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Jigsaw method in reading comprehension

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ABSTRACT

This study deals with the use of jigsaw method in improving students' reading at the VIII Grade Students of junior high school PGRI 4 Medan 2017/2018. This research was conducted by applying the Experimental method. The population of this study was the students of the VIII grade of junior high school PGRI 4 Medan. There were four classes which students were 30 in each classes. Totally 120 students. The sample was 60 students in which determined by purposive sampling technique that divided into two (2) groups, (CG) control group and (EG) experimental group. Data was analyzed by t-test formula and used observation sheet and interview sheet to show the result of the process in teaching reading. The result is the data by using t-test found that $t_{\text{observed}}(4,8) > t_{\text{table}}(2,00)$ with stage of freedom (df) is 58 and standard sense (0,05). And the end of the alternative hypothesis (H_a) was accepted and the null hypothesis (H_o) was rejected. In make yield means jigsaw significantly increasing reading at the VIII neap tide students of junior high school PGRI 4 Medan.

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1. Introduction

There is no human being who can live alone in this world, everybody needs other people. To interact with others, people use a system or tool of communication named language. English is one of the most important languages which plays a very necessary role in many international activities such as in commerce, sport, science, education, technology, business and international relations.

Reading skill is a concepts of mind from a text, it comes out experiences in mind. Additionally, this skill is one of English skill learn in formal or non-formal school by

examination is used in the final examination. Also, reading is the process of construct meaning in coordinate numbers and word in a text (Kusriani, 2013). It process of comprehension reading text skill (Patel & Jain, 2008). Not only values in reading a text but how the text have a sense from the writer wrote.

Based on the writer experimentation in Teaching Practice junior high school of PGRI 4 at Medan, the students have trouble to apprehend English in reading. The problem might resulted on the students' final examination achievement. Further, the teacher tends to dominate the classroom teaching and learning activity, and students rarely to discuss the materials or passive. Then, those problems are resulted from the failure to have optimally reading activity. In this case, the teacher, as an instructor, should consider to found methods in reading class in order to achieve learning goals.

In addition to this, teacher needs to solve problems immediately, class needs a new methods which were more challenging and interesting. Regarding the situation the writer choose the easy and enjoyable which could help students in reading comprehension.

The combined these case needed to cope problems one of methods that is jigsaw. Slavin (2005) stated that jigsaw is the process in working gathered and discussing by students in groups. Relating to the method, Pontoh, H., J., & H., (2019) Proved jigsaw in helping the students in reading class students share the case that they founded at the text. In jigsaw method optimally helping the student in reading text by process of learning students. The result of research in jigsaw students improve their knowledge, and effective in reading without bored of the text itself.

2. Method

This study applied quantitative in analyzing the data. Sugiyono (2013) defined the population as a common of field research to be discuss with determined by researcher. Based on the above theory, the writer determined the students of the eighth grade of SMP PGRI 4 Medan as the population of this study. According to the headmaster of SMP PGRI 4 Medan, there were four parallel classes of the eighth grade namely, VIII-A, VIII-B, VIII-C, VIII-D which consist of 30 students for each class, so the total number of population was 120 students.

This research applied purposive sampling. Latham (2007) states in his journal, purposive sampling is selecting a sample “on the basis of your own knowledge of the population, its elements, and the nature of your research aims”. That is the population that is “non-randomly selected based on a particular characteristic. Considering those theories, the writer determined 60 students as the sample, they were from grade VIII-A and VIII-B. As the reason was, the two classes was consisted of students who were more competent in English. As a sampling in two criteria experimental and control group using conventional way or without jigsaw method. VIII-A became the experimental group while VIII-B became the control group. Therefore, there were 30 students in each group. Research findings were taken from the quantitative

The quantitative data were taken by using jigsaw method. Based on the calculation above, the result of the research show the mean score of the experimental group (24,16) is higher than control group (14,33). It result significant improve in reading comprehension by jigsaw method at the VIII students of junior high school of PGRI 4 Medan. In other words, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected.

3. Results and discussion

The Data Analysis after applying the jigsaw method, the writer gave the post-test to the students. The score of the students' are increased. It can be seen that the total score of the control group in the pre-test is 1490 and in the post-test 1950 the mean in the pre-test is 49,67 while in the post-test is 65, the lowest score of post-test is 55 based on level of achievement the score are still low. It can be seen that the total score of the experimental group in the pre-test is 1635 and in the post-test 2360 the mean in the pre-test is 54,5 while in the post-test is 7,7 the lowest score of post-test is 70. Based on level of achievement according to Brown, 70 is one of the ranges of 70-79 which categorized into good.

Table 1. The Differences score of the pre-test and Post-test in Control group

No	Students' Name	Initial	Pre-test (y1)	Post-test (Y2)	Dy (Y2- Y1)	Dy ²
1	ADR		60	65	5	25
2	DH		40	55	15	225
3	EBN		50	65	15	225
4	ETM		40	65	25	625
5	ER		40	65	25	625
6	FZ		50	65	15	225
7	HDF		50	70	20	400
8	HAN		60	65	5	25
9	IM		55	70	15	225
10	JNT		60	70	10	100
11	ML		65	75	10	100
12	MHA		65	65	0	0
13	MHU		55	65	10	100
14	NH		55	75	20	400
15	RAH		45	65	20	200
16	RAY		55	55	0	0
17	RP		55	60	5	25
18	RMS		40	65	25	625
19	RHN		40	60	20	400
20	RLT		55	55	0	0
21	ROY		40	65	5	25
22	SE		40	55	15	225
23	SM		50	70	20	400
24	SZ		50	65	15	225
25	SM		50	55	5	25
26	SD		50	70	20	400
27	TS		50	70	20	400

28	TI	45	70	25	625
29	US	40	70	30	900
30	YG	40	65	15	225
	TOTAL	1490	1950	430	8000

From the table of differences score of the pre-test and post-test in control group above, the mean score of control group was calculated as follows :

$$My = \frac{\sum Dy}{N}$$

$$My = \frac{430}{30} = 14,33$$

The deviation square of experimental group was calculated as follows :

$$\begin{aligned} dy^2 &= \sum Dy^2 - \frac{(\sum Dy)^2}{N} \\ &= 8000 - \frac{(430)^2}{30} \\ &= 8000 - \frac{184900}{30} \\ &= 8000 - 6163,33 \\ &= 1836,33 \end{aligned}$$

Table 2- The Differences score of pre-test and post-test in Experimental Group

No	Students' Name	Initial	Pre-test (X1)	Post-test (X2)	DX - X1)	(X2 DX ²
1	AM		55	90	35	1225
2	AT		60	80	20	400
3	BS		55	85	30	900
4	BDT		60	85	25	625
5	CS		65	80	15	225
6	CME		50	70	20	400
7	CF		55	80	25	625
8	ESP		45	75	30	900
9	EMA		50	70	20	400
10	GF		40	75	35	1225
11	HP		50	70	20	400
12	IZ		40	75	35	1225
13	JS		55	90	35	1225
14	JR		55	90	35	1225
15	MA		65	80	15	225
16	MS		50	75	25	625
17	MK		55	70	15	225
18	MP		50	70	20	400
19	MR		70	85	15	225
20	NS		70	80	10	100
21	NF		65	80	15	225

22	PJ	40	80	40	1600
23	PM	60	80	20	400
24	QS	50	75	25	625
25	SM	45	75	30	900
26	SNF	50	75	25	625
27	SN	55	75	20	400
28	SIL	40	80	40	1600
29	WS	75	85	10	100
30	WAM	60	80	20	400
	TOTAL	1635	2360	725	19675
	MEAN	54,5	78,7		

From the table of differences score of the pre-test and post-test in experimental group above, the mean score of experimental group was calculated as follows :

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

$$M_x = \frac{725}{30}$$

$$= 24,166$$

The deviation square of experimental group was calculated as follows :

$$Dx^2 = \sum Dx^2 - \frac{\sum Dx^2}{N}$$

$$= 19675 - \frac{(725)^2}{30}$$

$$= 19675 - \frac{525625}{30}$$

$$= 19675 - 17520,83$$

$$= 2154,17$$

Testing Hypotesis

To find out whether Jigsaw method significantly improve students' reading comprehension at the eighth grade students of SMP PGRI 4 Medan, t-test can be used as the formula. The t-test was calculated as the follows :

$$t = \frac{M_x - M_y}{\left(\frac{\sqrt{dx^2 + dy^2}}{(N_x + N_y) - 2} \right) + \left(\frac{1}{N_x} + \frac{1}{N_y} \right)}$$

where : t : total score

M_x : the mean score of experimental group

M_y : the mean score of control group

dx² : the standard deviation of experimental group

dy² : the standard deviation of control group

N_x : the total number of students in experimental group

N_y : the total number of students in control group

And;

$$M_x = 24,16 \quad dx^2 = 2154,17 \quad N_x = 30$$

$$M_y = 14,33 \quad dy^2 = 1836,33 \quad N_y = 30$$

The result of t-test calculated as the following :

$$t = \frac{M_x - M_y}{\left(\frac{\sqrt{dx^2 + dy^2}}{(N_x + N_y) - 2} \right) \left(\frac{1}{N_x} + \frac{1}{N_y} \right)}$$

$$t = \frac{24,16 - 14,33}{\left(\frac{\sqrt{2154,17 + 1836,33}}{(30 + 30) - 2} \right) \left(\frac{1}{30} + \frac{1}{30} \right)}$$

$$t = \frac{9,83}{\left(\frac{\sqrt{3990,5}}{58} \right) \left(\frac{2}{30} \right)}$$

$$t = \frac{9,83}{\sqrt{(68,80)(0,06)}}$$

$$t = \frac{9,83}{\sqrt{4,12}}$$

$$t = \frac{9,83}{2,02}$$

$$t = 4,8$$

Then after the post-test was administered, the lowest score is not significantly improve, the 40 improves to 55 (55-40 = 15). It means that the difference of the score is 15 . The highest score is not significantly improves too, 65 improves to 75 (75-65 = 10), it means that the difference of score is 10. The mean score of the pre-test was 49,67 and post-test was 65 (65 – 49,67 = 15,33), it is concluded that the students in control group which is taught by using conventional way (without jigsaw method) was not significantly different.

The lowest score of pre-test in experimental group was 45 and highest score was 75. The lowest score of post-test in experimental group was 70 and the highest is 90. The lowest score improves significantly, the 40 improves to 70 (70 – 40 = 30), it means that difference of the score is 30. It also happened to the highest score, the 70 improves to 90 (90 – 70 = 20). It means that the difference of the sore is 20. The mean of the pre-test is 54,5 and the post-test is 78,7 (78,7 – 54,5 = 24,2). It can be concluded that the students in the experimental group which was taught by using jigsaw method was significantly different, since 24,2 > 15,33.

Based on the explanation above, it can be concluded that the students had the improvement in reading comprehension by using jigsaw method.

This research prove increasing reading by jigsaw methods. Then the analyzing data's, it was founded that lowers' score of pre-test in (CG) control group was 40, higher score was 65. The minimum scores of post-test was 55 and the highest is seventy five (75).

It means that the difference of the sore is 20. It can be concluded that the students in the experimental group which was taught by using jigsaw method was significantly different.

On the discussing above, jigsaw improvement in reading comprehension. And the end of the alternative hypothesis (Ha) was accepted and the null hypothesis (Ho) was rejected. In make yield means jigsaw significantly increasing reading at the VIII neap tide students of junior high school PGRI 4 Medan. With the explanation specifically has proved the improving students in reading by jigsaw. (N., & Dahlia,nd) conducted *Jigsaw to Improve Reading Comprehension*, the students dared to share what point of text they are reads with the class mate. The founded of this project an indication jigsaw method in optimally learning process. Students additionally, gives good responses on this research. (Purba, A. N., Flora, F., & Sinaga, T.2018).

4. Conclusion and suggestions

The process of teaching reading comprehension at the eighth grade students of SMP PGRI 4 Medan was good. Jigsaw method makes teaching and learning process become interesting and enjoyable. It was proved by the observation and interview. The process of teaching reading comprehension at the eighth grade students of SMP PGRI 4 Medan was gone Real Jigsaw method makes teaching and learning process become interesting and enjoyable. It was proved by the observation and interview. Based on the conclusion above, the writer suggests the following teacher it is better to use jigsaw method in teaching and learning process in reading skill because will train the students to be creative readers. Therefore, they will be able to get information from the text more comprehensively. To students should practice the jigsaw method, to give the students invaluable benefit, because it helps them to collaborate with their friend to discuss the material about reading text which will guide them to comprehend reading text much better.

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