THE EFFECT OF JIGSAW TECHNIQUE ON THE SECOND YEAR STUDENTS' ABILITY IN COMPREHENDING NARRATIVE TEXTS AT SMP TELEKOMUNIKASI PEKANBARU

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Abstract : This pre-experimental research was aimed at finding out whether there was a significant effect of jigsaw technique on the second year students' ability in comprehending narrative texts at SMP Telekomunikasi Pekanbaru. The research design was one group pre-test post-test design. The population was the second-year students in academic year 2018/2019. The sample was 25 students out of the population, chosen by cluster sampling. The instrument used to collect the data was a reading test. The tests consisted of 40 items. The obtained data was analyzed by using SPSS version 23.0. The finding of the research showed that the mean score of post-test was higher than pre-test (80.5>65.6). The value of t-test was higher than t-table (13.616>2.06) at 5% of significance level. Therefore, alternative hypothesis (Ha) was accepted. This means that Jigsaw Technique was effective for teaching reading comprehension concerning narrative text. There is a significant effect of jigsaw technique on the second year students' ability in comprehending narrative texts at SMP Telekomunikasi Pekanbaru.

Keywords: Jigsaw Technique, Reading Comprehension, Narrative Texts

PENGARUH TEKNIK JIGSAW TERHADAP PEMAHAMAN MEMBACA TEKS NARATIF DI TAHUN KEDUS DI SMP TELEKOMUNIKASI PEKANBARU

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Abstrak: Tujuan dari riset ini adalah untuk mengetahui pengaruh dari teknik jigsaw terhadap pehaman membaca teks naratif siswa tahun kedua di SMP Telekomunikasi Pekanbaru. Riset ini merupakan pre-experimental riset bermodelkan one group pretest-posttest. Seluruh siswa kelas VIII tahun ajaran 2018/2019 dipilih sebagai populasi. Sampel dari riset ini adalah siswa kelas VIII.B yang memiliki 25 siswa dan dipilih dengan menggunakan cluster sampling. Materi pembelajaran teks naratif dipilih sebagai instrument pada riset ini. Untuk mengumpulkan data, penulis menggunakan ujian membaca yang berisi 40 soaL. SPSS 23.0 digunakan untuk menganalisa data pada riset ini. Berdasarkan hasil yang didapat, nilai rata-rata siswa pada post-test lebih tinggi dibandingkan nilai rata-rata siswa pada pre-test. Nilai rata-rata pada pre-test adalah 65.6 sedangkan pada post-test adalah 80.5. Nilai t-test lebih besar dibandingkan nilai t-table (13.616 > 2.06) pada tingkat signifikan 5%. Singkatnya, hipotesis nol pada riset ini ditolak. Terdapat efek yang signifikan dari teknik jigsaw terhadap pemahaman membaca teks naratif oleh siswa tahun kedua di SMP Telekomunikasi Pekanbaru.

Kata kunci: Teknik Jigsaw, Pemahaman Membaca, Teks Naratif

INTRODUCTION

It is said that English is the most important language in the world due to its function as the international language that makes this language widely-used in all over the globe. Like any other languages, there are four ultimate skills that will be focused in learning English. They are listening, speaking, reading and writing. Moreover, Reading is one of the skills that plays a very important role for learners to be able to communicate in the context of English as an international language. This is because many important sources of learning are written in English.

According to Burhan (2012), reading is a physic and mental activity to reveal the meaning of the written texts, while in that activity there is a process of knowing letters. It says a physic activity because the parts of the body, our eyes particularly, do it. And it says mental activity because perception and memory as parts of though are involved in it. He then concludes that the main goal of reading is a process of comprehending written texts.

In addition, Cline et.al (2006), states that reading is decoding and understanding written texts. Decoding requires translating the symbols of writing system into the spoken words which they represent. Understanding is determined by the purposes for reading, the context, the nature of the text, and the readers' strategies and knowledge. Further, in their second definition states that reading is the process of deriving meaning from the text. For the majority of readers, this process involves decoding written text. Some individuals require adaptation such as Braille or auditorization to support the decoding process. Understanding is determined by the purposes for reading, the context, the nature of the text, and the reader's strategies and knowledge.

DEFINITION OF READING COMPREHENSION

The major goal of reading for high school students is comprehension. Readers' ability to understand the author's message is influenced by their background knowledge to the topic given in the text. It is stated by Burnes and Page (1985) state that comprehension is the process where background knowledge or the world knowledge of the reader interacts with the message encoded in the text to generate an understanding of an author's message.

Neufeld (2005), states that comprehension is the process of constructing a supportable understanding of a text. He added comprehension involves two important features: being actively involved with the text and using appropriate background knowledge to interpret the text. It is also supported by Ahuja and Ahuja (2001). She states that comprehension is the product of reconstructing the facts within the nervous system of the reader. It means that the reader will reconstruct her or his background knowledge in understanding the text.

Gibbons (1993), states that reading is the process of getting meaning from print. It means that reading is an activity to get information from written text. In this activity, there is an interaction between the author and the writer because the writer delivers her/his idea to the readers through the texts. The reader can also improve their understanding through reading activity. In this case, reading is a very useful activity that

should be done as a habit for everybody because reading will enlarge their knowledge about something.

Burnes and Page (1991) state that reading comprehension is a reading, thinking activity and as such relies upon its success upon the level of intelligence of the reader, his or her speed of thinking ability detect the relationship. It means that in reading comprehension, the readers have to involve their intelligence because it can influence their ability in comprehending what they read.

DEFINITION OF JIGSAW TECHNIQUE

There are some different definition about jigsaw technique which stated by the experts. Mengduo (2010) states that jigsaw technique, which originally developed by Elliot Aronson in 1971, was considered effective in increasing positive educational outcomes. As a cooperative learning technique, it has been greatly studied abroad and has been explored in various ways by a numbers of researchers and teachers in classes of different levels and of different subjects. Brown (2001) defines jigsaw technique as a special form of information gap in which each member of a group is given some specific information and the goal is to pool all information to achieve some objective.

In line with Brown, Berkeley-Wykes (2001) defines jigsaw reading techniques as the technique in which a reading text is cut into segments and the task of the students is to restore it to its proper order – to make sense of the text. If used as a group activity where students discuss the decisions of how to order the segments of the text, it can elicit a great deal of communicative interaction. Jigsaw is involving two distinct groups that students will be a part of. Initially there is a heterogeneous group that the students will temporarily leave to meet with homogeneous group to learn to be an expert on a topic. After students have become "experts" they reconvene with their original heterogeneous group to take turns sharing their "expert" knowledge. Just as in a jigsaw puzzle, each piece (each student's part) is essential for the completion and full understanding of the final product. If each student's part is essential, then each student is essential; and that is precisely what makes this strategy so effective. As Slavin (1995) adds: "The key to Jigsaw is interdependence: every student depends on his or her teammates to provide the information needed to do well on the assessments."

There are nine steps considered to be important in the implementation of the jigsaw classroom. Aronson (2008) describes them as follows.

1. Students are divided into a 5 or 6 person jigsaw group. The group should be diverse in terms of ethnicity, gender, ability, and race.
2. The day's lesson is divided into 5-6 segments
3. Each student is assigned one segment to learn. Students should only have direct access to only their own segment.
4. Students should be given time to read over their segment at least twice to become familiar with it. Students do not need to memorize it.
5. Temporary experts groups should be formed in which one student from each jigsaw group joins other students assigned to the same segment. Students in this expert group should be given time to discuss the main points of their segment and rehearse the presentation they are going to make to their jigsaw group.

6. Students come back to their jigsaw group.
7. Students present his or her segment to the group. Other members are encouraged to ask question for clarification.
8. The teacher needs to float from group to group in order to observe the process. Intervene if any group is having trouble such as a member being dominating or disruptive.
9. A quiz on the material should be given at the end so students realize that the sessions are not just for fun and games, but that they really count.

RESEARCH METHODOLOGY

This research was conducted at SMP Telekomunikasi Pekanbaru which was located on Jl.Esemka No.5, Simpang Baru, Pekanbaru and started from 10 November 2018 till 7 December 2018. The population of this research was the second year students of SMP Telekomunikasi Pekanbaru and the samples were selected by using cluster sampling. The data were collected by testing the students to read the text and answer the question. The calculation of the data help by SPSS 23.0.

To know whether or not there is a significant effect of Jigsaw technique in comprehending narrative text, the writer used t-test. T-test was formulated as follow:

$$t = \frac{Md}{SE_{MD}}$$

Where:

Md = Mean of difference
SE_{MD} = Standard error from mean of difference

(Sudijono, 2014)

RESEARCH FINDINGS

Results

The objective of the research was to find out the significant effect of jigsaw technique on reading comprehension of narrative texts of the second year students of SMP Telekomunikasi Pekanbaru. The data was collected by giving reading test to the students. The students were asked to read the reading passage and answer the questions individually. They need to answer 40 questions that contains of eight components of reading comprehension, they are factual information, main idea, guessing vocabulary, inference, reference, social function and generic structure of narrative text.

There were two kinds of the test that students had, pre-test and post-test. A pre-test was given at the beginning of the research to find out the students' ability before the treatment, and then the second test was a post-test which was given after treatment. The test was designed based on the syllabus in School Based Curriculum.

The Result of Try Out

Before the test was given to get the data, it was necessary to do try out in order to measure the validity and reliability of the test. The try out consist of 40 items. The try out was carried out in another class of the research class that is VIII A as try out class, and VIII B as sample class. The result showed that 7 items were rejected because 3 items are easy and 4 items are difficult.

Furthermore, after being calculated, it was found that the mean score of the try out was 18.88. its standard deviation was 2.76. After obtaining the mean score and standard deviation, the reliability of the try out can be calculated. The reliability of the items was 0.41. this means the reliability of the test was high. It can be concluded that the items of this instruments that were used in this research were valid and reliable.

The Result of Pre-Test

The pre-test was given by asking students to answer the questions about narrative text. The numbers of questions given were 40 questions and test were in the form of multiple-choices. The test was done before treatment process by using jigsaw technique in teaching reading narrative text comprehension. This test was intended to know the students reading achievement before the students got treatment. The result of the students' score in pre-test was shown in the table 4.3:

Table 1 Descriptive Statistic of Pre-test

	Mean	N	Median	Mode	Std. Deviation
Pre-test	65.6	25	65	65	4.406

Table 1 shows that the mean score of 25 students was 65.6. According to the table criteria students' score, the mean laid at average to good qualification. Meanwhile, the median score was 65. Finally, the most frequent score was 65 as the mode.

The Result of Post-test

The post-test was given by asking students to answer the questions about narrative text. The numbers of questions given were 40 questions and test were in the form of multiple-choices. The test was done after treatment process by giving jigsaw technique in teaching reading narrative text comprehension. This test was intended to know the students reading achievement after the students got treatment. The data students' achievement of post-test could be seen in the table 1:

Table 2 Descriptive Statistic of Post-test

	Mean	N	Median	Mode	Std. Deviation
Pre-test	80.5	25	80	80	3.536

This table shows that the mean score of 25 students was 80.5. According to the table criteria students' score the mean laid at average to good qualification. Meanwhile, the median score was 80. Finally, the most frequent score was 80 as the mode.

Therefore, there are differences in data presentation between before being taught by using jigsaw technique was better and higher than was before using jigsaw technique in teaching narrative text.

The Result of T-test

In this research, t-test formula was used to compare the pre-test and post-test results in determining whether the hypothesis could be accepted and also measuring whether the instruments in treatment could give an effect on students' reading comprehension or not.

In performing pre-experimental research, hypothesis was required to see whether there is a difference after the activities was completely performed. The mean of pre-test score (X) achieved by the second year students students was 65.6. Furthermore, when the treatment had been given to the students, the enhancement of students' reading comprehension occured.

The improvement could be seen in their mean score as shown in post-test result (Y), 80.5. The margin of pre-test and post-test achieved was 14.9 aside from the enhancement score of pre-test and post-test, in order for the hypothesis could be accepted, the results of t-test formula is also required. The t-test formula shown in the table 3.

Table 3 Paired Sample Statistic

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre	65.6000	25	4.40643	.88129
	Post	80.5000	25	3.53553	.70711

Table 3 shows that, the mean score of pre-test is 63.58 and in the post-test is 80.5. The difference of the mean score between pre-test and post-test is 14.9. The gap of mean score shows an effect of students' reading ability in the written test. Standard deviation is a values spread in the sample, while standard error mean is an estimate of standard deviation. The spread of values in the sample pre-test is 4.40, while standard error of mean is 0.88. The standard deviation of post-test is 3.53, while standard error of mean post-test is 0.7.

Table 4 Paired Sample Test

Paired Samples Test

	Paired Differences							
		Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
	Mean			Lower	Upper			
Pair 1 pre – post	-1.490 00E1	5.47152	1.09430	-17.1585 3	-12.6414 7	-13.61 6	24	.000

Table 4 shows the result of the t-test is 13,616, meanwhile the result of t-table is 2.06. The t-test is higher than t-table. It can be concluded that there is a significant difference between the pre-test and the post-test. In other words, the alternative hypothesis of this research, "There is a significant effect of jigsaw technique on the second year students' ability in comprehending narrative texts at SMP Telekomunikasi Pekanbaru" is accepted and null hypothesis is rejected.

DISCUSSION

Based on the description of data, the researcher can say that use of jigsaw technique is applicable for teaching English narrative. The result shows that the post-test is better than the pre-test which indicated the improvement of students' reading comprehension in narrative text.

Based on the research technique, the teaching learning process was divided into three steps. First step is giving students pre-test in order to know their ability before jigsaw technique was applied. Multiple choices test was design as an instrument. It was used for both pre-test and post-test.

The second step is by giving treatment for 6 meetings. The treatment is applying jigsaw technique in teaching reading narrative text. Each meeting had 80 minutes length teaching and learning process. Jigsaw technique was exposed in teaching reading on narrative texts. In the first meeting, the writer explained how this technique used. It did not take much time to explain. Then, the writer divided the students' in to group of five. The students learn about narrative text in a group. Then, the students in expert group explain about narrative text to the others group. In this meeting, the writer floats from group to group in order to observe the process. At the end of the meeting, the writer give some quiz to the students and they do it by them self.

In conducting the treatment, the writer faced some difficulties in the last meeting. The students get bored when the treatment was applied. Then, some students also made noise that disturbed the teaching-learning activities. They did not really pay attention. It was probably because the time of teaching was not effective, the school was in the preparation of semester test.

The last step is giving post-test for the students to know the students' ability after they gave a treatment by using jigsaw technique.

The experiment has an effort to get some improvement in the teaching reading to the eight grade students of the junior high school students. The discussion of the finding are as follows. Teaching reading by using jigsaw technique are good and effective for students at the second year students' of SMP Telekomunikasi Pekanbaru. The result of the test from teaching reading comprehension by using jigsaw technique shows that the students could understand the text that the teacher given to them. From the technique by using jigsaw, the students are able to help their friends who do not understand about the text.

By using jigsaw technique the students are easy to catch the main idea, factual information, generic structure, inference, reference, social function, vocabulary and language feature because they have to share each other from what they have. The students are interested and enjoy learn the narrative text by using this technique.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the data analysis, it can be concluded that jigsaw technique gives significant effect on the second year students' ability in comprehending narrative texts at SMP Telekomunikasi Pekanbaru. The use of jigsaw technique help the students easier to catch and understand the components of reading in narrative text that the teacher give to them, and also the students are interested and enjoy in learning the topic. This technique can help the students in order to gain information from the texts.

In addition, the use of jigsaw technique gives positive environment in the classroom. By using jigsaw technique can increase the students' participation and interaction to be more active. Using this technique the teacher devided the students into groups, so all members of the group have to read and answer the questions from the text and all the students must be understand.

Recommendations

The result of the research shows that the students' reading comprehension improves. There are significant differences of the students' reading comprehension before and after being taught using jigsaw technique. The average score before taught use jigsaw technique was showed 65.6 while the average score after being taught using jigsaw technique was showed 80.5.

After getting the result of the study in this research, the researcher would like to give some suggestions that can be used to teach narrative text as follows:

1. The teacher could apply jigsaw technique as one of the technique in teaching reading especially narrative text since it is proved that this technique gave good influence for the students' reading comprehension.
2. Before using this technique its better for the teacher to explain the procedures of this technique.

3. It is better for the teacher to give the information about the purpose of jigsaw technique.

When the students did their exercises in groups, the teacher should gave the attention and check what the students were did with their friends. These activities could be considered as valuable indicators to notify whether the students were learned or not.

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