THE INFLUENCE OF JIGSAW STRATEGY TO STUDENTS' READING COMPREHENSION

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ABSTRACT: This study highlighted the implementation of jigsaw strategy to improve eleventh graders' reading comprehension at SMA Karya Ibu Palembang. Jigsaw is one of learning strategies under cooperative learning method that promotes group work and problem solving practice among the group members. This strategy encourages each member to focus on solving a given task in a reading practice. The objective of this study was to find out whether or not jigsaw strategy could significantly improve students' reading comprehension of explanation text. It examined the influence of Jigsaw strategy on students' reading achievement. Pre-experimental research design was administered as the research method since it had no control group involved. 35 students of eleventh grade that categorized low in reading achievement, participated as the sample of this study. A reading comprehension test, consisting of 20 items of multiple choice, used as the data collection technique. The obtained data was analyzed using Paired Sample T-Test. Research finding showed that Jigsaw strategy could significantly improve students' reading comprehension. The result of Paired Sample T-Test revealed that the value of t-$_{obtained}$ (8.864) was higher than the value of t-$_{table}$ (2.032) and the significance level (2-tailed) was 0.000. It indicated that jigsaw strategy contributed significant influence toward students' reading comprehension.

Keywords: *jigsaw, reading comprehension, cooperative learning*

PENGARUH TEKNIK JIGSAW TERHADAP PEMAHAMAN SISWA MEMBACA

ABSTRAK: Penelitian ini menginvestigasi penerapan strategi Jigsaw untuk meningkatkan pemahaman membaca siswa kelas XI di SMA Karya Ibu Palembang. Strategi Jigsaw merupakan salah satu dari strategi pembelajaran dengan metode pembelajaran kooperatif yang menggalakkan kerja kelompok dan pemecahan masalah diantara anggota kelompok. Strategi pembelajaran ini mendorong setiap anggota kelompok untuk focus memecahkan masalah yang telah ditentukan pada kegiatan membaca. Tujuan penelitian ini adalah untuk mengidentifikasi apakah strategi jigsaw dapat meningkatkan pemahaman membaca teks penjelasan siswa secara signifikan. Penelitian ini bertujuan melihat pengaruh strategi jigsaw terhadap pencapaian membaca siswa. Penelitian ini menggunakan pre-experiment sebagai metode penelitian karena tidak melibatkan kelompok control. Sampel pada penelitian ini berjumlah 35 orang siswa yang memiliki kelemahan pada pemahaman membaca. Tes pemahaman membaca yang terdiri dari 20 butir soal berbentuk pilihan ganda digunakan untuk Sample Berpasangan. Dari hasil uji analisis yang dilakukan ditemukan bahwa strategy jigsaw dapat meningkatkan pemahaman siswa membaca secara signifikan. Hal ini dapat dilihat dari nilai Uji T yang diperoleh adalah sebesar 8.864 dan nilai ini lebih tinggi dibandingkan nilai pada table T sebesar 2.032 dan tingkat signifikannya sebesar 0.000. Data ini menunjukkan bahwa strategi jigsaw memberikan pengaruh yang signifikan terhadap pemahaman siswa membaca.

Kata Kunci: *jigsaw, pemahaman membaca, pembelajaran kooperatif*

INTRODUCTION

A language holds an important role for human's life. Language is a structured system of printed or spoken vocal signs used by human beings as a means to communicate each other (Algeo, 2010, p.2). It is clear that a language functions as a support system for every human to interact with each other. By the use of language, they can express their ideas, feelings, thoughts, and intentions orally or in writing.

In the context of written language, someone needs to deal with two fundamental language skills, those are: reading skill and writing skill. Reading skill is the most basic literacy skill which enables someone to achieve both academic and professional success. A person who can read proficiently will significantly achieve success in her or his personal and professional life (Block & Israel, 2005). Moreover, this digital era enables people easily access abundant of online reading sources. Therefore, reading is regarded as an important aspect of language skills that needs to be considered. Reading skill is a very influential tool and a crucial requirement for advanced society (Sangia, 2014, p. 1).

Reading is not only moving out the eyes to deal with the graphemes distributed in a written passage. A skillful reader understands better the reading materials. They do not struggle more to make meaning from reading activity since a skillful reader applies an interactive reading process to construct the meaning from reading activity. When reading, the readers need to apply two basic reading strategies to process the text: bottom-up strategy and top-down strategy (Brown, 2004). Bottom-up strategy is used to process separate letters, words, and phrases, while top-down strategy deals with the process of making meaning from the text. Therefore, the readers require strategies and skills for success in reading comprehension.

Unfortunately, reading comprehension was still a problem. Based on the preliminary study the writer did before conducting this study, it was revealed that some students could not decode the word meaning in the text. They were confused about the meaning of words and sentences. They could not comprehend the longer text using academic or technical terms. Moreover, they could not connect ideas and distinguish between the important or significant information and the minor details, and they could not concentrate during reading. When they read some texts, they spent the time in translating the words. When they found long passages, they lost their motivation because they thought that it would take a long time to translate the text. It was in line with Kusriani (2013) who found that the students were less motivated and felt bored during reading class, then the students seldom discussed and shared the materials at each other because the reading activity still depended on the teacher explanation. Purwowibowo (2015) found that the students reading comprehension was low, some of the students had difficulties in understanding the generic structure and the language feature of the text, then the students felt bored when they faced an English text that they should read. Winten (2013) affirmed that the students had weakness in specific vocabulary, so that it made the student difficult to understand the text optimally.

From the above problems, it was clear that comprehending a reading text was the main problem in reading class. It was a challenging task for teachers of English to solve the problem. The teachers need to consider to vary the reading class activity to boost students' motivation and help the students get better understanding toward reading text. It is an urgent for the teachers to modify their reading class atmosphere become a rich-acquisition classroom environment by using a teaching strategy that can boost the students' interest to read the text carefully. In this study, the writer used Jigsaw strategy to improve students' reading comprehension. Jigsaw is one of the

teaching strategies that fit for reading class. Jigsaw is one of cooperative learning techniques that includes work group to be successful in learning a material. According to Slavin (1995), "Jigsaw includes a procedure whereby students share information they have gathered with group mates and, in many cases, with the class as a whole. Students are quizzed on all topics and the quiz scores are averaged to form team scores"(p.111). Therefore, students need to cooperate with their partners to solve the problems given.

Many studies have proved that jigsaw could motivated the students work on group to improve student's reading skill. Kusriani (2013) found that jigsaw technique could improve the student's reading comprehension and the student's reading involvement in the reading class and then students became more active in every activity, they were willing to participate in the group discussion and they participated seriously to finish the tasks in groups. Purwowibowo (2015) found that jigsaw technique was effective to improve the student's reading comprehension and student's participation in reading class and the student's understanding toward descriptive and procedure text was improved. Winten (2013) found that most students were more interested in using jigsaw technique in learning English, especially in reading comprehension and it made students reading comprehension improved.

Based on the elaboration highlighted above, this study was conducted to examine the application of Jigsaw strategy to improve the eleventh grade students' reading comprehension at SMA Karya Ibu Palembang and to measure whether this strategy could significantly improve students' reading comprehension or not.

Reading Skill

Reading skill is defined as an ability to grasp the meaning from the printed page and make sense of the information found appropriately (Grabe & Stoller, 2011, p.3). It means that a reader is doing a reading activity when she or he can decode the meaning from the text read appropriately. Reading skill is also considered as a complex skill since when reading the readers must deal with two main points: the process and the product of the reading activity. As the process, when the readers read the texts they involve interactive reading process to grasp the meaning from the texts. Reading as an interactive process demands the readers to perform reading skills, reading strategies, and prior knowledge activation to help them construct or get the idea from the reading sources they read (Afflerbach: 2007).

Meanwhile, comprehension as the product of reading activity, demands the readers to apply certain techniques to help them locate the most significant and important details, and they need to relate what they have already known with the information provided in the text to ease them construct the meaning from the texts. Reading comprehension involves much more than readers' responses to text. Reading comprehension is meaning construction process by coordinating a number of complex processes, including word reading, word and world knowledge, and fluency (Klinger, Vaughn, & Boardman, 2007, p. 2). Word recognition deals with the process of getting the understanding of how written symbols or graphemes correspond to a language, while comprehension is the process of making the meaning of words, sentences and connected text (Pang et.al, 2003, p.6). It is clear that reading activity cannot be separated from reading comprehension itself. Reading without comprehension is not reading at all since reading without comprehending makes the readers loose the reading purpose since comprehension is the ultimate goal of reading activity. The readers can

only construct accurate comprehensions, as the ultimate goal of reading, when they can go through some interrelated processes during reading activity. They need to attend reading fluency first before reading comprehension. Reading fluency is the bridge between the two major components of reading: word decoding and comprehension (Rasinski, 2004, p.3). Word decoding skill automatically facilitates the readers to construct the comprehension as the major goal of reading activity.

Jigsaw Strategy

Jigsaw is one of learning strategies under cooperative learning method. This strategy was firstly initiated and developed by Aronson and his colleagues in 1971 in Austin, Texas. This strategy is beneficial to be employed in the classroom since learning revolves around interaction with peers, students are active participants in the learning process and thereby help to build inter-personal and interactive skills among students. The use of this strategy also makes teachers find it easy to learn, enjoy working with it, it can be used in conjunction with other teaching strategies and it can be effective even if it is used for just an hour per day (Adams, 2013, p.25).

The application of Jigsaw involves some interrelated cycles as the instructional activities, such as: reading, grouping, regrouping, expert group discussion, team reporting, testing, and team recognition (Sabbah, 2016, p. 449). Aronson (2008) pinpoints ten steps to employ the Jigsaw strategy: 1) dividing students into "jigsaw group" consisting of 5 or 6 people; 2) appointing one student as the group leader. This person should initially be the most mature student in the group; 3) dividing the day's lesson into 5-6 segments (one for each member); 4) assigning each student to learn one segment and making sure they have direct access to their own segment; 5) giving students time to read over their segment at least twice before they are familiar with it. Students do not need to memorize it; 6) forming temporary "expert groups" by having one student from each "jigsaw group" join other students assigned to the same segment. In this step, expert group is given time to discuss the main points of their segment and to rehearse the presentations they will make to their jigsaw group; 7) students come back to their jigsaw group; 8) asking each student to present their segment to the group. Other members are encouraged to ask question for clarification; 9) floating from group to group to observe the process. If any group are having problems, teacher gives an appropriate intervention; and 10) giving a quiz on the material at the end so students realize that the sessions are not just for fun and games but they really count. The implementation of Jigsaw strategy is illustrated in Figure 1.
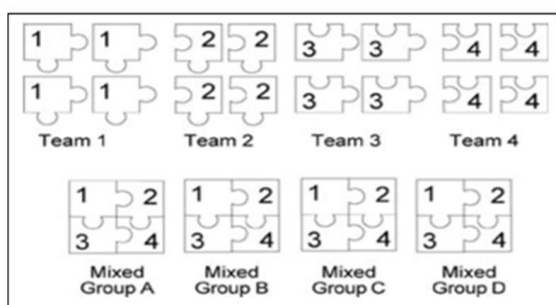

Figure 1. Jigsaw Strategy Template

METHODOLOGY

The design of this study was pre-experimental research since it had no control group involved in this study. This design involved only one group as its subject and it consisted of three steps: pretest, treatments, and post test. The scheme of this design is portrayed in Figure 2.

Pretest	Treatment	Posttest
Y1	Jigsaw Strategy	Y2

Figure 2. The Research Design

Based on the above figure, it can be seen that pre-test is given before Jigsaw strategy is applied. Then, posttest is given after Jigsaw treatment is completed. The research procedures of this study were as follows: 1) identify the research problem; 2) define the research objective; 3) make the research plan; 4) conduct the experiment and collect the data; 5) analyze the obtained data statistically; 6) interpret the results; and 7) report the research results. The research cycle of this study is displayed in Figure 3.
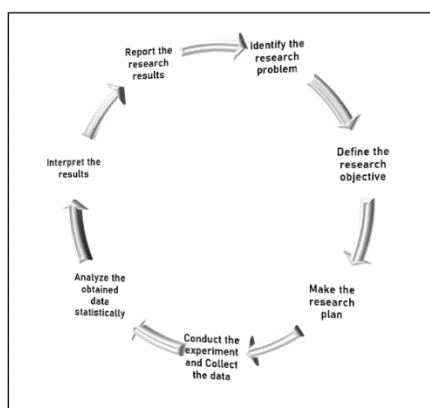

Figure 3. The Research Cycle

The total number of the sample of this study was 35 selected using purposive sampling technique. They were the eleventh grade students at SMA Karya Ibu Palembang who were categorized poor in reading comprehension. To gather the data, a reading comprehension test was distributed. It consisted of 20 items in multiple choice measuring the following reading comprehension subskills: 1) determine the topic of the text 2) identify the detailed information; 3) identify the text organization; 4) identify the main idea of the text; and 5) determine the social function of the text.

Before the test was administered to gather the data, it was tried out to examine which the test items were valid to be used as data collection technique. Based on the reliability test result, it was found that the Cronbach Alpha coefficient was 0.743. Thus, it was considered reliable to be used in collecting the data. In collecting the data, the instrument was administered twice, before and after the treatment was carried out. After that, the collected data was then analyzed by using Paired Sample T-Test to examine

whether Jigsaw technique could significantly improve students' reading comprehension or not.

FINDINGS AND DISCUSSION

The Result of Pre-test and Post test for Experimental group

The data collected by using reading comprehension test. The test was given twice to the sample to measure students' achievement before and after the treatment phase carried out. The result of pre-test in experimental group showed that the highest score was 90 gotten by 2 students and the lowest score was 25 gotten by 2 students. The mean score was 59.14, with standard deviation was 17.51. Then, the result of post-test showed that the highest score was 95 gotten by 3 students and the lowest score was 40 gotten by 1 student. The mean score was 75.43, with standard deviation 14.16. The summary of student's pretest and post test result for experimental group is presented in Table 8.

Table 1. The Result of Descriptive Analysis

	N	Minimum	Maximum	Means	Std. Dev
Pre-exp	35	25	90	59.14	17.51
Post-exp	35	40	95	75.43	14.16

Based on the descriptive data above, it could be seen that after the students were given the intervention using Jigsaw strategy, the mean score of the post-test was higher than the mean score of the pre-test. It indicated that the students' achievement in comprehending the text was improved significantly.

The Result of Paired Sample T-test

After analyzing the obtained data descriptively, then Paired Sample T-test was run to measure the pogress of student's reading comprehension after being given the treatment. It was used to find out whether Jigsaw strategy could improve student's reading comprehension or not. The summary of Paired Sample T-Test result is presented in Table 11.

Table 2. The Result of Paired-Sample T-Test

Group	T	df	Sig (2tailed)
Pretest-Posttest	8.86	34	0.00

From the table above, it could be seen that the value of $t_{obtained}$ was 8.86 with significance value was 0.000. It was higher than the value of t_{table} (2.03). It indicated that Jigsaw strategy could significantly improve students' reading comprehension.

Based on the findings of the study, there were some interpretations could be drawn. First, Jigsaw strategy contributed a significant progress toward students' reading comprehension of explanation text. Students' reading comprehension was significantly improved by using Jigsaw strategy (Kusriani, 2013; Purwowibowo, 2015; Winten,

2013). Second, the progress of students' reading comprehension might be influenced by students' motivation and participation. During the implementation of Jigsaw strategy, it could increase students' motivation and participation during reading class. They were willing to participate and work in groups in completing the reading task given. It was proved that the implementation of Jigsaw strategy could promote students' motivation. Group work could increase the students' motivation and participation in reading class since this strategy encouraged the students to work together on solving a given task in reading practices (Shaaban, 2006).

CONCLUSION

Based on the findings and interpretations of the study, it could be concluded that is Jigsaw technique could significantly improve students reading comprehension. In the light of this research result, it also highlights that Jigsaw technique is recommended to be employed in a reading class when the teacher needs to vary their reading class athmosphere that enables the students to work in groups and practice their thinking to solve the problem. It is necessary for the teachers to design a careful teaching plan to hold an effective implementation of Jigsaw strategy.

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