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THE EFFECT OF PROBLEM BASED LEARNING MODEL BY USING CANVA APPLICATION ON STUDENTS' READING COMPREHENSION AT XI GRADE OF SMA NEGERI 2 TANJUNGBALAI IN 2023/2024 ACADEMIC YEAR

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Abstract

The purpose of this study was to determine there was an effect of problem based learning model by using Canva application on students' reading comprehension at XI Grade OF SMA Negeri 2 Tanjungbalai in 2023/2024 Academic Year. This research is quantitative research with a two-group research design, experimental group and control group. The population in this research was all students of XI Grade consisting of 10 classes. The sample of this research was taken from 33 students of experimental class (XI IPA 6) and 33 students of control class (XI IPS 4). The instrument for collecting data was multiple choice test. The post-test was obtained with the average results of the experimental group 79,87 and the control group 62,72. T-test results obtained t_{score} = 7,56> t_{table} = 2.65 (at 1% significant level) or 2.00 (at 5% significant level). It means that Ha is accepted, thus it is obtained that there is an effect of problem based learning model by using Canva application on students' reading comprehension at XI Grade OF SMA Negeri 2 Tanjungbalai in 2023/2024 Academic Year.

Key word : Canva, Problem Based Learning Model, Reading Comprehension

INTRODUCTION

Reading is a way of understanding or understand texts that require attention to detail and concentration. William (1984) state that reading is an activities to catch the idea and to understand what has been read.

In learning English, reading comprehension is important. because most English lessons study types of texts, namely report text, procedural text, recount text, and so on, which are followed by several questions to improve students' understanding of recognizing the content, implied meaning, and explicit meaning in the text. However, all this does not go as expected, and there are still many students who find it difficult to answer questions related to the text, thus they feel bored and don't like studying the text.

Based on interviews with their teachers, SMA Negeri 2 Tanjungbalai students have several problems in understanding the text they read. They can't the structure, main ideas, and meaning of the text. There are several reasons that make reading comprehension difficult for students. Students had difficulties understanding the contents and finding the main idea of a text or there are even some students who don't know reading at all because English lessons were

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introduced after they were in junior high school. Therefore, they find it difficult to adapt when the teacher gives directions for learning English, namely find the meanings, superordinates, synonyms, antonyms, and technical language of a text. Due to a lack of vocabulary, students will find it extremely difficult to understand the book as a whole.Students have difficulty processing information from the text content. Students find it difficult to answer questions based on text because they don't know the strategies for answering questions. Even if they know the strategy, namely, by finding keywords in the question and adapting them to the content of the text, it will be easier for them to answer the question.

There are even some students who are not interested in English lessons because the learning medium is boring and has an impact on their reading mastery. Referring to the problem, this research believes that problem based learning by using Canva application is the most appropriate method for gaining students' reading comprehension, and the research focuses on analytical exposition text.

An exposition text is a text that puts forward some arguments accompanied by facts. An exposition text can also be interpreted as a paragraph or an essay that contains some information in which the contents are written to explain or give meaning in a short, concise, and accurate writing style.

Based on interviews with their teachers, SMA Negeri 2 Tanjungbalai students have several problems in understanding the text they read. They can't the structure, main ideas, and meaning of the text. Because of these students become passive learners, and learning model by teacher is less than optimal

Problem based learning is innovative learning that is delivered by presenting a problem, asking questions, facilitating investigation and discussion. According to Kilcher, Problem Based Learning is a learning model that challenges students to learn how to learn, and work in groups to find solutions to real world problems. The problems studied must be contextual problems that students encounter in everyday life. Problem based learning involves the teaching and learning process so that the students can understand the text.

Canva is an online design tool that offers users the opportunity to create professional-looking posters, slideshows, images, event flyers, resumes, cards, certificates, infographics, and other media. Canva application can make learning activities more interesting and not boring.

METHOD

This research method used experimental method with quantitative approach. There are two groups of sample namely Experimental Group and Control Group. This research consists of two varibles and two groups. Those two variables are problemt based learning strategy as independent variable and Reading Comprehension as dependent variable. This design focuses on treatment and outcome. The data was collected from pre-test and post test in order to know whether problem based learning by using Canva Application is effective in teaching Reading Comprehension. to take the sample of this research used one of sampling technique, it is simple random sampling. The Sample of this research was XI IPA 6 and XI IPS 4, where students of XI IPA 6 are as the experimental class and the students of XI IPS 4 are as the control class. This design of this research is below.

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Table 1. Two Groups Pre-test Post-test Design

Group	Pretest	Independet Variable	Post Test
E	Y1	X	Y2
C	Y1	-	Y2

Note:
E : Experimental Group
C : Control Group
Y1 : Pre-Test
Y2 : Post-Test
X : Treatment

The data of the research collected from the students' score that will be analyzed quantitatively. Quantitatively analysis was done using statistical formula is called statistical analysis. The function is to know the significance differences between students who were taught by problem based learning model by using Canva application and they were not. The data of the tests in this study were calculated by using Microsoft Excel 2010. The analyzed by using SPSS 26,0 for windows with the significance level of 0.05. The significant of the sum, the t-test and t-table will be compared with the degree of freedom (df) of the test, the t-test as follow.

$$t = \frac{M_x - M_y}{\sqrt{\left(\frac{\sum D\,x^2 + \sum Dy^2}{N_x + N_y - 2}\right)\left(\frac{1}{N_x} + \frac{1}{N_y}\right)}}$$

Where :
M_x = Means score of experimental group
M_y = Mean score of the control group
DX^2 = The Deviation score of Experimental group
DY^2 = The Deviation score of control group
N_x = The total sample of experimental group
N_y = The total sample of control group

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RESULTS AND DISCUSSION

The research data was collected in order to determine whether the problem based learning model has a significant impact on students' reading comprehension in analytical exposition text. The data consisted of the results of the problem based learning model and the conventional method.

Table 2. The Result of Pre-Test and Post-Test in Experimental Group

Experimental Group						
No	**Student's Initial**	**Pre-Test (X)**	**Post-Test (Y)**	**X^2**	**Y^2**	**XY**
1	A	70	80	4900	6400	5600
2	AF	65	70	4225	4900	4550
3	AP	40	70	1600	4900	2800
4	AFD	60	90	3600	8100	5400
5	DZS	45	75	2025	5625	3375
6	DA	70	80	4900	6400	5600
7	DAL	50	85	2500	7225	4250
8	DAP	40	70	1600	4900	2800
9	ESP	60	90	3600	8100	5400
10	FTP	30	70	900	4900	2100
11	FS	55	75	3025	5625	4125
12	GK	30	75	900	5625	2250
13	IAR	70	85	4900	7225	5950
14	IYM	35	80	1225	6400	2800
15	J	65	70	4225	4900	4550
16	JN	65	80	4225	6400	5200
17	KI	45	90	2025	8100	4050
18	KAS	40	85	1600	7225	3400
19	NAN	50	85	2500	7225	4250
20	NS	50	70	2500	4900	3500
21	NA	55	85	3025	7225	4675
22	NAI	65	70	4225	4900	4550
23	NL	65	70	4225	4900	4550
24	RNF	75	100	5625	10000	7500
25	RFS	55	85	3025	7225	4675
26	R	50	100	2500	10000	5000
27	SP	60	80	3600	6400	4800
28	SK	60	80	3600	6400	4800
29	S	60	70	3600	4900	4200

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30	SDY	55	70	3025	4900	3850
31	SUN	65	90	4225	8100	5850
32	TAR	55	75	3025	5625	4125
33	TS	65	70	4225	4900	4550
33 = N		**1820**	**2620**	**104900**	**210550**	**145075**

Table 3. The Result of Pre-Test and Post-Test in Control Group

Control Group						
No	**Student's Initial**	**Pre-Test (X)**	**Post-Test (Y)**	**X^2**	**Y^2**	**XY**
1	ARN	50	60	2500	3600	3000
2	AF	20	50	400	2500	1000
3	AIT	60	60	3600	3600	3600
4	CAN	50	70	2500	4900	3500
5	AS	35	50	1225	2500	1750
6	AP	50	65	2500	4225	3250
7	DW	50	60	2500	3600	3000
8	DES	40	75	1600	5625	3000
9	DA	50	60	2500	3600	3000
10	E	50	65	2500	4225	3250
11	FF	40	60	1600	3600	2400
12	FN	40	60	1600	3600	2400
13	FFBM	45	60	2025	3600	2700
14	IN	50	70	2500	4900	3500
15	KYG	55	70	3025	4900	3850
16	L	40	50	1600	2500	2000
17	MAKF	35	65	1225	4225	2275
18	NR	20	65	400	4225	1300
19	NID	40	70	1600	4900	2800
20	PAK	20	60	400	3600	1200
21	PH	40	60	1600	3600	2400
22	RPS	40	60	1600	3600	2400
23	S	40	65	1600	4225	2600
24	SL	55	50	3025	2500	2750
25	SP	35	65	1225	4225	2275
26	SAP	50	65	2500	4225	3250
27	STR	50	75	2500	5625	3750
28	T	35	70	1225	4900	2450

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29	UN	50	60	2500	3600	3000
30	VJP	50	50	2500	2500	2500
31	WAS	60	60	3600	3600	3600
32	WRL	50	70	2500	4900	3500
33	ZR	50	75	2500	5625	3750
33 = N		**1445**	**2070**	**66675**	**131550**	**91000**

From table 2 and table 3 showed that:

1. The highest and lowest scores in the experimental group in the pre-test were 75 and 30, while the highest and lowest scores in the post-test were 100 and 70 so, it was higher than the pre-test.
2. The highest and lowest scores in the control group in the pre-test were 60 and 20, while the highest and lowest scores in the post-test were 75 and 30. so it was higher than the pre-test.
3. The number of pre-test scores in the experimental group was 1820 after being given treatment using the problem-based learning model, the number of post-test scores increased to 2620.
4. The number of pre-test scores in the control group was 1445 after being given treatment using conventional way the number of post-test scores increased to 2070.
5. Points 3 and 4 showed that the use of the problem-based learning model improves students' understanding in reading comprehension of analytical exposition text rather than using conventional way. It can be seen with the number of post-test scores in the experimental group higher than the control group.

The data was analyzed by applying by t-test, finally the significant of the sum, the t-test and t-table would be compared with degree of freedom (df) of the test, the t-test as follow.

$$t = \frac{M_x - M_y}{\sqrt{\left(\frac{\sum D\,x^2 + \sum Dy^2}{N_x + N_y - 2}\right)\left(\frac{1}{N_x} + \frac{1}{N_y}\right)}}$$

Before calculating the data using t-test formula, the research has to find the mean standart deviation variable x and variable y.

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Mean Variable X:

$$M_x = \frac{\sum X_2}{N}$$

$$M_x = \frac{2620}{33}$$

$$M_x = 79{,}39$$

Standart Deviation variable X (Post-Test Score)

$$SDx = \sqrt{\frac{\sum Y^2}{N}}$$

$$SDx = \sqrt{\frac{210550}{33}}$$

$SDx = \sqrt{6380{,}30} = 79{,}87$

Mean Variable Y:

$$M_y = \frac{M_y}{N}$$

$$M_y = \frac{2070}{33}$$

$$M_y = 62{,}72$$

Standart Deviation Variable Y (Post-Test Score)

$$\text{SDy} = \sqrt{\frac{\sum \text{Y}^2}{\text{N}}}$$

$$SDy = \sqrt{\frac{131550}{33}}$$

$SDy = \sqrt{3986{,}36} = 63{,}13$

After getting mean variable x and variable y, then the data was analyzed by applying by t-test, finally the significant of the sum, the t-test and t-table would be compared with degree of freedom (df) of the test, the t-test as follow.

$$t = \frac{M_x - M_y}{\sqrt{\left(\frac{\sum DX^2 + \sum DY^2{}_y}{N_x + N_y - 2}\right)\left(\frac{1}{N_x} + \frac{1}{N_y}\right)}}$$

$$t = \frac{79{,}39 - 62{,}72}{\sqrt{\left(\frac{(79{,}87)^2 + (63{,}13)^2}{33 + 33 - 2}\right)\left(\frac{1}{33} + \frac{1}{33}\right)}}$$

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$$t = \frac{16{,}67}{\sqrt{\left(\frac{6379{,}2 + 3985{,}3}{64}\right)\left(\frac{2}{66}\right)}}$$

$$t = \frac{16{,}67}{\sqrt{\left(\frac{10364{,}5}{64}\right)\left(\frac{2}{66}\right)}}$$

$$t = \frac{16{,}67}{\sqrt{161{,}9 \times 0{,}030}}$$

$$t = \frac{16{,}67}{\sqrt{4{,}857}}$$

$$t = \frac{16{,}67}{2{,}204} = 7{,}56$$

$$t = 7{,}56$$

So, t-test = 7,56

And on the basis of these tests this research concluded about accepting or rejecting the formulated hypothesis. df or db = (N_2 + N_2-2) = 33 + 33-2 = 64 (See Table of Values "t"). It turns out that in the table there is no df of 64; therefore, the closest df is used, namely df. 60. With a df of 70, the table is obtained as follows:

1. At the 5% significance level: t_1 = 2.00
2. At the 1% significance level: t_1 = 2.65

Since the "t" we obtained in the calculation (i.e., t = 7,56) is greater than t_1 (both at the 5% significance level and at the 1% significance level), the alternative hypothesis (ha) is accepted. This means that There is significant the effect of problem-based learning model on reading comprehension of analytical exposition text by using Canva application.

This research has been successful, Ha is accepted and it is revealed that the hypothesis which states that there is a significant effect of using the Problem Based Learning model by using Canva application in learning reading comprehension of analytical exposition text is effective because learning reading comprehension of analytical exposition text using the Problem Based Learning Learning method gets higher scores than using conventional way.

CONCLUSION

Based on the result of the research and discussion that has been presented in the previous chapter, reading comprehension of analytical exposition text using the problem based learning model by using Canva application is more effective to improve the students' reading comprehension. The analysis show that the tscore is higher than the ttable. It shows that Ha is accepted and Ho is rejected. There is a significant influence of using the problem based learning model by using Canva application on students' reading comprehension in analytical exposition text.

After analyzing the data, it can be concluded that using the problem based learning model makes it easier for students to understand analytical exposition text, students become capable in reading comprehension of analytical exposition text and can easily understand questions related to the text, and by using problem based

learning model, students are more active in improving their reading comprehension.

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