

APPLYING COOPERATIVE LEARNING BY USING JIGSAW TYPE TO IMPROVE THE STUDENTS' READING ABILITY AT SECOND SEMESTER OF D CLASS AT STAIN JEMBER IN 2011/2012 ACADEMIC YEAR

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Abstract

Penelitian ini dilakukan untuk meningkatkan kemampuan mahasiswa dalam keterampilan membaca dengan menggunakan tehnik jigsaw. Keterampilan membaca khususnya dalam bahasa Inggris sangat penting untuk dikuasai karena dapat meningkatkan pengetahuan mereka. Disamping itu untuk mendukung mereka dalam memahami literature yang berbahasa Inggris.

Kesimpulan dari hasil penelitian ini adalah tehnik jigsaw dapat meningkatkan kemampuan mahasiswa dalam keterampilan membaca dengan cara membagi mahasiswa dalam beberapa kelompok yang terdiri dari 5 anggota dimana setiap anggotanya menjadi tim ahli bagi kelompoknya untuk menyampaikan isi teks.

Key Words: Cooperative Learning, Jigsaw Type, Reading Ability

INTRODUCTION

Reading is one important of the language skills. Someone can find information from reading. Say, when he wants to get a job, he sometimes needs information from advertisement of a newspaper. Then when he finds it, he has to read it. Students are not sufficient to learn from lecturing but they must enhance their knowledge by reading.

Reading is a complex cognitive process of decoding symbols in order to construct or derive meaning (reading comprehension). It is a means of language acquisition, of communication, and of sharing information and ideas. Like in all languages, reading is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, attitude, and language community which is culturally and socially situated. The reading process requires continuous practice, development, and refinement.¹

¹ [http://en.wikipedia.org/wiki/Reading_\(process\)](http://en.wikipedia.org/wiki/Reading_(process))

The statement above means that reading is process to get information, to make communication. It needs practice all the time and should be done on and on.

One of the skills which must be emphasized in teaching English is reading. By reading the students will be able to understand many vocabularies, pronounce English words and sentence, understand the information they read, and finally they can find what they want to get.

The researcher found that the students had difficulties in reading. They did not understand the words, they could not pronounce the English words well, they had a little information from the reading, and finally they could not find the information they wanted.

Here, the researcher wanted to improve the students reading ability by applying cooperative learning by using jigsaw type. Jigsaw task involve learners in combining different pieces of information to form a whole (e.g., three individuals or groups may have three different parts

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of a story and have to piece the story together).²

Based on the description above, the researcher wanted to know how the cooperative learning through jigsaw can improve the students' reading ability at second semester of D class at STAIN Jember in 2012/2013 Academic year.

REVIEW OF THE RELATED LITERATURE

The Definition of Cooperative learning

Cooperative or collaborative learning essentially involves students learning from each other in groups. But it is not the group configuration that makes cooperative learning distinctive; it is the way that students and teachers work together that is important. As we have just seen, with learning strategy training, the teacher helps students learn how to learn more effectively³. In cooperative learning, teachers teach students collaborative or social skills so that they can work together more effectively. Indeed, cooperation is not only a way of learning, but also a theme to be communicated about and studied.

There are five key components for effective cooperative learning; positive interdependence, individual accountability, promoting face to face interaction, small group skills, and group processing.⁴

Cooperative learning does not merely imply collaboration. To be sure that a cooperative classroom the students and teachers work together to

pursue goals and objectives. But cooperative learning "is more structured, more prescriptive to teachers about classroom techniques, more directives to students about how to work together in groups – than collaborative learning". In cooperative learning models, a group learning activity is dependent on the socially structured exchange of information between learners. In collaborative learning, the learner engages "with more capable others (teachers, advanced peers, etc.), who provide assistance and guidance".

In addition defines that cooperative learning⁵ is an approach to teaching and learning in which classrooms are organized so that students work together in small co-operative teams. Such an approach to learning is said to increase students' learning since (a) it is less threatening for many students, (b) it increases the amount of student participation in the classroom, (c) it reduces the need for competitiveness, and (d) it reduces the teacher's dominance in the classroom. There are five distinct types of cooperative learning activities are often distinguished, as follows: first is **Peer Tutoring** that students help each other learning, taking turns tutoring or drilling each other. Second, **Jigsaw** that each member of a group has a piece of information needed to complete a group task. Third, **Cooperative Projects** that students work together to produce a product, such as a written paper or group presentation. Fourth, **Cooperative/Individualized** that students' progress at their own rate through individualized learning materials but their progress contributes to a team grade so that each pupil is rewarded by the achievements of his or her teammates. And fifth is **Cooperative Interaction** that students work together as a team to complete a learning unit, such as a laboratory experiment.

² Jack C. Richards. *Curriculum Development in Language Teaching*. (USA: Cambridge University Press. 2001).

³ Diana Larsen & Freeman. *Teaching and Principles in language Teaching*. (China. Oxford University Press. 2008)

⁴ D. Johnson, & T. Roger. *An Overview of Cooperative Learning*. In Thousand, J., Villa, A., & Nevin, A. (Eds), *Creativity and collaborative learning*. (Baltimore : Brooks Press. Online: <http://www.co-operation.org/pages/overviewpaper.html>. 1994).

⁵ Jack C. Richard. *Longman Dictionary of Language Teaching And Applied Linguistics*. (Malaysia: Fakenham Photocetting Ltd. 2002)

In cooperative learning model,⁶ students work in cooperative learning situation and are encouraged to work together on common task and to coordinate their efforts to complete tasks. Rewards systems are group-oriented rather than individually oriented.

Kinds of Cooperative Learning

There are many kinds of cooperative learning.⁷ Among of them are Make a Match, Think-Pair-Share, Think Pair Square, Number Head Together, Two Stay Two Stray, Inside-Outside Circle, Jigsaw, Paired Storytelling, and many more.

The Advantage of Cooperative Learning

There are some advantages of using jigsaw technique.⁸ They are: first, students have the opportunity to teach themselves, instead of having material presented them. The technique fosters depth of understanding; second, each student has practiced it in self-teaching, which is the most valuable of the entire skill teacher can help them learn; third, students have can practice in peer teaching, which requires that they understand the material at deeper level than student typically do when simply asked to produce an exam; fourth, students become more fluent in the use of English; fifth, each student has a chance to contribute meaningfully to discussion, something that is difficult to achieve in large group discussion. Each student develops an expertise and has something important to contribute; and sixth, asking each group to discuss a follow-up question after individual presentation fosters real discussion.

Jigsaw

Jigsaw techniques⁹ are a special form of information gap in which each member of a group is given some specific information and the goal is to pool all information to achieve some objective. There are four members of a group each with a [fictitious] application form, and on each form different information is provided. As students ask each other questions (without showing anyone their own application form), they eventually complete all the information on the form. Teacher might provide maps to students in small groups, each student receiving different sets of information (where the bank is, where the park is, etc.). The goal for beginners might be simply to locate everything correctly, and for intermediate learners to give directions on how to get from one place on the map to another, requiring a collaborative exchange of information in order to provide complete directions.

One very popular jigsaw technique that can be used in larger groups is known as a "strip story." The teacher takes a moderately short written narrative or conversation and cuts each sentence of the text into a little strip, shuffles the strips, and gives each student a strip. The goal is for students to determine where each of their sentences belongs in the whole context of the story, to stand in their position once it is determined, and to read off the reconstructed story. Students enjoy this technique and almost always find it challenging.

Jigsaw groups with five students are set up.¹⁰ Each group member is assigned some unique material to learn and then to teach to his group members, to help in the learning students across the class working on the same sub-section get together to decide what is important and how to teach it. After practicing in these

⁶ Jack C. Richard, *Curriculum*

⁷ Anita Lie. *Cooperative Learning*. (Jakarta. PT Gramedia Widiasarana Indonesia.2002)

⁸ <http://smahillah.hubpages.com/hub/mamaazaputri2>

⁹ Douglas Brown, *Teaching by Principle*. (New York. Addison Wesley Longman. inc.2001).

¹⁰ Spencer Kagan., *Cooperative Learning*. (San Clemente, CA: Kagan Publishing, 1994. www.KaganOnline.com)

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“expert” groups the original groups reform and students teach each other.

Jigsaw text (either listening or reading) are also an interesting idea; this is where individual students or groups of students are given slightly different texts concerning a single event so that they have to exchange information with each other before some final task can be completed.¹¹ This approach is best demonstrated in reading links.

The Steps of Jigsaw Learning

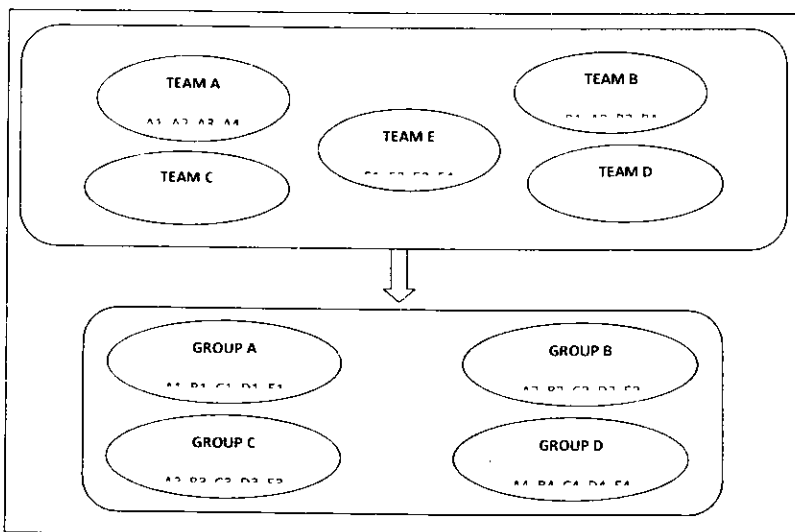
There are ten steps considered important in the implementation of the jigsaw classroom¹²: (1) Students are divided into 5 or 6 persons in a jigsaw group. (2). One student should be appointed as the group leader, (3) The days lesson is divided into 5-6 segment (one for each member), (4) Each student is assigned one segment to learn, (5) Student should be given time to read over their segment at least twice to become familiar with it. Students do not to memorize it. (6) Temporary experts group should be formed in which one student from each jigsaw group join other student assigned to the same segment, (7) Student comes back to their jigsaw group, (8) Student presents his or her segment to the group. Other members are encouraged to ask question for clarification, (9) The teacher needs to float from group to in order to observe the process. Intervene if any group is having trouble such as a member being dominating are disruptive, and (10) A quiz on the material should be given

¹¹ Riger Gower.. *Teaching Practice Handbook*. (England. Heinemann International. 1983)

¹² <http://www.jigsaw.org/steps.htm>

at the end so students realize that the sessions are not just for fun and games but they really count.

The illustration the picture of Jigsaw Model¹³ illustrated as follows:



Reading Ability

Students with more total hours of high school English instruction tended to score higher on the vocabulary measure, and students with more vocabulary tended to process the text more quickly and rely less on a dictionary. However, students with larger vocabularies did not always appear to be the more skillful readers. There was some evidence found that the better readers demonstrated superior syntactic knowledge that enabled them to rely more on the text and less on compensatory strategies.¹⁴

Reading skills are specific abilities which enable a reader to read the written form as meaningful language, to read anything written with independence, comprehension and fluency, and to mentally interact with the message.

¹³ Trianto. *Mendesain Model Pembelajaran Inovative-Progresif*. (Jakarta. Kencana Prenada media. 2010).

¹⁴ Nolan Weil. *Vocabulary Size, Background Characteristics and Reading Skills of Korean Intensive English Students*. (www.asian-efl-journal.com/December_08_nw.html. 2008)

There are eight skills of reading¹⁵, as follows; recalling word meaning, drawing inferences about meaning of a word in context, finding answers to questions answered explicitly or in paraphrase, weaving together ideas in the context, drawing inferences from the context, recognizing a writer's purpose, attitude, tone and mood, identifying a writer's technique, following the structure of a passage

There are three main types of strategy¹⁶ namely; sensitizing, improving reading speed, and going from skimming to scanning. Sensitizing is subcategorized into making inferences, understanding relations within the sentence, linking sentences and ideas.

Classroom techniques using these strategies include: ordering a sequence of pictures, comparing texts and pictures, matching, using illustrations, completing document, mapping it out, jigsaw reading, reorganizing the information, comparing several texts, completing a document, summarizing, and note taking.

The Process of Reading

Reading is a receptive language process since it is a psycholinguistics process in which it starts with a linguistic surface representation encoded by the writer and ends with meaning, which the reader constructs. Therefore, there is an essential interaction between language and thought in reading. The writer encodes thought as language and the reader decodes language to thought.

It is stated that reading process is broken down into a series of smaller to larger sub-skills, which should be taught in a certain order¹⁷. These skills are grouped

under headings like readiness, word recognition, word meaning, and comprehension.

Reading comprehension is a very complex process and in order to grasp how readers make sense of written symbols¹⁸, it is essential that the process of reading comprehension and the role of factors leading to the product of this process be understood properly. Besides, background knowledge is crucial for reading comprehension. There is no dispute among researchers that vocabulary knowledge is crucial to reading comprehension. Another element of reader variable is knowledge of language, or linguistic knowledge. Linguistic knowledge includes 'phonological, orthographic, morphological, syntactic, and semantic information' and 'discourse-level knowledge, including ... text organization and cohesion, text types and associated conventions, as well as metalinguistic knowledge'.

Reading Comprehension

Comprehension means interacting and constructing meaning with text. Note that we read in order to gain meaning from the text. Understanding a written text means extracting the required information from it. It can be concluded that reading comprehension means understanding about what we have read, knowing the meaning and the contents of the text. The goal of reading comprehension is ultimately targeted at helping a reader comprehend text. Therefore, after reading, the reader should understand the writer's message or important information or general information of texts.

Student's reading comprehension means the score that reader obtains from reading comprehension test. In order to know the student reading comprehension, teacher should give reading comprehension questions. Teacher may do observa-

¹⁵ J. Charles. Alderson. *Assessing Reading*. (United Kingdom: Cambridge University press. 2000)

¹⁶ David Nunan. *Second Language Teaching and Learning*. (Canada: Heinle & Heinle Publishers. 1999).

¹⁷ Carole Cox. *Teaching Language Arts*. (United State of America: Allyn & Bacon A Viacom Company. 1999)

¹⁸ Karim Sadeghi. *The Key for Successful Reader-writer Interaction: Factors Affecting Reading Comprehension in L2 Revisited*. (www.asian-efl-journal.com/Sept_2007_ks.html)

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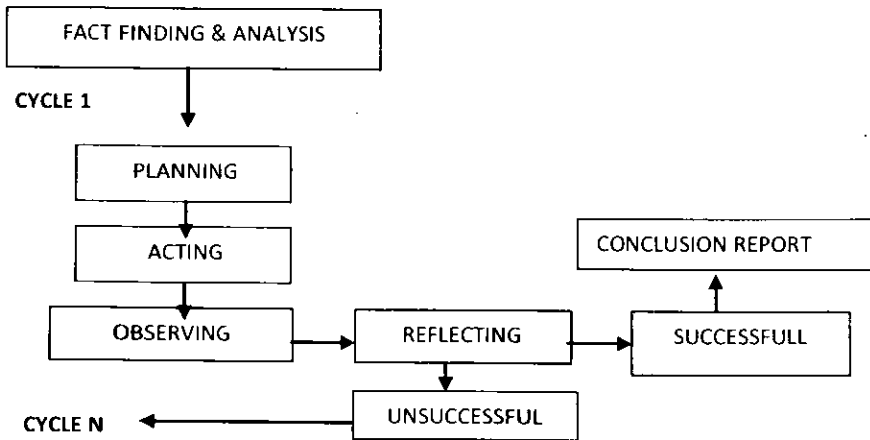
tion and assessment to check students' reading comprehension.

RESEARCH METHOD

The researcher used classroom Action Research for this research. Action research has purpose to develop new skills or new approach to solve problem in field work or the other actual problem by using implementation directly.

The researcher conducted this research into two cycles in which each cycle covered four activities ¹⁹ namely planning, acting, observing, and reflecting.

The research procedures are illustrated ²⁰bellow.



Planning

In this classroom action research, the preparation of the action was done by researcher before the implementation of action. They were as follows; selecting the materials (reading texts) that will be used to teach in teaching and learning English process, making the lesson plans to each meeting of the cycles, preparing the guide of observation in the form of checklist containing the indicators observed, dividing the students into several

¹⁹ S. Arikunto, *Prosedure Penelitian Suatu tindakan praktek*. (Jakarta: Rineka cipta. 2006).

²⁰ Iskandar. *Penelitian Tindakan Kelas*. (Ciputat : Gaung Perdana Press. 2009).

teams and groups, and preparing the way to score the students' test.

Implementing

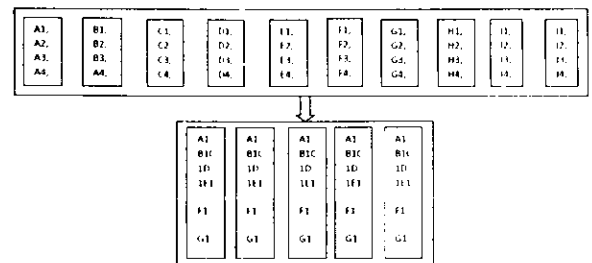
In this step, the researcher divided the students into ten teams. Each team consisted of five members. Each team was named based on the alphabet namely team A, team B until team J. Then the member of each of them named by A1, A2, A3, A4, and A5. Next, each team got five different reading texts. The following step was the researcher asked the students who had similar number to get together to discuss the same text. To make clear the procedure the exam-

ple given as follows; A1, B1, C1, D1, E1, F1, G1, H1, I1, and J1 were discussing text 1. A2, B2, C2, D2, E2, F2, G2, H2, I2, and J2 were discussing text 2, and the rest of them made the same pattern. Here is the model of dividing students into team and group.

Here is the model of dividing students into team and group.

Observing

The researcher did the observation by himself during the class was going



on. The observation was done to know whether the students were active or not.

To get the note of the students' activities, the researcher used check lists. Besides, the students would feel that their teacher paid attention to them. In addition the researcher regarded the positive students' activities as seriousness in studying. In this way the researcher could get maximal result in the process of teaching and learning specially in applying the jigsaw technique.

Reflecting

The researcher did the reflection after analyzing the students' test result at the end of cycle. This reflection was intended to know whether the action had weaknesses or not and identify the successfulness and unsuccessfulness.

To measure the students' successfulness percentage, the researcher used a formula as follows:

$$\text{Where: } E = \frac{n}{N} 100\%$$

- E* : The percentage of the students' reading ability.
n : The number of the students who achieve minimum standard score
N : The total number of the students

Data Collecting Method Test

The number of the test was 30 items that covered two indicators, namely; 12 items of reading, and 18 items of Vocabulary. All of these items were in the form of multiple choices. The test was administered in 90 minutes. Dealing with the scoring, each item of the indicators was scored 3.3 point. In conclusion, the total score were 100.

In this research, content validity was used because the materials had been discussed in classroom. Besides, the content of test materials was constructed by considering the indicators to be measured.

The test was given at the forth meeting in each cycle after the implementation of the action was done. The test used in this research was written test in the form of multiple choice.

Observation

In this research, the researcher observed in each meeting of each cycle while the researcher was doing the action. The researcher also did the observation while he was teaching as supporting information to the researcher's observation. The most effective way in observation by using checklist containing some indicators observed is used by observer or researcher²¹.

Interview

The type of interview used in this research was semi-structured interview. List of questions were prepared and developed to get the information needed.

Documentation

The documentation is a method in searching data about variables in the form of notes, transcript, books, news, magazines, and the like. In this research, documentation was used to get the supporting data about the name of the research subjects and English books²².

Data Analysis Method

The collected data was analyzed based on the form of the data. The primary data in this research was obtained from the students' reading comprehension test both in the first cycle and the second cycle. The data was analyzed quantitatively and qualitatively to find whether the students' competence mastery increased or not. The formula²³ to know the mean score of the students' competence test was as follows:

²¹ S. Arikunto, *Prosedure* hlm 204

²² S. Arikunto, *Prosedure* hlm 206

²³ Mohammad.Ali, *Strategi Penelitian Pendidikan*. (Bandung: Angkasa 1993).

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$$\% = \frac{n}{N} \times 100$$

% = the percentage of the students who get score ≥ 70

n = the total number of the students who get score ≥ 70

N = the total number of the students

The criteria used to evaluate the success of the actions are as follow:

1. The actions were considered successful if 75% of the students achieved the target score ≥ 70 .
2. If 75% or more students actively involved in the teaching learning process. Then, the results of the data analysis were classified qualitatively based on the following classification of the scores levels.

Research Subject

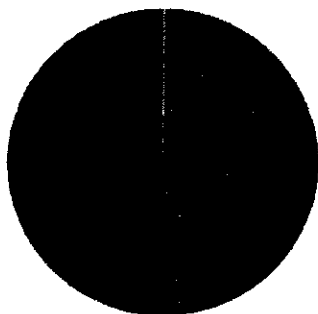
Population is a group of element or cases, of individuals, objects, or events, that conform to specific criteria and to which we intended to generalize the result of the research. The population of this research is second semester of STAIN students at D class in the academic year of 2011/2012. There are 50 students.

RESEARCH RESULT

Preliminary study

In preliminary study, the researcher gave pre test to the students. The result of the test score generally could be described as follows:

Pre Test

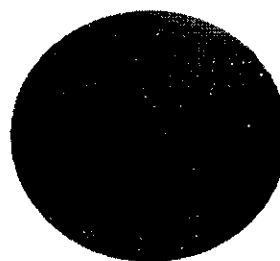


From the chart above, it can be described that the total of the students were 50. Then the students who got score less than 70 were 26 students. In other word, there were 52 percent of the total students got score less than 70. Meanwhile the students who got score 70 up were 24 students. In other word, there were 48 percent of the total students who got score up to 70.

Result of cycle I

The result of the students' test score in cycle I generally could be described as follows.

Cycle 1

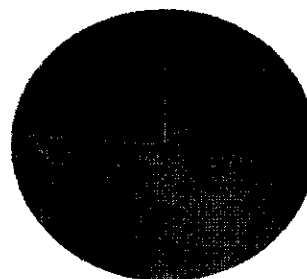


From the chart above, it can be described that the total of students who got score less than 70 are 21 students. In other word, there were 42 percent of the total students got score less than 70. Meanwhile the students who got score 70 up were 29 students. In other word, there were 58 percent of the total students who got score up to 70.

Result of second 2

The result of the students' test score generally could be described as follows.

Cycle 2



From the chart above, it can be described the students who got score less than 70 were 12 students. Then there were 38 students got score 70 up. In other word, 24 percent of the total students got less than 70 and 76 percent of the total students got score 70 up. .

Based on the criteria of success, the result of cycle 2 was fulfilled. Therefore, the researcher stopped continuing the research.

DISCUSSION

In general it was obvious that teaching reading by using jigsaw technique gave positive contribution on the students' reading ability especially for reading comprehension. It could be seen from the result of the test in each cycle. To know the students' reading ability, the researcher firstly conducted pre test. The result of the pre test showed that the percentage of the students' reading comprehension test score was 48 percent of the total students got score greater than or equal to 70. Therefore, the researcher did this research by giving materials to the students and tried to make the students' reading ability better.

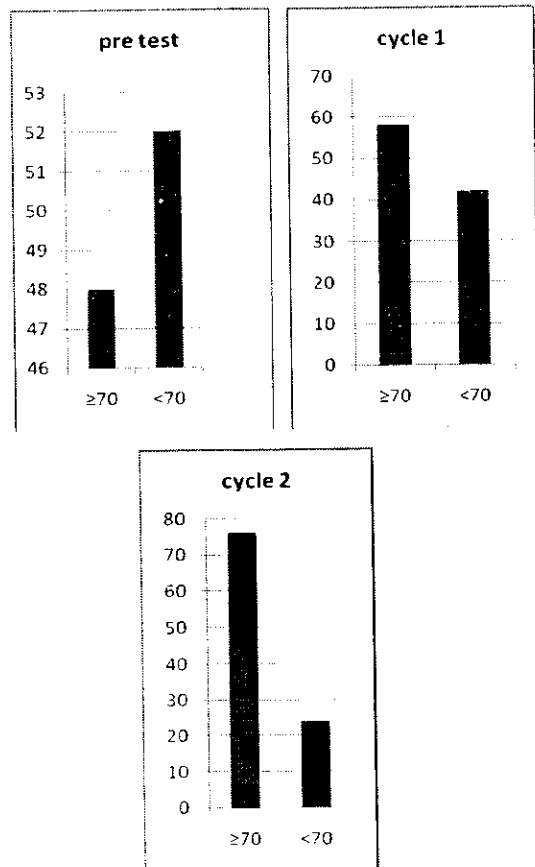
Jigsaw techniques are a special form of information gap in which each member of a group is given some specific information and the goal is to pool all information to achieve some objective²⁴. Therefore, the researcher implemented the action for the first cycle for three meeting.

The result of the test after teaching and learning process showed that the percentage of the students' reading comprehension test score was 58 percent of the total students got score greater than or equal to 70. It proved that by jigsaw technique the students can increase their ability in reading. But form the result, it showed that the target which determined in the criteria have not fulfilled yet.

Based on the fact, the researcher continued the research in cycle 2. In cycle two the researcher divided the student

into two groups. The each group divided into five teams. It was done to reduce the students' noise. Besides, the students were able to participate so that each of them contributed his or her idea. From the result of the test in cycle 2, it showed that the percentage of the students' reading comprehension test score was 76 percent of the total students got score greater than or equal to 70.

As the research result conducted above, it was not enough to apply the technique once. It needs repeated action. Besides, the researcher did the reflection about the weaknesses and the strengths. When the researcher found the weaknesses, he tried to fix the weaknesses to get the target fulfilled. As the summary of the research result, it can be illustrated as follows;



²⁴ Douglas Brown, *Teaching* .

CONCLUSION

Based on the result of classroom action, it generally can be concluded that applying cooperative learning by using jigsaw technique can improve students' reading ability of the second semester of D class at STAIN Jember in the academic year of 2011/2012 well. Specific conclusions are:

The cooperative learning with jigsaw can improve the students' finding answers to questions answered explicitly well.

The cooperative learning with jigsaw can improve the students' drawing inferences from the context well

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