

ENHANCING STUDENTS' READING COMPREHENSION BY USING JIGSAW TECHNIQUE

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Abstract : The aims of this study is to find out whether or not there is significant effect of using Jigsaw technique on the eighth grade students' reading comprehension at Islamic Junior High School Al-Jauharen. The design of the experiment research is a quasi-experimental research with pre-test post -test control group design. There were 64 students involved as the samples in this study. The results indicated that there was significant difference on the students' comprehension before ($M=60.80$, $SD= 19.69$) and after being taught by using Jigsaw Technique ($M=78.62$, $SD=10.08$), $t(29)=3.926$, $p= 0.000 < 0.05$. The results of independent sample t-test also indicated that there was significant difference on the comprehension of the students in experimental group and in control group ($p>0.05$). In brief, the results implied that there were there was significant effect of using Jigsaw Technique on the students' reading comprehension.

Keywords: Jigsaw Technique, Reading, Reading Comprehension

Abstrak : Tujuan dari penelitian ini adalah untuk mencari tahu apakah ada efek yang signifikan dari penggunaan teknik Jigsaw terhadap pemahaman membaca Siswa MTS Al Jauharen. N . Desain penelitian yang digunakan adalah desain eksperimental kuasi yang menerapkan desain kontrol grup 'pre-test' dan 'posttest'. Terdapat 64 siswa yang menjadi sampel dalam penelitian ini. Hasil penelitian menunjukkan terdapat perbedaan yang signifikan antara pemahaman membaca siswa sebelum ($M=60.80$, $SD= 19.69$) dan sesudah diajarkan dengan menggunakan Teknik Jigsaw ($M=78.62$, $SD=10.08$), $t(29)=3.926$, $p= 0.000 < 0.05$. Hasil perhitungan 'independent sample t-test' juga menunjukkan bahwa terdapat perbedaan yang signifikan terhadap pemahaman membaca siswa di kelas eksperimental dan kelas kontrol ($p>0.05$). Singkatnya, Hasil penelitian membuktikan bahwa terdapat efek yang signifikan dari penggunaan teknik Jigsaw terhadap pemahaman membaca siswa.

Kata kunci: Teknik jigsaw, membaca, pemahaman membaca

1. INTRODUCTION

Reading is the fundamental skill that is essential in all formal education. Moats (2020) stated, "The most fundamental responsibility of school is teaching students to read" (p.4). According to research funded by the National Institute of Child Health and Human Development, if intervention is delayed until

nine years of age (the time when most children with reading difficulties receive services), approximately 75% of children will continue to have difficulties learning to read throughout high school (Lyon, 1998). Reading outcomes at early grades can predict overall academic success in higher (Torgesen & Wagner; Slavin; Strag, cited in Buscardin at all, 2014). Those research studies show that a child who does not learn the reading

basics early is unlikely to learn them at all. Low reading achievement is the problems which cause low school performance. It harms the students and influence public confidence in the school system.

Moreover, reading as one of language skills plays significant role. This is the skill that help language learners strengthen their language knowledge According to Teixeira (2012), reading is a key language skill that has a significant place in the teaching and learning of foreign languages. This skill allows students to have access to ideas that is communicated by people in different locations and areas and give them the opportunity to broaden their horizons and increase their knowledge. Besides, reading also helps learners to improve the grammar and comprehend the text and idea.

However, reading as one of the basic skills in English is not simply translated word by word. It is needed to be acquired during language learning process. The process of reading involves the reader, the text and the interaction between reader and text because the text presents letters, words, sentences, and paragraphs that encode meaning. Readers are not only expected to read the text in good pronunciation or to find the meaning of each word within the text. They have knowledge, skills, and strategies to determine the meaning.

In order to help the students to be able to read and comprehend the ideas, teacher should be able to use appropriate strategy to match the students' condition. Larsen-Freeman (2000) states that in order to create an effective learning process, a suitable strategy for teaching reading

must be considered. The strategy must match the condition of the class and the ability of the students because every class has different condition. Indeed, the condition will determine the suitable strategy to be applied.

However, the students' reading achievement is still out of expectation. Based on Chung (2014, p.12), the reading assessment in Asia is in the last position of four skills. Most students thought that reading English text is really difficult for it has different vocabulary, structures with their own language rules. It becomes a major reason for them to comprehend an English text. The research from *Program for International Student Assessment (PISA) 2015* shows that Indonesia ranked 64 out of 70 countries for reading assessment. It means Indonesian rank in the bottom seven. This research proved that reading is still need to be improved.

Moreover, specifically in Islamic Junior High School Al Jauharen the writer found that students are lack in reading English passage. In fact, the standard completeness in Islamic Junior High School Al Jauharen is 8, 0 but the students only reach 7, 2.

As it was observed, the lack ability of the eighth-grade students in Islamic Junior High School Al Jauharen in reading English is influenced by several factors. Students still have difficulty in understanding English word, phrase and sentences. The students also have difficulty in finding the main idea of the text they read. Besides, students are not accustomed to have reading practice in classroom and everyday life. In fact, teachers still not apply the right method

or technique to provide materials for students to learn and have quick understanding the material presented. Based on that factors mentioned above, the biggest problem is how to choose appropriate technique or method because student can easily get bored if teacher presents material with inappropriate technique.

Therefore, it is necessary to apply the method, techniques or strategies to solve students' reading problem in English in order to help them can read and understand the meaning of every reading passage. Collaborative teaching technique may become an alternative technique to teach students. Indeed, one of the techniques that can be used to improve students' reading comprehension on the basic of collaborative teaching is jigsaw.

According to Tewksbury (2008) jigsaw is one of the techniques which helps the teachers stimulate the students to be more active and creative in learning process. She adds Jigsaw is a cooperative learning technique that was created with the goals of reducing conflict and enhancing positive educational outcomes. A study form Meng (2010) concluded that the students in experimental class who taught using Jigsaw Techniques were benefited from cooperative learning approaches. The technique fosters the interests in learning English, increases the motivation and improves the students' ability.

By using jigsaw, it can help students to comprehend a text better. Besides, jigsaw provides the opportunities for the students to work in groups and to share ideas. Then, Kessler supported that jigsaw develop students' skills of

analysis, comparison, evaluation, and synthesis of information (1992). The advantages Kessler mentioned are mostly from the students because as students have main role in jigsaw technique process, students should get involved well in the process.

As a matter of fact, the writer was interested to conduct a research to find out whether or not jigsaw technique can improve reading comprehension of the students at Islamic Junior High School Al-Jauharen.

2. RESEARCH METHODOLOGY

2.1 Research Method

In conducting the research, the writers applied one type of quantitative method which was experimental research. Frankel and Wallen (2006) state that experimental research is type of research that directly attempts to influence a particular variable, and when properly applied, it is the best type of testing hypothesis about cause and effect relationship. The major characteristic of experimental research is that researchers manipulate the independent variable. The design of the experiment research is a quasi-experimental research. Fraenkel and Wallen (2008) and Creswell (2009) states that *Quasi*-experimental designs do not include the use of random assignment. The writer applied nonequivalent control group design.

In the study, the writers gave interventions to both of the groups. The writers applied jigsaw technique in the experimental group, but the writers did not apply special technique to the

control group. The writers taught the control group by adopted the activities that usually used by the classroom teacher during the daily meetings. The research was conducted for twelve meetings.

The design for this research is expressed in the table 1:

Table 1.
The Table of Research Design

Class	Pre Test	Treatment	Post Test
Experiment	O ₁	X	O ₁
Control	O ₁	Y	O ₁

Explanation:

- X : Jigsaw technique
- Y : conventional learning/regular
- O₁ : initial test and final test

2.2 Operational Definitions

There are some terms are needed to be defined operationally.

Jigsaw Technique:

Jigsaw Technique is an efficient way to facilitate learning. In this technique, students learn a lot of material quickly, share information with other groups, minimize listening time, and be individually accountable for their learning. Since each group needs its members to do well in order for the whole group to do well, *Jigsaw* maximizes interaction and establishes an atmosphere of cooperation and respect for other students.

Reading Comprehension:

Reading Comprehension has some levels. In this research, the writer refers to literal comprehension where students are suggested to find out information and understand the ideas that are explicitly stated in the text. In fact, in this study, the writer focuses on the students' score in reading that obtained after comprehending the reading texts that are in literal level of comprehension.

2.3 Population and Sample

The populations of this study were eight grade students of Islamic Junior High School Al-Jauharen Jambi. There were 64 students whom were assigned to both experimental (30 students) and control group (34 students).

2.4 Technique for Collecting Data

In order to collect the data of the students' reading comprehension, the writers used reading comprehension test. The test was distributed in form of multiple choice. The writer adapted some texts and questions from several sources available for the eighth-grade students based on the curriculum applied by the school. The writers tested the texts readability to make sure if the texts were appropriate for their level. The writers also asked two validators to make sure the questioned adapted were valid for literal reading comprehension. Before the writers distributed the tests to the research samples, the writer tried out the questions to the non-sample students.

The results of the reliability by using Cronbach's alpha showed that the test was the test was reliable ($r = 0.658 > r_{table} = 0.279$). However, among 50 items questions, there were only 23 valid items/questions that could be used in the test. The writers then distributed the valid questions in pre-test both in experimental and control group before and after the interventions.

3. FINDINGS

Before showing the results of statistical analyses, the writers explained frequencies, percentages, and means score of the students' reading comprehension achievement based on the results of the tests before and after the interventions in both experimental and control groups. The score criterion was adopted from Heaton and Nurgiantori (cited in Saputra, 2012).

Table 1. Score Categories

Score	Category
81-100	Very Good
61-80	Good
41-60	Fair
21-40	Weak
0-20	Poor

3.1 The Result of Pre-Test and Post-Test in Experimental Group

The experimental group consisted of 30 students. The average score (M) achieved by this group before the intervention was 66.08. Then,

the lowest score was in weak interval, because it was between 21 to 40 and the highest score was in very good interval; that was between 81-100.

Based on the calculation, it can be seen that from 30 students, there were 11 students (36%) got score between 61-80 (good), 8 students (27%) got score between 41-60 (fair), 3 students (10%) got score between 21-40 (weak) and 8 students (27%) got score between 81-100 (very good). In addition, the lowest score was 26.08 and the highest score was 95.65. Figure 1 Explored the pre-test score based on score categories.

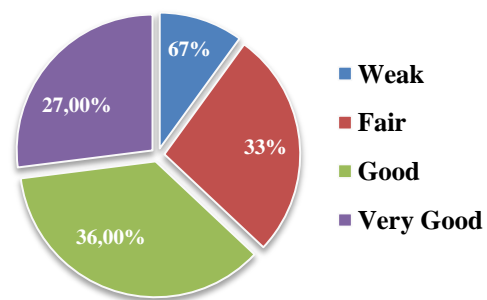


Figure 1. The Result of Pre-Test in Experimental Group

After the interventions, the writers gave post-test to the group to see the improvement of the students' comprehension. The average score (M) achieved by this group was 78.26. Then, the lowest score was in good interval, because it was between 61-80 score and the highest score was in very good interval; that was between 81-100 score.

Based on the calculation, it can be seen that from 30 students, there were 20 students (67%) got score between 61-80 (good) and 10 students (33%) got score between 81-100 (very

good). In addition, the lowest score was 65.22 and the highest score was 95.65.

The results proved that after the interventions by using jigsaw technique no more students were categorized weak or poor. Figure 2 explored the post-test score based on score

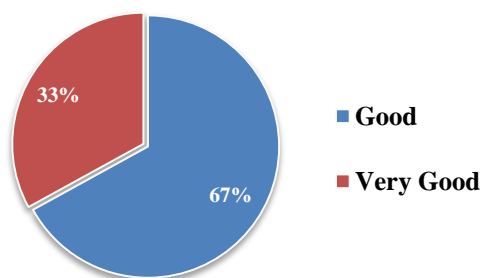


Figure 2. The Result of Post-Test in Experimental Group

3.2 The Result of Pre-Test and Post-Test in Control Group

The results of pre-test of control class showed that from 34 students, there were 12 students (35%) got score between 61-80 (good), 29 students (10%) got score between 41-60 (fair) and 12 students (36%) got score between 81-100 (very good). In addition, the lowest score was 52.79 and the highest score was 95.65. Figure 3 explored the pre-test based on score categories.

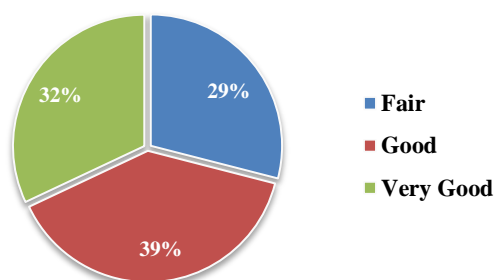


Figure 3. The Result of Pre-Test in Control Group

After the teaching and learning activities, the writes calculated the students' post-test. The results of post test showed that the average score (M) was 71.61. Then, the lowest score was in fair interval, because it was between 41-60 score and the highest score was in very good interval; that was between 81-100 score. Figure 4 explored the post-test based on score categories.

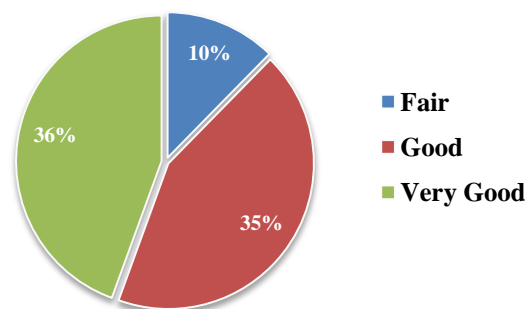


Figure 4. The Result of Post-Test in Control Group

Although the results of the post-test control group show that there was improvement after the intervention, but the improvement is not that big. Moreover, the mean difference between the result of post-test in experimental group (78.26), and post-test in control class (71.61) was 6.65.

3.3 Normality of the Data

Before the writers analyze the data statistically, the writer calculated the normality of the data to see whether the data are distributed normally. The results of the test in experimental group showed that the data were normally distributed since

the significance was 0.200 which data are higher than the level of significance 0,05 ($0.200 > 0.05$). The results of normality test in control group also showed that the data were normally distributed with the significance 0.098 that was higher than the level of significance 0.05.

Since the pretest and post test scores of the experimental and control groups were normally distributed, parametric tests using t-test were computed.

3.4. Calculation of t-test

Paired Sample t-test in Experimental Group

In order to find out whether or not there was significance difference on the students' reading comprehension before and after being taught by using Jigsaw Technique, the writers computed paired sample t-test.

The results proved that there was a statistically significant improvement in students' reading comprehension from pre-test ($M = 60,80$, $SD = 19,69$) to post test ($M = 78,62$, $SD = 10,08$), $t(29) = 3.926$, $p = 0.000 < 0,05$.

Independent Sample t-test

An independent sample t-test was conducted to find out whether or not there

was significant difference between experimental and control groups after the students were given the treatment. The result show that t-scores was 1,765 ($p = 0,00 < 0,05$).

In fact, the t table for 29 samples ($df = n-1$) was 1,644. Therefore, the result of t-test between the two groups indicated that there was significant difference on reading comprehension between the students taught by using Jigsaw technique and those who were not.

3.5 Interpretation

The results on the findings showed that the students' score in experiment class improved after getting the treatment by using jigsaw technique. The result was due to some reasons.

Firstly, the use of jigsaw technique could help students to understand the material well due to an active participation with their friends in groups. Students could also involve in the teaching learning process by discussing and delivering ideas towards the material learned. By using jigsaw technique, students tried to have their own opinion about a case.

Besides, they had learned the way to cooperate with others. The students enjoyed the process, so they were able to have a good mark in reading comprehension. This is suitable to what Tewksbury (2008) states that jigsaw is one of the techniques which helps the teachers stimulate the students to be more active and creative in learning process. Jigsaw is also a

cooperative learning technique that was created with the goals of reducing conflict and enhancing positive educational outcomes. Therefore, in this case it is believed that the jigsaw technique can help students realize the essential components of a whole learning process and can encourage cooperation in a learning environment

Jigsaw technique was interesting for the students because they never got this technique before and they got new learning technique in the class. They did not feel bored anymore because of the implementation of the technique in the reading class. Jigsaw technique was also helpful for the students. By using this technique, the students could ask and share their opinions with their group mates when they got the problems in reading their texts.

Besides, the use of jigsaw technique could help students to understand the material well due to an active participation with their friends in groups. Students could also involve in the teaching learning process by discussing and delivering idea towards the material learned. This is in line with what Brisk & Harrington (2000, p.83) states “The jigsaw approach is a way for students to work cooperatively and help each other to learn new material. Students take in active role their learning as they teach other students what they have learned”.

4. CONCLUSIONS

The results of the study confirmed that the use of Jigsaw Technique brought significant effect on the students’ reading comprehension skills. The effect was positive since it improved the students’ comprehension. The difference between the score in experimental group and control group was also implied the positive effect of the implementation of the technique.

Since the study was still far away from being perfect, the writers would also like to give some suggestions for the teachers and further researchers.

Firstly, it is recommended for the teacher to use *Jigsaw* as a technique in the teaching of reading, because it can help students to improve reading skill. However, teachers should consider about the time. If it is done too long, the learners may get tired and it will certainly influence the process of transferring knowledge that the target of the study may not be maximally achieved. Therefore, teacher is expected to arrange the teaching and learning process well in order to make students more active, and gives respond well to the material.

For other researchers who are going to conduct an experimental research, it is suggested to use more reading passages in teaching learning process. It also suggested that the future study consider the students’ reading comprehension relation to the students’ motivation or students’ learning style. Besides, researchers can use the higher level of reading comprehension, such as Interpretive

Comprehension and Critical Comprehension for the higher level of students.

Since this current study applied only the convenience sampling, it is suggested that the future researcher could apply other sampling technique to control the external variable that may occur since this study could not the maximally control the external variable.

Hopefully it can be used as a reference and be an alternative source and guidance in conducting the same study of obtaining better result.

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