

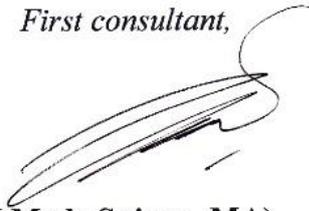
## APPROVAL

This journal entitled

**THE EFFECTIVENESS OF CLUSTERING TECHNIQUE TOWARD  
STUDENTS' ABILITY IN WRITING DESCRIPTIVE TEXT:  
An Experimental Research at the First Grade Students of SMAN 1 Kediri in  
Academic Year 2013/201**

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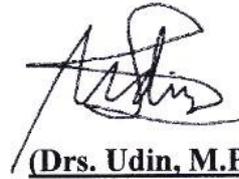
*First consultant,*



**(I Made Sujana, MA)**

NIP. 19651231199103 1 016

*Second consultant,*

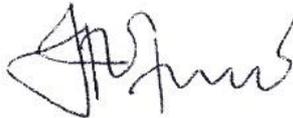


**(Drs. Udin, M.Pd)**

NIP. 19641231199303 1 016

Acknowledged by:

*Head of Language and Art Department  
The Faculty of Teacher Training and Education  
Mataram University*



**(Dra. Siti Rohana Hariana Intiana, M.Pd)**

NIP. 1966033119903 2 002

**THE EFFECTIVENESS OF CLUSTERING TECHNIQUE TOWARD  
STUDENTS' ABILITY IN WRITING DESCRIPTIVE TEXT:**

An Experimental Study at the First Grade Students of SMAN 1 Kediri  
in Academic Year 2013/ 2014

**Nuryadi Oktayudin – Mataram University**

[iadhy.lapeh@gmail.com](mailto:iadhy.lapeh@gmail.com)

**ABSTRAK**

Penelitian ini berkaitan dengan pengujian penggunaan teknik clustering dalam menulis deskriptif teks. Penelitian ini bertujuan mengidentifikasi apakah teknik clustering memberikan efek yang signifikan untuk meningkatkan kemampuan siswa dalam menulis teks deskriptif. Penelitian ini dilakukan melalui desain penelitian eksperimen. Populasi dalam penelitian ini adalah siswa kelas satu SMAN 1 Kediri tahun ajaran 2013/ 2014 yang terdiri dari 4 kelas dan dua diantaranya digunakan sebagai sampel untuk pengumpulan data. Kelas tersebut yakni kelas X-A sebagai kelompok eksperimen dan kelas X-B sebagai kelompok kontrol yang masing-masing kelompok terdiri dari 22 siswa. Data dikumpulkan dari hasil *pre-test* dan *post-test* dengan menggunakan tes tulis sebagai instrumen pengumpulan data. Data kemudian dianalisis menggunakan uji *t*. Berdasarkan analisis tersebut, didapatkan rata-rata *pre-test* kelompok eksperimen yaitu 58.5 dan kelompok kontrol yaitu 58.58. Sementara itu, hasil rata-rata *post-test* kedua kelompok secara berurutan yaitu 78.82 dan 69.18. Hasil dari uji *t* adalah 2.555 sedangkan nilai dari tabel-*t* adalah 2.018 pada taraf signifikansi .05 (95%). Hasil ini menunjukkan bahwa nilai uji *t* lebih tinggi dari pada nilai tabel-*t* ( $2.555 > 2.018$ ). Hal ini berarti hipotesis nol ditolak dan hipotesis alternatif diterima. Hasil ini mengindikasikan bahwa penggunaan teknik clustering memberikan kontribusi yang signifikan untuk meningkatkan kemampuan siswa dalam menulis teks deskriptif.

**ABSTRACT**

This study deals with the investigation of using a clustering technique in writing descriptive text. It is aimed at identifying whether clustering technique gave significant effect to improve students' ability in writing descriptive text. It was conducted by applying experimental research design. The population of this study was the first grade students of SMAN 1 Kediri in academic year 2013/ 2014 consisting of 4 classes and two of them were used as sample for collecting the data. They are class X-A as experimental group and class X-B as control group, each of which consisted of 22 students. The data were collected from the students' pre-test and post-test score by using written test as the instrument of data collection. The data were, then, analyzed by using t-test. From the analysis, it was found that pre-test mean score of experimental group was 58.50 and of control group was 58.58. Meanwhile their post-test mean score were 75.82 and 69.18 alternately. The result of t-test was 2.555 while value of t-table was 2.018 at confidence level .05 (95%). This showed that the value of t-test is higher than t-

table ( $2.555 > 2.018$ ). It means that  $H_0$  is rejected and  $H_a$  is failed to be rejected. This result indicates that using clustering technique is better than using conventional one. Therefore, it can be concluded that clustering technique has significant contribution to increase student's ability in writing descriptive text.

**Key words:** *Clustering Technique, Descriptive Text, Writing Skill, Experimental Research*

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## **1. Introduction**

### **1.1 Background**

Learning English language brings students to achieve ability in communication both spoken and written. Meanwhile for having a good communication, there are for skills to be mastered in English language. One of them is writing skill. However, mastery on writing requires conceptual and judgmental element beside grammatical and rhetorical devices (Heaton, 1988: 135)

In the first grade students of senior high school, the students are expected to be able to write such types of monolog text. Regarding to basic competence of writing in curriculum – KTSP, Descriptive text is one of text types that should be mastered by the students (BSNP, 2006).

Since English has set up as a subject in the curriculum, there are many problems exist in writing, whereas students are required to produce a good writing. As the researcher experienced teaching practice program at SMAN 1 Kediri, many students lack skill in writing. Most of them are difficult in expanding their ideas when they are having a topic. They have unclearly ideas even their writing are not well organized and error exist in vocabulary, grammar and spelling as well. Consequently, it will affect the students' achievement in attaining the objectivity of the study. Thus, teacher needs to think creatively to choose appropriate technique to help and motivate the students in learning activities. One of the techniques that can be chosen is clustering.

Clustering technique was first developed in 1983 by Gabriel Luser Rico. It deals with making a visual map to help the students organize their idea related to the topic closely. This technique is like mind mapping that both are designed with central idea and connecting lines. However, clustering technique is not using color in its design. It also not uses graphical illustration of ideas such as pictures and symbols, which may contain in a mind map. Clustering technique uses lines, boxes, arrows or

circle to show relationship among the ideas. Hence, it will save time to use it in the class.

Based on the explanations above, this research attempts to investigate whether the clustering technique is effective to teach students in writing descriptive text. The object of this research is students of senior high school because descriptive text is part of subject taught in senior high school. Therefore, this research investigates the effectiveness of clustering technique toward students' ability in writing descriptive text at the first grade students of SMAN 1 Kediri in academic year 2013/ 2014.

### **1.2 Statement of the Problem**

This study is conducted to answer the following research question: is there any significant effect of writing descriptive text using clustering technique at the first grade students of SMAN 1 Kediri?

### **1.3 Hypothesis**

The researcher formulates Alternative Hypothesis ( $H_a$ ) that is "there is significant effect of using clustering technique in writing descriptive text at the first grade students of SMAN 1 Kediri" and Null Hypothesis ( $H_0$ ) that is "there is no significant effect of using clustering technique in writing descriptive text at the first grade students of SMAN 1 Kediri".

### **1.4 Scope of the Study**

This study is limited to investigate the effect of writing descriptive text using clustering technique especially in teaching writing descriptive text at the first grade students of SMAN 1 Kediri academic year 2013/ 2014.

### **1.5 Significant of the Study**

Theoretically, the teacher will know if clustering technique is effective to improve students' ability in writing descriptive text. The result of this research is expected to use as reference and additional knowledge for next research.

Practically, the result of this study may become an effective technique for teaching writing skill in senior high school, particularly in the first grade of SMAN 1 Kediri.

## **2. Review of Related Literature**

### **Writing Skill**

Writing is a form of communication to express the human being thinking or feeling written on letter or other writing media. Sokolik (cited in Linse 2005: 98) pointed out writing as combination of process and product. The process views on how to gather the ideas and work with them. In short, writing is a productive process by combining words and considering other elements in writing to be a complete concept of thought or ideas.

Writing is considered as important skill to be mastered by the students. For this reason, it is used as communicative act that transmits information and links people together (Brown, 1993: 2). However, it is realized as difficult skill for learners to be mastered. The difficulties lay in generating ideas as well as in translating the ideas into readable text (Richard and Renandya, 2002: 303). In addition, students need to consider about organizational skill in writing such as content, appropriate language and so on (Harsyaf, *et al.*, 2009: 3). Thus, it can be said that writing is a complex skill.

### **Witten Text Types**

In teaching – learning, generally written text is divided into types. Different forms of writing are often known as text types at school. In the first grade of senior high school, there are five major text types, they are *recount*, *narrative*, *procedure*, *descriptive* and *news items* (BSNP, 2006)

### **Writing Descriptive text**

Descriptive text captures something into language. It describes the object as real as possible to what something or somebody is like. The generic structure of descriptive text consists of two parts: (1) *identification* and (2) *description* (Sudarwati and Grace, 2007: 135). This text is divided into three general text types. They are description of a person, description of a thing and description of a place.

### **Teaching Writing**

Writing as a skill is as important as speaking, listening, and reading. It needs to learn. As mentioned by Langan (2011: 11), writing is not a natural gift. It is a skill like driving, cooking or the other skill that can be learnt. In short, this skill is not naturally acquired by people. Teaching writing has some reasons for students of English as a foreign language. They are reinforcement, language development, learning style and writing as skill in its own right (Harmer, 1998: 79).

### **Technique in teaching writing**

Writing is a complex skill and sometimes it had to teach. According to Ddeubel (2009) some activities that can be used such as *guided writing, graphic organizers, sequencing, and reading journal*.

### **Clustering technique**

Clustering belongs to graphic organizer that was first developed in 1983 by Gabriel L. Rico. She defined it as a nonlinear brainstorming process that generates idea, image, and feelings around a word topic until a pattern becomes discernible (Rico 1987: 17). Langan (2011: 28) defined clustering as a diagramming or mapping. Furthermore, he explained clustering as one of prewriting technique to help to think and develop a topic and get words on paper. Thus, it can be concluded that clustering is a prewriting technique to get many ideas quickly.

### **Teaching Writing Descriptive Text with Clustering Technique**

There are some instructions to teaching writing with clustering technique in the class. Below are some steps modified from Rico in beginning this prewriting activity (Rico, 1987: 17).

1. Tell students that they are going to learn to use a tool that will enable them to write more easily.
2. Teacher encircles a word on the board as a topic, for example *energy* and then asks students "what do you think of when you see that word?"
3. Encourage all responses (ideas). Cluster these responses, radiating outward. When they have finished giving their responses, show them how many ideas are floating around their heads.
4. Next, ask students to cluster a second word for themselves. Before that, tell them that the clustering process is about one or two minutes. If they do not know in English, they can write in L1.
5. Students work in groups, compare and discuss their ideas. This provides the opportunity for peer learning, the other students may be available to provide the English words for the idea that was noted in L1.
6. Ask them to keep their own clustering until they get signal that their mind is holding something they can shape into a whole.
7. The students begin to write. After they finish writing, ask them to give a title about their writing.

There are some advantages that can be gained when using clustering. The main benefit is that clustering not only uses the left hemisphere, but also it uses the right hemisphere of the brain which derives creativity. It becomes natural way to organize idea. Having clusters, students memorize the idea much faster, thus it saves time to use it in the class. Unfortunately, clustering may have some disadvantages. This technique may not yet use a lot in school, thus it can be quite time-

consuming in the beginning. Moreover, a cluster is a personal, so that probably not work at all for someone else.

### **3. Research Methodology**

#### **3.1 Research Design**

The research design in this study was commonly known as experimental research. Participants in this research were assigned to different groups that received different treatment (Lodico, *et al.*, 2006: 178). These groups were named as experimental or treatment group and control or comparison group. The experimental group was treated by using clustering technique in teaching writing descriptive text and the other group as control group was taught by using PPP (presentation, practice, and production) technique that was commonly used in the school. Although they were treated differently, they were tested by the same test.

#### **3.2 Population and sample**

The population was all the second semester of tenth grade students of SMAN 1 Kediri which is located on Jl Tgh. Abdul Karim, Rumak, West Lombok. The population was consisting of four classes; class X-A, X-B, X-C, and X-D.

The researcher took two classes that became an experimental group and control group as the sample of the population. The sample was taken through purposive sampling. This technique sampling was done by taking the sample based on the consideration of a certain purpose (Arikunto, 2010: 183). In this research, the researcher took the class that had the same characteristic on number of the students. The classes that had been taken as the samples were class X-A as experimental group and X-B as control group in which each class consisted of 22 students. Therefore, the total number of the students in both of the groups was 44 students.

#### **3.3 Method of Collecting data**

The kind of data collected in this research was quantitative which was taken from the result of writing test by the students. The sources of data in this research were students of class X-A and X-B of SMAN 1 Kediri. The data of this research was collected by using test. The writer applied two tests: pre-test and post-test. Pre-test was given before treating and post-test was given after treating in which each groups was provided different treatment. Then, both of them were tested by the same test. The instrument was in the form of written test. Scoring in this test was based on five criteria, namely; *content, organization, vocabulary, language use, and mechanics* (Jacobs *et al.* cited in Weigle, 2002: 116).

### 3.4 Method of Data Analysis

After the data was collected, the researcher analyzed the descriptive statistic. It was done by calculating the mean score ( $M$ ) and standard deviation ( $SD$ ) of the students' score. It used the following formula

$$Md_x = \frac{\Sigma dx}{N} \quad \text{and} \quad Md_y = \frac{\Sigma dy}{N}$$

(Experimental Group)                      (Control Group)

Then, calculating the square mean deviation score of both groups used the following formula.

$$\Sigma x^2 = \Sigma dx^2 - \frac{(\Sigma dx)^2}{N} \quad \text{and} \quad \Sigma y^2 = \Sigma dy^2 - \frac{(\Sigma dy)^2}{N}$$

(Experimental Group)                      (Control Group)

Next, the researcher did hypothesis testing. done was analyzed by identifying the significance of the two mean deviation scores of the two groups y using the following formula.

$$t - test = \frac{Mx - My}{\sqrt{\left(\frac{\Sigma x^2 + \Sigma y^2}{Nx + Ny - 2}\right) \left(\frac{1}{Nx} + \frac{1}{Ny}\right)}}$$

The last step was determining the degree of freedom. The following formula is used.

$$df = Nx + Ny - 2$$

The hypothesis criteria, if:

$t_{test} \geq t_{table}$ , it means that  $H_0$  is rejected (significant)

$t_{test} \leq t_{table}$ , it means that and  $H_0$  is accepted (not significant)

## 4. Findings and Discussion

### 4.1 Findings

Pre-test mean scores of the two groups were similar, they are 58.5 and 58.58 It identified that these groups had almost the same background of writing skill. In the other side, post-test score of the two groups were higher than pre-test. Moreover, their post-test men score were 75.82 and 69.18. It showed that each groups has an improvement

From the data gained, there were some students who got high deviation scores. The highest deviation scores of experimental group and control group were 37 and 26. It means that the students' scores increased approximately 37 point for experimental group while control group increased 26 point from the previous score. Meanwhile, the lowest deviation score reached from the experimental group was -6 and from control group was 0. Somehow, this indicated that clustering technique did not contribute a positive effect for some students.

The deviation score of experimental group was 381 and the square deviation was 10,257. In the other side, the deviation score of control group was 233 and the square deviation was 3,641.

Having calculating the mean deviation score and the sum square of deviation score in each group, the experimental group gained higher mean deviation score and sum square of mean deviation score than the control group did. Experimental group had result 17.32 for mean deviation and 3,658.77 for sum square of mean deviation. Meanwhile, the mean deviation of control group was 10.14 and the sum square of mean deviation was 1,173.32. So far, it can be assumed that the implementation of clustering technique gave effect to improve students in writing descriptive text at the first grade students of SMAN 1 Kediri. However it was not reliable enough to know the significant effect between clustering technique and PPP (conventional technique).

Then, the researcher did a further analysis by using t-test to confirm whether clustering had significant effect or not. The result of t-test was 2.555 and degree of freedom (df) was 42.

#### 4.2 Discussion

Having computed the data completely, the researcher would like to interpret the result whether clustering technique has significant effect or not by comparing the value of t-test and t-table. Based on the result of the data computation above, the value of t-test is 2.555 and the degree of freedom (df) is 42. In this research, the researcher takes two tailed test with the confidence level .05 (95%) and .01 (99%). Thus, the comparison between the value of t-test and t-table can be seen in the table below.

t-test	t-table		
	Degree of freedom (df)	.05 (95%)	.01 (99%)
2.555	42	2.018	2.698

Table 4.4 above illustrates that value of t-test at confidence level .05 (95%) is higher than t-table. However, it is lower than t-table at confidence level .01 (99%). It means that there is significant effect of clustering technique at confidence level .05 (95%), while at confidence level .01 (99%) is not giving a significant effect. Somehow, it can be concluded that clustering technique has significant effect to improve students writing descriptive text.

Referring to the comparison above, using clustering technique is better than using PPP technique. This is because of the fact that clustering

technique helps the students to drain their ideas quickly. As Langan (2011: 23) stated, it will help to think about and develop a topic and get word on paper. When the students have a topic, clustering makes them able to develop the ideas before starting to write. It begins with writing the topic in the center of the paper, then writing as many ideas as possible related to the topic which are connected by drawing lines. Furthermore, clustering technique allows the students to write whatever ideas that come through their mind because there is no right and wrong way of clustering or diagraming. It gives large chance to the student to think on paper of various ideas and details related to one another (Langan, 2011: 28). In addition, having a clustering of their ideas, the students are easy to pick up the ideas into paragraph. It gives a clear display of the relationship between the ideas. It is because clustering visualizes the ideas entirely. In the other word, the ideas are piled together and it can be seen at once as a whole (Rico, 1987: 30). Therefore, students can choose which one they want to use.

In the other side, clustering also has weaknesses. The implementation of clustering takes somewhat time-consuming. However, it can be minimized by modeling the technique to the students in the beginning. The researcher also found that the students got confused how to use it. They got confused in starting to write using this technique although the researcher had given a model how to generate it into paragraph in the beginning. The students are easy to explore their ideas into clustering, but they are confused where to start writing. Sometimes, it makes the researcher have to remodel it in the next meeting.

Finally, since the value of t-test (2.555) is higher than t-table at confidence level .05 (95%) with 2.018, it shows that the null hypothesis ( $H_0$ ): "there is no significant effect of using clustering technique in writing descriptive text at the first grade students of SMAN 1 Kediri" is clearly rejected. In the other side, the alternative hypothesis ( $H_a$ ) "there is significant effect of using clustering technique in writing descriptive text at the first grade students of SMAN 1 Kediri" is failed to be rejected. Thus, it can be concluded that the implementation of clustering technique has significant effect to improve the student's ability in writing descriptive text.

## **5. Conclusion and Suggestion**

Based on data analysis and the result of the research that had been previously conducted, it can be concluded that clustering technique has an impact on students' writing ability to develop and organize their ideas. It

can be seen in the table 4.1 that the experimental group reached higher post-test than the control group had. The post-test mean score of experimental group was 75.818, while the post-test mean score of control group was 69.182. It means that clustering technique is able to improve student's ability in writing descriptive text at the first grade students of SMAN 1 Kediri.

Based on the analysis, the value of t-test (2.555) was higher than t-table (2.018) by using two tailed test with confidence level .05 (95%). Therefore, the researcher concludes that clustering technique gave significant effect on student's ability for writing descriptive text at the first grade students of SMAN 1 Kediri.

Regarding to the implementation of clustering in the classroom, the researcher would like to give some suggestions as follow.

1. Clustering technique can be an alternative technique used by the teacher in the class room in order to improve the student's writing ability. Teacher should guide the students along the class to control the time. Regarding to the classroom practice, giving a model of clustering and how to start writing using this technique is important to do.
2. The students can frequently practice using this technique to improve their writing skill. Moreover, the researcher expects that this technique enrich the students' writing strategies.
3. The researcher suggests other researcher to apply this technique on other kinds of text and the other skill

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