

**DEVELOPING STUDENTS' WRITING SKILL  
THROUGH JIGSAW, MIND-MAPPING,  
AND ROUNDTABLE TECHNIQUES**

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**Abstract**

Writing skill seems to be a difficult skill for many students. Whereas, they are demanded to be able to write at text level. This study investigates how students' writing skill can be developed through the combination of jigsaw, mind-mapping, and roundtable techniques. The aim of the study was to find out in what ways the combination of jigsaw, mind-mapping, and roundtable techniques can develop students' writing skill. Moreover, this study belonged to a pre-experimental study and the instruments employed in this study were tests and field notes. The results of the study showed that almost all of the students made some improvements after the treatments. All aspects which comprised grammar; mechanics; style and quality of expression; organization; and content aspects were improved. In addition, the highest improvement belonged to grammar aspect (30.73%). Furthermore, based on the field notes, the students gave positive responses towards the treatments and the treatments were worthwhile for the development of the students' writing skill. Based on the results of the study, it can be concluded that the combination of jigsaw, mind-mapping, and roundtable techniques can develop students' writing skill in many ways including grammar, mechanics, vocabulary, organization, and content aspects.

**Keywords:** jigsaw; mind-mapping; roundtable; writing skill.

## **INTRODUCTION**

It goes without saying that there are many students who still encounter some difficulties in writing. Whereas in language learning, they are demanded to be able to write at text level. Some of them even get confused when they write at sentence level. It is like what the writer has ever found in her classroom. When the writer taught her students, she found many mistakes in her students' sentences, for instance: "He didn't *went* to the supermarket last night.", "He *wasn't* go to the supermarket last night", and "Was he *went* to the supermarket last night?". These examples of mistakes made by the students indicated that there was confusion happened among the students. The actual source of the confusion they encountered here was related to grammar, especially about the finite, an element that does not exist in Indonesian. Finite element is one of the small number of verbal operators expressing or showing the distinctions in tense (means past, present, or future at the moment of speaking), modality (indicates the speaker's judgement of the probabilities or the obligations involved in what he or she is saying), and polarity (the form of the sentence, whether it is positive, negative, or interrogative). The aforementioned problem is one of the problems faced by the students.

During teaching learning process, a teacher is demanded to use appropriate and interesting teaching techniques in order to make the students excited and understand the materials easily. Especially in teaching writing, there should be such kind of teaching technique that enables students to write good texts easily since it needs mastery of many aspects like vocabulary, grammar, punctuation, mechanics, text structure, etc.

Teaching writing, especially at the secondary and post-secondary levels has two purposes. According to Magnan cited in Shrum and Glisan (2000), those two purposes are teaching writing as a support skill and as a communicative skill. In teaching writing as a support skill, the instruction focuses on the mastery of grammatical rules or linguistic competence. Meanwhile, in teaching writing as a communicative skill, the instruction more focuses on how to communicate the content of the message rather than the linguistic accuracy (Shrum and Glisan, 2000).

In this study, the writer endeavors to combine several teaching techniques encompass cooperative learning and mind-mapping to teach writing. Cooperative learning is such kind of learning method which uses the benefits of student-student

interaction. The essential concepts of cooperative learning are positive interdependence and individual accountability (McCafferty, Jacobs, and Iddings, 2006). There are many kinds of cooperative learning and the cooperative learning used in this study comprises jigsaw and roundtable. According to Aronson et. al cited in McCafferty, Jacobs, and Iddings (2006), in jigsaw technique, group mates share information with each other. First, students begin in their home team and each home team member is given one part of an overall topic. Next, students form expert teams to study their part of the topic and prepare to teach it to their home teammates. Afterwards, students return to their home teams and teach their group mates. Finally, students work together on a task that involves all the different parts of the topic.

In roundtable technique, each group member has a designated turn to participate (Kagan cited in McCafferty, Jacobs, and Iddings, 2006). Here, there is usually a writing task. Each group member is required to write a portion of a task. Next, she or he should pass the paper into their left. RoundTable can be done with one piece of paper per group (sequential roundtable) or with one piece of paper per group member (simultaneous roundtable). Afterwards, one group member may be

asked to share with the class what their group has written.

Mind-mapping is a creative way of recording ideas that uses the concept of how our brain works. It was coined by the author and psychologist Tony Buzan in the early 1970s. According to Buzan (2011), “mind-map is a powerful graphic technique which provides a universal key to unlock the potential of the brain”. In addition, the significant characteristics of mind-map according to Buzan quoted by Wolff (2004) are as follows. The main topic of the mind-map is summarised as a central image, word, or phrase. Based on the main topic, it can be created branches and sub branches which form a connected structure. The branches can consist of a key word, image or topic. Mind-mapping, thus, is a good technique to develop writing skill since through mind-mapping, the students’ writings will have good structures or scaffolds and they can write their ideas easily. The example of a mind-map can be seen in Figure 1.



Regarding the aforementioned background, the objective of this study, is to find out in what ways the combination of jigsaw, mind-mapping, and roundtable techniques can develop students' writing skill. Moreover, dealing with the significance, this study is expected to give many benefits to the readers such as giving much insight about some teaching techniques that can be used to improve students' writing skill.

## **RESEARCH METHODOLOGY**

### ***Research Design***

This study belonged to a pre-experimental study in which the chosen design was one group-pretest-posttest design. This research design could be seen in Figure 2.

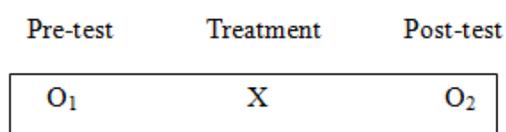


Figure 2. One Group-Pretest-Posttest Design  
(Campbell and Stanley cited in Saleh 2011)

As drawn in Figure 2, this study consisted of pre-test, treatments, and post-test. The pre-test was carried out to measure the students' writing skill before treatments while the post-test was conducted to measure the students' writing

skill after treatments. The treatments encompassed the implementation of jigsaw, mind-mapping, and roundtable techniques.

### ***Subject of the Study***

The subjects of the study were sixteen students from the eighth grade of junior high school.

### ***Instruments of the Study***

The instruments employed in this study were tests and field notes. The tests comprised pre-test and post-test. The pre-test was carried out for the purpose of measuring students' ability before the treatments, while the post-test aimed to measure the students' ability after the treatments. In the pre-test, the students were asked to write a recount text and in the post-test, the students were also asked to write a recount text guided by series of pictures which were similar with the pre-test. In assessing the tests, this study used Brown's rubric of assessment. There were five aspects assessed in the tests including organization; logical development of ideas (content); grammar; mechanics; and style and quality of expression (Brown and Bailey cited in Brown 2004). Moreover, in analyzing the tests, this study used mean or average score. Meanwhile, the field notes contained some notes made by the writer in accordance with the treatments including

the students' interest and attitudes towards the implementation of the combination of jigsaw, mind-mapping, and roundtable techniques; and the development of the students' writing skill.

### ***Methods of Collecting Data***

In collecting data, first, the writer conducted a pre-test. Afterwards, the writer gave the treatments to the students. During the treatments, the writer also made field notes. The last step, the writer gave a post-test to the students.

During carrying out this study, the writer also used four stages of language learning. There were building students' knowledge of the text, modelling of text, joint construction of the text, and independent construction of the text.

In the stage of building students' knowledge about the text, the writer gave a text to the students and they were encouraged to enlarge their insight and vocabulary towards the text, guess and discuss it, and then the writer explained the social function, the generic structure, the linguistic features of the given text (which was a recount text) and the correct use of mechanics.

In the stage of modelling of text, the students were given some examples of recount texts and they were required to discuss and identify the social function, the generic structure and the linguistic features

of the texts. Here, the jigsaw technique was applied. In this technique, the students were divided into several groups. These groups were called home teams. Afterwards, some members of each home team formed experts teams. Here, there were three expert teams. The first expert team was assigned to study and identify the social function of the given recount texts, the second one was asked to study and identify the generic structure of the given recount texts, and the last one was assigned to study and identify the linguistic features of the given recount texts. After the students worked in expert teams, they returned to their home teams and taught their group mates. At last, each home team was asked to write and share the results of the discussion including the social function, the generic structure, and the linguistic features of the given recount texts.

To make the students easier in understanding the framework of the text, the writer used a mind-map. Here, the writer displayed a mind-map of one of the texts the students had read. The writer also explained how to create cohesion and how to achieve coherence when writing texts. The mind-mapping technique was also used in the stage of joint construction of the text in which the students practiced to write a recount text in groups. Before

writing a text, the students were asked to make a mind-map of the story they would write. They were allowed to make it colorful. After making the mind-map, the students developed it into a recount text. They wrote recount text in groups through roundtable technique. In this technique, each group member was assigned to write a sentence in the given piece of paper based on the mind-map made by his/her group. After writing the sentence, she/he passed the paper into their left (the other group member). After the text was formed, each group was allowed to check the text before sharing it to the class. Then, the writer gave feedback to the students' writings.

After the jigsaw, mind-mapping, and roundtable techniques were implemented, the students were asked to write a recount text individually. This stage is called independent construction of the text.

### ***Methods of Analyzing Data***

After the writer got the data, the writer analyzed the data. First, the writer calculated the average scores (mean) of both pre-test and post-test. In addition, the writer also calculated the mean of each writing aspect. Then, the writer compared the results and described them. Furthermore, the writer also analyzed and described the results of the field notes as the supported data. At last, the writer made

the conclusions based on the results of the analysis.

## **RESULTS AND DISCUSSION**

### ***Results***

This part encompassed the analysis of the results of the tests and field notes.

### **The Analysis of the Results of the Tests**

This study aimed to develop students' writing skill. To know whether the presented techniques could develop the students' writing skill or not, the writer compared the results of pre-test and post-test. The results showed that the mean of post-test was better than the mean of the pre-test. The comparison of both tests' achievement was described in Figure 3.

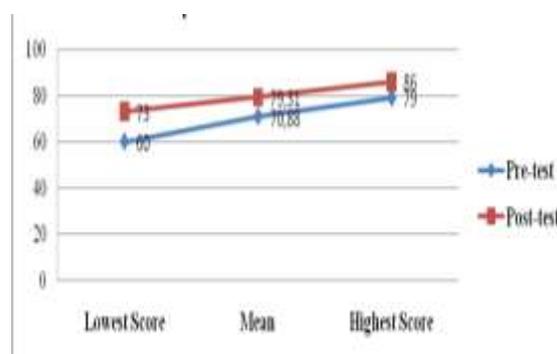


Figure 3. The Comparison of Pre-test and Post-test Results

Furthermore, there were several aspects assessed in the pre-test and post-test. They were organization (introduction, body, and conclusion); logical

development of ideas (content); grammar; punctuation, spelling, and mechanics; and style and quality of expression. Generally, the students' achievements in those aspects were improved. The average score of each aspect rose from pre-test to post-test. The highest improvement belonged to grammar aspect which was around 30.73%. Meanwhile, the improvement of the organization aspect was around 6.03 %, the improvement of the content aspect was around 5.39%, the improvement of the mechanics aspect was around 10.88%, and the improvement of the aspect of style and quality of expression was around 10.40%. The detail of the improvement of the average score (mean) of each aspect was shown in Table 1.

Table 1. Mean of Each Writing Aspect

Writing Aspects	Mean of Students' Score		Improvement	Percentage of the Improvement
	Pre-test	Post-test		
Organization	14.56	15.44	0.88	6.03%
Content	16.13	17.00	0.87	5.39%
Grammar	12.00	15.69	3.69	30.73%
Punctuation, spelling, and mechanics	13.81	15.31	1.50	10.88%
Style and quality of expression	14.38	15.88	1.50	10.40%

The improvement of the average score (mean) of each aspect could also be seen through Figure 4.

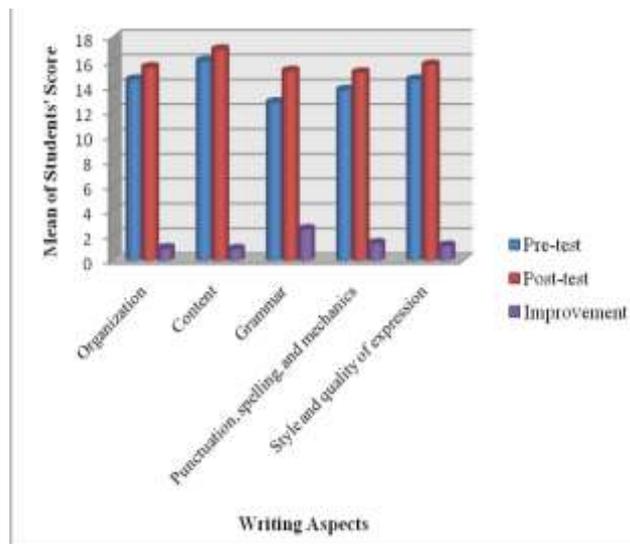


Figure 4. Mean of Each Writing Aspect

The level of students' achievement could be seen in Table 2.

Table 2. Level of Achievement

Test Scores	Probable Class Performance	Frequency	
		Pre-test	Post-test
80 – 100	Good to excellent	-	8
60 – 79	Average to good	16	8
50 – 59	Poor to average	0	0
0 – 49	Poor	0	0

The level of students' achievement could also be seen in Figure 5.

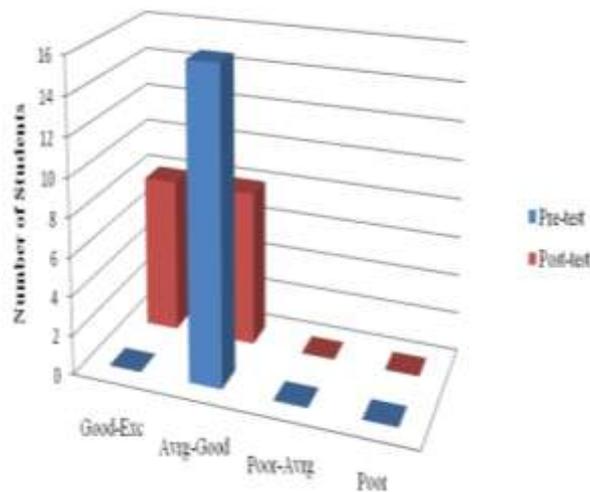


Figure 5. Level of Achievement

In general, students' writing skill was developed and better after the treatments. There were improvements in all writing aspects. The highest improvement belonged to grammar. Here, the improvements were about the use of personal pronoun and the students' consistency in applying the rules of simple past tense in their texts.

The other improvement was the aspect of organization, which was shown by the students' better achievement in terms of creating cohesion and understanding about the generic structure of recount text which comprised orientation, sequence of events, and re-orientation. Besides, this aspect was also related to the appropriateness of the transitional expressions.

The aspect of logical development of ideas (content) was also improved. This aspect was related to the completeness of the ideas and the coherence of the text.

After the treatments, the students could more easily develop their ideas.

There were also some improvements in the mechanics aspect. The improvements were about the descent of the incorrect use of full stop and comma, the incorrect spelling, and capitalization problems.

The other improvement was also showed in the aspect of style and quality of expression. The improvement was shown by the quality of expression which was better or more appropriate and the variety of the conjunctions to show the temporal sequence. In other words, the students' vocabulary mastery had increased.

### **The Analysis of the Field Notes**

Field notes were also used as the instrument of collecting data in this study. There were some aspects which were analysed here. They were the implementation of the combination of jigsaw, mind-mapping, and roundtable techniques, the students' interest and attitudes towards it, and the development of students' writing skill.

In broad outline, the writer could do almost all of what she had planned. The writer could apply jigsaw, mind-mapping, and roundtable techniques and could give feedback to the students although it was quite difficult in making students

motivated to write at the beginning and to manage the time.

During the implementation of the combined technique, the students were cooperative. Most of them paid attention to the writer's instructions although it needed an effort to manage the class well. In addition, the students did not hesitate to ask what they did not know. They seemed interested when the jigsaw, mind-mapping, and roundtable techniques were applied. They seemed excited when they worked in groups. The students also learned to be more confident and responsible. Moreover, the class was more alive due to the student interaction.

In the beginning, students got difficulties in some aspects, such as: grammar, vocabulary, organization, mechanics, etc. Related to the grammar, especially about the finite element, there were many students who could not easily understand it. The treatments could help the students overcome their difficulties in writing texts although not all of the improvements in all writing aspects were significant enough.

In summary, the students' writing skill was getting better after being taught through the combination of jigsaw, mind-mapping, and roundtable techniques.

## ***Discussion***

The results of the study showed that all writing aspects were improved after the students had been taught through the combination of jigsaw, mind-mapping and roundtable techniques. Those writing aspects were grammar; punctuation, spelling, and mechanics; style and quality of expression; organization; and content aspects. Through jigsaw, students were facilitated to deepened their knowledge (especially about the social function, the generic structure, and the linguistic features of the given texts including the grammar) in expert teams and could get insight from their group mates after they returned to their home groups. Moreover, the use of mind-maps before starting to write texts seemed to be very beneficial for the students. Like the findings of the previous study about mind-mapping, the students could brainstorm their ideas well and their ideas could be systematic, starting from the main topic until the supporting sentences. Through a mind-map, the students could also make a list of vocabulary or other important notes for their texts. Furthermore, the students were encouraged to create cohesion and achieve coherence when they practice to write texts through roundtable.

## **CONCLUSIONS AND SUGGESTIONS**

The combination of jigsaw, mind-mapping and roundtable techniques presented in this study aims to develop students' writing skill. All writing aspects which consist of grammar; punctuation, spelling, and mechanics; style and quality of expression; organization; and content aspects are improved after the treatments. In addition, the highest improvement belongs to grammar aspect. Furthermore, based on the field notes, the students gives positive responses towards the treatments and the treatments seems to be worthwhile for the development of the students' writing skill. Based on the results of the study, it can be concluded that the combination of jigsaw, mind-mapping, and roundtable techniques can develop students' writing skill in many ways including grammar, mechanics, vocabulary, organization, and content aspects.

Based on the conclusion above, the readers are hoped to take benefits of this study. Moreover, for other researchers who are willing to conduct other studies under the same field, this study can be a reference and they are hoped to make the better studies.

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