



## THE EFFECT OF TEACHING TECHNIQUE AND GRAMMAR MASTERY TOWARD READING COMPREHENSION AT THE EIGHTH GRADE STUDENTS OF JUNIOR HIGH SCHOOL IN PANDEGLANG

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**ABSTRACT:** *The purpose of this study was (1) to show the effect of teaching techniques on students' reading comprehension at the eighth grade students of junior high school in Pandeglang (2) to show the effect of grammar mastery on students' reading comprehension at the eighth grade students of junior high school in Pandeglang (3) to show the effect teaching techniques and grammar mastery simultaneously toward students' reading comprehension at the eighth grade students of junior high school in Pandeglang. The research method used was an experimental method with two-way ANOVA analysis. The sample was eighty students of the eighth grade of senior high school Pandeglang and the sampling was done through a qualitative approach, data collection was carried out by means of a test filled with respondents. Data analysis consisted of: descriptive statistical analysis, data analysis requirements test (normality and homogeneity test), and hypothesis testing with two-way ANOVA. The statistical test used probability test (Sig.). This research was conducted from April to July 2015. The results showed that there is an effect of teaching techniques on students' reading comprehension. This is proved by the Sig. = 0.000 < 0.05. There is an effect of grammar mastery on students' reading comprehension, this is evidenced by the Sig. = 0.000 < 0.05. There is an effect of teaching techniques and grammar mastery simultaneously on students' reading comprehension, this is proved by the Sig. = 0.000 < 0.05.*

**Keywords:** *teaching technique, grammar mastery, reading comprehension*

### I. INTRODUCTION

Teaching English plays a key role in educational system in Indonesia. Perhaps the most dramatic development that has taken place in the field of English language teaching in the last 50 years has been the shift in its primary function: from being mainly the native language of nations such as the UK or USA, to being mainly a global means of communication. (Penny Ur: 2012).

Meanwhile, English has been taught in Indonesia in the long term. However in fact, English is still recognized as a difficult subject for some students. This is due to the background and awareness of students about the importance of English. There are four basic skills of English; namely, reading, listening, speaking and listening. Reading is one of the abilities that students must have. Reading is a set of skills that involves making sense and deriving meaning from the printed word (Raiker, 2020). In other words, it means that when a person reads, he looks at the writing and tries to get the meaning and understand it.

Based on the author's experience in teaching English at Junior High School 3 of Pandeglang at the eighth, the writer found that the students' reading ability was lack. There



were several factors in the problem of students' reading comprehension. First, their lack of motivation in participating in reading activities. Second, students were not enthusiastic and interested in reading. Third, they found the difficulties to understand the text when they come across new words. Fourth, students were also more passive during the learning and teaching process.

Another problem came from the teacher. This problem was related to how the teacher teaches reading. The teacher did not use the appropriate technique for teaching reading that invites students to be active. For one thing, the teacher only got the reading material from textbooks and worksheets (Blannin et al., 2020). Sometimes, the teacher asks students to read certain texts in a textbook or worksheets, and then the teacher asks students to do an assignment based on that text. However, the teacher dominates the class and only read the written text without knowing whether the students got clear information or not. Therefore, some students did not participate in class discussion discussions. This monotonous learning process did not motivate students to learn. Another problem arose when the teacher could not make the classroom atmosphere fun, so students were not interested in learning to read (Saqipi & Vogrinc, 2020).

To solve these problems, teachers should be creative in developing their teaching techniques to create a good learning atmosphere, improve students' reading skills and make English lessons more enjoyable.

One of the appropriate reading teaching techniques in the teaching and learning process at the eighth grade of students of junior high school 3 in Pandeglang used the Buzz Groups technique. Buzz groups technique is a team of four to six students that is formed quickly and extemporaneously to respond to course-related questions in order to get ideas that are generated with the feedback and discussed by the whole group (Elizabeth Barkley, et al.:2012). In other words, these are small discussion groups formed for specific tasks such as idea processing, problem solving or achieving the same point of view on a topic and then followed by whole class discussion in large groups to summarize the topic within a certain time period. Larger groups can be divided into Buzz Groups after the initial presentation to cover different aspects or maximize student participation (Ayu & Marwiyah, 2019; Fuadi Jaya, 2011; Lusiani et al., 2020).

By applying the Buzz Groups technique, students will learn on their own, learn more, feel more confident in themselves, feel more diligent, enjoy the classroom atmosphere, and become independent students. Through this technique, students can work together in small groups to help each other and then join large groups (whole class discussion). After students discuss in small groups, the teacher will ask the spokesperson for each Buzz Groups to report to the class. Each group can share their ideas related to the text given by the teacher (Fairus Sintawati, 2020; Irawan, Nasiatin et al., 2020; Zuniawan et al., 2020).

Meanwhile, if students want to master English, they must learn the grammar aspect, because grammar is a basic principle in language. The grammar skills in English are extraordinary. This is probably his most creative ability. There are no limits to what we read or write, but all this potential is controlled by many and limited rules. Learning about grammar in English includes basic language lessons such as tenses, subject verb, agreements, proper use of conjunctions, parallel structures, sentence types, and sentence patterns.

One way of mastering English is reading skills which require repeated practice. Nobody reads automatically, even reading letters without understanding grammar, and



in order to understand reading, the reader must know the formation of sentence patterns, punctuation, tenses, etc.

### A. RESEARCH QUESTIONS

Based on the problems which were identified above, the problems of the study can be formulated as follow:

1. Is there an effect of teaching techniques ( $X_1$ ) towards students' reading comprehension (Y)?
2. Is there an effect of grammar mastery ( $X_2$ ) towards students' reading comprehension (Y)?
3. Is there an effect of the technique of learning ( $X_1$ ) and mastery of grammar mastery ( $X_2$ ) simultaneously toward students' reading comprehension (Y)?

## II. LITERATURE REVIEW

### Teaching Reading

Reading is a very important activity in human's life. This is due to the fact that people mostly get information through reading. Reading is more than simply referring to the activity of pronouncing the printed material or following each line of written page. It consists of various and mixed activities. People have their own activities to do the reading activities. They have different purposes when they read. It is also more than recognizing words within a sentence; but includes whole activity of thinking process to evaluate the information. The following are some definitions of reading proposed by some experts:

Heilman (1981) states that reading is a complex process in requiring not only the ability to recognize the words, but also the ability to comprehend and evaluate the meaning of written text. It means that reading is process to get information by comprehending and evaluating the written text. Comprehending is the ability of the reader to understand and gain meaning from what has been read in the written text.

### Reading Comprehension

Reading is not only to get information but it needs understanding and comprehension to get some points from the text. In this case, reading and understanding are related to each other. Reading itself contains the activity to understand the text and information in the text. In order to understand or to get points from text, we need comprehension for it. Therefore, reading cannot be separated from comprehension.

According to Heilman (1981) states that Reading comprehension is a process of thinking sense of written ideas through meaningful interpretation and interaction as a multifaceted process affected by several thinking and language abilities. Similarly with Grellet (1998), reading comprehension is understanding a written text to extract the required information from it as efficiently as possible.

From those theories above, it can be concluded that reading comprehension is a process of understanding to get an idea or meaning from a written text, understand it according to experiential background or prior knowledge, and interpret it with the reader's needs and strategies to achieve message or information from a written text by finding word meaning of the text, finding detailed information, identifying referent, identifying main idea, identifying implied information, identifying generic structure, and identifying the communicative purpose of the text.

### Buzz Groups Technique

Apparently the method known as "Buzz groups" was first used by Dr. Donald Phillips at Michigan State University. He would divide his large classes into six-member clusters asking them to discuss a certain problem for six minutes. As you might guess, it was not long until the



new approach became known on campus as the “Phillips 66” technique Gangel (2005). Now the use of Buzz groups is quite popular, and varying formats and arrangements have been introduced to add a great deal of flexibility to this type of discussion teaching.

Buzz groups technique is a team of four to six students that are formed quickly and extemporaneously to respond to course-related questions in order to get ideas that are generated with the feedback and discussed by whole group Barkley, et al. (2012).

Based on Diffundo (2008) A Buzz group is a small, intense discussion group usually involving 2 to 3 persons responding to a specific question or in search of very precise information. The full plenary group is subdivided into the small groups. It’s called a ‘Buzz’ group because it mimics the sound of people in intense discussion. It is an extremely useful technique in training, as these small groups can be divided into participants with wide ranging experiences or those with highly specialized positions (depending on the topic and the desired outcome) (Irawan, Nasiatin et al., 2020). Obviously, a broadly experienced group brings a wider understanding of the problem, which is good for tackling multi-disciplinary problems.

In other words, it is a small group discussion formed for a specific task such as generating ideas, solving problem or reaching a common viewpoint on a topic and then followed by whole class discussion in large groups to summarize the topic within a specific period of time. Large groups may be divided into Buzz groups after initial presentation in order to cover different aspects of a topic or maximize participation.

### **The Grammar Mastery**

Grammar is one of the important parts students need to master when learning English. Many students who study English especially from elementary to pre-intermediate level complain that English grammar is quite difficult. When students learn English grammar, they have to do the exercises from the basic level and move on to more difficult levels. Little by little students will understand and practice English.

Students need patience and persistence in learning various grammar lessons to understand English well.

According to grammarians:

Scott Thornbury (2007) Grammar is partly the study of what forms (or structure) are possible in language. Traditionally, grammar has been concerned almost exclusively with analysis at the level of the sentence. Thus a grammar is a description of the rules that govern how a language's sentences are form.

Grammar aims to explain why sentences are acceptable:

1. We are not at home right now. or
2. Right now we are not at home.

The two sentences above can be accepted and produced properly from sentences whose parts are essential in second language lessons.

Example: 1. Not we at home now are.

2. We are not at home right now.

The two sentences above do not make sense if they are called sentences.

Grammar contains a comminkative meaning in a very precise part, namely vocabulary.

Example: A ticket inspector on a train says. Tikect!

The sentence above does not contain grammar that makes sense either morphology or syntax. Meaning is conveyed simply in the lexical form. Or word level, ticket. Situational factors such as the passenger's expectation that the examiner will check the tickets for which the language is not working very strongly to make the meaning clearer.



Other definitions of grammar according to experts are:

Wilga M. Rivers (1981: 63) Grammar is the rules of a language set out in a terminology which is hard to remember, with many exceptions appended to each rule.

Carter, Ronald and McCarthy Michael, (2008) Grammar as Structure means: What rule does one to know in order to construct a sentence or clause appropriately? Grammar does not exist separately from other levels of language, there is closed link between grammar and lexis that is given to the meaning, structure and formation of individual words (Fairus Sintawati, 2020).

With the theory of grammar above explained, there are some of the same opinion that grammar is studying in formation. The grammar field is sometimes divided into two domains. Both morphology and syntax are presented in tenses. The previous focus was on word structure, dealing with issues such as inflected endings and the way words can be built into smaller units and later focused on sentence structure. Mastery of grammar includes tenses. There are many types of verb tenses in English.

Tense is one of the elements in English that is difficult to understand and master by students learning English because tense is not present in Indonesian grammar.

This means that it can be said that tenses are changes in the verb depending on the time of occurrence. All sentences in English cannot be separated from the tenses and their elements because all sentences must have a tense, whether it is in the past, present or future. The tense to be used is the simple past tense because it relates to the narrative text.

The definition of simple past tense according to grammarians is:

Simple Past Tense

1. the simple past is used to talk about activities or situation that began and ended in the past. (e.g. yesterday, last night, two days ago, in 1990. Most simple past verb are formed by adding - ed, some verb have Irregular past form (Rowley, 2000; Suroto et al., 2016).

Example:

- Mary walked downtown yesterday
- I ate breakfast this morning.

Other opinion in simple past tense:

2. Murphy Raymond (1989). We use the simple past to talk about actions or situations in the past. The simple past ends in-ed, but many important verbs are irregular. This means that the simple past does not end in-ed.

Example:

- The police stopped me on my way home last night.
- Last month I went to Rome to see a friend of mine.

Both verbs walked and stopped were used in the past that verbs end -ed, they are called regular verbs. Verb ate and went are called irregular verbs. Those activities in verbs past, finished in the past. These means that the activities are not continuing to the present.

Another definition that similar above:

3. Murcia Celce Marianne, Diane Larsen-Freeman (1983). The simple past a definite single completed even, action in the past. Habitual or repeated action or even in the past. An even with duration that is applied in the past with the implication that it no longer applies in the present.



**III. METHOD**

**Place and Time of Research**

**Type of research**

In this study, the authors used experimental research in finding "The Effect of Teaching Techniques and Grammar Mastery on Students' Reading Comprehension". In this study, the authors used statistical comparisons to determine the effect of teaching techniques and grammar mastery on students' reading comprehension. Researchers took two classes, an experimental class (a class using Buzz Groups) and a control class (conventional).

**Research Design**

Based on the research method used, the following is the research design:

**Table 3.2 Research Design**

Teaching Technique \ Grammar Mastery	A1	A2
B1	A1B1	A2B1
B2	A1B2	A2B2

**Note:**

A1: Student groups using the Buzz Groups technique

A2: Conventional

B1: High level of grammar mastery

B2: Low level of grammar mastery

A1B1: Students with a high level of grammar mastery and learning through teaching techniques.

A2B1: Students with low level of grammar mastery and learning process through teaching techniques.

A2B2: Students with a high level of grammar mastery and get a conventional learning process (without using teaching techniques)

A2B2: Students with low level of grammar mastery and learning process using conventional techniques (without using teaching techniques)

**Data Collection Process**

- 1) Prepare lesson plans, materials, and teaching materials.
- 2) Divide the class in Buzz Groups
- 3) Delivering the Material
- 4) Writing on the implementation of the material
- 5) Evaluate the results of student assignments using the Buzz Groups technique
- 6) Make repetitions on the material that has been discussed

**Techniques in Sample Collection**

Arikunto (2002) states that sample is a subset of the population, selected in some prescribed manner for study. The research used accidental sampling in taken the sample. Accidental sampling is a type of non-probability sampling which involves the sample being drawn from that part of the population which is closed to hand. That is a convenient. The researcher uses such a sample that cannot scientifically make generalizations about the total population from this sample because it would not be representative enough (Sugiyono, 2004). Therefore, in this study the researcher



deliberately took class the eighth grade students at Junior High School 3 Pandeglang as the sample, one for the experimental class and the second for the control class.

**Data Collection Methods**

1. Research Variables

a. Independent variables: Teaching Techniques and Mastery of Grammar

b. Dependent variable: Reading Comprehension

**Data Sources**

Research data obtained from:

**Table 3.3 Data Source**

Research Variable	Data Source
Teaching Technique	Students
Grammar Mastery	Students
Reading Comprehension	Students

The data source of the independent variable is the treatment, while the data from the dependent variable is from a group assignment of eighty students or a sample of this study.

**Data Collection Techniques**

The following are instruments of data collection:

**Table 3.3 Data Collection Instruments**

Research Variable	Data Collection Techniques
Teaching Technique	Treatment
Grammar Mastery	Test
Reading Comprehension	Test

To find out which test instruments are valid and reliable, researchers use the validity and reliability of the tests formulated by Arikunto (2009).

**Instrument Validity**

**Grammar mastery validity test**

According to Suharsini Arikunto (2009), "the validity of an item is that an item is said to be valid if it has great support for the total score." Item validity using each item against the total score. According to Suharsini Arikunto (2009) calculating the validity of the items using the formula below:

$$r_{pbis} = \frac{M_p - M_t}{S_t} \sqrt{\frac{p}{q}} \quad \text{and} \quad St^2 = \frac{\sum X^2 - \left(\frac{\sum X}{n}\right)^2}{n}$$

and:

$r_{pbis}$  = biserial correlation coeficien

$M_p$  = the average score to those who has correct item that its validity can be found

$M_t$  = the total score average

$S_t$  = standar deviation of total score

$p$  = student proportion who has correct answer to-i

$q$  = student proportion who has wrong answer to-i



Criteria :

If  $r_{count} < r_{table}$  means that the item is invalid

If  $r_{count} > r_{table}$  means that the item is invalid

Based on the data the validity of the test can be explained as follows:

**Table 3.7 Item Validity Test for Grammar**

Items	Corrected Item-Total Correlation	$r_{table}$ (5%;38)	Conclusion
VAR00001	0,350	0.320	Valid
VAR00002	0.350	0.320	Valid
VAR00003	0,527	0.320	Valid
VAR00004	0.359	0.320	Valid
VAR00005	0.391	0.320	Valid
VAR00006	0.343	0.320	Valid
VAR00007	0.529	0.320	Valid
VAR00008	0.335	0.320	Valid
VAR00009	0.446	0.320	Valid
VAR00010	0.409	0.320	Valid

Based on the data the validity of the test can be explained as follows:

**Reading comprehension validity test**

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and :

$r_{pbis}$  = biserial correlation coefficient

$M_p$  = the average score to those who has correct item that its validity can be found

$M_t$  = the total score average

$S_t$  = standard deviation of total score

$p$  = student proportion who has correct answer to-i

$q$  = student proportion who has wrong answer to-i

Criteria :

If  $r_{count} < r_{table}$  means that the item is invalid

If  $r_{count} > r_{table}$  means that the item is invalid

Based on the data the validity of the test can be explained as follows:





**Table 3.8 Item Validity Test for Reading Comprehension**

Item Test	r <sub>pbis</sub>	r <sub>tabel</sub> (5%;38)	infering
11	0.044	0.320	Not Valid
12	0.414	0.320	Valid
13	0.434	0.320	Valid
14	0.496	0.320	Valid
15	0.471	0.320	Valid
16	0.369	0.320	Valid
17	0.355	0.320	Valid
18	0.659	0.320	Valid
19	0.359	0.320	Valid
20	0.408	0.320	Valid
21	-0.024	0.320	Not Valid
22	0.459	0.320	Valid
23	0.494	0.320	Valid
24	0.350	0.320	Valid
25	0.334	0.320	Valid
26	0.413	0.320	Valid
27	0.029	0.320	Not Valid
28	-0.084	0.320	Not Valid
29	0.520	0.320	Valid
30	0.019	0.320	Not Valid

Based on the table above, there are five invalid items (9, 21, 27, 28, 30), so the test items used are 15 items.

**Test reliability test**

According to Suharsini Arikunto (2009), "test reliability is the determination of test results." According to Suharsini Arikunto (2009), the calculation of the reliability test can use the Kuder and Richardson formula no 20 (K-R. 20), as follows:

$$r_{11} = \frac{k}{(k - 1)} \left\{ \frac{s^2 - \sum pq}{s^2} \right\}$$

And :

r<sub>11</sub> = the whole test of realibility

p = Subject proportion of those who are correct in answering the question

q = Subject proportion of those who are wrong in answering the question

Σpq = the total of multiply p and q

k = the number of items

s<sup>2</sup> = test variant

Criteria :

Jika r<sub>11</sub> < r<sub>tabel</sub> means the instrument is not reliable

Jika r<sub>11</sub> > r<sub>tabel</sub> means the instrument is reliable



Based on the results of the reliability test, a score was found  $r_{11} = 0.767$  dan  $r_{tabel} (5\%;38) = 0.320$  or  $r_{11} > r_{tabel}$ , then the instrument of grammar mastery items consisting of 10 items and 15 reading comprehension items can be used for research.

### Difficulty Index

According to Suharsini Arikunto (2009) "a good question is a question that is not too easy or not too difficult." A number identifying the difficulty or ease on a test is called a difficulty index marked between 0.00 to 1.00 and the symbol P (proportion). Based on Suharsini Arikunto (2009: 208) the difficulty index can be formulated as follows:

$$P = \frac{B}{JS}$$

Stand for :

P = Difficulty Index

B = The number of the student who has correct answer

JS = The whole student as who are tested.

Difficulty index classification:

- Items between P: 0.00 - 0.30 are difficult items
- Items between P: 0.30 - 0.70 are moderate items
- Items between P: 0.70 - 1.00 are easy items



Based on the difficulty index test, the data can be described as follows:

**Table 3.9 Grammar Comprehension Test Difficulty Level**

Tes butir soal	P	Infering
1	0.21	Difficult
2	0.16	Difficult
3	0.09	Difficult
4	0.19	Difficult
5	0.24	Difficult
6	0.09	Difficult
7	0.16	Difficult
8	0.20	Difficult
9	0.16	Difficult
10	0.20	Difficult
11	0.17	Difficult
12	0.07	Difficult
13	0.20	Difficult
14	0.23	Difficult
15	0.22	Difficult
16	0.23	Difficult
17	0.14	Difficult
18	0.14	Difficult
19	0.19	Difficult
20	0.23	Difficult
21	0.09	Difficult
22	0.20	Difficult
23	0.21	Difficult
24	0.16	Difficult
25	0.17	Difficult
26	0.17	Difficult
27	0.19	Difficult
28	0.13	Difficult
29	0.20	Difficult
30	0.16	Difficult

Based on the table above, which consists of the first 10 items for grammar skills and 20 items for reading comprehension skills, it shows that the questions are difficult and not easy for students to answer.

#### Calculation of difficulty level

According to Suharsini Arikunto (2009) that, "the distinguishing power of a question is the ability of a question to distinguish between smart (high-skilled) students and stupid (low-skilled) students." To find out the calculation of the level of difficulty, it is called the index (symbol D), the values are stated between 0.00 to 1.00. According to Suharsini Arikunto (2009), the calculation of the level of difficulty for large groups (above 100 people) is shown from poles (27% and above) as higher class / JA and 27% below as lower class / JB and is formulated as follows:



$$D = \frac{B_A}{J_A} - \frac{B_B}{J_B} = P_A - P_B$$

Stand for :

$J_A$  = the number of upper class

$J_B$  = the number of lower class

$B_A$  = the number of upper class who answer the question correctly

$B_B$  = the number of lower class who answer the question correctly

$P_A$  = Upper class proportion who answer the question correctly

$P_B$  = Lower class proportion who answer the question correctly

Based on the difficulty level test, it can be explained in the table below:

**Table 3.10 Test the Difficulty of Reading Comprehension Items**

Item Test	D	Conclusion
1	0.20	Medium
2	0.10	Poor
3	0.20	Medium
4	0.20	Medium
5	0.40	Good
6	0.10	Poor
7	0.10	Poor
8	0.25	Medium
9	0.20	Medium
10	0.15	Poor
11	0.05	Poor
12	0.15	Poor
13	0.35	Medium
14	0.20	Medium
15	0.25	Medium
16	0.40	Good
17	0.05	Poor
18	0.25	Medium
19	0.40	Good
20	0.15	Poor
21	0.00	Poor
22	0.35	Medium
23	0.30	Medium
24	0.20	Medium
25	0.15	Poor
26	0.30	Medium
27	0.10	Poor
28	0.10	Poor
29	0.15	Poor
30	0.20	Medium

According to the table above, it can be concluded that 3 items are good, 14 are medium and 13 are bad. Based on the instrument test (item difficulty level, validity,



reliability, and difference in item level), the authors obtained 25 questions for grammar 10 questions and reading comprehension 15 questions, with a maximum score of 100 each.

### Test Analysis

#### Normality Test

The normality test data of the study were presented in six groups of data (1) teaching techniques, (2) reading comprehension, (3) free section on students' reading comprehension results from the Buzz Groups technique (4) the tied section on students' reading comprehension of the Buzz Groups technique the free section on the reading comprehension of students from conventional techniques (6) the part is tied to the reading comprehension of students from conventional techniques

The test method was carried out using the Kolmogorov-Smirnov test technique. Data is moral if the value of  $F$  is observed  $< F$  table is accepted if it is significant at a level of  $\alpha = 0.05$ . The As of linear data  $F_{\text{observed}} > F$  table tested is accepted if the level is significant  $\alpha = 0.05$ .

#### b. Homogeneity Tests

The homogeneity test is designed for the test version in the normal distribution of the population, the homogeneity test is derived from Levene's test. The research data that has been collected if significant is  $\alpha = 0.05$ . if  $F$  observed  $< F_{\text{table}}$ , it can be concluded that data is significant.

#### Research Hypothesis Test Techniques

The purpose of this study was to determine the difference between the mean score of the two independent variables, so the research hypothesis used two ways analysis of variance (ANOVA) by using SPSS version 20. Then the hypothesis test was completed by:

1. There is an effect of teaching techniques towards students' reading comprehension
2. There is an effect of grammar mastery towards students' reading comprehension.
3. There is an interactive effect between teaching techniques and grammar mastery toward students' reading comprehension.

#### Statistical Hypothesis

From the previous data, statistical hypotheses can be obtained from:

##### Hypothesis 1

$H_0 : \mu A1 = \mu A2$

$H_1 : \mu A1 \neq \mu A2$

##### Hypothesis 2

$H_0 : \mu B1 = \mu B2$

$H_1 : \mu B1 \neq \mu B2$

##### Hypothesis 3

$H_0 : \text{interaction of } A \times B = 0$

$H_1 : \text{interaction of } A \times B \neq 0$

Note:

$H_0$  : zero hypotheses

$H_1$  : research hypothesis



- A<sub>1</sub> : students taught by Buzz Groups
- A<sub>2</sub> : students taught by conventional
- B<sub>1</sub> : field-independent students
- B<sub>2</sub> : field-dependent students
- A x B : the interactive effects of teaching technique and reading habit

**IV. RESULTS AND DISCUSSION**

**Data Description**

This research is an experimental study with two factors, teaching techniques (A) and grammar mastery (B). Each factor has a sub factor called a level. Each teaching technique (A) consists of two levels, namely: buzz groups (A1) and conventional (A2). The second factor is grammar mastery (B) which consists of two levels, namely: high (B1) and low (B2).

**Buzz Groups Technique (A1)**

Buzz groups technique data obtained from tests conducted by researchers on respondents as a sample of the study were 40 students. The lowest score obtained was 40, the highest score was 100, the mean was 79, the median was 80, the mode was 80 and the standard deviation was 10.42679.

**Table 4.1 Buzz Groups Technique Description Data**

**Statistics**

buzz groups technique

N	Valid	40
	Missing	0
Mean		78,0000
Median		80,0000
Mode		80,00
Std. Deviation		10,42679
Minimum		40,00
Maximum		100,00

Based on the calculation results above, it can be concluded that the scores of students who use the buzz group technique are quite good. It can be proved by the mean result of 78.

**Conventional (A2)**

Conventional data obtained from tests conducted by researchers on respondents as the research sample of 40 students. The lowest score obtained was 20, the highest score was 60, the mean was 47.25, the median was 50, the mode was 50 and the standard deviation was 8.46940.



**Table 4.2 Data Description Conventional**

**Statistics**

Conventional		
N	Valid	40
	Missing	0
Mean		47,2500
Median		50,0000
Mode		50,00
Std. Deviation		8,46940
Minimum		20,00
Maximum		60,00

Based on the results of the calculations above, it can be concluded that the scores of students using conventional techniques are not good enough. This is evidenced by the mean value of 47.

**High Level Grammar Mastery (B1)**

High-level data on grammar mastery is obtained from tests conducted by researchers on respondents as the research sample of 40 students. The lowest value obtained was 50, the highest score was 100, the mean was 68.25, the median was 70, the mode was 80 and the standard deviation was 16.46870.

**Table 4.3 Data Description of High Level Grammar Mastery**

**Statistics**

Grammar Mastery High Level		
N	Valid	40
	Missing	0
Mean		68,2500
Median		70,0000
Mode		80,00
Std. Deviation		16,46870
Minimum		50,00
Maximum		100,00

**Low Level Grammar Mastery (B2)**

Low level data on grammar mastery were obtained from tests conducted by researchers on respondents as the research sample of 40 students. The lowest score obtained was 20, the highest score was 60, the mean was 57.00, the median was 50, the mode was 40 and the standard deviation was 18.14472.



**Table 4.4 Data Description of Low Level Grammar Mastery**

Statistics		
Grammar Mastery Low Level		
N	Valid	40
	Missing	0
Mean		57,0000
Median		50,0000
Mode		40,00
Std. Deviation		18,14472
Minimum		20,00
Maximum		80,00

**Data Descriptive**

The summary of the data from the research results matches the research design in the form of the table below:

**Tabel 4.5 Descriptive Statistics Summary**

Descriptive Statistics				
Dependent Variable: reading Comprehention				
buzz groups technique	grammar Mastery	Mean	Std. Deviation	N
Experiment	High	85,0010	4,77530	20
	Low	77,3330	4,53684	20
	Total	81,1670	6,01776	40
Control	High	55,9980	3,99028	20
	Low	40,3340	5,91535	20
	Total	48,1660	9,36574	40
Total	High	70,4995	15,31509	40
	Low	58,8335	19,44431	40
	Total	64,6665	18,35467	80

Based on the data above, the data were obtained from the reading comprehension of students using the buzz group technique and had a high score of 20 students, the mean was 85.00 and the standard deviation was 4.77530. While the reading comprehension results of students with and having a low level of grammar mastery were 20 students, the mean was 77.33 and the standard deviation was 4.536.

From the reading comprehension results of students who use conventional techniques and have high scores on grammar mastery as many as 20 students. The mean is 55.99 and the standard deviation is 3.99028. Meanwhile, 20 students used conventional techniques and had low scores on grammar mastery, mean 40.33 and standard deviation 5.91535.





**Table 4.6 Statistical Description based on Research Design**

B	Stat	A		Total
		A <sub>1</sub>	A <sub>2</sub>	
B <sub>1</sub>	N	20	20	40
	$\bar{X}$	85.00	55.99	70.49
	S	4.78	3.99	15.31
B <sub>2</sub>	N	20	20	40
	$\bar{X}$	77.33	40.33	80.76
	S	4.53	5.91	19.44
Total	N	40	40	80
	$\bar{X}$	81,16	48.16	64.66
	S	6.01	9.36	18.35

**Test Analysis**

Before conducting a hypothesis test, an analytical test consisting of normality and homogeneity must be carried out.

**Normality Test**

Normality tests on the dependent variable and different variables are required. Basically, it determines whether the next analysis method uses parametric and non-parametric statistics. If the data follows a normality test or other distributive test theory, the analysis can be continued using parametric statistics. In this study, it will be followed by a parametric analysis, namely analysis of variance (ANOVA) or analysis general model (GLM).

**Tabel 4.7 Normality Test**

**One-Sample Kolmogorov-Smirnov Test**

		Normality Test
N		80
Normal Parameters <sup>a,b</sup>	Mean	64,6665
	Std. Deviation	18,35467
	Absolute	,223
Most Extreme Differences	Positive	,144
	Negative	-,223
Kolmogorov-Smirnov Z		1,997
Asymp. Sig. (2-tailed)		,001

- a. Test distribution is Normal.
- b. Calculated from data.

Based on the data above, it shows that the Kolmogorov-Smirnov Z statistical test for students' reading comprehension results is 1.997 and Sig. = 0.001 < 0.05. This means that the value distribution on reading comprehension has a normal distribution.



**Hypothesis Test**

After carried out the normality test and homogeneity test, the results show that the sample of the study from a population that has a normal distribution and a homogeneous sample of variants, then a hypothesis test using ANOVA can be done.

Analysis of the results of student data using ANOVA in two ways, the calculation process is assisted by SPSS 20. And the summary of data analysis using ANOVA can be seen as follows:

**Table 4.9 Research Hypothesis Test**

Tests of Between-Subjects Effects

Dependent Variable: reading Comprehension

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	24822,911 <sup>a</sup>	3	8274,304	350,977	,000
Intercept	334540,498	1	334540,498	14190,457	,000
Technique	21781,320	1	21781,320	923,915	,000
Grammar	2721,911	1	2721,911	115,457	,000
technique * grammar	319,680	1	319,680	13,560	,000
Error	1791,703	76	23,575		
Total	361155,112	80			
Corrected Total	26614,614	79			

a. R Squared = ,933 (Adjusted R Squared = ,930)

Based on the data above, the proposed hypothesis can be answered. And the explanation in the table above is:

The first hypothesis: there is a significant effect of teaching techniques towards reading comprehension of the eighth grade students at junior high school at Pandeglang.

Based on table 4.9, the ANOVA results with a value of  $F_0 = 923,915$  and  $Sig. = 0.000 < 0.05$ , this means that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ) is accepted. So, there is a significant effect of teaching techniques towards reading comprehension of the eighth grade students at junior high school at Pandeglang; or in other words, there are different results on students' grammar mastery using buzz groups and conventional techniques.

The second hypothesis, there is a significant effect of grammar mastery towards reading comprehension of the eighth grade students at junior high school at Pandeglang.

Based on table 4.9, the ANOVA results with a value of  $F_0 = 115.457$  and  $Sig. = 0.000 < 0.05$ , this means that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ) is accepted. So, there is a there is a significant effect of grammar mastery towards reading comprehension of the eighth grade students at junior high school at Pandeglang; or in other words, there are differences in the reading comprehension results of students who have high level grammar mastery and low level grammar mastery.

The third hypothesis, there is a significant interaction effect of teaching techniques and grammar mastery toward reading comprehension of the eighth grade students at junior high school at Pandeglang.

Based on table 4.9, the ANOVA results with a value of  $F_0 = 13.560$  and  $Sig. = 0.000 < 0.05$ , this means that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ) is



accepted. So, there is a significant effect together with teaching techniques and grammar mastery on students' reading comprehension at junior high school at Pandeglang. Meanwhile, the Adjusted R. Squared value is 0.933; this means that teaching techniques and grammar mastery have an effect of 93.3% on reading comprehension of the eighth grade students at junior high school at Pandeglang.

**Advanced Test**

**Testing Techniques**

This further test was carried out for testing the comparison between rows and columns, namely between groups A1 - B1 and A2 - B1, between groups A1 - B2 and A2 - B2, between groups A1 - B1 and A1 - B2, and between groups A2 - B1 and A2 - B2.

The calculation and testing in this follow-up test used the help of the SPSS 20.0 application program. The results of the program that must be considered in this test are the **Multiple Comparisons** Table from the results of the Tukey test analysis. The test conditions are: if the value in the Sig column is less than 0.05 then the test is significant, in the sense that the difference between the two groups being compared is significant.

**Advanced Test Results**

The test results for further testing in this study are as follows:

**Table 4.10. Advances Test Results with Tukey HSD Test**

Multiple Comparisons						
Dependent Variable: Pemahaman Membaca						
Tukey HSD						
(I) Post Hoc	(J) Post Hoc	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A1B1	A1B2	7,67*	1,535	,000	3,63	11,70
	A2B1	29,00*	1,535	,000	24,97	33,04
	A2B2	44,67*	1,535	,000	40,63	48,70
A1B2	A1B1	-7,67*	1,535	,000	-11,70	-3,63
	A2B1	21,33*	1,535	,000	17,30	25,37
	A2B2	37,00*	1,535	,000	32,97	41,03
A2B1	A1B1	-29,00*	1,535	,000	-33,04	-24,97
	A1B2	-21,33*	1,535	,000	-25,37	-17,30
	A2B2	15,66*	1,535	,000	11,63	19,70
A2B2	A1B1	-44,67*	1,535	,000	-48,70	-40,63
	A1B2	-37,00*	1,535	,000	-41,03	-32,97
	A2B1	-15,66*	1,535	,000	-19,70	-11,63
Based on observed means.						
The error term is Mean Square (Error) = 23,575.						
*. The mean difference is significant at the 05 level.						

Explanation:

Index\_AB = 1 is Group A1 - B1

Index\_AB = 2 is Group A1 - B2



Index\_AB = 3 is Group A2 - B1

Index\_AB = 4 is Group A2 - B2

### **Between Groups A1 - B1 and A1 - B2 (Groups 1 and 2)**

From Table 4.10. above, for comparison between groups A1 - B1 and A1 - B2 (Index\_AB = 1 and Index\_AB = 2) the value of Sig = 0.000 is smaller than 0.05, so that  $H_0$  is rejected and  $H_1$  is accepted, which means that there is a significant difference in understanding. Reading on students who are taught with the Buzz group teaching technique between students who have high grammar mastery and students who have low grammar mastery, or there is a significant effect of grammar mastery on Indonesian learning outcomes in students who are taught using the buzz group teaching technique.

### **Between groups A1 - B1 and A2 - B1 (Groups 1 to 3)**

From Table 4.10. above, for the comparison between groups A1 - B1 and A2 - B1 (Index\_AB = 1 and Index\_AB = 3), the Sig = 0.000 value is smaller than 0.05, so that  $H_0$  is rejected and  $H_1$  is accepted, which means that there is a significant difference in understanding. reading on students who have high grammar mastery, between students who are taught using the buzz group teaching technique and students who are taught using conventional teaching techniques, or indeed there is an effect of using teaching techniques on reading comprehension in students who have high grammar mastery.

### **Between Groups A1 - B2 and A2 - B2 (Groups 2 and 4)**

From Table 4.10. above, for comparison between groups A1 - B2 and A2 - B2 (Index\_AB = 2 and Index\_AB = 4), the Sig = 0.000 value is smaller than 0.05, so that  $H_0$  is rejected and  $H_1$  is accepted, which means that there is a significant difference in understanding. reading on students who have low grammar mastery between students who are taught with the buzz group teaching technique with students who are taught using conventional teaching techniques, or there is a significant effect of the use of teaching techniques on reading comprehension in students who have low grammar mastery.

### **Between Groups A2 - B1 and A2 - B2 (Groups 3 by 4)**

From Table 4.14. above, for the comparison between the A2 - B1 and A2 - B2 groups (Index\_AB = 3 and Index\_AB = 4), the Sig = 0.000 value is smaller than 0.05, so that  $H_0$  is accepted and  $H_1$  is rejected, which means that there is a significant difference in understanding. reading on students who are taught with conventional teaching techniques between students who have high grammar mastery and students who have low grammar mastery, or there is a significant effect of grammar mastery on reading comprehension in students who are taught using conventional teaching techniques.

### **Discussion**

1. There is a significant effect of teaching techniques towards reading comprehension of the eighth grade students at junior high school at Pandeglang.

Based on the results of the study, teaching techniques had a positive influence towards reading comprehension of the eighth grade students at junior high school at Pandeglang. Based on table 4.9, the ANOVA results with a value of  $F_0 = 923,915$  and Sig. = 0.000 < 0.05, this means that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ) is accepted. So, there is a significant effect of teaching techniques on reading comprehension of the eighth grade



students at junior high school at Pandeglang; or in other words, there are different results on students' grammar mastery using buzz groups and conventional techniques.

2. There is a significant effect of grammar mastery towards reading comprehension of the eighth grade students at junior high school at Pandeglang.

Based on the research results, grammar mastery has a positive effect towards reading comprehension of the eighth grade students at junior high school at Pandeglang. Based on table 4.9, the ANOVA results with a value of  $F_0 = 115.457$  and  $\text{Sig.} = 0.000 < 0.05$ , this means that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ) is accepted. So, there is a significant effect of grammar mastery on reading comprehension of the eighth grade students at junior high school at Pandeglang; or in other words, there are differences in the reading comprehension results of students who have high level grammar mastery and low level grammar mastery.

3. There is a significant interaction effect of teaching techniques and grammar mastery toward reading comprehension of the eighth grade students at junior high school at Pandeglang.

Based on the results of the study, teaching techniques and grammar mastery had a positive effect on reading comprehension of the eighth grade students at junior high school at Pandeglang. Based on table 4.9, the ANOVA results with a value of  $F_0 = 13.560$  and  $\text{Sig.} = 0.000 < 0.05$ , this means that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_1$ ) is accepted. So, there is a significant interaction effect of teaching techniques and grammar mastery simultaneously toward reading comprehension of the eighth grade students at junior high school at Pandeglang. Meanwhile, the Adjusted R. Squared value is 0.933; this means that teaching techniques and grammar mastery have an effect of 93.3% on reading comprehension of the eighth grade students at junior high school at Pandeglang.

## V. CONCLUSION

Based on the results of the analysis and testing of hypotheses on the results of research on the effect of teaching techniques and mastery of grammar to the students' reading comprehension, obtained conclusions as follows:

1. There is a significant effect of teaching techniques towards students' reading comprehension. It is can be proofed by the value of  $\text{Sig } 0,000 < 0,05$  and  $F_{\text{count}} = 923.915 > F_{\text{table}}$ ; it means reject  $H_0$  and accept  $H_1$ .
2. There is a significant effect of grammar mastery towards students' reading comprehension. It is can be proofed by the value of  $\text{Sig } 0.000 < 0.05$  and value of  $F_{\text{count}} = 115.457 > F_{\text{table}}$ , rejects  $H_0$  and accepts  $H_1$ .
3. There is a significant interaction effect of teaching techniques and grammar mastery toward students' reading comprehension. It is can be proofed by the value of  $\text{Sig } 0,000 < 0.05$  and the value of  $F_{\text{count}} = 13,560 > F_{\text{table}}$  rejects  $H_0$  and accepts  $H_1$ . There is the influence of interaction of teaching techniques and grammar mastery toward the students' reading comprehension. The  $F_{\text{count}}$  value of the teaching technique is bigger than the  $F_{\text{count}}$  value of grammar mastery, it can be proofed by the value of  $F_0 = 923,915$  with the value of  $F_0 = 115,457$ .

### Suggestions

As an English teacher or lecturer, we should provide helpful and effective teaching techniques and strategies in teaching the language to the students. One of the ways is by



providing buzz group technique and grammar mastery toward the students' reading comprehension. By doing so, we hope that their reading comprehension would improve time by time. Other researchers are encouraged to conduct other studies in the similar fields so as to get better insights on this theme.

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