

## THE INFLUENCE OF JIGSAW TECHNIQUE AND LEARNING INTEREST TOWARDS READING COMPREHENSION ACHIEVEMENT OF BUSINESS LETTERS ON THE ELEVENTH GRADERS OF SMK NEGERI 3 PALEMBANG

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### Abstract

This study is concerned with the inquiry of the Influence of Jigsaw Technique and Learning Interest towards Reading Comprehension Achievement of Business Letters on the eleventh Graders of SMK Negeri 3 Palembang. The problem of the study is to investigate the influence of Jigsaw technique and traditional teaching method in relation to learning interest towards reading comprehension achievement of business letters. Jigsaw is a collaborative technique to accommodate the students' reading comprehension. This quantitative study and the data collection are deliberated by adopting pretest, posttest and questionnaire. The data analysis employs paired sample t-test, independent sample t-test and two way analysis of variance. Findings showed that there was a significant influence of the application of both Jigsaw technique and traditional teaching method towards reading comprehension achievement of business letters but that there were not any significant interaction effects of the application of Jigsaw technique and learning interest towards reading comprehension achievement of business letters. Conclusion suggests that there were significant effects of Jigsaw technique and traditional teaching method on students' reading comprehension achievement.

**Keywords:** *Jigsaw technique, learning interest, reading comprehension and business letters*

### Introduction

#### Background of the study

The government considers that English as a foreign language in Indonesia should be learned at schools beginning from elementary as the local content not as compulsory subject, the Decree of the Ministry of Education and Culture Number 060/U/1993 dated February 25, 1993. (Asriyanti, E. et al, 2013). English as foreign language in Indonesia has a function for guiding and developing different languages in the world. It means that Indonesian (students) should be prepared as well as to face the globalization era with English mastery.

There are four English basic skills for communication (Eli, 2006: 109) listening, speaking, reading and writing. The teachers ought therefore to consider carefully what they are trying to do when they are teaching a foreign language. It is well known, there are four general aims, to teach students to hear and to understand the spoken language, to understand what they read, to speak the language and to write it. Shortly, to understand the spoken and the written language, and to speak and to write it. There are four abilities to train: listening, reading, speaking and writing with understanding as the main ingredient in each.

One of the skills in English subjects is reading that has its own passion to make the students learn really more about English. Reading is very important for study purpose, careers, or simply for pleasure. By reading, we can get much information and pleasure. According to Harris (1980:53), reading is a form of communication. Information and ideas are exchanged between writer and reader in the act of communicating. The form of written text which is read by reader will be communicative to deliver the ideas of the writer about some particular information. This information will be a new knowledge or as an entertainment which is needed for the reader. Reading as a communication through the text includes knowledge, news, and story. In education, by reading a passage or story, the students will get more knowledge and information. The knowledge or information they get from reading can be used for communicating or sharing their idea. The interaction among students during reading section will set up the class more active and alive.

The reader's success in reading is determined by his or her comprehension in general. Comprehension means understanding what he or she is reading about. The students should be assigned and drilled much reading business letters and producing comprehension about them. The students still have difficulties in comprehending reading skill because they still lack of exercising in reading comprehension (Walisman, 2003:2).

The writer chose Jigsaw technique. Jigsaw technique is an excellent structure combining learning partnership into group (Kagan in Walkor, 1998:382). Jigsaw relies on highly structuring interaction among the students, both in their teams and in their groups to create inter dependence and intricately interesting learning tasks (Kagan, 1992:17).

Jigsaw is one of the cooperative learning techniques that reduces racial conflict among school children, promotes better learning, improves students' interest, and increases enjoyment of learning experience. It is first developed by Elliot Arosen in

1978. Every member in Jigsaw groups must be active. "Jigsaw techniques are special forms of information gap in which each member of a group is given some specific information and the goal is to pull all information to achieve some objectives" (Brown, 1995 : 185).

Jigsaw technique did not only improve the reading comprehension achievement but also motivated them to read and work together. This technique was also helpful in encouraging the students to participate actively and easily in reading comprehension of business letters. Thus the writer was interested to carry out a research entitled "The Influence of Jigsaw Technique and Learning Interest towards Reading Comprehension Achievement of Business Letters on the Eleventh Graders of SMK Negeri 3 Palembang.

### **Research questions**

1. Is there any significant influence of Jigsaw technique towards reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang?
2. Are there any significant interaction effects of the application of Jigsaw technique and learning interest towards the students' reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang?

### **Conceptual framework**

#### Concept of Jigsaw

Jigsaw is one of the cooperative learning techniques that reduces racial conflicts among school children, promotes better learning, improves students' interest, and develop enjoyment of the learning experience. It is first developed by Elliot in 1978. Every member in Jigsaw groups must be active. Jigsaw techniques allow students to actively participate in learning process. By being constantly subjected to the method, they should feel more comfortable about their roles (Sahin, 2010 : 2).

According to Coelho (2004:193), Jigsaw technique can be used in every level of education, It can be applied in many content areas, and develop many language skills. It declares that the Jigsaw technique is one that maximizes the interactive basis of cooperative learning.

Based on the foregoing discussion, it can be concluded that Jigsaw is one of cooperative learning techniques that can improve students' interest and enjoyment in learning. This technique can also be used in every level of education in order to make

the students have positive impacts on their academic achievements.

### Concept of Reading Comprehension

Reading comprehension is the process of deriving meaning from connected text. It involves word knowledge (vocabulary) as well as thinking and reasoning. Therefore it is not a passive but an active process. The reader actively engages with the letter text to construct the meaning. The active engagement includes making use of prior knowledge. It involves drawing inferences from the words and expressions that a writer uses to communicate information, ideas and viewpoints.

According to Klinger (2007:2), reading comprehension is the process of constructing the meaning by coordinating a number of complex processes that includes word reading, word and world knowledge, and fluency. It refers to the ability in interpreting the words, understanding the meaning and the relationships between ideas conveyed in the letter text. He summarizes reading comprehension instruction for the teacher as following a three- step procedure: mentioning, practicing, and assessing. That is , teachers mention the skills that the students want to use, then they give them opportunities to practice those skills through workbooks or worksheets, and finally assess whether or not the skill successfully.

Catherine (2002:11) states that comprehension entails three elements : 1) The reader who is doing the comprehending, 2) the text that is to be comprehended, and 3) the activity in which comprehension is a part. In considering the reader, she includes all the capacities, abilities, knowledge, and experience that a person text or electronic text. While the activity includes the purposes and consequence associated with the act of the reading.

In this investigation the researcher wanted to limit the reading comprehension on the following skills of reading : (1) the students were able to find out the explicit information in the letter text. (2) the students were able to find out references of referent words in the letter text, (3) the students were able to find out the explicit out the main idea of a paragraph, (4) the students were able to find out the meaning of a word from the context and (5) the students were able to find out the implicit information in the letter.

## **Methodology**

### Place and Time of the Research

This investigation was conducted at the eleventh graders of SMK Negeri 3 Palembang in academic year of 2016/2017, located at Jalan Srijaya Negara Bukit

Besar Kelurahan Bukit Lama Palembang Telp. (0711)351816 from April 1st until May 3rd, 2017.

### **Population and Sample**

The population of this study consisted of five classes of the eleventh graders of SMK Negeri 3 Palembang with the total number 166 students which were divided equally into experimental and control groups by using two-stage random sampling. Two stage random sampling is a type of sampling method which combines cluster random sampling and individual random sampling (Fraenkel, et al, 2012:97).

### **Validity Test**

Validity is the most important idea to consider when preparing and selecting instruments for use in order to be valid. According to Hatch and Fardhady (1982:250-251) validity means there is an equality both collected data and the real data in experimental object.

In this research, the writer also used item validity. Anas said that "item validity of a test is accuracy of measuring from an item impartially part from the test as a totality" (Evelyn Hatch and Hossein Farhady, 1982: 259). For item validity of the tests, the writer used formula of product moment correlation or known as Pearson correlation.

The writer examined the significance of the result by comparing the scores of Corrected Item-Total Correlation each item and table of correlation coefficient two-tile Test by  $\alpha$  5%. If the score of Corrected Item-Total Correlation is higher than the score of table of correlation coefficient two-tile Test by  $\alpha$  5% (0,367), the item is defined Valid.

### **Instruments**

For collecting the data, the writer used instruments of Pre-test, Posttest and questionnaire.

#### **Pre-test - Posttest**

The test to get the data of the students' reading comprehension achievement, the writer constructed based on the material or syllabus in which the students had learnt at school. The test was to examine the students' ability in reading comprehension of business letter. Reading test would be given in form of pre-test and post-test. The pre-test was given before the treatment not only to the experimental group but also to the control group, and then the treatment was given to the experimental group only. Finally the post-test was given to both the experimental and

the control group. The analytic scale (Brown & Balley, 1984:38-41) in Brown (2001:244-245) was used for rating comprehension tasks in this study.

#### Questionnaire

The questionnaire is a set of questions that should be covered by the respondents to get the information about identical data or respondents' knowledge (Arikunto, 2008:140).

To know the effect or the influence of students' interest in reading comprehension of business letters, the writer used the questionnaire because it was an accurate way to gather data from a potentially large number of respondents.

In this study, the questionnaire was distributed to experimental and control groups. It consisted of 20 items in which each contained 5 points scale ranging, strongly agree, agree, undecided, disagree and strongly disagree. The writer used the instrument that was designed by Likert.

Table 1  
Students' Responses

High and Low Learning Interest Students	Scores
Strongly Agree	5
Agree	4
Undecided	3
Disagree	2
Strongly Disagree	1

#### Data Analysis

In analyzing the data, the writer used Paired Sample t-test, Independent Sample t-test, Two Way Analysis of Variance.

##### Paired Sample t-test

Paired sample test was applied to find out the significant influence in achievement before and after the treatment in the experimental group and control group. It is suitable with Priyanto (2014:175), the paired t-test is commonly used to compare the mean score of samples group before and after treatment. A significant influence was found whenever the p-output is lower than mean significant influence at the 0.05 level.

### Independent Sample t-test

The writer used independent sample t-test to find out the significant influence of reading comprehension taught by using Jigsaw technique (experimental group) and by traditional teaching method (control group) towards students' learning interest. A significant influence was found whenever the p-output is lower than mean significant influence at the 0.05 level of SPSS 16.00.

### Two Way Analysis of Variance

The two-way analysis of Variance (ANOVA) is used to find out whether or not there is a significant interaction effect of Jigsaw technique (independent variable) and students' learning interest (moderator variable) towards reading comprehension achievement (dependent variable). The variables have significant interaction if the value is  $< 0.05$ . All the data above were analyzed by using the Statistical Product and Service Solution (SPSS 16.00)

## Results and Discussion

The result

The writer supplied the results of the students' pretest and posttest in both experimental and control groups as illustrated in the following table.

Table 2

The score distribution in experimental group

Score Range	Category	Pretest		Posttest	
		Frequency	Percentage	Frequency	Percentage
80 - 100	Very good	2	6.67%	8	26.67%
70 - 79	Good	3	10%	7	23.33%
56 - 69	Average	8	26.66%	8	26.67%
40 - 55	Poor	15	50%	7	23.33%
< 40	Vey Poor	2	6.67%	0	0%

Table 3

The score distribution in control group

Score Range	Category	Pretest		Posttest	
		Frequency	Percentage	Frequency	Percentage
80 - 100	Very good	1	3.33%	12	40%
70 - 79	Good	3	10%	11	36.67%

56 - 69	Average	9	30%	5	16.67%
40 - 55	Poor	14	46.67%	2	6.66%
< 40	Vey Poor	3	10%	0	0%

#### Normality Test

The writer used normality testing to know if the data was normally distributed or not. In this study, the writer used SPSS 16.00 version Kolmogorov-Smirnov Z test (k-S Test) applied to test normality. The data could be classified into normal if the p-out is higher than 0.05 level.

The goal of normality measurement was to find out whether or not the data in this research was taken from the normal distribution of the data. According to Holandiyah (2014:82), the distribution of the data can be classified into normal distribution if Kolmogorov-Smirnov was higher than significance level 0,05.

Table 4

#### The Summary of Normality Test of Reading Comprehension Achievement of Business Letters

Normality Test	Asymp.Sig. (2-tailed)	Significance level	Distribution
1. High interest students, pretest and posttest score in control group			
pretest	0.966	> 0.05	Normal
posttest	0.913		
high interest	0.218		
2. Low interest students, pretest and posttest score in control group			
pretest	0.983	> 0.05	Normal
posttest	0.422		
low interest	0.362		
3. High interest students, pretest and posttest score in experimental group			
pretest	0.651	> 0.05	Normal
posttest	0.909		
High interest	0.983		
4. Low interest students, pretest and posttest score in experimental group			
pretest	0.837	> 0.05	Normal
posttest	0.987		
Low interest	0.094		



### Paired Sample t-test

According to Priyanto (2014:175), the paired t-test is commonly used to compare the mean score of sample groups before and after a treatment. It can be concluded that it is used to analyze a significant progress in students' reading comprehension achievement of business letters in experimental and control groups. If the significant level is lower than  $\alpha$  0.05, null hypothesis is rejected (Priyanto, 2014:180).

In this study, the paired sample t-test was used to measure the significant influence of reading comprehension achievement of business letters before and after the treatment.

### Hypothesis Testing :

Is there any significant influence of Jigsaw technique towards reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang? (Research Question Number 1)

The hypothesis is tested as follows :

Ho1 : There is not any significant influence in reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang

Ha1: There is significant influence in reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang.

The calculation output of the students' posttest in the experimental group was achieved by SPSS 16.00. In post test experimental group high and low interest, it could be achieved that the scores of mean was 67.167, standard deviation 14.135, standard error mean 2.581. The p-value was 0.000. Since p-output  $0.000 < \alpha$  (0.05), it is significant. Therefore the null hypothesis (Ho) is rejected while the alternative hypothesis (Ha) is accepted. It means that there was significant influence in reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang after having been taught by using Jigsaw technique. The complete calculation of paired sample t-test could be seen in table 5.

**Table 5**  
**Paired Samples Test**

	Paired Differences					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Jigsaw - High_Low_Interest	67.167	14.135	2.581	61.889	72.445	26.027	29	.000

two-way ANOVA.

In this research, the writer used two-way ANOVA to measure whether or not there are interaction effects of the application of Jigsaw technique and learning interest towards students' reading comprehension achievement of business letters.

Hypothesis Testing :

Are there any significant interaction effects of the application of Jigsaw technique learning interest towards students' reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang? (Research Question Number 2)

The hypothesis is tested as follows :

Ha 2: There are interaction effects of the application of Jigsaw technique and learning interest towards students' reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang.

Ho2: There are not any interaction effects of the application of Jigsaw technique and learning interest towards students' reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang.

The descriptive statistics analysis showed that the mean score of students who had high interest taught by using Jigsaw technique was 66.67, the standard deviation was 14.598. The mean score of students who had low interest after having

been taught by using Jigsaw technique was 70.67, the standard deviation was 13.998. The complete description was illustrated in table 6.

Table 6  
Descriptive Statistics  
Dependent Variable Posttest Experiment Control Group

Jigsaw technique	Interest	Mean	Std. Deviation	N
Jigsaw	High Interest	66.67	14.598	15
Technique	Low Interest	70.67	13.998	15
	Total	68.67	14.199	30
Total		69.83	12.964	30

The calculation analysis showed that p-value was 0.167. Since It was higher than the significance level  $\alpha$  (0.05), it is not significant. Therefore the null hypothesis (Ho) is accepted while the alternative hypothesis (Ha) is rejected. It meant that there were not any significant interaction effects of the application of Jigsaw technique and learning interest towards students' reading comprehension achievement of business letters. The calculation analysis using two-way ANOVA was displayed on table 7.

Table 7  
Test of Between-Subject Effects  
Dependent Variable Posttest Experiment Control Group

**Tests of Between-Subjects Effects**

Dependent Variable: Scores

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	5684.167 <sup>a</sup>	21	270.675	1.946	.167

Intercept	92528.906	1	92528.906	665.376	.000
Jigsaw High Interest	1904.167	10	190.417	1.369	.335
Jigsaw Low Interest	1707.967	9	189.774	1.365	.336
Jigsaw * Posttest_Interest	290.909	2	145.455	1.046	.395
Error	1112.500	8	139.062		
Total	113600.000	30			
Corrected Total	6796.667	29			

a. R Squared = ,836 (Adjusted R Squared = ,407)

### Interpretations

In respect of the data analysis, the students' achievement in reading comprehension of business letters which was taught by using Jigsaw, the writer presented some interpretations based on the above findings as follows :

First, the calculation of statistics by using paired sample t-test showed that the p-value was 0.000. Since the p-output was lower than the significance level 0.05, it could be predicted that there was a significant influence in reading comprehension achievement of business letters taught by using Jigsaw technique and by using traditional teaching method. It meant that It was effective to use Jigsaw technique in teaching reading comprehension achievement of business letters to solve the problems faced by the students because they were more understandable how to read the business letters after having been explained to them, make them have closer interaction in doing their posttest. It was relevant to Kessler (1992:137) that the benefit of jigsaw especially for second language classroom; the students could develop their cognitive skills of analysis comparison evaluated and syntheses of information after they had been taught by using Jigsaw technique.

Second, the calculation of analysis by using two-way ANOVA of measuring interaction effects between the teaching business letters through Jigsaw technique and

students' interest p-output was 0.167 higher than significant level (0.05). It was found that there were not any interaction effects of Jigsaw technique and learning interest on reading comprehension achievement of business letters because it was perhaps the students who had high and low learning interest could improve their competence of reading comprehension achievement of business letters after having been taught by using Jigsaw technique. When the students were allowed to be actively participated in learning process by being constantly subjected to the method, they would feel more comfortable about their roles (Sahin 2010:2). So however the students who had high or low learning interest, they would be easier to develop their reading comprehension achievement of business letters by using jigsaw technique.

### **Conclusions**

In line with the above findings and discussion, it can be concluded as follows :

1. Finding of research question number 1 showed that there was a significant influence of the application of both Jigsaw technique and traditional teaching method towards reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang..
2. The study of research question number 2 showed that there were not any significant interaction effects of the application of Jigsaw technique and learning interest towards reading comprehension achievement of business letters on the eleventh graders of SMK Negeri 3 Palembang.

### **Suggestions**

From the above conclusion, the writer would like to suggest some points particularly extended to the English teachers, students, institutions and other researchers.

1. For the English Teachers.

They should have many kinds of teaching techniques or methods to improve the students' reading comprehension achievement especially of business letters. One of them is Jigsaw technique because it can stimulate and develop their learning interest.

2. For the Students.

It is expected that the teachers pay more attention to the students if they have problems in learning reading comprehension of business letters. With this study, the students could improve their interest, concentration, imagination and pro-active in learning English especially reading comprehension of business letters by using Jigsaw

technique.

### 3. For the Institutions.

It is expected that this study provide a chance and sources for the teachers and the students to apply Jigsaw technique in their teaching and learning processes.

### 4. For other Researchers.

It is expected that other researchers conduct some other topics with a wide scope that they can investigate with a deeper teaching technique and produce an output which is more applicable for teachers of English in other contexts.

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