THE APPLICATION OF COOPERATIVE LEARNING: JIGSAW II TECHNIQUE IN IMPROVING STUDENTS’ READING COMPREHENSION OF EXPOSITORY TEXT

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Abstract. The research was conducted to find out whether or not the use of Jigsaw II technique improves the reading comprehension significantly better than the use of the conventional method of the eleventh grade students of SMA Negeri 8 Takalar, it covered students’ literal comprehension, inferential comprehension and critical comprehension of expository text and whether or not the students are interested in the use of Jigsaw II technique in learning reading of expository text. This research method employed was quasi-experiment. The research data were obtained through the test and questionnaire which were analyzed by SPSS 17.0 program. Data of test were analyzed using T-test to know students’ reading comprehension in terms of literal, inferential, and critical of expository text. Data of the questionnaire were analyzed by using descriptive statistics to see the students’ interest in joining the reading class of expository text through Jigsaw II technique. The research findings indicated that (1) Jigsaw II technique gave a higher contribution to the students’ reading comprehension of expository text. The mean score of pretest of the experimental and control group was significantly different after treatment by using Jigsaw II technique. The mean score of posttest of the experimental group was higher than the control group (84.16 > 62.91). Thus, the use of Jigsaw II technique was effective. Besides, all the three levels of comprehension improved after doing treatment; the literal comprehension got the highest improvement was 92.19>76.69. It was followed by inferential comprehension which got 83.75>66.25, and critical comprehension which got 76.56 > 42.81.

Keywords: Jigsaw, Cooperative Learning, and Reading Comprehension.

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INTRODUCTION

Reading is the easiest and the cheapest way of getting information. Through reading, the readers can enrich their knowledge, broaden outlook and make them understand more about nature (Johnson and Morrow, 1987: 87). Learning to read is an important educational goal. For both children and adults, the skill to read opens up new worlds and opportunities. It enables us to gain new knowledge, enjoys literature, and do everyday things that are part and parcel of modern life, such as reading newspaper, job listing, instruction manuals, maps, and so on (Pang, 2003: 6).

Rivers (1981: 259), the most important activity in any language class is reading. It is not only as a source of information and pleasurable activity but also as a means of consolidating and extending knowledge of a language. In other words, reading activity brings many benefits for students such as information, pleasure, and knowledge. In this way, the students not only read but they also able to comprehend the written text or reading materials given from books, magazines, newspaper, and to study science and technology. Development of science demands people to read a lot. Many textbooks written in English and reading skill will aid students to fulfill their need. Habit in reading English can also enrich vocabularies, so it will facilitate students to understand the content of the reading text.

Comprehending a text in reading is essential for students because they can understand information from the English materials if they have the skill of reading comprehension that is able to be developed by practicing reading more
and more, and leading the questions to estimate what contains in that written text actually. Also, it is supported by Crane (2001: 28), comprehension is what is understood of a term by someone who grasps it. For this opinion, a reader does not merely know the written symbol and its meaning, but further, she/he should establish the text. It is also supported by Thinker and Mc. Constance, they state that reading is establishing the understanding of the meaning of words, sentences, and paragraphs, and establishing the relationship among ideas (1975: 5). The point is to understand information from the reading material/written text given is read for comprehension.

In reading English text, many learners consider that they have to know all the words in the text in order to understand the text (Tomlinson in Masuhara, 2003:341). It seems that the text cannot be reached its true information if any difficult words. Supported by Deporter that reading is anxiety for students; even students are merely able to finish in well-timed when answering the comprehension questions, because when reading, many students find it very difficult; they just often concern to words, read slowly until the last minutes then realize that they do not have enough time to complete the reading assignment and answer the comprehension questions (1999: 182).

English texts are not all easy to understand, some are very difficult and confusing texts, and so in reaching comprehension, it depends on the reader’s own techniques and concentration to focus on text. As Schaffzin’s idea that every reader has his/her own techniques such as reading while writing, getting the main idea, and picking out the important details, there is also using pictures, subheadings, translation, and drive the meaning of words in context (1996: 83).

In reality, most of the students especially in Senior High School have low skill in reading especially reading comprehension. For them, reading English text is difficult and boring activity of lesson. It makes them less motivation to learn English, especially reading. It supported by Susilawati (2010: 3), according to her, most of students said that English is a very difficult course compared to other courses. In addition, the students said that reading comprehension is boring and make them unmotivated to comprehend English texts. It happens because they cannot understand English texts which they read and answer the comprehension question of English texts. So, it is able to be stated that having several difficulties and less of motivation are hard by most of students in learning reading, especially in Senior High School.

The view above is bolstered up by the result of pre-observation, the students of eleventh grade students of SMA Negeri 8 Takalar have English average score is 7.5 each class, and however the fact explains differently that, students have a low ability of English, particularly reading. In reading, they are difficult to understand and comprehend English text given because it is a boring activity for them and make them unmotivated to comprehend English text, especially in reading long text, and they are still difficult to find passages in reading book. Also, they are lacking of vocabularies as another problem of students to understand reading text. It could be concluded that the skill of their students in English is still lacking, particularly in reading. The students have a poor skill to understand the content of reading, to conclude the content of text, and to answer the question of reading text. They have difficulties in learning reading, so that, they are often lazy and uninspired to learn reading in English.

In addition, after holding an interview with teachers in the observational school, is able to conclude that the English teachers at the school are still using the traditional method of teaching, or on the other words, conventional method. They say that they use the method of speech, and then ask the students to read, to understand reading, and to interpret text readings given by the dictionary, but they also often help students in understanding the words that are considered difficult for students. They afterward explain to the students, and then the students answer the questions in the reading text individually. They often use more Indonesian to make their students
understand the reading materials than English, even for making their students understand more easily, they occasionally explain the reading material by use of their student’s mother tongue, Makassarese.

The point that needs to be understood of the previous statement is to understand a text; students must have an effective method, which accords with the purpose of learning to improve the students’ skill of reading comprehension, and to build up the motivation of students. It is needed an effective strategy, in order to the students are able to concentrate, to understand, to read quietly and enjoyably, to find information out quickly and effectively of reading English text, especially reading comprehension. A method must be effective, efficient, enjoyable, and possible for helping students to comprehend easier of English text. The applying an effective method to improve the students’ skill in reading comprehension is a principal responsibility for English teachers especially in Senior High School, they must have efforts to make their class interesting with various methods, in order to stimulate their students to learn language skill effectively. In another word, the teacher responsibilities are to create a situation that provides opportunities and to stimulate students to be interested in English subject especially in reading comprehension of English texts.

Nowadays, English teachers in the classroom have applied all kinds of reading methods alternately. It gives a result that some are successful teaching, but some are not. In truth, there are some English teachers still apply speech or traditional methods (teacher-center) in teaching, it causes that many students feel fed up in the learning and teaching process. Teacher-centered approaches taking place do not produce the students become active in the classroom. It is not effective enough to promote the student's skill of English, especially in reading comprehension, and the students are less to participate in the learning and teaching process. From the explanation, it can be stated that the successful or unsuccessful learning and teaching of reading comprehension depend on the way of teaching, and how the students can understand and comprehend it. On that account, it is needed a good and suitable method to overcome the problems. One of the possible ways for assisting is a cooperative learning method.

Cooperative learning is an instructional program in which students work in small groups to help one another understand the academic content of materials. Harmer (2004: 117) states that groups work has some advantages, one of them is it promotes learner autonomy by allowing learners to make their own decision in the group without being told what to do by the teacher. They work together in groups work, or pairs work for doing something to achieve the goals of language learning. Hill and Hill (1990: 1) state that cooperative learning has significant advantages for both intellectual and social development, over individualized and competitive learning environments. Besides this approach is suitable to conduct the process of teaching-learning process to the students who have high motivation and low motivation, it is students-centered oriented in which all activities make the learners active during the teaching-learning process. Richard and Rodgers (2001: 193) state that one of language teaching goals by using cooperative learning is to enhance learner motivation and to reduce learner stress and to create a positive affective and classroom climate.

It can be defined that Cooperative Learning is a teaching setting that refers to a small heterogeneous groups of students cooperate to reach a common goal. Students cooperate to learn and take responsibility for their learning and own friends. If the application of cooperative learning process goes well, indirectly, it will foster a high learning motivation in students, increase self-confidence of students, and understand the material that is given to them will be easily and quickly understood. The cooperative learning method has some techniques; they are Cooperative Integrated Reading Composition (CIRC), JIGSAW, Cooperative Scripting, Teams
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Games Tournaments (TGT), Team Accelerated Instruction (TAI), STAD, and so forth.

This research solely focuses on the Jigsaw technique in teaching reading. The reason why the researcher uses cooperative learning based on Jigsaw technique is good to improve reading comprehension, because Jigsaw is designed to increase the students’ responsible to their learning and also their other friends’ learning, not only learn the materials but also must be ready to give and teach the materials each other. Thereby, they depend on each other and must work together in understanding their material given and doing their task. In other words, the Jigsaw technique is useful to help students build up their comprehension and to encourage cooperative learning among students. It also is clarified by Browns’, states that Jigsaw technique is a special form of an information gap in which each number of a group is given some specific information, and the goal is to pool all information to achieve some objectives (1994: 179). Also, he says that group and pair activities are excellent technique as long as the teaching-learning process is clearly structured and defined with specific objectives (2001: 100).

RESEARCH METHOD

In this research, the researcher applied quantitative approach using quasi-experimental design in collecting the data and analysing the data. The design involved two groups namely experimental group and control group. The experimental group was taught by using Jigsaw II technique while the control group used conventional method or without applying Jigsaw II technique in learning process (Gay, 2006).

Both groups were given pre-test and post-test. Pre-test was administered before the treatment to asses the students’ prior knowledge on reading skill and the post-test administered after treatment to measure the technique effects. The aim of this test was to find out the effectiveness of Jigsaw II technique in teaching reading whereas focusing on reading comprehension of expository text.

The population of the research was the eleventh grade students of SMAN 8 Takalar, Takalar regency in 2013/2014 year. It had six classes with the number of population is 93 students. Since the number of population was large, the researcher used cluster random sampling technique. One class was chosen as the experimental group and one class for control group. The number of sample for every group was 32 students. So, the total number of sample was 64 students.

This research employed three variables, one independent variable and two dependent variables. The independent variable was teaching reading through Jigsaw II technique while dependent variables were reading comprehension and interest of learning reading through Jigsaw II technique.

To make clear and avoid the readers’ misunderstanding, the writer gave the operational definition of variables such as follows:

1. Jigsaw is the way of teaching where the students are divided into some groups to help each other to read the text in the group as an expert, students are assigned to four-member learning teams that are mixed in performance level, gender, and ethnicity. The teacher presents a lesson, and then students work within their teams to make sure that all team members have mastered the lesson. Finally, all students take individual quizzes on the material, at which time they may not help one another. Students’ quiz scores are compared to their own past averages, and points are awarded on the basis of the degree to which students meet or exceed their own earlier performance. These points are then summed to form team scores, and teams that meet certain criteria may earn certificates or other rewards.

2. The students’ reading comprehension is the result of what the students have studied after teaching and learning process in the form of skill in comprehend the reading text.
a. Literal comprehension, acquiring and comprehending information is stated in a reading text literally.

b. Inferential comprehension, finding and comprehending information which is not explicitly stated in the reading text.

c. Critical comprehension, comparing information in the reading text states with the readers’ own knowledge and values.

This research employed two instruments based on the variables investigated; they were written reading test and questionnaire list, so the test involved one skill namely reading comprehension skill. The researcher used reading test as written test. The test was used as pretest and posttest by using objective tests. It consists of 30 items; there were 10 questions for Literal category, 10 questions for inferential category, and 10 questions for Comprehensive. The pretest was given to the students before the treatment and the post-test was given after treatment in order to check their reading achievement. The test was used to obtain information about the students’ achievement in reading on the use of Jigsaw II technique and it was distributed to the respondents after the last treatment given.

RESULT AND DISCUSSION

The description of the data collected through test shows that the students’ reading comprehension improves enormously. It is also proved by the mean score rate of the students’ pretest and posttest of experimental group. The mean score of pretest and posttest of experimental group was 46.66 to 84.16 while the mean score of pretest and posttest of control group was 46.66 to 62.91. The difference score between both groups was 21.25. It means that students’ score in experimental group was greater than students’ score in control class, on the other words, can be stated that the use of Jigsaw II technique gives far the better effect in learning reading than the conventional method.

Both Jigsaw II technique and conventional method are able to be applied in teaching reading and evolve the students’ achievement of reading, but then, using of Jigsaw II technique in teaching reading comprehension more develops meaningfully students’ ability than the conventional one. Jigsaw II technique could change the students’ reading comprehension better than before. So it could be inferred statistically based on t-test value that Jigsaw II technique is more effective in developing students’ comprehension of literal, inferential and critical in reading skill, in other words, Jigsaw II technique could increase the students’ learning reading comprehension and is more effective than conventional method.

The result of this research is as same as the result of Larasati’s research (2009) which is entitled ‘The Effect of Jigsaw Technique on Students’ Reading Comprehension Achievement (An Experimental Study at Eight Class of SMP Taman Islam Jakarta)’. Based on her research, she concluded that Jigsaw technique is useful to prove statistically whether any significant difference between two variables, those are teaching reading by using Jigsaw technique and teaching reading by using conventional technique. Teaching reading by using Jigsaw technique increases students reading comprehension achievement. The students’ reading comprehension score taught by using Jigsaw technique is higher than the students’ reading comprehension score taught by using conventional technique. This means the students who taught by using Jigsaw technique shows better achievement in reading comprehension than students who taught by using conventional technique. Therefore, the Jigsaw technique has a positive effect to increase students’ reading comprehension achievement significantly.

During conduct a research, the researcher found some problems are faced by students either in the experimental and control group. Some were difficult to understand the questions of text, it made them difficult answer the questions correctly. They also had lack of vocabularies and were very difficult to think something critically. It is able to be concluded that one of causes the students have difficulty in reading
comprehension, especially in learning of expository text, because most of them still have a low ability in English.

After treatment of Jigsaw II technique, the students had increasing of reading comprehension ability. It is supported by the result of the students’ achievement in the three levels of comprehension in reading. Literal level of comprehension indicates that the students had improvement to recognize the literal statements in the text. Although, the students often faced difficulties to understand the literal comprehension, for example in asking a literal comprehension, they sometimes did not read very well, and then considered to choose the answer which is not true. After learning through Jigsaw II technique, they began to more focus on reading well, hence it can be stated that is good to apply in learning reading.

The use of Jigsaw II technique on teaching reading was successful to the students’ ability of literal comprehension, proved by increasing the score of students from the pretest to posttest in answering literal questions correctly on the text given. In pretest, the students’ mean score was 63.13 for experimental group and 61.25 for control group. The difference score between both groups was 1.88. After applying Jigsaw II technique to improve the students’ literal comprehension was successful. It is proved by students’ test, in experimental group, students’ score of posttest 92.19, and 79.69 for control group was. The difference score between both groups was 12.5. Even though, the students’ score in control increased in posttest, the students’ score in experimental group was greater, on other words, Jigsaw II technique is very effective to apply in improving reading comprehension of expository text.

On the inferential level comprehension, the students gave better respond to the text given by using the instruction or guided questions of Jigsaw II technique. In this case, they are able to know the ideas that are not directly stated in the text. So, it helps the students in getting meanings from the text without hardly read the text repeatedly. In pretest, the students’ mean score was 47.81 for experimental group and 48.13 for control group. The difference score between both groups was 0.32. After applying treatment, students’ mean score improved, where in experimental group students’ score of posttest was 83.75, and 66.25 for control group. So, the difference score between both groups was 17.5. It means that students’ score in experimental group was greater than students’ score in control group.

In inferential reading comprehension also, students both from control and experimental group have difficulties in inferential comprehension before treatment, like the questions which should be answered by using inferential comprehension, they answered it by using literal comprehension, even answer it mistakenly. Based on the previous explanation, it can be taken a conclusion that Jigsaw II technique is really effective and good to be applied in learning reading comprehension, although the students have difficulties of literal and inferential comprehension. After treatment, the result of score of experimental class that used Jigsaw II technique was greater than the control class that used conventional method in posttest, where the score of both of them were not too much different in the pretest.

Similarly, the difference of score pretest and posttest between literal and inferential comprehension is not too much different, where the literal comprehension’s score is quite higher than inferential comprehension’s. Basically, the question literal comprehension is much easier to be answered and understood by students as compared to inferential comprehension. Understanding the literal reading is comprehension of reading content literally, whereas the inferential reading comprehension is comprehension the content of reading impliedly.

It has been proved in this research, which also is supported by Miller and Smith in their result of research which entitled “Differences in Literal and Inferential Comprehension after Reading orally and silently”, concluded that inferential questions are indeed more difficult than literal questions (1984: 10).
There is different level between literal and inferential comprehension, in literal level comprehension, students obtain information and ideas literally in the text. They only need the ability to read a text, because they can obtain the literal meaning is influenced by mastery of the vocabulary and its meaning. The more master vocabulary, the more it helps them in literal comprehension. Whereas in inferential level comprehension is harder than literal comprehension, because they need to connect information, ideas, and clues from the reading text given to information, or knowledge that already have been on the topic. Despite being in different levels, but literal comprehension will help students understand the reading inferentially. Because information that is obtained through the literal comprehension, it is very important to comprehend inferential comprehension of the text, especially in the activation of prior knowledge and the obtaining of new information on a reading text given. It can be shown in this research, where the score of students’ literal comprehension in experimental group after treatment is only a little bit higher than the score of inferential comprehension.

However, both of them must activate their schema to be able to use their prior knowledge to the reading text given and will help them to associate reading and understanding, therefore, to obtain new knowledge associated with the prior knowledge that will result in a better understanding of the reading text given. It is supported by Stahl (2004), she found that activating prior knowledge is able to understand and recall more of what they have read. More specifically, Stahl (2004) found that teacher-generated questions that involve students to come up with answers on his/her own, make the student rely on his/her own experience and knowledge. They are able to relate the text to information or schema they already have and how it can relate to their own lives.

As described earlier, in increasing the understanding literal and inferential using Jigsaw II technique cannot be separated from theory of Slavin, which in activate schema, students learn the schemes, such as organizing the information obtained, to process new information, and links between prior knowledge and the new information, which might generate new knowledge. Vygotsky's theory that emphasizes the importance of interaction with peers through the formation of study groups, students are given the opportunity to actively think to express something to their friend, and it will help them to see things clearly, even the inexpediency to their own views. In the presence of application of the Jigsaw II technique as cooperative learning, where students are in a group to discuss the information that is held will ultimately help students in the learning outcomes of a more complete and detailed, in terms of the level of their comprehension of the reading text given will be much better, and it is evidenced in this research has worked. Therefore, it can be concluded that the application of the Jigsaw II technique in reading comprehension of expository text is very effective to improve students' ability in literal and inferential comprehension.

Before applying treatment in pretest of critical reading comprehension, the students’ mean score was 29.06 for experimental group and 30.63 for control group. The difference score between both groups was 1.57. After applying treatment, students’ mean score improved, where in experimental group students’ score of posttest was 76.56, and 42.81 for control group. So, the difference score between both groups was 33.75. It means that students’ score in experimental group was greater than students’ score in control group. Thus, it can be stated that Jigsaw II technique is effective to be used in learning expository text reading comprehension.

The use of Jigsaw in learning expository text reading to develop student ability in critical comprehension, shown in increasing students’ score from pre-test to post-test in answering critical questions correctly on the tests given, despite the increased ability of the students in the literal and inferential comprehension are much more improved than critical comprehension, it can
be also said that critical reading comprehension is more difficult than literal and inferential reading comprehension.

On the critical level of comprehension through the application of Jigsaw II technique, students were guided to read critically and to compare ideas in the text, think about text’s big idea and messages that are implied in the written text. By relating those ideas to their own experiences in their real life, it will make them find certain facts so they will be involved in logical thinking and reasoning as a part of reading critically. It is supported by Donoghue’s statement critical or applied comprehension is “the reading beyond the lines,” this level requires readers to integrate their own thinking with the facts from the text. Consequently, they evaluate and apply information and ideas from the printed page to their own experiences and judgment. It concerns skills such as the abilities to distinguish fact from opinion and fantasy from reality and to detect propaganda techniques (2008: 175).

Utilizing and combining schema theory with principles of critical thinking are one of the effective ways of enhancing the concept of reading comprehension (Norris and Phillips, 1987). They explain that critical thinking provides a means of explaining the ability to work out ambiguous text by generating alternative interpretations, considering them in light of experience and world knowledge, suspending decision until further information is available, and accepting alternative explanations. They conclude that critical thinking is the process which the reader uses to comprehend (in Aloqali, 2011: 38). So, it can be said that to improve the critical reading comprehension is really harder than literal and inferential comprehension.

In the acquisition of critical comprehension concepts is required thinking concept much deeper and critically compared with literal and inferential comprehension. The questions of critical comprehension is not found in the text either literally or impliedly, but the ability to comprehend reading widely and deeply associated with the facts that are in life, or it can also mean the reader in this text are required to fantasize that has to do with the topic of reading. In a critical comprehension requires a lot of strong prior knowledge that is reconstructed with new information obtained in the text given, so that it can be said that the schemata and critical thinking should be really functioned to get a good critical comprehension. Therefore, if a student is able to process his/her knowledge and information in the process of thinking and also has a good cooperation among friends, which is probably more friends have different knowledge and information given, so they one another share knowledge and information, which automatically, he/she will strengthen prior knowledge and multiply new information, which will make him/her has critical good reading comprehension.

Basically critical comprehension will be easily mastered by people who have extensive knowledge, developed critical thinking, and good language skills. It is not surprising that in a research using the eleventh grade student of senior high school as object of this research either experimental or control group has ability of critical reading comprehension is lowest of the three comprehension who is a young learner and also seldom answered the critical comprehension questions, they really had difficulties in analyzing, constructing, comparing something in the text with the fact, so forth but after conducting treatment of Jigsaw II technique, the students have been increased in critical reading comprehension, although the increasing of it is not the same as the student’s ability on the literal and inferential comprehension. Therefore, it can be revealed that, Jigsaw II technique is effective for being used to improve students’ ability on critical reading comprehension of expository text.

Using Jigsaw II technique is also effective to be used in learning critical reading comprehension of expository text, in other words, can be said that the students have experienced in increasing the ability of literal, inferential, and critical reading comprehension. It is in line with some of the statements of several experts, according to Slavin in Suratno, Jigsaw...
cooperative learning is effective in improving process and outcome of learning (2009: 5). The same opinion was expressed by Aronson in http://www.jigsawclassroom.com (2012) “just as in jigsaw puzzle, each piece-each students’ 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. It is also supported by Jigsaw makes it possible for the students to work together to complete the assignment on their own. Therefore, “each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement”. Also it is supported by statement of Cooperative Learning, online 2008) states that students work through the assignment until all group members successfully understand and complete it".

Based on technique used on this research is Jigsaw II technique, which according to Slavin, Jigsaw II technique cooperative learning is an effective technique and well applied in learning, it is in line with which was suggested by Slavin in Wang (2010: 114), attached more importance to familiarity of all the group members with the whole. So, it can be said that Jigsaw II technique is a good way to learn reading comprehension of expository text that can increase students’ ability comprehension in reading, and it has been proved by this research.

CONCLUSION

The use of Jigsaw II technique in learning reading comprehension, which is focused on expository text at the eleventh grade students of SMA Negeri 8 Takalar improves the students’ ability of reading comprehension in terms of literal, inferential, and critical. The result of the use of Jigsaw II technique was better than the result at conventional method where the mean score of posttest of the experimental group was higher than the control group (84.16 > 62.91). Thus, the use of Jigsaw II technique was effective to improve students’ reading comprehension. Besides, all the three levels of comprehension improved after the treatment, those are: 1) The literal comprehension got the highest improvement is 92.19> 76.69 with the difference score between both groups was 12.5 or 12.5 %; 2) The inferential comprehension which got 83.75 > 66.25, with the difference score between both groups was 17.05 or 17.05 %; and 3) The critical comprehension which got 76.56 > 42.81 with the difference score between both groups was 33.75 or 33.75 %.

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