The Application of Group Work in Classroom Interactions of Teaching Reading Comprehension of Students *(Case Study SMP Negeri 6 Binjai)*

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ABSTRACT

This study deals with the application of Group Work in teaching English. The underlying objective of the study is to see whether teaching reading by using Group Work has significant difference from the students who do not apply it. In carrying out this study, the writer took 40 students of the first year of SMP Negeri 6 Binjai from two classes as the sample of her study. They were divided into two groups. The first group is experimental group was taught by using group work in reading comprehension, while the second group is controlled group, the reading text was taught without group work. The instrument used were teacher made test based on the materials that had been taught. These test used were administrated to find out the reliability, the computation showed that the reliability of the test was 1,5. After the treatment, a post-test was applied. The results of the study shows that teaching reading comprehension by using group work is more significant than of without group work.

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INTRODUCTION

Reading is source of information. The development of science and technology is still written in the text form. Mass-Electro (internet), for instance, serves a lot of information and materials that happen in daily life. Reading is needed to enable teaching-learning process running well, unconsciously, if one has competence in reading, implies a good performance in learning. (Karlin, 1984) states that: "There is relationship between reading and successful performance in school.

Language significantly aids in both socialization and individual development. In relation to this, (Byrne, 1983) says that: "Language is central to human experience, the process by which men communicate with one another, it must look closely at the human capacity for language and at the particular qualities of languages.

English is an international language. It has been taught in schools and it has become part of the curriculum of secondary schools. English as a foreign language is taught to students since they

are at grade four of elementary schools. English as a foreign language consists of four skills that should be achieved by the students who learn English, namely Listening, Speaking, Reading, and Writing.

Reading as one of the basic communicative skills is an active and ongoing process that is affected directly by an individual interaction with the environment. We would sometimes wonder, "Why should we bother reading?" This question makes us reexamine the need and importance of reading. According to (Callahan and Clark, 1982), "part of the answer is that reading is one key to success. Aside from strictly physical activities, virtually every aspect of learning uses reading as a major component. So far, no other medium equals books as the repository of culture, the storehouse of information and ideas, the source of enlightens and pleasure". Reading contributes to our social and vocational effectiveness. To help every student to become an effective reader is clearly a major responsibility of the schools and teachers.

According to English GBPP (1994), there are four language skills that should be achieved in teaching-learning process, namely: listening, speaking, reading, writing and it shows reading as an important skill that must be mastered.

In fact, students have problems in reading because it is a very complex process. The reader brings to the text his own store of general information, deriving from his native culture, education, personal experience and normally some specific knowledge. Thus, each student is unique differing from another intellectually, emotionally, socially, and physically. (Cecil and Ann, 1981).

In teaching reading comprehension there are some techniques that can be applied to achieve the aims of the reading. One of them is to recognize theories of reading which enable students to comprehend their reading fully.

The competence of theories of reading perhaps will help students to find out the main idea of the text, to understand the hidden messages, and to retell the story in their own sentence.

Based on the writer's experience in teaching practice, most of the students had problem in reading comprehension because it is very complex process. The students had difficulties to comprehend the text and it caused them lazy to read, therefore they had low scores on the text questions.

Based on the experience, the writer wants to find out if the Group Work is really helpful in teaching reading comprehension for the students. According to (Gamble & Gamble, 1984) group work is a collection of people. It is not just a random assemblage of independent individuals, however, but it is composed by individuals who interact verbally and nonverbally who occupy certain rules with respect to one another and who cooperate with each other to accomplish a definite goal.

The statement above indicates the importance of Group Work. It will ask the students to undertake some works in their group that are defined by discussing first with the class as a whole, but once, the students should be allowed to work to a large extent on their own. Group Work (Maxim, 1987) as a supplement to a large group instruction enhances the student's achievement.

RESEARCH METHODOLOGY

The Method of the Study

In writing this research, the writer used two kinds of research, namely: library research and field research. The writer collects the information by reading some relevant books related to concept and principles of teaching reading by using Group Work and collecting the data of the student's achievement in mastery reading comprehension from the experimental and control group.

In relevance with the title, this study was conducted with the co-relational design. "This co-relational study involves the collection of two or more set of data from a group of subjects with the attempt to determine the subsequent relationship between those two sets of data" (Tuck man, 1978)

However, "a strong relationship between the first and the second variable suggest one of the three interpretations as follows "(Tuck man, 1978): (1) the variable that the first variable is measuring has caused the second variable, (2) the variable that the second variable is measuring has caused the first variable, and (3) unmeasured variable has caused both the first and the second variable.

In this study was an experimental research which meant that there was a certain experiment applied to the population or sample. In classroom experimentation, we must be especially sensitive to the problems of external and internal validity. One way of avoiding such problem was to use the two groups in an experiment namely an experimental group and a control group. The experimental group is a group that receives a treatment with a new method or technique in an investigation while the control group is group that receives a different treatment or is treated as usual.

The Location of the Research
This research was conducted at SMP Negeri 6 Binjai. The reason for choosing this school was that this school has already applied 1994 curriculum and a similar research has never been conducted yet in this school.

The Populations and Sample
The population of the study was the 2012/2013 academic year of the first year student of SMP Negeri 6 Binjai, totaling about 256 students.

Arikunto ideas (1991) about sample selection stated as below: "Jika sample subjeknya besar, dapat diambil 10% - 15% atau 15% - 25% tergantung dari: Kemampuan peneliti dilihat dari segi waktu, tenaga dan dana., Sempit luasnya penelitian, Besar kecilnya resiko yang ditanggung oleh peneliti."

It means that : "If the population is too large in number, the sample can be taken around 10% - 15% or its depends on the researcher's ability based on : The time, energy and funds, The scope of the research, The risk that will be faced by the researcher.

In selecting the sample, the random sampling by using lottery technique was used. By using random sampling, all the population had an equal chance to be the sample. (Gay, 1990) states that: "Random sampling is the process of selecting sample in such a way that all the individuals in the defined population have an equal and independent chance of being selected for the sample".

Two classes, namely 1_A and 1_B (40 students out of 256) were randomly chosen out of two classes as sample. This 40 students is representative as (Tuckman, 1978) states, "The size of the sample is 16 %". However, the bigger the size the more representative they are. In addition, large samples add to the stability of the findings obtained".

The two classes were divided into groups. Each group consisted of 20 students. The first group was taught using Group Work was called experimental group.

The Instrument for Collecting Data
In collecting the data needed, the writer used pre-test and post-test. The writer asked the students to solve the problem based on prepared material.

The instrument mentioned above was two sets of test, they were pre-test and post-test. The teacher gave hands out to group who carried out the test. This was aimed at proving whether there was a difference in the student's reading comprehension after they had been taught these two different methods.

These test were prepared in such away in attempt to know the result of application of teaching reading with and without Group Work.

Procedures of the Research
The writer followed the following procedures, they were :

Preparation

Before conducting the research, the writer had selected materials for teaching presentation. The writer took the topics from "Reading Faster and Understanding More, by Wanda Maureen Wilier, where the materials based on GBPP and Curriculum 1994.

Data Collection

In this research, the writer prepared test as the instrument for collecting the data. To collect the data, the writer followed the following procedures:

Pre-Test

A pre-test is given to both groups of the population to find out the homogeneity of the students in each groups. The administration of the test is held to make sure what extent the students have known the target words before the teaching-learning process.

The pre-test was given to the population of the students to be sampled out. This test consisted of a text with a multiple choice test as the indicators of achievement. The scores were obtained by looking at the correct answer. The aim of the pre-test was to avoid the intervening variable of the background knowledge. The sample students before the treatment belonged to the same level of background.

Both experiment group and controlled group were given a pre-test before the teaching presentation. This pre-test was administrated to determine whether the two groups of the students relatively homogeneous.

Before the pre-test, the writer asked the students to arrange their seats in such a way and then told them to sit quietly while arrange the letter into noun.

The Teaching Presentation

The writer conducted the teaching presentation for three meetings. Every meeting took 45 minutes.

Teaching Reading Comprehension With Group Work

The first meeting, the teacher began introducing the procedures of group work by giving a hands out such as comprehending the text, finding the meaning of some new difficult words, and answering the question based on the text.

From the second meeting to the third meeting, the writer divided the students into groups. Each groups consisted of four students. The students who got number 1 belonged to group A and the students who got number 2 belonged to group B and etc. This arrangement was to make the students easier to recognize their friends.

The writer asked them to read and comprehend the text for 15 minutes. After that, the writer asked them to find the meaning of the vocabularies given and answer the question based on the text for 15 minutes. Then, the writer called one group to present the result of their group work in front of the class. The teacher also gave time to others groups to give comments or suggestion. If the other groups were not satisfied with the answer, the writer helped them to solve the problem. These questioning and answering periods took 15 minutes.

In the third meeting, the writer gave another handout and asked the students to comprehend the text and find the meaning and vocabularies given for 15 minutes. After that, she asked them to answer the question for 10 minutes. Then, they presented the result of their group in front of the class for 10 minutes.

Teaching Reading Comprehension Without Group Work

In teaching reading comprehension without group work, the teacher only taught how to comprehend the text, the meaning of vocabularies given, and asked them to answer the question by giving them hands out.

Post-Test
After teaching presentation had been conducted, the writer tested them then by giving the post test. Having teaching procedure have been completed, the writer conducted the post-test, the students (experimental and control group) were tested by giving a post-test to find out the result of teaching presentation.

The test was a multiple choice of 25 items based on the reading materials of about 500 words. The scores were analyzed to see the difference of the two groups.

The Evaluation of the Test
The multiple choice test was evaluated by giving a mark of 4 to each item. The system of scoring was based on the 100 points. Therefore, if a students made a mistake, the score would be 100 – 4 = 96.

To obtain the score, the writer counted the correct answer and then applied the following formula:

$$S = \frac{R}{N} \; x \; 100\%$$

Where :

S = the score
R = the number of correct answer
N = the number of question

According to (Arikunto, 1998) there are four level of score, they are 76% - 100% is high score, 56% - 75% is middle score, lower score is 40% - 55% and the lowest is under 40%.

The formula used for computing the mean as followed :

$$M = \frac{\sum X}{N}$$

Where :

M = the mean
N = the number of the scores distribution
X = any text scores
Σ = the sum

The computing of the range of the first score mean and the last score mean to find out whether the difference was significant or not.

The Validity and the Reliability of the Test

The Validity of the Test
Validity refers to the appropriateness of a given test or of its component part as a measurement of what is supposed to measure and nothing else. A test is said to be valid if it measures what intended to measure (Tinambunan, 1988), as he quoted from Grunlund's.

The validity of a test represents the extent to which a test measures what its purpose to measure. According to (Borg and Gall, 1983): "Validity is the degree to which a test measures what it purports to measure". "In simple words, does the test really measure the characteristics that it is being used to measure?" (Tuck man, 1978). (Wren, 1990) states that, "The concept of validity is the test measure what it is intended to measure?"

A good test should be both valid and reliable. Validity refers to whether or not a test measures what it purpose to measure. Reliability is a general quality of stability of scores regardless of what the test measures. Thus, a test cannot be valid unless it is also reliable, for an unreliable test does not measure what it should measure. One of the targets to know a good test is to consider its validity because it is important to prepare a test. In relation to the validity, (Walden and Frankeul, 1991) states that validity refers to the extend to which an instrument gives us information we want.

Furthermore, (Stanley, 1981) gives his definitions as follows "*Validity as the degree to which measuring instruments actually serves the purpose for which it is used*".

In line with the definitions above, it can be concluded that a good test is called valid if the test can measure, for instance, the ability of a student in mastering one material after it has been taught.

Without the standards for validity, tests can be misused and may actually have deleterious effects on the person being tested. To establish the validity of the test administered, the material was taken from the third year student material based on the English course design.

In this research, the test given to the sample class is based on the English GBPP of the 1994 Junior High School Curriculum.

The Reliability of the Test

A second important characteristic that all test should posses is reliability. A reliable test is consistent that is, if it repeated, student's score roughly the same as they did the first time they took the test.

Reliability is one of the characteristics of a good test. Reliability refers to the consistency of test scores. That is how consistent test scores or other evaluations results are from one measurements to another (Tinambunan, 1988), as he quoted from Grunlund's.

While, reliability is the consistency of the test scores. (Lado, 1961) states that: "Reliability is a general quality of stability of scores regardless of what the test measures". Thus, a test can not be valid unless it is also reliable, for an unreliable test can not measure the object of research. Whereas, (Wiersma, 1991) says that: "Reliability is the consistency of the instrument in measuring whatever it measures". Reliability coefficient can take on values of – 1,0 to 1,0 inclusive.

Reliability in any language test has to be judge as a fundamental criterion. According to (Tuckman, 1978) "Test reliability means that a test is consistent". (Weir, 1990) says, "The reliability concerns with how far we can depend on the result that a test produces or, in other words, could the results be produced consistently?" The concept of reliability is particularly important when considering language tests within the communicative paradigm" (Porter, 1983). Furthermore, (Davies, 1965) stresses that, "Reliability is the first essential of any test, but for certain kind of language may be very difficult to achieve".

To get the reliability of the test, the writer uses the split half method. In this method, there are two different ways in splitting it into two parts namely based on the initial and final numbers of the test, and based on the odd and even numbers of the test.

The definition above implies that more reliable the test is more confident we can have the scores obtained from the administration of the test. Therefore, if the test scores of the students are not fluctuate too much, then the test is called reliable.

Three aspects of reliability are usually taken into account. The first, concerns consistency of scoring among different markers. The second, concerns of the tester is how to enhance the agreement between the markers by establishing and maintaining adherence to, explicit guidelines for the conduct of this marking. The third aspect of reliability is that of parallel-forms reliability, the requirements of which have to be born in mind when future alternative forms of a test have to be devised (Weir, 1990).

Reliability is a necessary characteristic of any good test to be valid at all, a test must first a reliable measuring instrument. (Walden and Frankel, 1991) define reliability refers to the consistency of information obtained.

The definition above implies that more reliable the test is more confident we can have the scores obtained from the administration of the test. Therefore, if the test scores of the students are not fluctuate too much, then the test is called reliable.

According to (Aruan, 1983) asserts that the categories of coefficent correlation are as the following:

0,00 - 0,20	the reliability is very low
0,21 - 0,40	the reliability is low

0,41 - 0,60   the reliability is fair
0,61 - 0,80   the reliability is high
0,81 - above the reliability is very high

In this study, the reliability of the each test was calculated by using formula as the following:

$$r_{11} = \frac{k}{k-1}\left[1 - \frac{M(k-M)}{k(s)^2}\right]$$

Where :

k = the number of the items in the test
M = the mean of the test scores
s = the standard deviation of the test
r = coefficient reliability

To obtain the reliability of the test, the writer first counted the mean (M) and the standard deviation (SD).

$$M = \frac{\sum X}{N}$$

Where :

M = Mean
N = The total number of the scores
ΣX = The sums of scores test X

$$S^2 = i\sqrt{\frac{\sum X^2}{N}}$$

Where :

N   = Number of the students
S^2 = Standard Deviation
$ΣX^2$ = The sums of deviation squared

The Technique of the Data Analysis

There were two groups of the data, those of the experimental and control groups. In this research the writer used t-test formula:

$$t = \frac{Ma - Mb}{\sqrt{\left(\frac{Sa^2 + Sb^2}{Na + Nb - 2}\right)\left(\frac{1}{Na} + \frac{1}{Nb}\right)}}$$

Where :

Ma   = the mean of group A
Mb   = the mean of group B
Sa^2 = the standard deviation of score A
Sb^2 = the standard deviation of score B
Na   = the total sample of A
Nb   = the of total sample of B

RESULTS AND DISCUSSION

The Data

The data of this research were taken from the student's row score in pre-test and post-test from the experimental and control group. (see appendix)

The Results of Pre-Test and Post-Test

The following are the results of pre-test and post-test of the two groups :

Table 1.
The Result of Pre-Test and Post-Test of Experimental Group

No.	Student's Reg. Number	Pre-Test Score (T_1)	Post-Test Score (T_2)
1	001	70	80
2	002	70	80
3	003	70	80
4	004	75	80
5	005	75	80
6	006	75	80
7	007	70	85
8	008	70	85
9	009	70	85
10	010	70	85
11	011	70	85
12	012	70	85
13	013	70	80
14	014	75	80
15	015	75	80
16	016	75	80
17	017	65	80
18	018	75	80
19	019	75	80
20	020	75	80
	Total	**1440**	**1630**
	Mean	**72**	**81.5**

Table 2.
The Result of Pre-Test and Post-Test of Control Group

No.	Student's Reg. Number	Pre-Test Score (T_1)	Post-Test Score (T_2)
1	001	65	75
2	002	65	75
3	003	70	80
4	004	70	80
5	005	70	80
6	006	70	85
7	007	65	75
8	008	65	70
9	009	65	70
10	010	70	75
11	011	70	75
12	012	70	75
13	013	70	80
14	014	70	75
15	015	70	80

16	016	70	75
17	017	70	75
18	018	70	75
19	019	70	75
20	020	70	75
	Total	**1375**	**1525**
	Mean	**68.75**	**76.25**

The Data Analysis

The Reliability of the Test
Based on the score percentage of the student's on reading comprehension, it can be calculated that K (total items) is 25, M (mean) is 72 and SD (Standard Deviation) is 17,9.

In this study, the reliability of the each test was calculated by using formula as the following :

$$r_{11} = \frac{k}{k-1}\left[1 - \frac{M(k-M)}{k(s)^2}\right]$$

Where :

k = the number of the items in the test
M = the mean of the test scores
s = the standard deviation of the test
r = coefficient reliability

From the data above, it is obtained that the reliability of the test is 1,5. This means that the test is reliable.

The Homogeneity of the Samples
In this study, the homogeneity of the samples is calculated by the following formula:

$$F_{ratio} = \frac{sg}{sl}$$

Where :

Sg = greater variance = 321,9938

Sl = lesser variance   = 307,459

Based on the data above, the result of computing the homogeneity of the sample shows that the F $_{value}$ is smaller than F $_{table}$.

F $_{value}$ < F $_{table}$

1,05 < 3,00

From the calculation above, it can be concluded that the hypothesis is accepted, it means that both groups (experimental and control group) have the same variants.

Analyzing the Data by using t-test formula
After calculating the reliability of the test, the writer computes the t $_{test}$ by using the formula as follows :

$$t = \frac{Ma - Mb}{\sqrt{\left(\frac{Sa^2 + Sb^2}{Na + Nb - 2}\right)\left(\frac{1}{Na} + \frac{1}{Nb}\right)}}$$

Where :

Ma	= 9,5
Mb	= 7,5
Sa^2	= 17,9
Sb^2	= 17,5
Na	= 20
Nb	= 20

After calculating the data above, it is obtained that t $_{observed}$ is 6,66

Testing the Hypothesis

Based on the data analyzed above, the research finding is as follows: the result of computing t $_{test}$ shows that t $_{observed}$ is higher than t $_{table}$ at the level of α = 0,05 with

df = 38.

t $_{observed}$ > t $_{table}$

6,66   > 2,021

From the result of the t $_{table}$ above, it can be concluded that the hypothesis is accepted. It means that teaching reading comprehension is better than that of without group work.

CONCLUSION

Having analyzed the data, it is found that group work significantly applied to student's reading comprehension. The mean of post-test for both group either with group or without group are 81,5 and 76,25. From the result. It shows that the mean of with group is higher than the mean of without group. As shown, by the calculation of t $_{test}$ presented the result of t $_{observed}$ (4,62) is higher than value of t $_{table}$ (2,021). This means hypothesis is accepted. The result implies that teaching reading comprehension using group work makes the students comprehend the text more quickly than teaching reading comprehension without group work. This means that there is significant difference between students who apply group work and students who do not apply it in classroom interactions of teaching reading comprehension.

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