

## THE IMPLEMENTATION OF COOPERATIVE LEARNING BY USING A JIGSAW TECHNIQUE IN SPEAKING TO THE GRADE XI STUDENTS OF SMK NEGERI 9 MEDAN

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### ABSTRACT

*This study was investigating the Implementation of the Jigsaw technique in speaking To the Grade XI Students of SMKN 9 Medan. This study used an experimental design. The instruments for collecting data were tests and questionnaires. The population in this study were all the grade XI students of SMKN 9 Medan and two classes were taken as samples, each class consisting of 30 students. One class was an experimental group (30 students of grade XI-RPL2) and one class was as a control group (30 students of grade XI-TKJ3). The experimental group was taught by jigsaw strategy while the control group which consisted of 30 students was taught by using a conventional method. The finding of this study shows that the Jigsaw technique used in teaching speaking affected the students' speaking scores. The mean score of pre-test and post-test for the control class were 65,53 and 75,77 which shows only a slight difference of 10,24 points. While the mean score in the pre-test and post-test of the experimental class was 69,81 and 81,30 with a difference of 11,49 points. Although it shows a slight difference between the two means, the result shows that the post-test of the experimental class was better than Post-test in the control class. It can be concluded that the students who were taught through the Jigsaw technique achieved a better performance in speaking than those who were not taught through the Jigsaw technique. In addition, the result of the questionnaires shows that the students became more active and productive by discussing ideas since the interactive classroom atmosphere and joyful learning helped them to be more confident to express ideas orally.*

**Keywords:** Cooperative Learning, Jigsaw Technique, Speaking

### ABSTRAK

Penelitian ini bertujuan untuk menginfestigasi Penerapan Teknik Jigsaw Dalam mengajar keterampilan berbicara Pada Siswa Kelas XI SMKN 9 Medan. Desain dari penelitian ini adalah penelitian eksperimental. Instrumen yang digunakan untuk pengumpulan data adalah tes dan angket. Populasi dalam penelitian ini adalah seluruh siswa kelas XI SMKN 9 Medan. Dua kelas diambil sebagai sampel, masing-masing kelas terdiri dari 30 siswa. Satu kelas sebagai kelas eksperimen (30 siswa kelas XI-RPL2) dan satu kelas sebagai kelas kontrol (30 siswa kelas XI-TKJ3). Kelas eksperimen diajar dengan strategi jigsaw sedangkan kelas kontrol yang terdiri dari 30 siswa diajar dengan menggunakan metode konvensional. Hasil penelitian ini menunjukkan bahwa teknik Jigsaw yang digunakan dalam pengajaran berbicara efektif. Nilai rata-rata pre test dan post test kelas kontrol adalah 65,53 dan 75,77, Sedangkan nilai rata-rata posttest kelas eksperimen adalah 69,81 dan 81,30. Hasil menunjukkan bahwa post-test pada kelas eksperimen lebih baik daripada Post-test di kelas kontrol. Dapat disimpulkan bahwa siswa yang diajar dengan teknik Jigsaw mencapai hasil nilai lebih baik dalam keterampilan berbicara daripada mereka yang tidak diajar dengan teknik Jigsaw. Selain itu, hasil angket menunjukkan bahwa siswa menjadi lebih aktif dan produktif dengan mendiskusikan ide-ide karena suasana kelas yang interaktif dan pembelajaran yang menyenangkan membantu mereka menjadi lebih percaya diri untuk mengungkapkan ide secara lisan.

**Kata Kunci:** Pembelajaran Kooperatif, Teknik Jigsaw, Keterampilan Berbicara

### INTRODUCTION

Reading, speaking, writing, and listening are the four basic language abilities covered in English as a school subject. Students' learning activities in every topic

include speaking. One of the most difficult aspects of learning English is speaking. It is a type of activity in which the speaker expresses his or her thoughts or communicates effectively. Speaking is a performance art (Clark and Clark, 1997:223). Speakers speak in order to have an impact on their audience. They make claims in order to alter their state of knowing. They pose the query in order to elicit information from them. They make requests in order to entice them to help them. It is quite related to the concept of communication competence and refers to speech skill. The goal of speaking instruction is to prepare students to convey relevant and contextual communicative abilities in real-life situations.

In addition, the National Education Standard Agency (BNSP) (2006: 134) stated that "the standard competence of the graduate of English for each level is communicative competence in the form of spoken of language accompanying action for elementary school, in the form of spoken and written for achieving functional literacy level for junior high school, in the form of spoken and written for achieving information literacy level for senior high school." To create classroom-speaking activities that will develop communicative competence, instructors need to incorporate a purpose and allow for multiple forms of expression. However, quantity alone will not necessarily produce competent speakers. The instructor needs a new technique that gives students opportunities to practice language use more freely and one of the ways to make the teaching speaking effective is making the students active so they enjoy learning so that they can improve their speaking skills.

The technique for teaching English can be changed at any time. The strategy should be engaging and focused on the students. Cooperative learning is one of the teaching methodologies (CL). Students are more engaged in the learning process using this technique since they will learn more by constructing and creating, working in groups, and sharing knowledge. Nonetheless, personal responsibility remains the most important factor in learning English. Cooperative learning (CL) is said to be able to allow students to participate in discussions, have the confidence to think critically, and be willing to accept responsibility for their own learning. Although it emphasizes students' active participation, this does not preclude teachers from participating in the classroom. In the learning process, the teacher takes on the roles of designer, facilitator, and guide (Kagan, 1994). Based on the preliminary research conducted by the writer at SMKN 9 Medan it was found that the teachers still use the traditional way of teaching English where the teaching-learning process was still dominated by teacher-centered. This traditional teaching made learners passive and they seem to have great difficulties and shy in speaking English. Some of them could not even talk about themselves or their daily activities in English. This fact made the students get a low score for every semester. The score they got in every semester was approximately 30-50.

According to Arronson, E. (2008). The jigsaw is one of the more intriguing forms of cooperative learning. The application of the jigsaw classroom is very simple. Jigsaw is a learning style that requires pupils to learn in a group of 4-6 individuals with varying abilities. Members of each home group meet in expert groups to study the material allocated to them.

Jigsaw classroom approaches have several advantages over traditional teaching methods: most teachers find it simple to learn, most teachers love working with it, it can be used with other teaching tactics, it works even if only used for an hour every day, and it is completely free.

From the fact above, the researcher can conclude and can give a prove that

jigsaw techniques are a good technique to be implemented, it will give an interesting situation to learn English, it makes the students' ideas come out by working together and also having an expert student in each group can help them think and share their ideas easily. So that, the writer is interested to choose this model and implementing it in English teaching, especially in teaching speaking.

Alamri (2019) has explored the impact of utilizing the jigsaw procedure on the presentation of Saudi English as a Foreign Language (EFL) understudies' in talking abilities and on advancing their proper act of jargon, precision, familiarity, and articulation during oral undertakings. The outcomes got from the review test comprised 28 female understudies learning at Prince Megren University. The consequences of the review showed that there were measurably huge contrasts as far as Saudi EFL female understudies' general presentation in talking abilities for the jigsaw bunch. The outcomes likewise showed that the members in the jigsaw bunch beat those of the benchmark group in the talking skills: jargon, exactness, familiarity, and articulation. The review introduced a few proposals and ideas considering the consequences of the examination.

In addition, Hakim and Sakti (2019) have distinguished that the utilization of the Jigsaw type agreeable learning model to understudies and regardless of whether there is an increment in learning results in monetary subjects. Jigsaw agreeable learning will be discovering that spotlights on the conversation by gatherings of specialists and gatherings of beginning. Conversations directed by understudies mean comprehending the material being examined. The issue presented is about the monetary topic. This examination is a homeroom activity research comprising of two cycles. This homeroom activity research is centered around further developing understudy learning results. The outcomes showed that the utilization of the Jigsaw type agreeable learning model had the option to further develop the learning results of monetary subjects in each cycle.

Phuong (2019) has investigated the use of the Jigsaw II method on showing talking alongside different abilities can be valuable to the two understudies and educators in the language study hall. This strategy works on understudies' demeanor towards English picking up, making them more dependable, dynamic, and certain about class and upgrading their talking execution because of the talking openings it makes. It can likewise be viewed as an opportunity for educators to assess understudies' capacity.

Sulfemi and Kamalia (2020) have distinguished that the Al-Hamidiyah Integrated Islamic Elementary School Class III Khalid Bin Walid, adding up to 25 individuals comprising of 14 men and 11 ladies. The examination was completed beginning from the absence of understudy learning results in learning, from the after-effects of the worksheets given to understudies there are about 56% of understudies who are still underneath the Maximum Mastery Criteria that is set that is 75. Along with associates to further develop learning by two cycles. Each cycle comprises preparation, execution, perception, and reflection. Information gathered in this review is quantitative information through learning results. The aftereffects of this present review's information investigation showed an expansion in the level of understudy learning results likewise expanded, from 60% in cycle 1 to 80% in cycle 2. The consequences of this review can be inferred that the utilization of the Jigsaw Cooperative Learning Model helped with varying media can further develop learning results.

Based on the discussion above, the study aims to investigate the Implementation of

Jigsaw techniques in speaking To the Grade XI Students of SMKN 9 Medan. Then the study attempted to answer the following research question.

1. Do students who were taught through the Jigsaw technique achieve a better performance in speaking than those who were taught through the traditional method?
2. How are the students' perceptions toward the implementation of cooperative learning by using the Jigsaw technique in teaching speaking?

## **RESEARCH METHODOLOGY**

This research used an experimental research design. Borg (1989) says: "the experimental design is ideally suited to establish causal relationships if proper controls are used." And Borg (1989) indicates: "the experiment is the most powerful research design for identifying causal relationship."

The experimental group and the control group were divided into two groups in the study. The Jigsaw technique was used to teach the experimental group, whereas the Conventional Method was used to teach the control group. The teaching methods were the independent variable, while the students' achievement in developing their speaking skills was the dependent variable.

The study's target population was 694 students in grade XI at SMK N 9 Medan. When a small population is used, the writer used a simple random sampling technique that involved placing a slip of paper containing the name or identification number of each individual in the population in a container, thoroughly mixing the slips, and then drawing the required number of names or numbers. As examples, the author selected two classes of 60 pupils. One class served as an experimental group (30 grade XI-RPL2), while the other served as a control group (30 students of grade XI-TKJ3). The experimental group received instruction using a jigsaw strategy, while the control group of 30 pupils received instruction using a traditional method.

In collecting data, the writer applied the supporting instrument to collect the data are tests and Questionnaires. At the beginning of term (before treatment is given) the researcher conducted a test for both classes called the pre-test to assess students' ability in speaking before the treatment was given.

The procedures used in collecting data in this research were experimental studies. Before the researcher conducted the experimental research, a pre-test was given for both classes experimental and control groups. In teaching speaking to the experimental group, the researcher used the Jigsaw technique as a treatment for them to ease them and facilitate them to be readier to speak and to get a good result.

In the last meeting or after treatment of teaching through the Jigsaw technique to an experimental group, the post-test was given to both groups. This test aims to know whether or not the students' score in speaking will be better after the treatment. The test given in the post-test was the same as the test given in the pre-test.

In this quantitative study, the validity of the data collection technique is very important to make data valid and reliable, because it concerns the consistency of the process and the result of the study itself. To see whether the questions given by the researcher have met the valid and reliable requirements, the writer studied that this kind of activities in the student's English Textbook of Kementerian Pendidikan dan Kebudayaan 2017 especially in speaking then referred to Standard Content of The School and the researcher had to test it also to other students in the same year.

The questionnaire sheets were distributed at the end of the meeting for 15 to the students in the experimental class who have received the implementation of a

jigsaw.

1. The sheets were given to the students one by one.
2. There was an explanation of how to mark before asking the students to answer.
3. The students were permitted to ask clarification for the question they were confused with.
4. The questionnaire sheets which have been submitted were checked to be ensured that the students have filled it.

In order to solve the first research challenge, various formulas were applied. The mean, standard deviation, and t-test were calculated using statistical analysis. The test of normality distribution and homogeneity was performed before evaluating the t-test data. The following are the steps in calculating the data:

#### 1. Determining Mean Score

The mean was used to investigate the average score of the students. Sudjono (2010:84) prescribe the formula of mean as follow;

$$\bar{x} = \frac{\sum fx}{n}$$

#### 2. Determining Standard Deviation

The next step was to calculate the standard deviation after obtaining the mean score. The standard deviation is used to study the variability that is most typically reported in research, according to Sudjono (2010:162). The formula is as follows:

$$S = \sqrt{\frac{\sum fx^2}{n} - \left[ \frac{\sum fx}{n} \right]^2}$$

#### 3. Examining Normal Distribution Test

The next step was examining the normality test. It was calculated before the t-test which is aimed to investigate whether or not the distribution of the pre-test and the post-test scores in groups were normally distributed (Sudjana, 2002:272). The formula is:

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

The statistical calculation of normality distribution test used Kolmogorov Smirnov by the following steps;

##### 1. Setting the hypothesis

Ho : the score between the experimental and the control group is normally distributed.

Ha : the score between the experimental and the control group is not normally distributed.

##### 2. Setting the level of significance ( $\alpha$ ) = 0.05

3. Analyzing the normality distribution using the Kolmogorov-Smirnov test was by comparing the scores between the test result and the level of significant value. The criteria of examining these hypotheses are ho would be accepted, if  $x_{\text{obtain}} < x_{\text{table}}$  and the other hand, ho would be rejected. If  $x_{\text{obtain}} > x_{\text{table}}$ .

4. Examining Homogeneity of Variance. The next step was examining homogeneity test which is aimed to determine if the subject comes from a population that has a homogeneous variance or not, the formula used in analyzing the data stated by Sudjana (2002:149) is as follow:



$$F = \frac{S_1^2}{S_2^2}$$

## RESULTS AND DISCUSSION

Before presenting the data, this part is initiated by presenting the teaching process applying the Jigsaw in speaking class. Although the description of the process of teaching employing the Jigsaw is not the data of the study, it is worth to be presented to give a short description on how the Jigsaw) was implemented in the classroom.

### Description of the Data

#### 1. The Scoring Guide of Speaking Assignment

The writer modified the scoring system and follow the curriculum outline for a vocational school in speaking skills such as vocabulary, pronounce, appropriate utterance, expression, intonation, etc. The guided score of speaking is used to measure those aspects.

**Table. 1 The Scoring Guide of Speaking Assignment**

Criteria	Description	Scale	Weight	Score (SxW)	Scoring Scale
Accuracy (40)	Ucapan, Penggunaan tata Bahasa, kosa kata dan pengaruh Bahasa ibu	1 - 10	4		1-3: Poor 4-6: Fair 7-8: Good 9-10: Excellent
Fluency (30)	Kelancaran, pengulangan kata-kata, ekspresi.	1 - 10	3		1-3: Poor 4-6: Fair 7-8: Good 9-10: Excellent
Comprehensibility (30)	Kejelasan makna, isi dan intonasi	1 - 10	3		1-3: Poor 4-6: Fair 7-8: Good 9-10: Excellent

### Data Results of Experimental Class

This part presents the obtained data taken from two tests of both experimental class and control class. The tests result from both classes consisted of a pre-test which was administered at the beginning of the research and a post-test was administered after finishing treatment.

The data of the pre-test resulted from 30 students in the experimental class using the Jigsaw technique, with the mean score being 69.27, the highest score being 77, and the lowest score being 62. Meanwhile, the mean of the post-test scores was 81.30, with 90 being the highest and 69 being the lowest. As a result, the data revealed that the post-test result was greater than the pre-test, with a gain-score difference of 12.03. Table 2 summarizes the findings.

**Table 2. Students' Scores of Jigsaw Experimental Class**

Students' ID	Experimental Class		Gained Score
	Pre-Test	Post-Test	
A1	75	88	13
A2	77	80	3
A3	70	75	5
A4	76	89	13
A5	69	75	6
A6	75	79	4
A7	71	79	8
A8	69	73	4
A9	68	75	7
A10	71	89	18
A11	68	79	11
A12	65	78	13
A13	65	78	13
A14	70	74	4
A15	65	85	20
A16	67	79	12
A17	63	82	19
A18	72	82	10
A19	70	85	15
A20	71	86	15
A21	73	90	17
A22	69	82	13
A23	74	89	15
A24	72	89	17
A25	69	81	12
A26	63	79	16
A27	65	69	4
A28	69	88	19
A29	62	87	25
A30	65	75	10
$\Sigma$	2078	2439	361
<b>Mean</b>	<b>69.27</b>	<b>81.30</b>	<b>12.03</b>
<b>Maximum Score</b>	<b>77</b>	<b>90</b>	<b>13</b>
<b>Minimum Score</b>	<b>62</b>	<b>69</b>	<b>7</b>

## 2. Data Results of Control Class

Unlike the experimental group, the control group had a higher mean pre-test score of 65.53 among 35 students. The greatest point total was 71, and the lowest point total was 55. Meanwhile, the post-test resulted in a mean score of 75.77 in the control class, with the highest score being 89 and the lowest score being 65. The

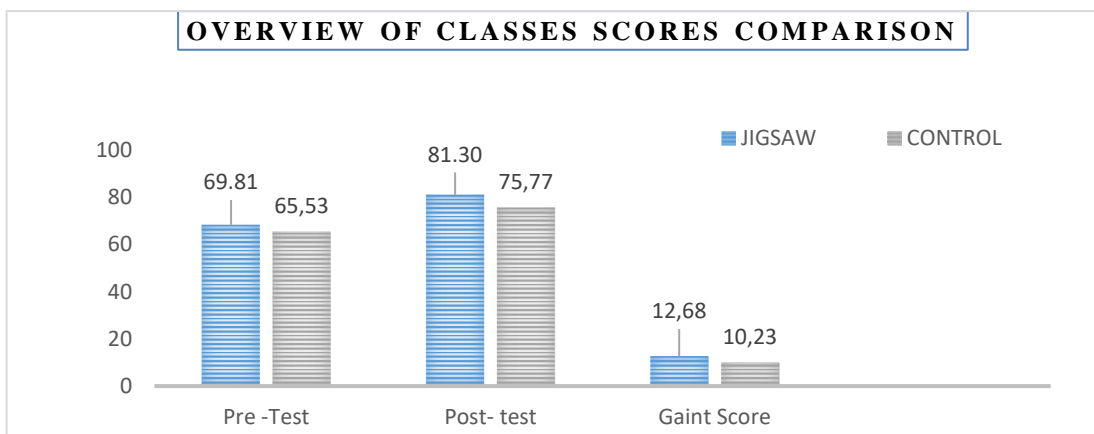
following table 3 shows the students' scores in the control class.

**Table 3. Students' Score of Control Class**

Students' ID	Experimental Class		Gained Score
	Pre-Test	Post-Test	
A1	69	72	3
A2	60	65	5
A3	71	84	13
A4	66	68	2
A5	71	74	3
A6	65	77	12
A7	66	75	9
A8	67	69	2
A9	67	69	2
A10	71	73	2
A11	70	75	5
A12	71	80	9
A13	65	79	14
A14	65	75	10
A15	55	65	10
A16	66	67	1
A17	55	85	30
A18	64	67	3
A19	65	82	17
A20	71	82	11
A21	60	80	20
A22	63	84	21
A23	64	79	15
A24	69	82	13
A25	71	89	18
A26	70	79	9
A27	68	81	13
A28	55	77	22
A29	56	69	13
A30	70	70	0
$\Sigma$	1966	2273	307
<b>Mean</b>	<b>65,53</b>	<b>75,77</b>	<b>10,23</b>
<b>Maximum Score</b>	<b>71</b>	<b>89</b>	<b>18</b>
<b>Minimum Score</b>	<b>55</b>	<b>65</b>	<b>10</b>

Because the data had been summarized using descriptive statistics, it was compared to receive an overview of the scores before and after the treatment, as well as to see how far each class had progressed. Figure 1 illustrates this:





**Figure 1. Overview of Both Classes Scores Comparison**

Figure 1 shows that the Jigsaw experimental class's pre-test mean scores were 69.27, which is somewhat higher than the control class's 65.53. This means that the experimental kids had about the same speaking competence as the control students. Meanwhile, a graph of the post-test mean scores is shown in the figure. Even though both classes improved in the post-test results, the mean suggested that students in the experimental class had higher post-test scores than students in the control class.

It's also demonstrated by the experimental classes' gained scores, which show a bigger difference in growing point than the control class. In the Jigsaw experimental class, the difference mean of the obtained scores was 12.01, whereas in the control class, it was 10, 23 points.

### Data Analysis

The pre-test and post-test scores from the three classes are statistically examined using the T-test in the data analysis section. Inferential statistics refers to the outcome of the T-test. Before using the T-test to calculate the outcome, the writer had to determine whether the data was distributed normally and whether the variances in the research samples were homogeneous.

The researcher also ran an effect size test on the final T-test result to measure the intensity of the Jigsaw technique's effectiveness in this study. Before the data is further evaluated by T-test and effect size, normality and homogeneity tests are performed. Except for the effect size testing, which is done manually with the use of supporting data acquired from the T-test, other kinds of data analysis and calculation are performed using SPSS 20.0 for Windows.

### Normality Test

The researcher utilized Kolmogorov-Smirnov to calculate the normality test, as shown in table 4 for the Jigsaw experimental class and table. for the control class. Table 5 reveals that the pre-test and post-test normality significance in the experimental class is 0.194 and 0,070, respectively. Because the significance is greater than 0.05 ( $0.194 > 0.05$ ;  $0,070 > 0,05$ ), both the pre-test and post-test significant results indicated that the data are regularly distributed. Table 4 displays the results.

**Table 4 Normality Test Result of Pre-Test and Post-Test in Jigsaw Experimental Class**

Hasil Belajar	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	df	Sig.
PRETEST	.132	30	.194
POSTEST	.153	30	.070

In the control class, the normalcy significance of the pre-test was 0.052 and the post-test was 0.200, according to Table 4.5. Because the significance was over 0.05 ( $0.052 > 0.05$ ;  $0.200 > 0.05$ ), the results also indicated that the post-test data were distributed normally. Table 5 summarizes the findings.

**Table 5: Normality Test Result of Pre-Test and Post-Test in Control Class**

Hasil Belajar		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Teaching Method	PRETEST	.159	30	.052	.867	30	.001
	POSTEST	.122	30	.200*	.961	30	.328

## 2 Homogeneity Test

The writer used the Levene Statistic test to calculate the homogeneity test. The significance of the data in the homogeneity test post-test of both classes was 0.059, which is greater than  $= 0.05$  ( $0.059 > 0.05$ ).

**Table 6. Homogeneity Test Results of Post-Test**

Levene Statistic	df1	df2	Sig.
2.926	2	87	.059

## Statistical Hypothesis Testing

After proving the obtained data's normality and homogeneity, the data were further evaluated using a T-test to test the research hypothesis. The T-Test result, after assessing the hypothesis, answered the research question of whether Jigsaw approaches were effective in this study.

The outcome of the T-test was then backed up by the effect size estimate. The scores of post-tests and the obtained a score of both the experimental and control classes were compared when the T-test was calculated. The results are shown in Table 7:

## Post-test Result

Table 7 shows the results of the T-test analysis of post-test scores in the experimental and control groups after the experimental group received Jigsaw technique therapy and the control group received no treatment.

The result is read using the equal variance assumption, with a significance level of  $\text{sig} = 0.05$ . (5 percent ). The independent sample test result p-value or sig (2-tailed) = 0.001 is based on the table (0,1 percent ) Because the p-value (0.001) is smaller than  $\text{sig} = 0.05$ , it can be argued that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted (5 percent ). It also implies that the experimental class has statistical significance.

**Table 7. T-Test Result of post-test Score**

		Independent Samples 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
RESULT POSTEST	Equal variances assumed	1.057	.308	3.443	58	.001	5.46667	1.58757	2.28880	8.64454
	Equal variances not assumed			3.443	56.835	.001	5.46667	1.58757	2.28741	8.64592

### Gained Score Result

The obtained scores of the pre-test and post-test results were also studied, as shown in Table 8, in addition to T-test analysis of pre-test and post-test scores. The independent sample test yielded a p-value or sig (2-tailed) = 0.034, as shown in the table (3,4 percent ). Because the p-value (0.034) was smaller than sig = 0.05, it can be assumed that the null hypothesis was rejected and the alternative hypothesis was accepted (5 percent ). It also signifies that the experimental class got a statistically significant score.

**Table 8 T-test Result of Gained Score Independent Samples 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
NGain_Perse n	Equal variances assumed	.928	.340	-.368	58	.714	-1.87803	5.10277	-12.09232	8.33627
	Equal variances not assumed			-.368	56.948	.714	-1.87803	5.10277	-12.09634	8.34029

### Effect Size

Finally, because the T-test result showed statistical significance in the post-test and gained scores results, the writer examined the effect size of the T-test result using Cohen's d effect size calculation to determine the level of significance. The means and standard deviations of the post-test of both classes (experimental and control) are needed in this computation, which may be found in the T-test result from the group statistic table. Table 9 summarizes the impact size conclusion

**Table 9. The Effect Size Result**

Statistic of Post-test	JIGSAW Experimental Class	Control Class
Mean	81.12	75.77
Std.Deviation	6,1	4.5
Effect Size	5,4*	

\*the result is obtained by manual calculation using Cohen's d formula

Table 9, shows that the effect size or the level of significance effect is 1.00. It indicated that there is a moderate effect of the Jigsaw technique and STAD on students' speaking ability performed in this research. This is based on Cohen's d effect size criteria, in which 1.00 ranges in moderate effect scale that is only two points close to the strong effect scale.

### **Intrinsic Questionnaire Motivation Factors.**

To find out the distribution of respondents' answers to each indicator based on intrinsic motivational factors, it can be presented as shown in Table 10 below:

**Table 10. Students' Intrinsic Motivational Factor**

Kriteria Pernyataan													
No.	Indikator	Jlh Item	SS		S		TS		STS		Rata-Rata Skor	TC (%)	Ket
			F	%	F	%	F	%	F	%			
1	Strategi	4	59	55	43	40	5	5	0	0	4,31	86,21	Baik
2	Motivasi	3	43	53	31	38	7	9	0	0	3,44	68,8	Cukup
3	Material	2	20	37	30	56	4	7	0	0	4,13	82,6	Baik
5	Media	1	11	41	15	56	1	4	0	0	3,4	68	Cukup
Rata-Rata Total		10	133	186	119	190	17	25	0	0	3,71	74,37	Cukup

Keterangan : SS = Sangat Setuju, S =Setuju, R = Ragu-Ragu, TS = Tidak Setuju STS = Sangat Tidak Setuju, TC = Tingkat Capaian, F = Frekuensi

From the table, if we look at the average score for each indicator, the indicator has an average score of 4.31 and an achievement level of 86.21%, this figure is in a good category. This means that the student had positive responses toward the Jigsaw technique. Judging from the percentage of all instrument answer choices on the criteria of strongly agree (SS) as much as 55.5%, the criteria for agreeing (S) 40%, the criteria for disagreeing as much as 4.5%, and the criteria for strongly disagreeing (STS) being none.

## **RESEARCH FINDINGS**

The findings of the study revealed that the Jigsaw methodology was effective in teaching speaking, as there was a substantial difference in results when teaching speaking using the Jigsaw technique against the traditional learning method. The researcher knows that the independent sample test result p-value is less than sig (0.001 0.05) based on data analysis. The alternative hypothesis (Ha) is accepted, while the null hypothesis (Ho) is rejected. The effect size was also estimated using the Cohens'd formula to recognise the level of effectiveness. The effect size value was 1.00, indicating that the Jigsaw technique was somewhat effective in terms of training students' abilities to think and learn to communicate (sharing).

Based on the research method, the teaching-learning process was divided into three steps. The first step is giving a pre-test for both classes in the experimental class and the control class to know the students' speaking ability before being taught by the Jigsaw technique. The second step is giving treatment in an experimental class by applying the Jigsaw technique in speaking. The third step is giving a post-test for both classes (experimental and control) to know the students' speaking ability after they got treatment.

Based on the results of the test, teaching speaking using the Jigsaw technique allows students to speak more effortlessly. Because pupils can have a dialogue with themselves before starting to speak, and then they can converse and exchange ideas.

## DISCUSSION

Based on the result of the test from teaching speaking by using Jigsaw technique makes the students easily to speak. Because before the students start to speak, the students can dialogue with themselves, then the students can talk and share ideas. Whereas in teaching speaking by using Jigsaw technique, the students were active too but some of the students who have low in English, they find more difficulties in understanding the text because of having lack vocabulary.

The last group is the students who were taught by the Conventional method. In this class, the students only learn by hearing the teacher explain about analytical exposition text and found many unfamiliar words and have difficulties comprehending the text and answering the questions. The researcher found that the students felt bored with this method and it was monotonous.

The Jigsaw method of teaching speaking can help pupils enhance their speaking abilities. They were able to understand the content of the text and the major idea of the text when the teacher gave them the text and asked them to speak verbally about it. The strategy is especially beneficial for study groups, as it focuses on efforts and asks good questions. Jigsaw-based speaking instruction allows pupils to be more enjoyable, relaxed, active, and beautiful while speaking English. This strategy makes it simple for the teacher to teach speaking.

From the explanation above, it can be concluded that in this research Jigsaw technique is effective to improve students' speaking ability in analytical exposition text at SMKN 9 Medan.

## CONCLUSIONS

After conducting the research and analyzing the data analysis, there were two main conclusions drawn on what have been found on the implementation of Jigsaw in teaching speaking. They are: (1) the students who were taught through Jigsaw techniques achieve better performance in speaking ability, (2) the students give a positive respond toward the implementation of Jigsaw technique in teaching speaking. The elaboration of these main points will be described below.

1. Based on this experiment research it was found that after the treatment, the experimental groups' post-test shows a better result than the control groups' post-test scores. This research showed that Jigsaw techniques affected the students' speaking ability. These can be seen from the data obtained in which the the result and refer to a significance level of  $sig \alpha = 0.05$  (5%). Based on the table, the independent sample test result p-value or  $sig$  (2-tailed) = 0.001 (0,1%) From the result, it can be concluded that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis is accepted because the p-value (0.001) is less than  $sig \alpha = 0.05$  (5%).
2. It is indicated that  $H_a$  is accepted and  $H_0$  is rejected.
3. On the average the students who are taught by using Jigsaw techniques have higher score than students who are taught in control group.
4. The students who were taught by using Jigsaw technique has higher score than students who were not taught by using Jigsaw technique.

5. The students' response was mostly positive toward the Jigsaw technique in teaching speaking. It can be seen from the result of the questionnaires given to the students that Jigsaw helped them to be more confidence to express their idea orally.

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