

USING JIGSAW TECHNIQUE IN READING COMPREHENSION CLASS OF FIRST SEMESTER STUDENTS BY THE YEAR 2015-2016 FACULTY OF LITERATURE ISLAMIC UNIVERSITY OF NORTH SUMATRA

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ABSTRACT

Jigsaw is a cooperative learning technique that has been studied in various ways by some researchers and teachers in classes of different levels and subjects (Aronson: 2008). The research aimed to find out whether the jigsaw technique could be successfully used to fulfill the intended task in the college English class, particularly in a reading comprehension class. The research takes place in the second semester students by the year 2015-2016, Faculty of Literature, Islamic University of North Sumatera, Medan, involved twenty five students that divided in 5 groups. Some questions are taken from the book *Practice and Progress* written by L.G Alexander (1967) as the students' text book. The design employed in this research was classroom action research developed by Mertler and Charles (2010). Findings were analyzed and the reflections on jigsaw were offered. The implementation of jigsaw in reading comprehension class made it possible for the teachers to focus on students and thereby language learning became interdependent. A conclusion was drawn that jigsaw technique is an effective way to promote student participation as well as a useful technique for the students to accomplish learning tasks in the reading comprehension class.

Keywords: Jigsaw Technique, Students, Reading Comprehension

INTRODUCTION

A. Jigsaw Technique

The jigsaw classroom is a research-based cooperative learning technique

invented and developed in the early 1970s by Elliot Aronson and his students at the University of Texas and the University of California. Since 1971, thousands of classrooms have used jigsaw with great success. Jigsaw is an efficient way for students to become engaged in their learning, 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.

According to Johnson (1991) the Jigsaw Cooperative Learning is small group learning activities, students learn and work together both individual and group. In the jigsaw cooperative learning model, Johnson lies the students into groups of origin and expert groups. The origin group consists of group of students holding students by ability, origin, and family backgrounds are diverse. The origin group is a combination of several experts. Expert groups consist of members of different origins were assigned to study and explore specific topics and complete the tasks related to the topic and then explain to the members of the original group.

Aronson (1978) compared classes that used the cooperative jigsaw approach with classes in which students worked in competitive groups. He found that children in the jigsaw classrooms outperformed children in competitive classrooms in terms of mastery of classroom material. The children performed significantly better in jigsaw classrooms than in competitive

classrooms. The members of a group of different origins met with the same topic in the group of experts to discuss the material that is assigned to each member of the group and help each other to learn about their topic. When the discussion is finished, the members of the group then return to the origin group and teach their friend's group what they have learned during the meeting in the experts group. Jigsaw is designed not only to improve students' sense of responsibility independently but also charge positive interdependence (mutual giving out) to the friend's group. Furthermore, at the end of the lesson, students are given individual quiz that covers the topics that were discussed. The key of Jigsaw is interdependent of each student to the team members.

Marzano, Pickering, & Pollock (2001) say that researchers have found that using Jigsaw technique in particular improves students' social-emotional learning (SEL). It is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions.

In studies comparing Jigsaw with traditional direct instruction, students taught with the Jigsaw method demonstrated increased feelings of autonomy, competence, and intrinsic motivation (Hänze & Berger, 2007). Autonomy is the universal urge to be causal agents of one's own life and act in harmony with one's integrated self. Competence is seek to control the outcome and experience mastery. While intrinsic motivation is the natural, inherent drive to seek out challenges and new possibilities that associates with cognitive and social development. It is about human motivation and personality that concerns people's inherent growth tendencies and innate psychological needs. It is concerned with the motivation behind choices people make without external influence and interference, known as self-determination theory (SDT).

It concludes that using jigsaw technique in the process of learning makes the students may develop their

knowledge widely, grow their intrinsic motivation and extrinsic motivation in a cooperative class.

Aronson (2008) creates ten steps in jigsaw technique:

1. Divide students into 5-6 person jigsaw groups.
2. Appoint one student from each group as the leader.
3. Divide the day's lesson into 5-6 segments.
4. Assign each learner to learn one segment.
5. Give students time to read over their segment.
6. From temporary 'expert groups' by having one student from each jigsaw group join other student assigned to the same segment.
7. Bring the student back into their jigsaw groups.
8. Ask each student to present her or his segment to the group.
9. Float from group to group, observing the process.
10. At the end of the session, give a quiz on the material.

Mengduo & Xiaoling (2010) implement seven steps in the researcher's tutorials:

1. Choosing a passage
2. Dividing the students into jigsaw groups.
3. Studying new words.
4. Involving the whole class in an activity for general comprehension.
5. Forming expert groups.
6. Students returning to their jigsaw groups.
7. Writing a summary.

Meanwhile Tewksbury (1995) makes 13 steps of jigsaw technique, as follows.

1. Divide the class into teams of 3-5 people.
2. Divide 3-5 different team assignments.
3. With a small class, give a different assignment to each team.
4. Ask each student to prepare individually before class.
5. Set aside time during class for students to work in teams to do the reading/analysis.
6. Give each team in class to discuss the reading, results,

- issues, or whatever and to develop a strategy for teaching the material; to members of other teams.
7. Make sure that each team is prepared to teach a mixed group and that students will make the points that you want them to make.
 8. Reassemble the class in mixed groups.
 9. Each member of the group will then teach the rest of the group whatever was discussed on prepared by his/her team.
 10. Some type of written assignment should result from the peer teaching effort, and students should have that assignment in mind as they work in their groups.
 11. Evaluate students in the group setting.
 12. Ask each group to have a general concluding discussion and to make a list of important points.
 13. Bring everyone back together toward the end of the class, and ask each group for its most important point.

From some steps that are made by some experts in their research, the writers make a conclusion that there is an expert group and origin group/jigsaw group in jigsaw technique with some varieties strategies in their class. The writers, in this study, make their own steps in reading comprehension class of first semester students by the year 2015-2016 in Faculty of Literature, Islamic University of North Sumatra.

B. Reading Comprehension

Reading is one of language skills besides speaking, listening and writing. It is the way to understand written messages. According to Nuttal (2000:2) reading means a result of interaction between the writer's mind and the reader's mind. It is the way how to the reader tries to get the message or the intended meaning from the writer. In this process, the reader tries to create the meanings intended by the writer, the reader can get the message, and the writer's meaning sense.

According to Pang (2003:6) reading is defined as understanding written texts. He says that reading consists of two related

processes: word recognition and comprehension. Word recognition is defined as the process of getting how written symbols correspond to one's spoken language while comprehension is the process of making the meaning of words, sentences and connected text. He adds his statement that the reader who has background knowledge, vocabulary, grammatical knowledge, experience with text and other strategies can help them understand written texts. Based on two definitions above reading can be defined as the instantaneous recognition of various written symbol with existing knowledge and it also can be defined as comprehension of the information and the idea communicated. It means that when a reader interacts with printed messages, he tries to get the visual (written) information result or to get meaning in comprehending the messages or the texts from the writer. It also can be said that reading not only the process of getting the written symbols correspond to one's spoken language but it is also the process of making the meaning of words, sentences and connected text that can be called comprehension.

As comprehension involves the interaction of a wide range of cognitive skills and processes, there are many occasions where some difficulties arise that may lead to comprehension failure (Cain and Oakhill 2007). For example, during reading, the ability to derive meaning is normally enhanced when there is a reduction in the cognitive load of a reader's working memory, and the reader can decode the words and phrases fluently and bring meaning to the unfamiliar vocabulary encountered (Nelson 2005).

As stated by Rukamyadi (2011) in Haydan (2013) the objectives of teaching reading in the context of English learning is basic comprehension skills. Therefore, the students who have good comprehension skills can read and understand the text easily. This research used L.G Alexander's book *Practice and Progress* published by Longman as the students' text book. This book is considered sufficient for the first semester students. It includes five passages: *the greenwood boys, do you speak English?, Good news, a polite request. and always young.* As reading comprehension

lecturers, the researchers feel that some students find some difficulties in understanding the lesson and it is difficult to study more than 2 passages in one meeting. So, the writers apply the jigsaw technique to handle these problems. It is done on March, 2016, the fourth week of lecture.

The purposes of the study are to find out whether the jigsaw technique could be used to fulfill the intended task in the college students. Other purpose is to show the effectiveness of jigsaw technique in reading comprehension class.

RESEARCH METHODOLOGY

A. Research Design

The study uses classroom action research (CAR) in doing the analysis. The

action research process adopted Mertler & Charles model (2010). The design of this current study employs the use of action research cycle as shown in figure. The action research is carried out in a cyclic manner, consisting of four different stages:

1. Planning for the action stage by using the information gained such as problems in teaching & learning.
2. Acting on the planned lesson.
3. Collecting and analyzing the data collected, and
4. Reflecting on the outcome of the planned lesson by looking at the benefits and possible problems.

The summary of the action research process in this present study can be seen in figure 1.

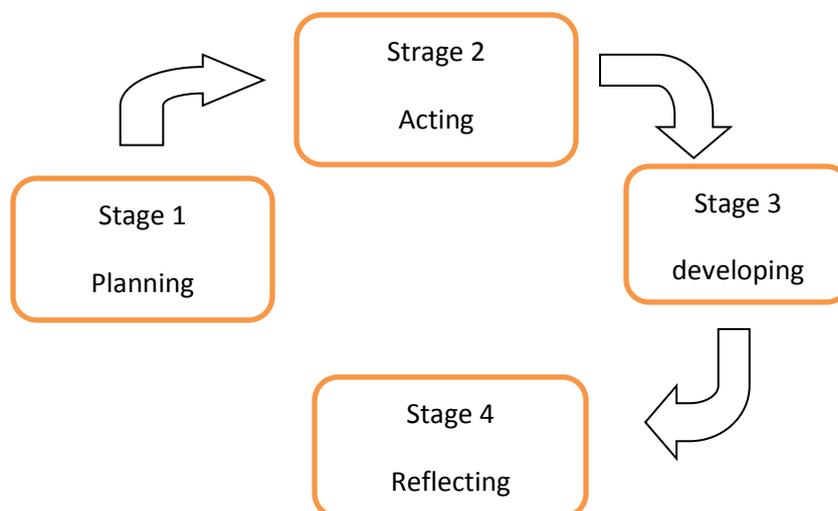


Figure 1. Action Research Process adopted from Mertler & Charles (2010)

The classroom action research was done as follows.

- Stage 1. Planning:

In this stage, the researchers explain to the students about jigsaw technique; choose one text for each group, it becomes 5 texts with 28 questions for comprehension test; and then divide the students into 5 jigsaw groups.

- Stage 2. Acting:

In this stage, the researchers ask all members of each group discuss about their own passage. Each member participates actively by seeking,

pronouncing, and understanding the meaning of word, phrase, sentence, and passage.

- Stage 3. Developing:

In this stage, all the students know their passage well. Then, the researchers form expert group. One student from five jigsaw group becomes the member of expert group so it five students. All members in this expert group share their own passage.

- Stage 4. Reflecting:

The students come back to their jigsaw group The experts retell five passages

that are gotten in expert groups. And now, all students comprehend the passages well. To know the comprehending of the students, the students should do some exercises in all passages individually.

There are 28 questions of comprehension test. Then it becomes questionnaire. The classroom action research cycle using jigsaw technique may be seen in figure 2 below.

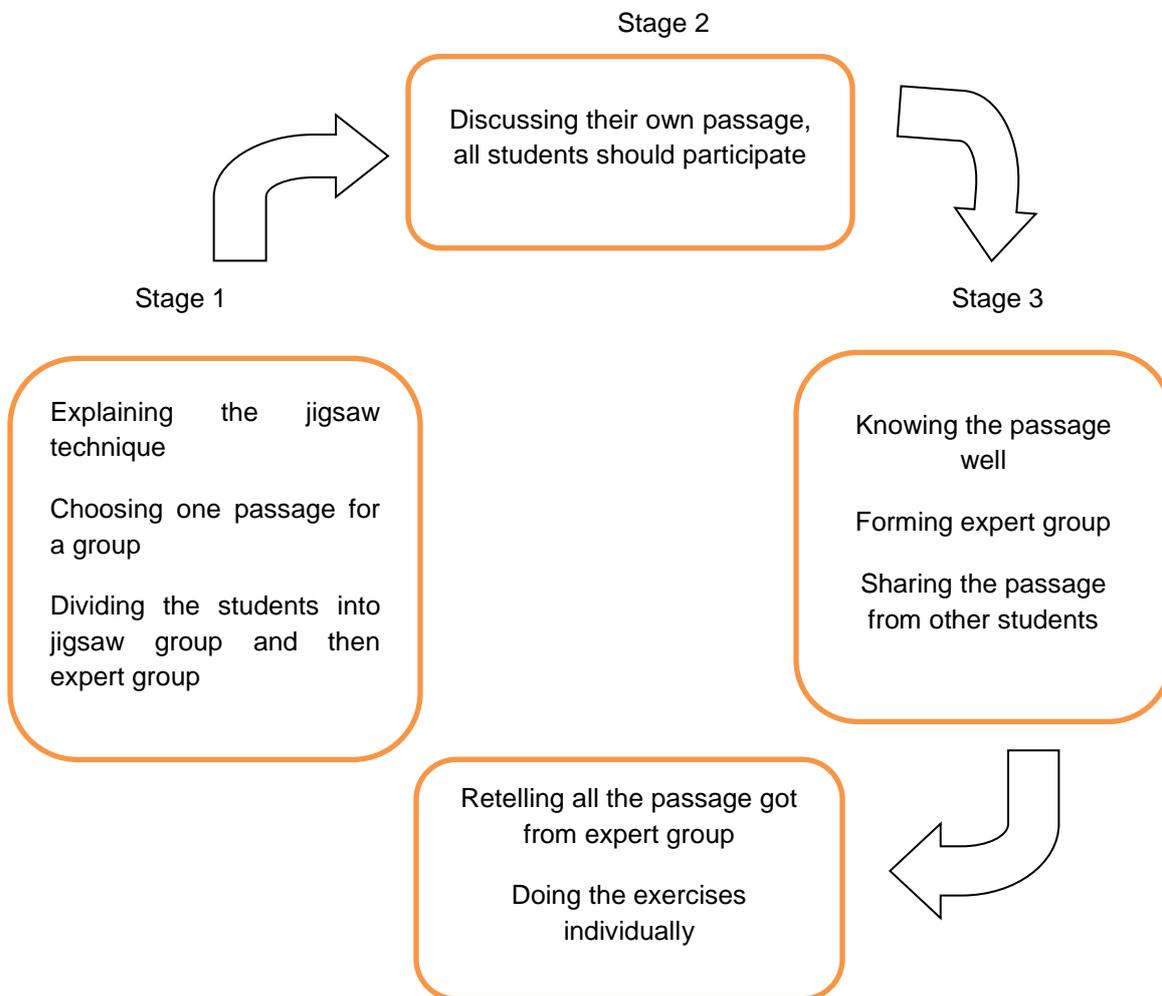


Figure 2. The classroom action research cycle using jigsaw technique

The research only uses one cycle of this action research cycle because the result is answer the research questions. It is concluded that jigsaw technique is an effective technique in teaching reading comprehension class.

B. Participants

The participants in the study is the first semester students by the year 2015-2016 faculty of Literature, Islamic University of North Sumatra. It is 25 students that divided into 5 groups, as follows.

Figure 3. Origin Group of Jigsaw Technique

Group 1	Group 2	Group 3	Group 4	Group 5
1. Febriyola	1.Nanda	1.Rizky	1.Siska	1. Kahfi
2. Luna	2.Siti	2.Nisa	2.Suci	2. Melisa
3. Tri Mauli	3.Rasyiqah	3.Anggi	3.Beby	3. Arab
4. Eli	4.Thesya	4.Nasuha	4.Lestari	4. Sudwintari
5. Nurhalimah	5.M.Iqbal	5.Dinda	5.Indah	5. Dhitya

Figure 4. Expert Group of Jigsaw technique

Expert Group 1	Expert Group 2	Expert Group 3	Expert Group 4	Expert Group 5
Febriyola	Nanda	Rizky	Siska	Kahfi

ANALYSIS AND FINDINGS

After applying jigsaw technique in classroom action research, there are some steps that are created by the researchers, as follows.

1. Explaining to the students about jigsaw technique (time required 5 minutes)
2. Choosing one text for each group. It becomes 5 texts with 28 questions for comprehension test (time required 2 minutes)
3. Dividing the students into 5 jigsaw groups.(time required 3 minutes)
4. Allowing all members of each group discuss about the passage they have. (time required 20 mins)
5. Forming expert group (time required 20 mins)
6. Retelling the passages that the experts are gotten in expert groups. (time required 20 mins)
7. Doing some exercises by all the students in all passages. (time required 20 mins)

These seven steps are done in 90 minutes in their reading comprehension class. All the students follow the learning teaching activity using jigsaw technique actively.

All the questions in the five passages become the questionnaire. They are 28 questions, in *the greenwood boys* has 5 questions. They become number 1-5 of the questionnaire; *do you speak English* has 6 questions. They become number 6-11 of the questionnaire; *Good news* has 8 questions. They become number 12-19 of the questionnaire; *A polite request* has 4 questions. They become number 20-23; and *Always young* has 5 questions. They become number 24-28 of the questionnaire.

Figure 5. Name of Passage and Number of Questionnaire

No.	Name of Passage	Number of questionnaire
1	<i>the greenwood boys</i>	1, 2, 3, 4, 5
2	<i>do you speak English</i>	6, 7, 8, 9 10, 11
3	<i>Good news</i>	12, 13, 14, 15, 16, 17, 18, 19
4	<i>A polite request</i>	20, 21, 22, 23
5	<i>Always young</i>	24, 25, 26, 27, 28

The questionnaire result is very good. Seven students may answer all the questions correctly, ten students answer one question incorrectly, two students answer two questions incorrectly, two students answer three questions incorrectly, one student each answers six, seven, eight, fourteen questions incorrectly.

From 28 questionnaires that are answered by 25 students, 12 students answer one question incorrectly. After

analyzing the question number 20 in a *polite request* passage, the writers conclude that the students got confuse. It is known when the writers answer all the questions in the end of the meeting. One of the students didn't answer 14 questions. The writers ask the student about it, and she answers that she got sick at that time. The students said that they let the blank answer, because the limitation of time. It can be seen in figure 6.

Figure 6. The students' answer

Number of Question	Students' Answers	
	Correctly	Incorrectly
1	28	-
2	27	1
3	27	1
4	28	-
5	28	-
6	26	2
7	27	1
8	27	1
9	27	1
10	25	3
11	25	3
12	27	1
13	28	-
14	27	1
15	28	-
16	27	1
17	28	-
18	22	6
19	22	6
20	16	12
21	25	3
22	25	3
23	26	2
24	27	1
25	27	1
26	26	2
27	27	1
28	26	2
Total= 28	728	56

There are some findings that the writer found after applying the jigsaw technique, as follows.

1. Teacher's role in the jigsaw
Teaching using jigsaw technique makes the teacher's role becomes facilitator. The teacher explains the jigsaw procedure, forms the students into groups, and follows all the student activities.
2. The students' feeling of ownership and belonging
Using the jigsaw technique, it gives students a sense of ownership and belonging. Those feelings are hard to experience when working alone. Having shared responsibility to the group setting, students gain the benefit of learning from those different from themselves. While individual

students could be required to do the entirety of a project on their own, the fact that they have the opportunity to listen to the perspectives of others enhances the quality of their education. Jigsaw requires students to listen and learn, and the group is rewarded when each individual contributes their skills and knowledge to the whole. Not only is learning improved, but tolerance and understanding is as well.

3. Grouping the students heterogeneously.
In jigsaw technique, the students group heterogeneously. They group randomly, not depend on their ability, their competence, or their interest.

4. Error corrections for accuracy, fluency, and appropriateness are done by the students. They participate doing correction by checking in the dictionary, even online dictionary.

REFERENCES

- Aronson, E., 2008. Jigsaw classroom. Texas: Austin. Retrieved from <http://www.jigsaw.org>.
- Aronson, E. Blaney, N. Stephan, C. Sikes, J. & Snipp, N. 1978. *The Jigsaw Classroom* (2nd ed) . Beverly Hills CA: Sage.
- Dat, Tran Van. 2016. The Effects of Jigsaw Learning on Students's Knowledge Retention in Vietnamese Higher Education. *Journal. International Journal of Higher Education*. Vol 5 No. 2, 2016. <http://www.sciedu.ca/journal/index.php/ijhe/issue/view/411>.
- Haydan, Rifki. 2013. Implementation of the Cooperative Learning Method in Teaching Reading Comprehension. *Journal of English and Education* Vol 1 (2) p. 57-64. <http://ejournal.upi.edu/index.php/L-E/article/view/584/441>
- Hänze, M., & Berger, R. (2007). Cooperative learning, motivational effects, and student characteristics: An experimental study comparing cooperative learning and direct instruction in 12th grade physics classes. *Learning and Instruction*, 17(1), 29-41. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0959475206001174>
- Johnson, D.W. & Johnson, R.T. 2009. *An Educational Psychology Success Story: Social Interdependence Theory Cooperative Learning*. Educational Researcher. <http://dx.doi.org/0.3102/0013189X09339057>.
- Liang, T. 2002. *Implementing Cooperative Learning in EFL Teaching: Process and Effects*. (Doctoral Dissertation, National Taiwan Normal University). http://www.Asianefl-journal.com/thesis_Liang_T_sailing.pdf (july, 17,2009)
- Marzano, R. J., Pickering, D., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- McKeachie, Wilbert James. 1999. *Teaching Tips*. Boston: Houghton Mifflin Co.
- Mengduo QIAO & Xiaoling, Jin. Jigsaw Strategy as a Cooperative Learning Technique: Focusing on the Language Learner. *Journal (Chinese Journal of Applied Linguistics (Bimonthly))*. August 2010 Vol.33 No.4.
- Mertler, C.A & Charles, C.M. 2010. *Introduction to Educational Research* (6thed). Boston: Pearson Education.
- Nuttall, C. 2000. *Teaching Reading Skills in a foreign language*. Oxford: Macmillan Heinemann
- Pang, Elizabeth S., et. al. 2003. *Teaching Reading*. Brussel: The International Academy of Education (IAE)
- Tewksbury, Barbara Jarvis. 1995. Specific Strategies for Using the "jigsaw" Technique for Working in Groups in Non-Lecture-Based Courses . *Journal of Geological Education* Vol.4p.322.
- Walker, I. (1998). Academic performance, prejudice, and the jigsaw classroom: New pieces to the puzzle. *Journal of Community & Applied Social Psychology*, 8(6), 381-393. Retrieved from <http://uwf.edu/svodanov/AS/Jigsaw.pdf>