

THE INFLUENCE OF USING JIGSAW TECHNIQUE AND READING MOTIVATION TOWARD THE EIGHTH YEAR STUDENTS' READING COMPREHENSION ACHIEVEMENT AT SMP PADMAJAYA PALEMBANG

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Abstrack

This article was aimed to find out the significance average score and motivation between Jigsaw and Conventional Technique. Due the interpretation of this study, it found that: (1) there was a significant difference in reading achievement between the students who were taught by using Jigsaw and those are taught using conventional technique since it was found that the result was 0.024 it was lower than significant level (0.05), (2) there was significant difference in reading achievement between the students who have high motivation by using Jigsaw and conventional technique since the result was 0.002 and it means that lower than significant level (0.05), (3) there was significant difference in reading achievement between the students who have low motivation by using Jigsaw and conventional technique since the result was 0.000 and it was lower than significant level (0.05), and (4) there was an interaction effect of technique used and student's motivation in improving reading achievement since the result of interaction effect was lower (0.042) than the significant level (0.05). Based on the result, the writer conclude that Jigsaw and motivation gave the significant influence for student's narrative reading achievement since there was a significant improvement before and after taught Jigsaw technique.

Keywords: JIGSAW Technique, Motivation, and Reading.

Introduction

Reading is the most important skill for students of English as a foreign language (EFL) or second language (ESL), according to Debat (2006, p.1). Furthermore, Komiyama (2009, p.32), argued that reading is very important skill for English language learners in today's world, it supports the development of overall proficiency and provided access to crucial information at work and in school.

The researchers did an observation and interview in pre-research at SMP Padmajaya Palembang, it was found that some students get difficulties in some aspects such as main idea, supporting details, author's aim, passage structure, using correct spelling, and pronunciation, especially in the Eighth Students of SMP Padmajaya Palembang. The problems happened because students did not use strategies when they read. The researcher gave information about the important of

©Pendidikan Bahasa Inggris FKIP UM Palembang reading strategies to improve reading comprehension achievement and also to found out the influence of reading motivation on reading comprehension.

Reading strategies are very important to help reader comprehend the text in the act of reading (Kuru-Gonen, 2015, p. 2924) and the implementation of special reading strategies enable more efficient use of time (Sen, 2009, p. 2301). Moreover, it has been acknowledge that reading strategies can be taught to learners and that reading strategy instruction can benefit all students (Carrell, 1989; Carol, 2002). It implied that being a strategic reader help reader comprehend the text and handle the reading problems. The effective strategies produced an effective result.

One of the strategies to implement cooperative learning is through Jigsaw Technique. By applying this strategy, the researchers expect the students would not find the difficulties whether they

want find the topic and read the material, especially interest in reading. That is why the researchers are interested in conducting the research entitled “The Influence of Jigsaw technique and Reading Motivation toward the Eighth Year Students’ Reading Comprehension Achievement at SMP Padmajaya.

This research focuses the effects of treatment (with Jigsaw technique, without Jigsaw technique) on the students’ reading comprehension achievement at SMP Padmajaya Palembang in Academic year 2017/2018. Therefore, the problem of this study formulated, as follow:

1. Was there any significant difference in reading achievement between the students who have high learning motivation and those who have low learning motivation taught using jigsaw technique of SMP Padmajaya Palembang?
2. Was there any significant difference in reading achievement between the students who have high learning motivation and those who have low learning motivation taught using conventional teaching method of SMP Padmajaya Palembang?
3. Was there any significant difference in reading achievement between the students who have high learning motivation and those who have low learning motivation taught using jigsaw technique and conventional teaching method of SMP Padmajaya Palembang?
4. Was there any significant interaction effect of using jigsaws and learning motivation towards the students’ reading achievement of SMP Padmajaya Palembang?

Literature Review

1. Jigsaw

According to Coelho (2004:193), “Jigsaw can be used in every level of education, it can be applied in many

content are, and develop many language skill.” It declares that jigsaw technique is one that maximizes the infective basic of cooperation learning. Every member in Jigsaw groups must be active. Brown (1995:185) states that “Jigsaw technique are special forms information group in which each member of group is given some specific information and the goal is pull all information to achieve some objectives.”

2. Reading Comprehension

According to According to Smith (2004:179), “Reading is extracting information from prints.” Reading is the fundamental skill upon which all formal education depends.” Reading is a complex process that requires the analysis, coordination, and interpretation of a variety of sources of information. In order to effectively meet the needs of literacy learners, especially those who struggle, instruction needs to take account of this complexity. Efficient readings consist of clearly identifying the purpose in reading something, According to Hibbard and Wagner (2013:8), “Teaching reading is a complex process involving decoding skills, fluency and reading comprehension.”

3. Motivation

According to Hammer (2007:98) states “Motivation is a state of cognitive arousal” which provokes a decision to act”, result of which there is sustained intellectual and or physical effort” so that the person can achieve some previously set goal.” Motivation plays are important role in education field.

Method

This study conducted factorial design as the method of the research which modified of pretest-posttest control group design, and it divides into two groups, the first group is as the

experimental group and the other one is as a control group

Operational Definition

The writer avoids misunderstanding about the terms used in this research the operational definition were presented (1) Jigsaw, (2) Reading, and (3) Motivation.

Jigsaw is one of activities of cooperative methods which can solve this problem. Cooperative learning or group work method has several activities in the teaching learning. Jigsaw is one of the activities in the cooperative learning. In cooperative learning, students cooperate with friends to discuss the topic they study but when the students are given to study their own topic, it is the danger because the students tend only to study their own topic and the students do not want to study their friends' topic.

Jigsaw technique to cover the problem in reading Narrative text and the students are able to know Main idea, Supporting details, Author's aim., Passage structure, using correct spelling, and pronunciation and they only read sentences.

Motivation is one of the factors that can determine someone to do something to get success in the level of activity and life, consistency, discipline, and has good behavior in paying attention, connecting in learning process, monitoring and planning.

Population and Sample

In this study, the writer took the population of Junior High School in Padmajaya Palembang. The total number of the students as the population was 96 students and the sample of the study was 64 students where it was experimental and control group.

Technique for Collecting Data

A test, in simple term, is a method of measuring a person's ability, knowledge, or performance in a given domain (Brown, 2003:3). A test was given to the sample of the study before and after the treatment and the writer used the pre-test and post-test and questionnaire whether in experimental and control group. Furthermore, the writer also determined the level of learner's motivation whether the learner who had high, middle, and low motivation in learning narrative writing by using the interval score of motivation. Besides, the writer also showed the reliability and validity to collecting the data in the table 1 and table 2.

Table 1 Reliability Statistics of Motivation

Cronbach's Alpha	N of Items
0,883	20

Table 2. Item-Total Statistics motivation

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Note
Item_1	54,31	115,190	,829	,865	Valid
Item_2	54,47	120,967	,582	,874	Valid
Item_3	53,63	129,274	,392	,880	Valid
Item_4	53,69	127,512	,413	,879	Valid

Item_5	54,41	125,797	,438	,879	Valid
Item_6	54,31	118,286	,737	,869	Valid
Item_7	54,00	130,581	,218	,886	Invalid
Item_8	53,63	127,661	,415	,879	Valid
Item_9	54,28	119,370	,671	,871	Valid
Item_10	54,25	123,032	,550	,875	Valid
Item_11	54,19	126,996	,412	,879	Valid
Item_12	54,44	122,254	,598	,874	Valid
Item_13	53,84	131,233	,195	,887	Invalid
Item_14	54,13	114,500	,819	,865	Valid
Item_15	53,66	125,201	,544	,876	Valid
Item_16	53,78	129,015	,312	,883	Invalid
Item_17	53,78	129,854	,254	,885	Invalid
Item_18	54,09	129,830	,292	,883	Invalid
Item_19	54,13	123,016	,531	,876	Valid
Item_20	54,22	121,918	,550	,875	Valid

Technique for Analyzing Data

Based on the explanation above, the researcher analyzed the questionnaire data by examining the correlation between each item score and the total score using SPSS version 22 to measure students' motivation. Furthermore, several statistical tests were conducted, including the Kolmogorov–Smirnov test for normality, Levene's test for

homogeneity of variance, a paired-samples t-test, Spearman's rank correlation, and a two-way ANOVA.

Result and Discussion Data Analysis

Statistic descriptive and frequency student's score high motivation and low motivation in the experimental and control group.

Table 3. The Posttest Score in the Control Group for Low Motivation Posttest low control

Score	Frequency	%	Valid %	Cumulative %
71	1	6.3	6.3	6.3
72	1	6.3	6.3	12.5
73	3	18.8	18.8	31.3
74	1	6.3	6.3	37.5
76	1	6.3	6.3	43.8
77	1	6.3	6.3	50.0
78	2	12.5	12.5	62.5
79	1	6.3	6.3	68.8
80	1	6.3	6.3	75.0
81	1	6.3	6.3	81.3

84	2	12.5	12.5	93.8
85	1	6.3	6.3	100.0
Total	16	100.0	100.0	—

Based on the result there was one student who got 71 (6.3%), one student who got 72 (6.3%) one student who got 71 (6.3%), three students who got 73 (6.3%), one student who got 74 (6.3%), one student who got 76 (6.3%), one student who got 77 (6.3%), two student who got 78 (12,5%). one student who got 79 (6.3%), one student who got 80 (6.3%), one student (6.3%), two students who got 84 (6.3%), one student who got 85 (6.3%)

Table 4. The Pretest Score in the Control Group for Low Motivation

	Freq	%	Valid %	Cumulative %
Valid 64	1	6,3	6,3	6,3
65	1	6,3	6,3	12,5
67	1	6,3	6,3	18,8
68	3	18,8	18,8	37,5
69	1	6,3	6,3	43,8
70	2	12,5	12,5	56,3
72	2	12,5	12,5	68,8
73	1	6,3	6,3	75,0
74	1	6,3	6,3	81,3
76	2	12,5	12,5	93,8
79	1	6,3	6,3	100,0
Total	16	100,0	100,0	

Based on the result that there was one student who got 64 (6.3%), one student who got 65 (6.3%), one student who got 67 (6.3%), three students got 68 (18.8%), one student got 69 (6.7%). two students who got 70 (12.5%), two students who got 72 (12,5%), one student who got 73 (6.3%), one student who got 74 (6.3%), two students who got

Table 6. Independent Sample T-test

	Levene's Test for Equality of Variances	t-test for Equality of Means
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76 (12,5%), one student who got 79 (6.3%).

Table 5. Frequency Posttest Score in the Experimental Group for High Motivation Experiment

	Freq	%	Valid %	Cumulative %
Valid 80	1	6,3	6,3	6,3
81	2	12,5	12,5	18,8
84	2	12,5	12,5	31,3
86	1	6,3	6,3	37,5
87	2	12,5	12,5	50,0
88	1	6,3	6,3	56,3
89	4	25,0	25,0	81,3
90	3	18,8	18,8	100,0
Total	16	100,0	100,0	

Based on the result analysis of students' posttest scores in experimental group, it shows that there were one student who got 80 (6.3%), two students got 81 (12.5%), two students got 84 (12.5%), one student got 86 (6.3%), two students got 87 (12.5%), one student got 88 (6.3%), four students got 88 (25.5%), three students got 90 (18,8 %).

Hypothesis Testing

1. Measuring the significant difference in reading comprehension achievement between the student who have high learning motivation and those who have low reading motivation taught by using jigsaw technique at SMP Padmajaya Palembang

	F	Si g.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Experiment Equal variances assumed	.000	.992	2.384	30	.024	3.063	1.284	.439	5.686
Equal variances not assumed			2.384	29.755	.024	3.063	1.284	.438	5.687

It was found that the p-output was 0.024. When the p-output was lower than the mean significant different at the 0.05 level, it can be concluded that there was a significant difference in reading comprehension achievement between the student who have high learning motivation and those who have low reading motivation taught by using jigsaw technique at SMP Padmajaya Palembang

2. Measuring the significant difference in reading comprehension achievement between the student who have high learning motivation and those who have low learning motivation taught using conventional teaching method at SMP Padmajaya Palembang.

Table 7. Independent Sample Test

		Levene's Test for Equality of Variances t-test for Equality of Means								
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Control	Equal variances assumed	1.539	.224	3.361	30	.002	4.750	1.413	1.863	7.637
	Equal variances not assumed			3.361	27.643	.002	4.750	1.413	1.853	7.647

It was found that the p-output was 0.002 when the p-output was lower than the mean significant different at the 0.05 level, it can be concluded that there was significant different in reading comprehension between the students who were taught using window notes

strategy. In other word, there was a significant influence of window notes strategy on students' reading comprehension achievement.

3. Measuring the significant difference in reading comprehension

achievement between the student who have high learning motivation and those who have low learning motivation taught using jigsaw

technique and conventional teaching method at SMP Padmajaya Palembang

Table 8. Independent Sample Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Gabungan	1.109	.296	4.888	62	.000	5.219	1.068	3.084	7.353
			4.888	60.315	.000	5.219	1.068	3.083	7.354

It was found that the p-output was 0.000 when the p-output was lower than the mean significant different at the 0.05 level, it can be concluded that there was

significant different in reading comprehension between the students who were taught using jigsaw technique.

Table 9. Tests of Between subjects Effects

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	587.250 ^a	17	34.544	6.648	.000	.890
Intercept	150686.653	1	150686.653	28998.119	.000	1.000
Experiment	326.340	11	29.667	5.709	.002	.818
Motivasi	8.975	1	8.975	1.727	.210	.110
Experiment* Motivasi	81.109	5	16.222	3.122	.042	.527
Error	72.750	14	5.196			
Total	204182.000	32				
Corrected Total	660.000	31				

a. R Squared = ,890 (Adjusted R Squared = ,756)

4. Measuring the significant interaction effect of using jigsaw technique and reading motivation toward students readingcomprehension achievement.

Based on data that data value was lower than equal to 0.05, and then there was a significant interaction. From the significant column of Table 29, it was obtained that the significance value was 0.527.

Interpretations

In order to strengthen the value of this study, there are some interpretations presented in this part based on the results of the data analyses. They are described as follows.

First, t-test analysis of reading comprehension achievement between the students who have a high level of motivation and those who have low reading motivation who are taught by using jigsaw technique. From the statistics calculation using independent sample test was found the p-output was 0.024. it means that the p-output was lower than 0.05 it was interpreted that teaching reading using window notes strategy was effectively applied in one of the groups.

Second, t-test analysis of reading comprehension achievement between the students who have a high level of motivation and those who have low reading motivation who are taught by using conventional strategy. From the statistics calculation using independent sample test was found the p-output was 0.002 it means that the p-output was lower than 0.05 it was interpreted that teaching reading using window notes strategy was effectively applied in one of the groups.

Third, t-test analysis of reading comprehension achievement between using jigsaw technique and conventional strategy who have reading motivation and those who have low reading motivation. From the statistics calculation using independent sample test was found the p-output was 0.000 it means that the p-output was lower than 0.05 it was interpreted that teaching reading using window notes strategy was effectively applied in one of the groups.

Fourth, t-test analysis of reading comprehension achievement between using jigsaw and conventional strategy that have reading motivation and those who have low reading motivation. From

the statistics calculation using independent sample test was found the p-output was 0.042 it means that the p-output was lower than 0.05, it was interpreted that was a significant interaction effect of jigsaw technique and reading motivation toward students' reading comprehension achievement.

Fifth, from the result of student's reading that was evaluated by two levels. It could be found that all the aspects of reading influenced student reading achievement. There are three students got the highest score in high level was 90, because they can answer their reading test easier. Meanwhile, there are three students got the lowest score in low level was 65, because the students got difficulties to mastering the all aspect of reading test. Based on the explanation above, the researcher concluded that there was a progress achieved both experimental and control group. Furthermore, the experimental group had a better progress in reading achievement than the control group.

Conclusion and Suggestion

A. Conclusion

Based on the result of analysis, the writer concluded that (a) there was a significant difference in reading comprehension achievement between the student who have high learning motivation and those who have low reading motivation taught by using jigsaw technique at SMP Padmajaya Palembang, (b) There was a significant difference in reading comprehension achievement between the student who have high learning motivation and those who have low learning motivation taught using conventional teaching method at SMP Padmajaya Palembang, (c) There was a significant difference in reading comprehension achievement between the student who have high learning motivation and those who have low

learning motivation taught using jigsaw technique and conventional teaching method at SMP Padmajaya Palembang, (d) there was a significant interaction effect using jigsaw and learning motivation toward students' reading comprehension achievement.

B. Suggestions

Jigsaw technique and learning motivation help a teacher to present they materials which need not only be supplied by a text book but it is essential for the teacher self to use her initiative to exert own energy to make their student satisfied. Using jigsaw technique, the students are motivate to respond the teacher explanation and assert themselves in their learning by participant in teaching and learning process trough jigsaw technique.

References

- Abdollahzadeh, E. (2009). *The effect of rhetorical and cognitive structure of texts on reading comprehension*. University of Science and Technology, Iran.
- Anonymous. (2009). *Questions on students' learning styles*. <http://www.studyguide.org>. (Accessed December 25, 2009).
- Anonymous. (2010). *Test document readability and improve it*. ADMC HCT. <http://www.admc.hct.ac.ae/hdl/english/readability.htm> (Accessed January 8, 2010).
- Aronson, E. (2000). *Jigsaw classroom*. <http://www.admc.hct.ac.ae/hdl/english/readability.htm>.
- Brown, H. D. (2000). *Principles of language learning and teaching* (4th ed.). Pearson Education.
- Brown, H. D. (2004). *Language assessment: Principles and classroom practices*. Pearson Education.
- Brown, H. D. (2011). *Teaching by principles: An interactive approach to language pedagogy* (2nd ed.). Addison Wesley Longman.
- Byrnes, H. (1998). *Teaching reading*. NCLRC. <http://www.admc.hct.ac.ae/hdl/english/readability.htm>. (Accessed January 4, 2010).
- Carroll, R. (2002). Mindful reading: Strategy training that facilitates transfer. *Journal of Adolescent & Adult Literacy*, 45(6), 498–513.
- Casper, M., Cotton, J., & Westfall, S. (1998). *Comprehension: Theory and strategy*. Dominican University. <http://www.dominican.edu/academics/education/faculty/madaliennepeters/comprehension.html> (Accessed January 7, 2010).
- Clarke, J. (1994). Pieces of the puzzle: The jigsaw method. In S. Sharan (Ed.), *Handbook of cooperative learning methods*. Greenwood Press.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Sage Publications.
- De Debat, E. V. (2006). Applying current approaches to the teaching of reading. *English Teaching Forum*, 44(1), 8–15.
- Fraenkel, J. R., & Wallen, N. E. (2012). *How to design and evaluate research in education*. McGraw-Hill.
- Hornby, A. S. (1995). *Oxford advanced learner's dictionary of current English*. Oxford University Press.
- Hughes, A. (1989). *Testing for language teachers*. Cambridge University Press.
- Mangduo, Q., & Jin, X. (2010). Jigsaw strategy as a cooperative learning technique focusing on the language

- learner. *Chinese Journal of Applied Linguistics*, 33, 113–125.
- McFarland. (1988). *Two-way ANOVA and interaction*. Multivariate Statistics. <http://www.multivariatestatistics.com> (Accessed April 12, 2010).
- Milya Suspikat. (2012). *Utilizing English magazine to increase students' reading comprehension and motivation at the eighth grade students of SMPN Tungkal Ilir* (Unpublished undergraduate thesis). PGRI University.
- NCREL. (2009). *Teaching reading*. NCLRC. (Accessed January 7, 2010).
- Pakhare, J. (2007). *Effective teaching: Reading comprehension strategies*. <http://www.buzzle.com> (Accessed January 5, 2010).
- Pikulski, J. J. (2002). *Readability*. Houghton Mifflin.
- Reid, J. (1984). *Perceptual learning-style preference questionnaire*. (Accessed January 18, 2010).
- Riduwan. (2008). *Metode dan teknik menyusun tesis*. CV Alfabeta.
- Riswanto. (2003). *Utilizing newspaper with caption to increase the students' reading comprehension at the second year of SMP 1 Rawas* (Unpublished undergraduate thesis). Jambi University.
- Ruddell, M. R. (1993). *Teaching content reading and writing*. Allyn & Bacon.
- Santoso, S. (2003). *Mengatasi berbagai masalah statistik dengan SPSS versi 15*. PT Elex Media Komputindo.
- SEDL. (2009). *Building reading proficiency at the secondary level: A guide to resources*. (Accessed January 9, 2010).
- Simaibang, B. (n.d.). *English language teaching in a foreign situation*. CV Citra Books.
- Suhaimi. (2009). *Reading comprehension: Theory and strategy*. (Accessed January 7, 2010).
- Tim Penyusun. (2017). *Pedoman penulisan tesis*. Program Pascasarjana Universitas PGRI.
- Waxler, A. (2005). *Three ways to increase reading comprehension*. (Accessed January 7, 2010).
- Yusri. (2005). *The effectiveness of the guided reading procedure in improving students' reading comprehension achievement* (Unpublished master's thesis). Sriwijaya University.
- Zhenhui, R. (2001). Matching teaching styles with learning styles in East Asian context. *The Internet TESL Journal*, 7(7).