

# THE COMPARISON OF READING COMPREHENSION TAUGHT BY USING STAD AND JIGSAW TECHNIQUE AT DIFFERENT MOTIVATION TO READ AT THE EVEN SEMESTER OF ELEVENTH GRADES IN SMAN 1 RUMBIA ACADEMIC YEAR 2012/2013

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**Abstract :** Reading is necessary when students further their study, especially at Senior High School level. Based on the Pre survey, Many students are not interested in reading subject, the students are not interested in teaching technique which is used by the teacher, the students motivation to read are still low, the quality of their reading comprehension are still low. There are two techniques presented as a solution in this research. They are STAD Technique and Jigsaw technique. The objective of this research is to know whether there is any difference of reading comprehension taught by using STAD and Jigsaw technique, to unlock whether there is any difference of reading comprehension taught by using STAD and Jigsaw technique at high and low motivation to read, and to explore whether there is any interaction of reading comprehension, learning technique, and different motivation to read at the even semester of eleventh grades in SMA N 1 Rumbia academic year 2012/2013.

The method of investigation is held through quantitative research. The researcher uses true experimental research. In this experiment, the researcher applies factorial design. The research is conducted at the eleventh grades of SMA N 1 Rumbia in academic year 2012/2013. The population in this research is 204 students. It consisted 6 classes and each class consist 34 students. The researcher takes 68 students from total population as the sample, 31 students as experiment class and 31 as control class that match based on classification of student level. The researcher uses cluster random sampling as technique sampling.

To analyze data, the researcher uses ANOVA TWO WAYS formula. The researcher got the result of  $F_{hit}$  is 18, 2 and  $F_{table}$  is 7, 14. It means that  $F_{hit} > F_{table}$ . And the criterion of  $F_{test}$  is  $H_a$  accepted if  $F_{hit} > F_{table}$ . So, there is any difference result of Reading comprehension taught by using STAD and Jigsaw and STAD technique is more effective technique than Jigsaw technique toward students Reading comprehension at different motivation to read at the eleventh grades of SMA N 1 Rumbia academic year 2012/2013. The researcher expects English teacher use STAD Technique in reading, so the students feel fun and enjoy in following the learning process.

**Key Words :** Jigsaw, Motivation to Read, Reading Comprehension, STAD

## INTRODUCTION

Reading is necessary when students further their study, especially at Senior High School level. They need good reading skill for acquiring knowledge and learning new information. However, it can be seen that most students' reading comprehension are not good enough to do so. Even reading comprehension skills of students at the upper secondary level are below the 80 percent of criterion. Many reading

methods have been used in classrooms alternately. The results show that some are successful with a particular group of students but some are not. Actually, what must be taken into consideration now is the way the knowledge is presented.

From the data which is got by the researcher, it is revealed that students' score into reading comprehension are still low. It can be known that they lack of motivation to read. Most of students

get a bad mark. There are about 70% students who get bad mark in reading comprehension, and then from the data pre survey about students' motivation to read there are about 65% students who get bad mark. It means that their motivations to read are still low. This fact still far from what is hoped and it needs ways to change to the better one.

Based on that statement, it can be concluded that the researcher find the other alternative technique in order to learning process of reading comprehension be success by using STAD and Jigsaw technique.

The objective of the research are to know whether there is any difference of reading comprehension taught by using STAD and Jigsaw technique at the even semester of eleventh grades in SMA N 1 Rumbia academic year 2012/2013. To unlock whether there is any difference of reading comprehension taught by using STAD and Jigsaw technique at high and low motivation to read at the even semester of eleventh grades in SMA N 1 Rumbia academic year 2012/2013. To explore whether there is any interaction of reading comprehension, learning technique, and different motivation to read at the even semester of eleventh grades in SMA N 1 Rumbia academic year 2012/2013.

## **THEORETICAL FRAMEWORK**

There are two literature overviews which related to this research.

First, it was conducted by Koindrasari (2011) entitled "The Comparison of STAD and Jigsaw Cooperative Technique toward Simple Present Tense Mastery at the Eight Level in SMP N 3 Batanghari Nuban Academic Year 2011/2012".

Second, it was executed by Prasetyo (2011) entitled "The Comparison between Reading Ability in Narrative Text Using STAD and CBI Methods at the Tenth Level at the Senior High School Muhammadiyah 1 Metro".

Reading comprehension is the process of deriving meaning from connected text, so it's not passive process, but an active one. it includes making use of prior knowledge, involving drawing inferences from the words and expressions that a writer uses to communicate information, ideas, and view points.

Cooperative learning STAD has received increased attention in recent years due to the movement to educate students with disabilities in the least restrictive environment. Children with disabilities bring social needs, as well as academic needs, which are not easily met in the regular classroom. Cooperative learning has received increased attention in recent years due to the movement to educate students with disabilities in the least restrictive environment. Children with disabilities bring social needs, as well as academic needs, which are not easily met in the regular classroom.

The Jigsaw technique is a cooperative learning technique in which students work in small groups. Jigsaw can be used in a variety of ways for a variety of goals, but it is primarily used for the acquisition and presentation of new material, review, or informed debate. In this technique, each group member is assigned to become an "expert" on some aspect of a unit of study. The researcher tries to use the jigsaw technique in learning process of reading comprehension of descriptive text because they can discuss about their

material and to add their knowledge with other groups. So, students can solve their problem with each other and it makes students more responsible and focuses when they are studying. But in the fact, the teacher never uses the jigsaw technique. So, the researcher feels difficulties when the researcher applies this technique in learning process.

Motivation and reading are two matters which is interplayed. Motivation in reading is very important in supporting the achievement of the expected results of the reading because motivation is an encouragement for someone willing and eager to read. Retrived from <http://www.allaboutlearningpress.com/motivation-to-read>, accessed on tuesday, 5<sup>th</sup> February, 2013; motivation to read is just what the name implies: a child's eagerness and willingness to read. Motivation to read is children have learned that reading can be valuable for many reasons, that it is not only interesting and entertaining, but that it can also be enlightening and informative. This skill is developed through varied and engaging reading experiences beginning at the preschool age. Children who are motivated to read will actively seek out books to enjoy, are happy sitting quietly by themselves to read, and love to share what they have read. Having a love of reading also gives children confidence in their ability to learn and satisfaction with themselves. Motivation to read has character to influence comprehension in reading because motivation to read can increase students' reading comprehension.

STAD Technique is different from Jigsaw Technique. Although STAD and Jigsaws are cooperative method, but they have different roles. In steps of

STAD technique, the teacher presents a lesson, and students then study worksheets in team members. Following this, students take individual quizzes, and based on the degree, team scores are computed to which each student has improved over their own past record. The team scores are recognized in news letters (Slavin, 1995, 57). The differences of using STAD and Jigsaw technique are in the role. STAD technique is more simple in operation than Jigsaw technique that need an expert group in the learning activity. STAD will be easier received by students it can make them easier to develop their reading comprehension.

## METHOD

This research is quantitative research. Research design that will be used in this research is factorial design. Factorial design is a modification of the true experimental design, the attention to the possible existence of moderator variable that would affect the independent and dependent variables. In this research, the researcher uses factorial 2x2 designs. This design would be linear with the following table:

**Table 3.1: Table of design factorial**

Learning technique \ Motivation to Read	STAD ( $X_1$ )	Jigsaw ( $X_2$ )
High ( $A_1$ )	$A_1.X_1$	$A_1..X_2$
Low ( $A_2$ )	$A_2..X_1$	$A_2.X_2$

Where:

$A_1.X_1$  = Students of experimental class with high motivation to read

$A_2.X_1$  = Students of experimental class with low motivation to read

$A_1..X_2$  = Students of control class with high motivation to read

$A_2.X_2$  = Students of control class with low motivation to read

In this research there are three variables, they are: independent variable ( $X_1$ ) and ( $X_2$ ), variable attribute (A), and dependent variable (Y). In this research the independent variables are STAD technique ( $X_1$ ), Jigsaw technique ( $X_2$ ), motivation to read (A), and the dependent variable is Reading Comprehension (Y).

There are six classes at the even semester of eleventh grades of SMA N 1 Rumbia namely XI IPA 1, XI IPA 2, XI IPA 3, XI IPS 1, XI IPS 2, XI IPS 3 and each classes in consist of 34 students, so the total number of population is 204 students. The students' comprehension of each class is homogenous.

the researcher uses *cluster random sampling*. This technique have been done by consideration that the characteristic of population consist of groups and each group in population is homogenous that is consisting of the students from the same semester with similar learning process or environment. It used if population or sample is cluster units in population. Experimental research about the influence of learning technique commonly uses groups of research sample and groups of research sample taken as being *stratified* (stratum).

The pre-test will be administered to both experimental and control class before giving the treatment. The post-test is given after experimental and control classes have been given treatment. The questionnaire distributed before pre test.

The validity which is used by the researcher is empirical validity. Empirical validity was tested by comparing (to look for similarities)

between the existing criteria in the instrument with empirical factors there

The researcher uses Internal Consistency Reliability. This form of reliability is used to judge the consistency of results across item (Split Half) in the same test. Essentially, you are comparing test items that measure the same construct to determine the test internal consistency.

And for more reliable, the researcher will do some steps:

1. Giving students' exam to the researcher.
2. Average equitable assessment result from the test 1 and test 2.
3. Dividing the scores into test 1 and test 2
4. Correlating Between test 1 score and test 2 score by using the product moment.

The formula is :

$$r_{xy} = \frac{\sum XY}{\sqrt{(\sum x^2)(\sum y^2)}}$$

Notes :

$r_{xy}$  = The coefficient correlation between X variable and Y variable

X = The score of test 1

Y = The score of test 2

$X^2$  = The quadrate score of the test 1

$y^2$  = The quadrate score of the test 2

$\sum XY$  = The score of X and Y product

To find reliability of the test, the researcher will use the spearman brown (Split Half).

The formula as follow:

$$r_{11} = \frac{2x r_{xy}}{(1+r_{xy})}$$

Notes :

$r_{11}$  : Reliability of instrument  
 $r_{xy}$  : correlation between score each split

Then the result of  $r_{11}$  will be consulted to the criteria of reliability as follows:

Reliability coefficient

A very high reliability ranges from 0.81 up to 1.00

A high reliability ranges from 0.80 up to 0.61

Average reliability ranges from 0.21 up to 0.60

A very low reliability ranges from 0.20 up to 0.00  
 ( Arikunto , 2010 : 319 )

Based on the result of tryout, the calculation:  $r_{11}=0,99$ , so reliability of instrument has very high reliability. It means the instrument can be used for the research.

After giving the test and finding the result of the test, student's score pre test and post test will be taken by using normality test and homogeneity test.

The characters of normality test are:

$H_0$  :  $L_{-ratio}$  is lower than  $L_{-table}$  (the distribution of the data is normal)

$H_1$  :  $L_{-ratio}$  is higher than  $L_{-table}$  (the distribution of the data is not normal)

The characters of homogeneity test are:

$$F = \frac{S_1 (\text{The largest Variable})}{S_1 (\text{The smallest Variable})}$$

$H_0 = H_0$  is accepted if  $F_{-ratio}$  less or equal to  $F_{-table}$  means the variance of the data is homogeneous.

$H_a = H_a$  is accepted if  $F_{-ratio}$  higher or equal to  $F_{-table}$  means the variance of the data is homogeneous. (Sugiono, 2010:275)

Hypothesis test is calculated by using two ways anova. This test is used to know whether the hypotheses proposed by the researcher are proved or not. The formula used in this test is Analysis Varian Test (ANOVA). In this research, the researcher uses the ANOVA test called Univariate: Analysis Varian Factorial Design.

## DISCUSSION

As describe in the previous chapter, the objective of this research was to know the difference result of reading comprehension taught by using STAD and Jigsaw technique, to unlock the difference result of reading comprehension taught by using STAD and Jigsaw technique at high and low motivation to read, and to explore the interaction of reading comprehension, learning technique, and different motivation to read . To clarify the objective of this research, the researcher used some tests to reading comprehension and questionnaire for motivation to read (which is used in the pretest and posttest) as a research instrument, and the average score of pretest and posttest for each class using STAD and Jigsaw technique compared to find out the advantages of both score.

The result of calculation on the value of the pre-test and post-test score in each class (experimental and control) showed that the distribution is normal. In addition, the calculation, the hypothesis

can be accepted because  $f_{cal}$  was 29,1 and  $f_{table}$  was 7, 14 on the criterion 1 and also  $f_{table}$  was 7, 14 and  $f_{cal}$  was 18, 2 on the criterion 2 and the last criterion was  $f_{table}$  was 7, 14 and  $f_{cal}$  was 76,56. It was shown that the hypothesis of  $H_a$  was accepted and  $H_o$  was rejected. It means that there was any difference of reading comprehension taught by using STAD and Jigsaw technique, there was any difference of reading comprehension taught by using STAD and Jigsaw technique at high and low motivation to read and it also be concluded that There was any interaction of reading comprehension, learning technique, and different motivation to read at the eleventh grades in SMA N 1 Rumbia academic year 2012/2013.

Calculation results provided evidence that the students' post-test in experimental class are better than control class. It can be seen when the post-test score of students compared with pre-test score. The result showed that there was significant differences between pre-test and post-test score (post-test > pre-test). The results are consistence with the result of research Eko Prasetyo (2011) about A Comparative between Reading Ability in Narrative Text Using STAD and CBI Methods at the Tenth Level at the Senior High School Muhammadiyah 1 Metro in the Academic year Of 2010/2011). The result of the study shows that the students' achievement in reading narrative text by the use of Students' Team Achievement Division (STAD) technique is higher than the use of Content Based Instruction (CBI) technique and Students' Team Achievement Division technique is effective to improve students' students' reading ability in narrative text. By using Students' Team Achievement Division technique students feel enjoy

in learning narrative text, so their achievement in narrative text can be improved.

The results are consistence with Elliot Aronson (1972) and Slavin (1997) which states that the differences of using STAD and Jigsaw technique are in the role. STAD technique is more simple in operation than Jigsaw technique that need an expert group in the learning activity. STAD will be easier received by students it can make them easier to develop their reading comprehension.

As retrived from <http://www.allaboutlearningpress.com/motivation-to-read>, accessed on tuesday, 5<sup>th</sup> February, 2013; motivation to read is just what the name implies: a child's eagerness and willingness to read. Motivation to read is children have learned that reading can be valuable for many reasons, that it is not only interesting and entertaining, but that it can also be enlightening and informative. This skill is developed through varied and engaging reading experiences beginning at the preschool age. Children who are motivated to read will actively seek out books to enjoy, are happy sitting quietly by themselves to read, and love to share what they have read. Having a love of reading also gives children confidence in their ability to learn and satisfaction with themselves. Motivation to read has character to influence comprehension in reading because motivation to read can increase students' reading comprehension.

## CONCLUSION

After the researcher finished the research and analyzed the data that

obtained from the research, then some conclusion can be drawn. Based on the result of the analysis and computation of the data, the researcher concluded as follows:

5.1.1 There was any difference of reading comprehension taught by using STAD and Jigsaw technique at the eleventh grades in SMA N 1 Rumbia academic year 2012/2013. It is proved based on the result of two WAYS ANOVA (2x2), where  $F_{hit}$  is 29,1 higher than  $F_{table}$  is 7, 14 on the criterion 1 or it means that the hypothesis  $H_a$  in this research is accepted.

5.1.2 There was any difference of reading comprehension taught by using STAD and Jigsaw technique at high and low motivation to read at the eleventh grades in SMA N 1 Rumbia academic year 2012/2013. Based on the statistic, the result of Two WAYS ANOVA (2x2), where  $F_{test}$  was 18,2 higher than  $F_{table}$  was 7, 14 on criterion 2, and also from result of average score of the students who taught by using STAD was 51, 76 in pre-test and 67, 03 in post test with the progress of value was 15, 27. While the result of average score of the students who taught Jigsaw technique was 51, 34 in pre-test and 60, 42 in post test with the progress of value was 9, 08. It means that the average score of the students who taught by using STAD is higher than Jigsaw technique. So it is clearly that the hypothesis  $H_a$  in this research was accepted.

5.1.3 There was any interaction of reading comprehension, learning technique, and different motivation to read at the eleventh grades in SMA N 1 Rumbia academic year 2012/2013. At this point the researcher found that  $F_{XA}$  bigger than  $F_{table}$ , so  $H_0$  was accepted. Finally the researcher concluded that there was interaction of reading comprehension, learning technique, and different motivation to read.

### SUGGESTION

After doing the research, the researcher has some suggestions related with the research has been done, they are:

5.2.1 By applying and analyzing those two techniques, the researcher expected that students reading comprehension can be raised by STAD technique with steps of STAD: a) Class presentation, b) Teams, c) Quizzes, d) Individual improvement score, e) Team recognition.

5.2.2 The researcher also expected that used technique in instructional English must be careful in selecting technique for instruction especially in reading. It meant that the technique might be interesting and appropriate with the curriculum and also could encourage the students' comprehension in reading.

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