capitalization, and paragraphing Occasional errors of spelling,
	3	Good to Average	Occasional errors of spelling, average punctuation, capitalization, and paragraphing
	2	Fair to poor	Frequent errors of spelling, punctuation, capitalization, and paragraphing
	1	Very poor	Dominated by errors

(adapted from Jacobs et al; 1981)

RESULTS AND DISCUSSION

The data of this research were collected from the pre-test and post-test results of class X students taught using project-based learning models in the experimental class and taught using conventional models in the control class. The data are described in the form of 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 of the experimental class and the control class, the first step taken was to conduct descriptive statistical analysis. Descriptive statistical analysis aims to explain and describe research data. Descriptive statistical analysis in this study used SPSS Statistics version 25.0. The results of the descriptive statistical calculations are presented in table bellow.

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

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experiment	34	56	81	68.12	7.074
Post-test Experimental class	34	74	95	83.56	5.171

Pre-test Control class	34	55	84	67.79	8.007
Post-test Control class	34	67	89	77.06	5.773
Valid N (listwise)	34				

Based on the data above the results of the pre-test and post-test of students in the Experimental class and the control class totaling 34 students. Based on the SPSS output value, for the pre-test of the experimental class, the minimum value obtained was 56, and the maximum value obtained was 81. For the post-test of the experimental class, the minimum value obtained was 74, and the maximum value obtained was 95. Pre-test for the control class, the minimum value obtained was 55, and the maximum value obtained was 84. For the Post-test of the Control class, the minimum value obtained was 67, and the maximum value obtained was 89. While the average value (Mean) is 68.12 Pre-test Experimental Class, 83.56 Post-test Experimental Class, 67.79 Pre-test Control Class, and 77.06 Post-test Control Group. With a standard deviation of 7,074 in the pre-test of the experimental class, 5,171 in the post-test of the experimental class, 8,007 in the pre-test of the control class, 5,773 in the post-test of the control class.

A. Normality test

The normality test of the results of writing procedural texts was carried out by testing each student's learning outcomes in the Pre-Test and Post-Test in the Experimental and Control classes. The normality test in this study used the Kolmogorov-Smirnov test which is part of the Lilliefors test. The Kolmogorov–Smirnov test is used to test the null hypothesis that the data comes from a normally distributed population. The data is normally distributed if the test result value must be greater than the standard normality test value of 0.05. The results of the data normality test using SPSS version 25.0 can be seen in the table below.

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

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Class	Statistic	df	Sig.	Statistic	Df	Sig.
Pre-test Experiment	.134	34	.125	.946	34	.096
Post-test Experiment	.102	34	.200	.979	34	.746
Pre-test Control	.137	34	.106	.946	34	.090
Post-test Control	.133	34	.134	.956	34	.179

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

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.

B. Paired Sample T-Test

After conducting the normality test, the next step is to conduct a paired sample T-test. The paired sample T-test is a test used to assess the effectiveness of a treatment which is characterized by a difference in the average before and after the treatment is given. In this study, the paired sample T-test was used to determine whether the project-based learning model had an effect on students' ability to write procedural texts. The paired sample T-test was conducted on the pre-test and post-test data of the experimental class and the pre-test and post-test data of the control class. The paired sample T-test was conducted using SPSS software version 25.0. The results of the paired sample T-test data using SPSS version 25.0 can be seen in the table below.

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

		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	df	Sig. (2-tailed)
			Paired Samples Test						
			Paired Differences		95% Confidence Interval of the Difference				
Pair 1	Pre-test Experiment Post-test Experiment	-15.441	9.307	1.596	-18.688	-12.194	-9.674	33	.000
Pair 2	Pre-test Control Post-test Control	-9.265	6.067	1.040	-11.382	-7.148	-8.904	33	.000

In the Based on the output data in the table above, the sig value (2-tailed) in pair 1 is 0.000 < 0.05. So, it can be concluded that there is a difference in the average

learning outcomes of students for the pre-test and post-test of the experimental class using the project-based learning model as a treatment. In pair 2, the sig value (2-tailed) is 0.000 <0.05, so it can be concluded that there is a difference in the average learning outcomes of students for the pre-test and post-test in the control class. Based on the discussion of the output pair 1, it can be concluded that there is an effect of the project-based learning model on students' abilities in procedural texts.

C. Homogeneity Test

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 post-test data of the experimental class and the post-test data of the control class were homogeneous or not. The results of the data homogeneity test using SPSS version 25.0 can be seen in the table below.

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

Test of Homogeneity of Variance				
	Levene Statistic	df1	df2	Sig.
Based on Mean	.032	1	66	.859
Based on Median	.060	1	66	.808
Based on Median and with adjusted df	.060	1	63.795	.808
Based on trimmed mean	.034	1	66	.854

Based on the output data in the table above, the significant value for the mean is 0.859> 0.05, for the significance value at the median is 0.808> 0.05, so it can be concluded that the variance of the post-test data of the experimental class and the post-test data of the control class are the same or homogeneous. If the results obtained are homogeneous, then the non-absolute requirement in the independent sample T-test has been met.

D. Independent Sample T- Test

The next test conducted is the Independent Sample T-test, which is a parametric statistical test used to determine whether there is a difference in the mean of two unrelated or unpaired samples. The requirement for the Independent Sample t-test is that the data is normally distributed. In this study, the independent sample t-test was conducted by testing the post-test scores of the experimental class with the post-test scores of the control class using SPSS software version 25.0. The results of the Independent Sample t-test, experimental post-test data and control post-test data using SPSS version 25.0 can be seen in the table below:

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

Independent Samples T-test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	.032	.859	4.890	66	.000	6.500	1.329	3.846	9.154
Equal variances not assumed			4.890	65.215	.000	6.500	1.329	3.846	9.154

Based on the results of the data output above, the significance value of the assumption of equal variance is 0.000 <0.05, so it can be concluded that there is a significant difference in the post-test scores of the experimental class and the post-test scores of the control class. This means that there is an effect of the use of the project-based learning model on students' writing skills.

Discussion

This study focuses on students' writing skills in procedural texts using project-based learning models in class X MAS AL Washliya Tanjung Tiram in the 2024/2025 academic year. This study was conducted in two forms of tests, namely pre-test and post-test. The pre-test was given to students before being given treatment, and the post-test was given to students after being given treatment. Based on the results of the test conducted, the study showed that the project-based learning model had a significant effect on students' writing skills. After being given treatment, students were able to answer the test better than the pre-test. This means that students successfully answered the post-test. This study was conducted through several steps using a project-based learning model. The steps in the PJBL model are: Starting with essential questions. Students will be given trigger questions to determine students' initial abilities in the procedural text material. explaining the general structure and grammatical characteristics of procedural texts, asking students to form several groups to make a product. Asking students to plan products

that will be made in groups, asking students to make short procedural texts based on generic structures. Based on Descriptive Data Analysis for the pre-test of the experimental class, the minimum value obtained was 56, and the maximum value obtained was 81. For the post-test of the experimental class, the minimum value obtained was 74, and the maximum value obtained was 95. Pre-test for the control class, the minimum value obtained was 55, and the maximum value obtained was 84. For the Post-test of the Control class, the minimum value obtained was 67, and the maximum value obtained was 89. While the average value (Mean) is 68.12 Pre-test Experimental Class, 83.56 Post-test Experimental Class, 67.79 Pre-test Control Class, and 77.06 Post-test Control Group. With a standard deviation of 7,074 in the pre-test of the experimental class, 5,171 in the post-test of the experimental class, 8,007 in the pre-test of the control class, 5,773 in the post-test of the control class. Based on the average value obtained, it can be concluded that there is an effect of project-based learning in the experimental class. This can be seen from the mean value obtained by the experimental class. In addition, based on the t-test conducted, it shows that the t-count value> t-table. This difference is shown from the results of the independent sample t-test, namely t-count = 4.890, t-table = 1.668, with a df value of 66, then the criteria for testing the hypothesis of this study are t-count table, so the hypothesis value (Ho) is rejected, and the alternative hypothesis (Ha) is accepted. This proves that there is a significant effect between the project-based learning model and conventional learning model on writing skills.

CONCLUSION

Based on the results and discussion of the influence of the project-based learning model, it was found that students' writing skills improved after implementing the use of the project-based learning model in teaching and learning activities of procedural texts. This statement can be seen from the average pre-test value of the experimental class of 68.12 to 83.56 in the post-test value, which means it increased after the application of the project-based learning model in the experimental class. In addition, the results are strengthened by looking at the significant value of the independent sample t-test results. The sig value (2-tailed) is 0.000 <0.05, which means that there is an effect of the project-based learning model on students' procedural text writing skills.

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