

## USING THE MIND MAPPING TECHNIQUE FOR BETTER TEACHING OF WRITING IN ENGLISH

By  
Fitria \*

*University of Syiah Kuala, Banda Aceh*

### ABSTRACT

The aims of this study were to find out whether there would be any significant improvement in the ability of students taught to write in English using the Mind Mapping Technique (MMT) by comparison with students taught using another technique. It is further to investigate the effect of teaching writing to the first grade students at a high school in Banda Aceh, Indonesia, using MMT. This research was an experimental study, two classes were taken as the sample, a control group (CG) and an experimental group (EG), each with 32 students. The quantitative data was obtained from the results from the pre-tests and the post-tests of writing done by the students. The result of the quantitative data analysis can be seen from the result from the post-tests for each group where the mean of the post-test scores from the EG was 81, while that from the CG was 70. By comparing the t-test score and t-table score, the result of the t-test was 6.38, while the result of the t-table at a level of significance with  $\alpha=0.05$  was 1.68. Thus, the t-test score was higher than the t-table score. Hence, it can be concluded that the students who were taught using the MMT performed better at writing tasks than those who were taught by another technique. The analysis of the writing done by the students to investigate the effects of the MMT also showed that the students in the EG improved in every aspect (content, vocabulary, grammar, organization and mechanics) of writing since they were taught using MMT. After being taught using the MMT they could develop their ideas into good paragraphs and compose a well-written piece of writing.

Key words: *Mind Mapping Technique, Writing.*

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\*Corresponding author: [fitria.englishteacher@gmail.com](mailto:fitria.englishteacher@gmail.com)

## **INTRODUCTION**

English is one of the compulsory subjects for students at senior high school. A lot of attention should be devoted in order to achieve the teaching objectives. Some of the teaching objectives for English at senior high school are developing the communication competence of students in oral and written English to achieve an informational level of literacy, building basic knowledge of English and motivating them to learn English (Depdiknas, 2006). From these objectives, it can be inferred that the students are expected to have some abilities to access knowledge in English using their language competence. Therefore, they are encouraged to communicate using spoken (speaking skills) as well as written English (writing skills) in order to improve their knowledge.

Writing is considered the most critical of the English language skills. Many students struggle to write error-free sentences and to deliver their ideas to the reader at the same time (Brown, 1997). They need to be able to offer their ideas and information appropriately so that the reader can get accurate information. At senior high school, the objective of teaching writing is to develop the competence of students to write various functional text types and genres which include procedure, descriptive, recount, narrative, and report writing (Depdiknas, 2006). Also, based on the Content Standards (Depdiknas, 2006), the standard competence for first year students in writing is being able to write meaningful short and simple functional texts in narrative, descriptive and news item format to interact with people in their surroundings. Due to this standard competence, the students are required to study the narrative, descriptive and news items text types in order to be able to write them.

Based on the above objective for teaching English, it can be interpreted that in the first year of senior high school, English is introduced to develop the skills of students to include competence in written and spoken communication and discourse. The students should be able to use their spoken and written English in communication and to provide relevant information to the interlocutor or the reader about daily life interactions (Depdiknas, 2006). However, many students seem to encounter some difficulties in implementing the appropriate text types in written communication, especially for descriptive texts. Many English teachers often express their concerns about the weaknesses of the students in writing and as a result the students often fail in the writing exams. Some of them cannot even write very short

compositions well. Students often appear confused when finding the topic and how to write about it in a paragraph.

Based on the preliminary study conducted on the first graders at a high school in Banda Aceh, the majority of these students struggled to write a descriptive text. They had difficulties in starting to write, especially in generating ideas. Furthermore, lack of vocabulary, poor grammar, punctuation and mistakes in mechanics made it difficult for them to even produce related sentences. The researcher also examined other texts written by the students to find out their ability in writing. In order to pass English, the students must reach the minimum standard criteria score of 75. The results showed that many students had great difficulty to reach this score. Moreover, from the activities in the classroom, it can be seen that they struggled to compose descriptive texts and seemed to be unmotivated. It was found that the teacher used a stagnant common teacher-centered method in the teaching learning process. All power and responsibility in the classroom were held by the teacher during the teaching-learning process. This traditional teaching method made the students less active and did not motivate them to write descriptive texts. This condition was added to by the lack of effort by the teacher to enable the students to develop their interpersonal skills in building up and motivating the students to write descriptive texts.

Then, the measurements used to evaluate the writing of the students, including the descriptive text, are based on the five components of writing via: content or ideas, vocabulary, grammar, organization, and mechanics (Jacobs, et al, 1981). Jacobs, et al. (1981) explain each of the components as follows. Ideas are the main message of the content with all the supporting details that enrich and develop the topic of writing. Vocabulary for descriptive texts are words which are related to the names of places locations, destinations, and their functions. Grammars used in writing descriptive texts are in present or past form. The present tense is often used in descriptive texts, but sometimes the past tense is also used to describe a certain thing which is extinct or not available anymore. Then, organization is the internal structure of a piece of writing, the pattern and sequence should fit the central idea. Finally, mechanics is the role in writing of items such as punctuation, capitalization, and the correct spelling of each word.

Numerous methods and techniques have been created to solve the writing problems of students. Thus, the Mind Mapping Technique (MMT) has been developed as a way of improving the writing ability

of students. It is a revolutionary technique for capturing ideas on a horizontal surface which was developed by Tony Buzan in 1970 (Mahmud, Rawshon & Rahman, 2011). It can be used in every activity where thought, planning, problem solving, and recall or creativity are involved. According to Cahyono (2012), mind mapping is developed based on the consideration of writing as a process. He also asserts that this technique can build and concentrate the vocabulary and grammar of students. He further sees mind mapping as a method that focuses on the content of writing because it is used to stimulate ideas for an account of a personal experience, build a list of issues, identify relationships between them, and prioritize the essential ideas. Mind mapping can be used as a pre-writing activity. Students start with a topic at the centre and then generate a web of ideas by developing and relating these ideas as their mind makes associations. Pictures, photographs or cartoon drawings can be used as media to make the students more interested in learning to write (Cahyono, 2012).

Based on the previous description, there are two research questions for this study.

1. Is there any significant difference in the ability to write of students who are taught using the MMT and those who are taught using another technique?
2. To what extent can teaching students how to use the MMT improve the different aspects of writing in writing done by those students?

In line with the above research questions, the objectives of the study were to find out whether there would be a significant difference in the writing ability of the students taught by using the MMT and those who are not, and to investigate the extent of the MMT to improve the various aspects of writing in paragraphs written by the students.

## **LITERATURE REVIEW**

### **Writing**

Writing is an important part of communication. As one of the four basic skills of English, it usually functions as a means of communication in which written messages are delivered. Good writing skills allow a student as a writer to communicate ideas with clarity and ease to a far larger reading audience than through face-to-face or telephone conversations (Heidarnezhadian, Aliakbari & Mashhadi, 2015). According to Hairston (1986), writing is not only about composing a simple text, but also a thinking process that involves the

purposes, ideas, thoughts, and facts that are intertwined with it. Therefore, it is important to develop and generate the ideas, thought and facts from students in order to enable them to develop good writing skills. Furthermore, Brown (2007) has stated that writing is a process of generating ideas that should be organized coherently, using discourse markers and rhetorical conventions. He also notes that writing should be revised and edited for appropriate grammar before producing the final product.

Additionally, Heaton (1986) proposes five general components of a good piece of written prose. The first component is use of language. It is the ability to write correct and appropriate sentences. The second component is the mechanical skills which means the ability to use correctly those conventions peculiar to the written language such as punctuation and spelling. The third component is treatment of content that is the ability to think creatively and develop thoughts, excluding all irrelevant information. Next, are the stylistic skills, the ability to manipulate sentences and paragraphs and also to use language effectively. The last component is judgement skills. This is the ability to write in an appropriate manner for a particular purpose with a particular audience in mind. In short, the conventions of English grammar, content, organization, vocabulary use, and mechanics are the characteristics needed in order to produce well-organized writing.

Moreover, Ur (1996) states that the purposes of writing are to express ideas and to convey messages to the reader. In other words, she assumes writing as a medium in which the writer communicate with the reader. Moreover, Heaton (1986) suggests that there are four common purposes in writing: to inform, to explain, to persuade, and to amuse others.

### **The Mind Mapping Technique**

The Mind Mapping Technique (MMT) was developed based on the research by John Dewey (1916) who concluded that students will learn better if what is learned is related to what they already know and the activities and events that are happening around them. Contextual learning involves seven major components of productive learning, namely: constructivism, questioning, inquiry, learning community, modelling, reflection and authentic assessment (Depdiknas, 2006).

Modelling is one of the seven components of contextual teaching that can easily be used by the teacher in teaching writing (Satriani, Emilia & Gunawan, 2012). It is essential for a teacher to demonstrate

the model to the students before starting the writing activities, for example the writing model for how to operate a tool or how to make matches.

In addition, mind mapping is a suitable technique to improve reading comprehension and writing ability. It has been referred to by many names such as semantic mapping, webbing, clustering and brainstorming (Hyerle, 2008). Teaching writing using the MMT means that the students have to learn how to apply this technique as a pre-writing activity. This technique helps the students to organize their ideas and to increase their vocabulary. It supports the students to brainstorm, generate ideas, relate main ideas and supporting details. Then, the students can share their ideas and listen to suggestions from their partners or from other students in their work-group about the content before combining their ideas into a good paragraph.

There are several steps that should be applied for the teaching of writing descriptive texts by using the MMT. Buzan (2006) explain the steps as the following. First, the students are encouraged to write a key word or phrase on a clean piece of paper. Second, they circle the word or phrase and let the connections flow mentally and verbally. Next, they write down the new words or phrases that come to mind, circle them and connect them together with lines. The teacher needs to encourage the students to keep their hands moving all the time, cluster for a while, and continue adding to the mind map. Finally, the students write a draft without worrying about attaining perfection.

The MMT has a number of advantages for students and teachers. The benefits of the MMT for the students are as follows. First of all, Hedge (2000) says that it helps students to organize their ideas. It encourages students to think, write and learn to organize their own writing. Moreover, it increases the vocabulary of students that can result in a significant improvement in their writing. Furthermore, mind mapping can help avoid mistakes. In relation to this, Buzan (2006) mentions that mind mapping provides an opportunity for students to gain more knowledge and find many different kinds of errors in their writing such as misplaced commas, mis-spelled words, inconsistencies in ideas and mistakes in tenses before these kinds of problems are seen by their teacher.

Even though the MMT presents a number of advantages, the application of mind mapping in teaching writing may result in some disadvantages. Hofland (2007) mentions a number of shortcomings from this technique. First of all, mind mapping can be quite time-

consuming at the beginning since the students have to brainstorm their ideas before writing their compositions. The second disadvantage is that mind mapping is very personal. A mind map made by someone else could confuse others. It may work well if each person makes their own mind-map themselves. The last one is that the MMT is less familiar for school students. They may feel uncomfortable or embarrassed using colored pencils or crayons to prepare a mind map while other pupils are writing straight into their notebooks.

## **RESEARCH METHODOLOGY**

The writer used true experimental design for this research with two groups, one, the experimental group (EG) which was taught using the MMT, and the other, the control group (CG), was taught using the traditional Grammar Translation Method (GMT).

The population for this research were all 254 first year students at SMAN 4 Banda Aceh. The sample was chosen considering the normality and homogeneity of the students. Hence the sample had the same characteristics without considering the number of students in the sample. For this research, two Social Science classes were selected from the total of 8 classes as both classes selected are similar in many aspects. The sample was homogeneous as the participants are alike; that is they come from the same cultural background, similar family backgrounds and similar ability level. Almost all the students had poor English writing skills and also they had quite low motivation to learn English which meant that they were passive most of the time. The writer chose two classes from the first grade using simple random sampling. The two classes selected were X-IS 2 (as the EG) and X-IS 3 (as the CG). Each class consisted of 32 students.

The instrument used to collect the data for this research was tests. The raw data was obtained from the pre-tests and the post-tests of writing done by the students from the two groups. The content of the tests were designed by the writer under the guidance of her two supervisors.

Based on the data from the tests, the researcher formed tables for frequency distribution and analyzed them by using the formula for means, variance, standard deviation, t-test and percentages as proposed by Sudjana (2002). In this case, before continuing to analyze the scores using the t-test, tests were done for normality and variance from a homogenous population (see also Sudjana, 2002).

## RESEARCH FINDINGS AND DISCUSSION

### Findings

The data shows that the use of MMT was effective to improve the scores from descriptive texts written by the EG students. This is proven by the data from the pre-tests and the post-tests in Table 1.

**Table 1.** Summary of the Results from the Pre-tests from Both Groups.

Factor	Experimental Group	$S_{gab}$	$t$ -test	$df$	$\alpha$	$t$ -table	Control Group
N (sample)	32	6.49	0.92	62	0.05	1.68	32
$\bar{x}$ (mean)	58						53
$s^2$	47.4						36.9
$s$	6.8						6.0

Based on Table 1, at the level of significance of degree  $\alpha=0.05$  and  $df=(n_1+n_2-2)=(32+32-2)=62$ , the result of the  $t$ -table with the level of significance of 0.05 was  $1.68(t_{(0,95)(62)})=1.68$ , and the result of the  $t$ -test was 0.92. This means that the  $t$ -test was lower than the  $t$ -table result. By comparing the results from the  $t$ -test and the  $t$ -table, it was found that  $t$ -test <  $t$ -table, via:  $0.92 < 1.68$ . This result indicates that there was no significant difference between the data from both groups. In other words, the EG and the CG students were similar in term of their initial ability in writing for the pre-tests.

**Table 2.** Summary of the Results from Post-tests of Both Groups.

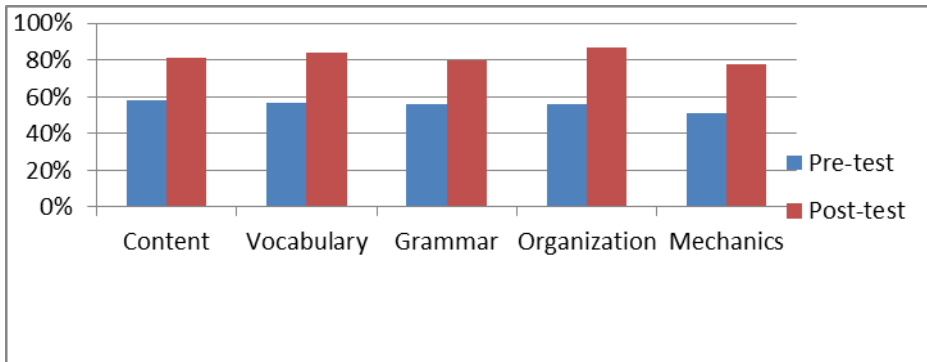
Factor	Experimental Group	$S_{gab}$	$t$ -test	$df$	$\alpha$	$t$ -table	Control Group
N (sample)	32	7.4	6.38	62	0.05	1.68	32
$\bar{x}$ (mean)	81						70
$s^2$	57.5						45.4
$s$	7.5						6.3

According to the level of significance of degree  $\alpha=0.05$  and  $df=(n_1+n_2-2)=(32+32-2)=62$ , the result of the  $t$ -table with the level of significance of 0.05 was  $1.68(t_{(0,95)(62)})=1.68$  and the result of the  $t$ -test was 6.38. Based on the criteria for test of two means that if the  $t$ -test <  $t$ -table,  $H_0$  should be accepted. On the other hand, if the  $t$ -table >  $t$ -test,  $H_a$  should be accepted. By comparing the result from the  $t$ -test and  $t$ -table, it was found that  $t$ -test >  $t$ -table, via:  $6.38 > 1.68$ . Therefore,  $H_a$  is accepted since the value of  $t$ -table exceeded the  $t$ -test score. This means



that the students who were taught by using the MMT produced better writing than students taught using the traditional techniques for teaching writing.

Figure 1 shows that the results from the EG students for each aspect of writing of their compositions.



**Figure 1.** Scores from the EG for Each Aspect of Writing.

Figure 1 shows that the results from the EG students for each aspect of writing went through significant improvements in every aspect from the pre-test to the post-test. In the aspect of content/ideas, the pre-test only reached 58%, while the post-test went up to 81%. This means that there was a remarkable improvement in content since the increase was equivalent to a 40% improvement from the pre-test to the post-test. In other words, the students generated better ideas after applying the MMT to develop their writing. This could be because they got good supporting ideas and could develop relevant supporting sentences more effectively for writing the topic.

In the aspect of vocabulary, the EG students got 57% in the pre-test which increased to 84% in the final post-test result. The improvement between the tests was 27% or nearly a 50% improvement on the pre-test result. This shows that there was a significant improvement in the vocabulary aspect of the students after the MMT was introduced. Students were able to employ appropriate vocabulary for each description. In descriptive texts, the students need to use adjectives and pronouns. The results indicated that most students were more able to use appropriate vocabulary for writing a descriptive text.

Furthermore, the increase in percentage from pre-test to post-test for the aspect of grammar was 24%, from only 56% in the pre-test up to 80% in the post-test. This indicated that the students were able to use

better grammar in writing a descriptive text which uses the simple present tense or simple past tense.

The fourth aspect was organization. Figure 1 shows the percentage in the post-test was 87% up from 62% in the pre-test. Increasing the value of the organization aspects by as much as 25% indicated that the writing from the students was clearer and more comprehensible. Between the sentences, there were clear relationships and the writing stayed focused on the topic. Thus the EG students were able to organize their writing better after they were taught how to use the MMT.

The last aspect, the mechanics of writing was only 51% in the pre-test, but increased up to 78% in the post-test. Thus it can be concluded that the students made less errors in their writing, especially in using capitals and in spelling, and in using punctuation correctly.

In conclusion all aspects of writing by the EG students improved significantly after they used the MMT to assist them in writing descriptive texts.

## **Discussion**

After calculating the mean scores of the pre-test results from both the EG and the CG, the difference between these two mean scores was compared by using an independent sample t-test. The mean of the EG pre-test scores was 58 while the mean of the CG pre-test scores was 53. The result of the t-test was 0.92 while the result from the t-table at a significance level of 0.05 was 1.68. As the result of the t-test was lower than the result from the t-table, the differences between the two means was not significant since the t-table exceeded the t-test. Thus, the EG and the CG were similar in term of their initial ability in writing for the pre-tests.

The same procedure was followed with the post-test scores: the mean of the post-test scores of the EG was 81 while that of the CG was 70. When the two means were compared through the independent sample t-test, the result of the t-test was 6.38 while the result from the t-table at a significance level of 0.05 was 1.68. Thus the difference between the two means was significant since the t-test exceeded the t-table. Therefore, the alternative hypothesis ( $H_a$ ) was accepted meaning that the students taught using the MMT did better in writing than those taught using the GTM technique.

Additionally, a paired t-test was also done to discover the differences between the scores from the CG and the EG before and after the treatments. This was to find out the effect of the MMT in

teaching writing. The results showed that there was a significant difference between the pre-test and the post-test scores from the EG students after they were taught how to use the MMT. Thus, it can be inferred that the treatment successfully enhanced the writing abilities of the EG students.

Next, the writing done by the students was analyzed to find out the development in the five aspects of writing: content, vocabulary, grammar, organization and mechanics. Heaton (1986) asserts that these five components must be done well in well written prose. The results showed that using the MMT the EG students were able to write good descriptive texts where these five components of writing were done well. In other words, the EG achieved a quite significant improvement in the quality of their writing.

Even though the CG also improved in almost every aspect, there was no significant increase in the quality of their writing. This could happen because the students had studied or practiced repeatedly during the study. Meanwhile, in the EG, the writing aspects with the highest improvement were vocabulary and mechanics. Vocabulary increased 27%, from 57% to 84%, and mechanics also increased 27% from 51% to 78%. Organization increased 25%, from 62% to 87%, while grammar increased 24% from 56% to 80%. Lastly, content increased 23% from 58% to 81% for the post-test. In conclusion, all aspects of writing increased significantly by between 23% and 27%.

Therefore, it can be concluded that teaching writing using the MMT improved the writing skills of the students, especially for descriptive texts. This result confirmed Cahyono's (2012) statement that the MMT can improve the writing of students, particularly for content, vocabulary and grammar.

## **CONCLUSIONS AND SUGGESTIONS**

### **Conclusions**

Based on the data in the research findings, there are three main conclusions that can be drawn from what was found from teaching writing by using the MMT.

First, the students taught using the MMT performed better at writing paragraphs than those who were taught using the GTM technique. Second, the MMT greatly improved the writing ability of the students. The results from the paired t-tests indicated that there was a significant positive difference between the pre-test and the post-test

scores of the EG after the MMT was implemented which did not occur with the CG. Finally, third, the EG significantly improved the quality of their writing especially in each of the five aspects of writing: content, vocabulary, grammar, organization and mechanics: All aspects of writing increased significantly on average of 25%. The MMT improved the critical thinking skills of the students so that they could develop their ideas themselves to write their own papers. As a result, the quality of their writing improved. Moreover, the students learnt to recognize mistakes in their writing and could avoid the same mistakes in their following compositions.

### **Suggestions**

Following this research, here are some suggestions to improve the teaching-learning processes for writing which could in turn improve the writing abilities of students.

First, the MMT should be considered as an alternative technique to be used by English teachers in teaching writing in the classroom since it has been found to be effective to improve the abilities of students to write in English especially EFL writing. Indeed, this research was focused on teaching writing especially for descriptive texts. This does not mean that the MMT can only be used in teaching such material; it can also be used for teaching many other subjects. Therefore, English teachers are suggested to use the MMT for teaching all types of texts and subjects. Second, English teachers should follow the steps suggested for using the MMT for teaching writing to increase the maximum results from the students. Next, English teachers should know that writing is not easy for most students, therefore, the teachers should try different techniques to encourage the students to write better.

For further research studies, the MMT can be used as a focus for teaching writing. Hence, it is recommended that more research be done following on from the findings of this research.

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