

# IMPROVING THE STUDENTS' ACHIEVEMENT IN WRITING PROCEDURE TEXT BY APPLYING MIND MAPPING TECHNIQUE

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## Abstract

This study aims to discover the effect of applying Four Square Graphic Organizer on students' achievement in writing descriptive text. It was conducted by using experimental research design. The population of this research was the seventh (VII) grade students of SMP Sultan Iskandar Muda Medan with four parallel classes. The samples of the research were two classes divided into two groups, experimental and control group which were chosen by using random sampling technique. Fifty students were taken as the samples. The experimental group was taught by using Four Square Graphic Organizer, while the control group was taught by using freewriting technique. The instrument for collecting the data was a writing test. Pearson Product Moment formula was applied to obtain the reliability of the test. Based on the calculation, it shows that the reliability of the test was 0,84 categorized as high reliability. Then, after analyzing the data, it was found that the value of  $t_{\text{observed}}$  was 3,66 with the degree of freedom (df)=48 at the level of significance  $p(0,05) = 2,01$ . It means that  $t_{\text{observed}}$  is higher than  $t_{\text{table}}$  ( $3,66 > 2,01$ ). The result of this study shows that Four Square Graphic Organizer has a significant effect on students' achievement in writing descriptive text.

Keywords: *writing, descriptive text, Four Square Graphic Organizer, experimental research*

## **Introduction**

### *The Background of the Study*

From a pedagogical side, English has four basic language skills to be taught, namely: listening, speaking, reading and writing. In this case, an English teacher must be able to master those basic language skills very well. They are required to comprehend (listening and reading) the language and produce (speaking and writing) the language. Among the four language skills taught in schools, writing is considered to be the most difficult skill to learn. It includes the ability to express the students' opinions or thoughts clearly and effectively in a written form. Ratnasari (2004) as cited by Sa'diyah (2011:164) states that these abilities can be achieved only if a learner masters some techniques of writing such as how to obtain ideas about what s/he will write on, how to express them in a sequence of sentences, how to organize them chronologically and coherently, and how to review and then to revise the composition until the writing is well-built.

There are some factors the students might think that writing is difficult. First, they find difficulties in gathering their ideas and organizing their ideas in a paragraph unity. Second, students do not have much idea of what to write and how to start writing. As a matter of fact, they waste too much time thinking about what they are going to write instead of freewriting. Third, students are afraid of making errors. Most students only focus on not making errors – spelling, grammar, and punctuations - to their writing rather than strengthening their ideas to be vivid. Spelling, grammar, and punctuation are also important parts in writing a paragraph, but the most important part is how the writers can give clear views through their writing. Finally, most teachers tend to use the traditional method.

Here, the teacher takes the major role explaining everything, doing what the student is supposed to do while the student's role is only listening to what is uttered to him/her by his/her teacher.

Based on the researcher's teaching experience in an English course for several years, she also finds that her students face the same obstacles in writing proficiency as the factors mentioned above. Here, applying various prewriting techniques, strategies, or writing methods students is very crucial. Those ways will lead the students to feel free to express their ideas and thoughts in written form. Nevertheless, students practically still have a hard time in applying suitable grammatical features, punctuations, word choice, spelling, and capitalization.

Based on the standard competency in the syllabus of the first grade of Junior High School (*Sekolah Menengah Pertama: SMP*) called Educational Unit Oriented Curriculum (*Kurikulum Tingkat Satuan Pendidikan: KTSP*), students are expected to be able to write simple paragraphs in descriptive, recount, procedure, report and narrative. In this case, teachers play a great role in thinking of a good strategy to be applied in their class in helping their students to write well.

Descriptive text is a type of text that functions to describe particular person, place, or thing. Wyrick (2011:323) states that the writer of description creates a word-picture of people, places, objects, and emotions, using a careful selection of details to make an impression on the reader. Students who are going to write this type of text should be able to express what they see, hear, feel vividly, so the reader can get the same views as what the writer means.

Because of the problems mentioned above, the writer chooses to conduct this study by using Four Square Graphic Organizer. Gould, Gould, & Burke

(2010:iv) state that it is a method of teaching basic writing skills that is applicable across grade levels and curriculum areas and can be applied for writing narrative, descriptive, expository, and persuasive text. It is an organizational tool to help students to write clear, organized paragraphs and essays, so they will be able to write systematically. Prewriting and organizational skills in Four Square are taught through the use of a graphic organizer. The graphic organizer helps students to conceptualize, understand, and structure a piece of written discourse successfully.

Luban, Lutke, Powell, & Wilson (2006) state that this method is relatively new; there is no research as to the effectiveness of this writing tool. The classroom action research conducted in 2006 by Luban, et al., showed that significant growth was observed in the students' writings. The strengths of this method seem to help the students to organize their thoughts in a logical way and improve the use of adding detail to their writings. However, the students still had difficulties in varied vivid word choice and the concluding sentence.

From the research findings from Luban, et al., the research will be conducted by using an experimental research to discover the effectiveness of applying Four Square writing strategy on student's achievement in writing a descriptive text in SMP Swasta Sultan Iskandar Muda Medan. It is expected that the problems Luban, et al., found during their research will be covered in this study. In the end of the study, the students will be able to organize their ideas systematically, add detail to their writings, use various vivid word choice and write concluding sentence well by applying Four Square Graphic Organizer while writing a descriptive text.

### *Research Question*

“Is there any significant effect of applying the Four Square Graphic Organizer on the students’ achievement in writing descriptive text?”

### *Conceptual Framework*

Writing is defined as one of the most powerful communication tools that used to share our thoughts and ideas in our life. Creating ideas or thoughts based on the learners’ experiences is needed as they will use that to communicate with others and in order to help readers remember information. People tend to remember written communication than oral. Studying writing does not only require the students to combine words into sentence or paragraph, but it is more than that. The students should use their experiences and prior knowledge to strengthen their piece of writing.

In this research, writing is focused on writing a descriptive text. There are several ways the teacher can use to teach this type of text, one of them is by applying the Four Square Graphic Organizer. This writing method will help the students to gather ideas and organize them well. Also, this fun method will help them to start their writing by following the steps they have made in the four squares. Each step will guide students to write systematically before publishing their piece of writing.

The first step in teaching writing by using Four Square Graphic Organizer, the teacher provides the topic the students are going to write. Then, students group ideas and words using Four Square Graphic Organizer. Second is labeling the fifth square with a summary sentence. They will complete the three boxes of the Four Square Graphic Organizer with similar ideas regarding to the topic using pictures

and/or words. The third step is placing a sentence in the center of the four square (using reasons instead of examples). The learners have to write a topic sentence in the center of the graphic organizer and a sentence in the first three boxes as the proof of the topic sentence. Then, they need to write a feeling sentence in the fourth box. Fourth is writing a paragraph (taking it off the organizer). This is the step where the learners are ready to take the sentences off the organizer and write them on paper. Fifth is adding more details. The learners need to learn the process of revision where they take one of their previously completed Four Square organizers and add an additional detail sentence to each of the first three squares. Then students are expected to complete a graphic organizer on their own, transfer it off the organizer onto lined paper in a paragraph form with good supporting details related to the topic sentence. Sixth is writing a wrap-up sentence. To guide the learners in this step, the former Four Square organizers with complete sentences and feeling sentences are changed to abbreviated phrases or words and the feeling sentence is changed to a wrap-up sentence which vividly illustrated the change expected when using the new concept. Seventh is adding supporting details. The learners are required to add another supporting detail to the first three squares. The last is adding connecting words to provide transition between ideas. During this step, the students are taught to choose appropriate connecting words between similar or contrasting ideas.

The steps mentioned above are very helpful for students to describe an object, a person, or a place based on the real life situation.

### *Methodology*

This study was conducted by using an experimental research. This study was conducted in two groups, i.e an experimental group which received the treatment by applying Four Square Graphic Organizer and a control group which did not receive the treatment. The writer gave pre – test to both groups.

The population in this study was the member of grade seven students of SMP SULTAN ISKANDAR MUDA Medan. There are four parallel classes consisting of 40 students.

Best & Kahn (2006:13) state that a sample is a small proportion of the population that is selected for observation and analysis. The samples then were taken by using simple random sampling. Ary, Jacobs & Sorensen (2010:150) state that the basic characteristic of simple random sampling is that all members of the population have an equal an independent chance of being included in the random sample. The control group was VII D and the experimental group was VII B. There were 25 students taken as the samples from each group.

In this study, test was used as the data instrument. The design of the test was in essay form. The students were instructed to write a descriptive text based on the topic given by the researcher. The tests were given to both groups; experimental and the control group. The time given was 40 minutes.

There are three procedures of conducting research:

- Pre – Test: given to experimental and control group before the treatment
- Treatment: conducted by applying the Four Square Graphic Organizer in experimental group for three meetings, spending 2 x 40 minutes for each
- Post – Test: given to both groups after the treatment completed

To collect the data, the researcher used Jacob's scoring test. Jacobs (1983:140) as quoted by Weigle (2009:116) asserts that there are five indicators to consider in writing test: Content, Organization, Vocabulary, Language Use, and Mechanics.

The following analysis attempts to group the many and varied skills necessary for writing good prose into five general components or main areas:

- **language use:** the ability to write correct and appropriate sentences;
- **mechanical skills:** the ability to use correctly those conventions peculiar to the written language – e.g. punctuation, spelling;
- **treatment of content:** the ability to think creatively and develop thoughts, excluding all irrelevant information;
- **stylistic skills:** the ability to manipulate sentences and paragraphs, and use language effectively;
- **judgment skills:** the ability to write in an appropriate manner for a particular purpose with a particular audience in mind, together with an ability to select, organize, and order relevant information.

(Heaton, 1988:135)

Validity is the quality of a data gathering instrument that enables it uses to measure what is supposed to measure. Gronlund (1998:226) as quoted by Brown (2003:22) states that validity refers to the extent to which inferences made from assessment results are appropriate, meaningful, and useful in terms of the purpose of the assessment.

Content and construct validity will be applied in this study. Content validity refers to the test which measures the material or content taught in a course or time period. The study concerned on measurement of the test that worked well to the subject matter and learning outcomes covered during the treatment. This study deals with content validity which relates to the representative of test item. Thus, by applying content validity, the writer will know whether the test items are valid or not. The written test in the form of descriptive text by applying the Four Square Graphic Organizer will be the instrument to measure the content validity.



According to Vockell (1983:57), construct validity refers to the extent to which a test can be interpreted in terms of underlying psychological constructs. Construct validity usually measures subjective tests such as oral and written test.

A reliable test is consistent and dependable even if you give the same test to the same students or matched students on two different occasions, the test should yield similar results (Brown, 2003:20). The test used in this study was the form of writing test. In scoring the writing test, it involves the subjectivity. Therefore, inter-rater reliability was used to find out whether a test is reliable. The writer used Pearson Product moment formula Arikunto (2010:213) as follows:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

$r$  = the correlation between two variables;  $N$  = the number of samples

$\sum X$  = total score of pre – test;  $\sum Y$  = total score of post – test

According to Best & Kahn (2006:388) the coefficient of ( $r$ ) can be interpreted using the following criteria:

1. 0.00 – 0.20 : Negligible (Very Low)
2. 0.21 – 0.40 : Low
3. 0.41 – 0.60 : Moderate (Fair)
4. 0.61 – 0.80 : Substantial (High)
5. 0.81 – 1.00 : High to Very High (Very High)

The test was calculated by using  $t$  – test formula, developed by Arikunto (2010:254), to know the effect or result of the research.

$$t = \frac{M_x - M_y}{\sqrt{\left[ \frac{d_x^2 + d_y^2}{(N_x + N_y) - 2} \right] \left[ \frac{1}{N_x} + \frac{1}{N_y} \right]}}$$

$M_x$  = the mean of experimental group

$M_y$  = the mean of control group

$dx^2$  = standard deviation of experimental group

$dy^2$  = standard deviation of control group

$N_x$  = the total number of experimental group

$N_y$  = the total number of control group

### **Result and Discussions**

There were fifty students who were taken as samples of this study. They were divided into two groups, namely experimental group and control group. To collect the data, writing test was given to the students. The treatment was applied in experimental group only, while another group was not given the treatment. The data of this study were obtained after pre – test and post – test were applied in both groups. The data were the students' scores needed for hypothesis testing.

From the data of the control group, there were 20 students improved their scores and 5 students did not. The lowest score in the pre – test was 34 and the highest was 77. Meanwhile, the lowest score in the post – test was 47 and the highest was 90. On the other hand, the data taken from the experimental group showed that 23 students improved their scores and 2 students did not. The lowest score in the pre–test was 40 and the highest was 77. Meanwhile, the lowest score in the post–test was 58 and the highest was 92.

From the data mentioned obtained, there was an effect of applying Four Square Graphic Organizer on students' achievement in descriptive writing. The increasing of the scores shows that the students have good ability in writing a

descriptive text after applying the treatment. The students who did not improve their scores probably still find difficulties in writing descriptive text.

Inter-rater reliability was used to calculate the reliability of the test. The writer used Pearson Product moment formula Arikunto (2010:213) as follows:

$$r_{xy} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

where:

$N= 25$ ;  $\sum X= 1417$ ;  $\sum Y= 1441$ ;  $\sum X^2= 82469$ ;  $\sum Y^2=85617$ ;  $\sum XY=83658$

From the calculation, the reliability of the test was 0.84 (**very high**).

The formula of t – test and the distribution table were applied in order to discover whether the hypothesis was accepted or rejected.  $H_a$  is accepted if the  $t_{\text{observed}} > t_{\text{table}}$ . In this research, the calculation of the scores by using t – test for the degree of freedom (df) 48 at the level of significance 0.05 that the critical value is 2.011.

The result of computing the t – test shows that t–observed (t–obs) is higher than t–table or can be seen as follows:

$t\text{-obs} > t\text{-table}$  ( $p = 0.05$ ) with df 48

$3.68 > 2.011$  ( $p = 0.05$ ) with df 48

It shows that the alternative hypothesis is accepted. It means that there is significance effect of Four Square Graphic Organizer on students' achievement in descriptive writing.

## **Conclusion and Suggestions**

### *Conclusion*

Having analyzed the data, it was found that Four Square Graphic Organizer significantly affects the students' ability in writing descriptive text, since  $t - \text{observed} > t - \text{table}$  ( $3.68 > 2.01$ ) with  $p = 0.05$  and degree of freedom (df) is 48. The application of Four Square Graphic Organizer in teaching descriptive writing in the classroom enables students to write systematically. Also, it encourages them to gather as much information as they can about the object being described, process the information they have in mind into Four Square Graphic Organizer by grouping them into the squares and adding details to their ideas, taking the brainstorming ideas off the draft. In conclusion, Four Square Graphic Organizer gave significant effect on students' achievement in descriptive writing as they become systematic in writing descriptive text.

### *Suggestions*

Related to the conclusion, some suggestions are pointed to English teacher, students, as well as other researchers who are interested in this technique. First, English teacher is expected to apply this technique in teaching writing as this technique not only can be applied in teaching descriptive writing but also narrative, informative, and persuasive writing. Second, Students are expected to apply this technique independently in writing descriptive, narrative, persuasive, and informative text as this technique can guide them to write independently. Third, Other researchers who are interested in this technique can apply this technique in improving students' writing proficiency.

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