

## The application of clustering technique in writing analytical exposition text

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**Abstract:** The objectives of the research were to find out: (1) whether or not the application of clustering technique enhances students' ability in writing analytical exposition text in the eleventh grade of SMA Negeri 1 Pancarijang and (2) whether or not the application of clustering technique in writing analytical exposition text is interesting for the eleventh grade students of SMA Negeri 1 Pancarijang. This research employed a Quasi-experimental design that applied experimental and control group. The population of the research was the eleventh grade (XI) students of SMA Negeri 1 Pancarijang in academic years 2013-2014. A total number of population was 294 students, and two classes of them were taken as a sample by using random sampling technique, class XI IPA 1 as the experimental group and class XI IPA 3 as a control group. The result of data analysis showed that there was a significant difference between achievement of the students who applied clustering technique and those who did not apply clustering technique (conventional technique) in writing analytical exposition text. It was proved by the mean score of the experimental group was higher than the control group in post-test ( $77.0 > 62.2$ ). Furthermore, the result of the t-test value (5.382) was greater than t-table ( $\alpha = 0.05$ ;  $df = 64$ ; t-table = 2.000) which means that  $H_1$  was accepted. The data analysis of questionnaire showed that the students had high interest in the application of clustering technique in writing analytical exposition. It was supported by 22 students (66.7%) who were strongly interested and 11 students (33.3%) who were interested. The mean score of students' answers in the questionnaire (87.0) was classified as a strongly interested category.

**Keywords:** Clustering Technique, Writing skill, and Analytical Exposition Text

### Introduction

Writing is one of the language skills that must be mastered by native speakers of the language as well as for foreign/second language learners. Writing is a tool that people have and use to communicate nonverbally, as a means of ideas, opinions, and emotional expressions. By committing our ideas to paper, our thinking becomes visible to the world. It also tends to be more permanent than spoken ideas as Conley in Ibnian (2010: 81) noted that people could keep their thoughts and experiences having a powerful

effect and lasting for a long time. By writing, people also can learn things in every subject area.

Furthermore, the fact that people frequently communicate through written language is not the only reason of including writing as a part of language learning syllabus. Raimes (1983: 3) indicated that "there is an additional and very important reason: writing helps our students learn." She explained that writing reinforces the grammatical structures, idioms, and vocabulary that students have studied. By writing, students also have a chance to be adventurous with the

language, to discover something new to write or a new way of expressing ideas. In addition, students get involved with the language in their effort for finding the right word and the sentence to express their ideas.

Among the skills, writing is the most difficult skill to learn. As Richards and Renandya (2002: 303) said that "writing is the most difficult skill for second language learners to master." Most of the students also regard writing as a boring and stressful activity. As a result, they are uninterested to get involved in writing class. Byrd (2011: 64) suggested that it happens because "learners are expected to develop ideas - which may or may not be themselves - into fully articulated products while taking into account the linguistic features of the target language that they may not yet have.". They are frequently instructed to do this individually. They are also expected to compose a polished piece of writing even without guidance from their instructor.

According to English curriculum of KTSP for senior high school, the eleventh-grade students must be able to write in terms of genres. One of the genres is analytical exposition text. Priyana et al. (2008: 58) defined that "analytical exposition proposes or suggests a certain topic which may only be pro or contra, not both." The purpose of the text is arguing a case for or against a particular position or point of view. It also explains how and why the argument is proposed. But in fact, the students are confused how to begin writing an analytical exposition text from the given topic. They also cannot arrange their ideas on the generic structure of analytical exposition text. Moreover, the students find difficulties in arranging words to a sentence, as well as sentences into a paragraph.

Based on the researcher's observation when she did teaching practice (PPL) in SMA Negeri 1 Pancarijang, developing ideas for making a composition was the most students' problem in writing class. When they were obliged to write, the students had not enough ideas to write down. Or even worse, they lost their ideas and did not know what to say. Ibnian (2010: 81) says that "some students do not purely face mistakes in writing but find themselves in hiding and seek games with ideas as well."

In order to solve this problem, it needs a technique which can help students to find and develop ideas. Sedley in Salam (2011: 3) suggested:

Actually, you have plenty to write about. After all, you live in the same world that "real" writers live in, and that world provides the raw material for millions of books every year. What you really need is not "something to write about," but some suggestions that will help you exploit the resources all around you.

Some researchers have found that conducting pre-writing activities are effective in increasing the composition quality of both L1 and L2 students. Byrd (2011: 75) concluded that pre-writing activities as the beginning of a journey through the writing process could provide a firmer foundation for students. As a result, students compose stronger end product.

There are several options for pre-writing activities that can be applied in teaching writing. One of them is clustering. In clustering, the main topic or the keyword from the assignment is written within a shape, such as a circle or a box. It is placed in the middle of a piece of paper. Related ideas are placed around the main topic and connected to the topic by lines. According to Steele and Steele (1991: 42), "clustering is a powerful technique which allows students to discover or "uncover" what they think about a subject."

Based on the issues discussed earlier, researchers are interested in applying this technique in teaching English writing and taking the title of this study "The Application of Clustering Technique in Writing Analytical Exposition Text in the Eleventh Grade of SMA Negeri 1 Pancarijang".

## **Literature Review**

### **Previous Related Studies**

Al-Jamal (2009) conducted research under the title "The Impact of Peer Response in Enhancing Ninth Grader's Writing Skill." The purpose of this study was to examine the effect of peer response techniques in developing writing skills in English lessons and to build a positive attitude towards those skills. The study population consisted of all

ninth grade students (men and women) at the Second King Abdullah School for Excellence at the Directorate of Irbid Education for the 2005/2006 scholastic year. The samples, which consisted of 55 students divided into two experimental groups (28 men, 27 women). Data analysis showed that both groups benefited from training on peer responses, each lasting six weeks.

Tuan (2010) in his research "Improving the Ability of Writing EFL Students through Journal Writing" in which findings justify the benefits of journal writing as an extensive activity to encourage motivation to write learners and improve their writing skills and build close ties between teachers and learners.

Ibnian (2010) investigated the effect of using the story-mapping technique on developing tenth-grade students' short story writing skills in EFL.

Fajriyani (2011) in his research "Improving Student Writing Skills through Clustering Techniques (Classroom Action Research in Second Year of Junior Al-Hasra Bojongsari-Depok)" shows that grouping techniques can improve students' writing skills.

Sahbaz and Duran (2011) searched the efficiency of cluster method in improving the creative writing skill of 6th-grade students of the primary school. In the result of this study, when the control and experiment groups were compared from the aspect of creative writing skill, meaningful differences were obtained in favor of the experiment group.

Mayasari (2012) in her research "The Use of Group Investigation to Improve Students' Ability in Writing Skill on Analytical Exposition Text (A Classroom Action Research with 11<sup>th</sup> Grade Students of MA Manahijul Huda Pati in the Academic Year of 2011-2012)" proved that the implementation of group investigation improve students' ability in writing

Based on the explanation of previous related findings above, the researcher concluded that the pre-writing activities should be conducted in writing class to enhance students' ability in writing.

## **The Nature of Writing**

### **a. Definition of Writing**

There are accurate provisions given by experts from many sources. According to Murcia in Alawi (2011: 8), "Substitution is the ability to express one's idea in the form of a word in the language." This means writing is a freedom-free path that meets ideas in written form.

Urquhart and McIver (2005: 5) say that "writing is a process, meaning different students, often moving behind the stage." Langan (2008: 14) also states that "writing is a process that enables steps, and these steps are very often a zigzag trip."

White and Arndt in Fahmi (2011: 11) explained that "writing is far from being a simple matter of transcribing language into written symbols; it is a thinking process in its own right."

Writing requires a set of competencies which is not every person mastered, especially for second language (L2) writers. Below are the set of competencies (micro-skills) which writer should master according to H. Douglas Brown in Lutfiah (2011: 7).

- 1) Produce English orthographic charts and patterns.
- 2) Produce writing with efficient speed in accordance with the purpose.
- 3) Generate acceptable core words and use appropriate sequence patterns.
- 4) Use acceptable grammar systems (eg, tense, agreement, pluralization), patterns, and rules.
- 5) Express certain meanings in various grammatical forms.
- 6) Use cohesive tools in written discourse.
- 7) Use rhetorical forms and written discourse conventions.
- 8) Complete the communicative function of the written text in accordance with its form and purpose.
- 9) Convey links and relationships between events and communicate those relationships as key ideas that support ideas, new information, information provided, generalizations, and examples.

- 10) Distinguish between literal and implied meanings when writing.
- 11) Correctly conveys cultural-specific references in the context of written texts.
- 12) Develop and use battery writing strategies, such as accurately assessing audience interpretation, using pre-writing tools, writing fluently in the first draft, using paraphrases and synonyms, requesting peer and instructor feedback, and using feedback to revise and edit.

From those explanations, it can be concluded that writing as a means of communication and it requires a set of competencies which can be mastered through practices.

#### ***b. Writing Process***

Writing is a process that involves several steps. Kane (2000: 17) said that the steps are: thinking about it, doing it, and doing it again (and again and again, as often as time will allow and patience will endure). The first step, "thinking," involves choosing a subject, exploring ways of developing it, and devising strategies of organization and style. The second step, "doing," is usually called "drafting"; and the third, "doing again," is "revising."

In another source, Langan (2008: 25) states that the following steps of the writing process are to find a thesis - often through writing, developing strong support for the thesis - often through prewriting, organizing the thesis and supporting materials and writing it in the first draft, revise and then edit it carefully to ensure an effective, error-free essay.

Seow (2002: 316-319) explained that writing process as a classroom activity incorporates the four basic writing stages – planning, drafting (writing), revising (redrafting), and editing – and three other stages externally imposed on students by the teacher, namely, responding (sharing), evaluating, and post-writing. The process will be described as follows.

#### ***c. Purposes of Writing***

According to Penny Ur (1996: 163) "the purpose of writing, in principle, is the expression of ideas, the conveying of messages to the reader. So the ideas themselves should arguably be seen as the most important aspect of the writing".

In addition, there are four major purposes for writing according to Wagner (2002), they are writing to demonstrate information and understanding, writing to persuade, writing to narrate, *and* writing in response to literature.

#### ***d. The Forms and Types of Writing***

Generally, there are four forms of writing. They are narration, description, exposition, and argumentation. It is supported by Wishon and Burks in Salam (2011: 12).

Meanwhile, according to Farmer in Salam (2011: 12-13), there are four types of writing which can be done by students. They are expressive Writing, informative Writing, Persuasive Writing, and Imaginative Writing.

#### ***e. Components of writing***

Jacob et al. (in Hughes, 2008: 103) point out that in analytic scale, it has five components in writing. They are content, organization, vocabulary, language use, and mechanics.

#### ***f. Principles of Teaching Writing***

Nation (2009: 93-95) offered the following principles that can be used as consideration in selecting teaching and learning activities of writing course. Thus, it will provide a good range of opportunities for learners in learning. The principles are put in the order with the most important principle first.

- 1) Meaning-focused Input
- 2) Meaning-focused Output
- 3) Language focused Learning
- 4) Fluency Development

### **g. The Roles of the Writing Teachers**

When students are asked to write, the following roles stated by Harmer (2003: 261-262) are especially important for teachers to deploy. They are amotivator, resource, and feedback provider.

### **Analytical Exposition**

Garrot and Wegnel (1994: 197) define an analytical exposition as "a type of oral or written text intended to persuade listeners or readers that something is happening."

According to Anderson and Anderson (1997: 128), analytical exposition text has 3 components; they are: constructing an exposition, language features of an exposition and generic structure.

The generic structure of analytical exposition consists of three main parts: thesis, arguments, and reiteration.

Some dominant features that usually used when writing analytical exposition text, it is usually focused on generic human and non-human participants. Another characteristic is the use of simple present tense.

### **The Concept of Clustering Technique**

#### **a. The Definition of Clustering**

In the writing process, there is a pre-writing step. One of the pre-writing steps is clustering. There are a lot of definitions about clustering stated by experts. Blanchard and Root (2003: 42) define that "grouping is another pre-writing technique. This is a visual way to show how your ideas connect using circles and lines." In another book, Galko (2001: 19) says that grouping is "Make a visual diagram of your idea of a topic."

Another definition put forward by Brandon and Brandon (2011: 39) that "grouping is a visual way to show connections and relationships. Sometimes used with outlines and sometimes replaces one of them."

According to Langan (2008: 30), "grouping is also known as a diagram, or mapping is another

strategy that can be used to produce material for paper.

From the definition above, it can be concluded that clustering is making a visual map or new association that allows thinking more creatively and to begin with clear ideas. Clustering can be used for any kind of writing.

#### **b. The Definition of Technique**

The term technique is commonly used in the teaching-learning process. It is often misunderstood with two others term; they are approach and method.

Richards and Rodgers (1986: 15) stated that "there are three levels of conceptualization and organization; approach, method, and technique."

According to Hornby (1995: 425), "technique is a method of doing something expertly or needs skill." In addition, Richards and Rodgers (1986: 15) stated: "a technique is an implementation that which actually takes place in a classroom."

Referring to the above ideas, grouping is one of the techniques in teaching writing because it is a teacher strategy applied in the classroom.

#### **c. The Step of Using Clustering**

Steele and Steele (1991: 42) stated the rules of applying clustering as follows:

- 1) Begin with a blank sheet of paper.
- 2) Write whatever associations of that word(s) come to mind.
- 3) Continue jotting down associations and ideas triggered by the nucleus word(s) for a minute or two.
- 4) If you're stuck, doodle until you're sure you have all the ideas out.

Langan (2008: 30) suggested the way of clustering works, namely: begin by stating your subject in a few words in the center of a blank sheet of paper. Then, as ideas and details come to you, put them in boxes or circles around the subject and draw lines to connect them to each other and to the subject. Put minor ideas or details in smaller boxes or

circles, and use connecting lines to show how they relate as well. Keep in mind that there is no right or wrong way of clustering or diagramming. It is a way to think on paper about how various ideas and details relate to one another.

Below is an example of what Diane Wood in Langan (2008: 30) might have done to develop her ideas in a clustering design.



Figure 2.1 Example of Clustering Technique

#### **d. Teaching Writing Using Clustering Technique**

The following are the steps in teaching writing using grouping techniques:

Step 1: Introduce the concept of grouping techniques to students.

Step 2: Lead the students to generate ideas in the form of grouping techniques on the whiteboard as a model.

Step 3: Ask students to write the first draft based on the sample grouping technique design that has been created on the board to know that students have been easy when starting to write by applying grouping techniques.

Step 4: Once students can use grouping techniques, ask them through selected topics to create an analytical exposition text referring to the topic. Give students an evaluation to check their

ability in writing and to know their problems in writing.

#### **e. The Advantages and Disadvantages of Applying Clustering Technique**

From the processes of clustering, there are some advantages of using clustering technique. Firstly has been stated by Tyner (1985: 176-177) said that clustering technique is beneficial in seeing the relationship between details, in organizing information in an orderly fashion, and in developing specific support for their main ideas. Then, Reid (1993: 6) stated that “organizing is important to compose the whole ideas into the good composition of writing, so the product of writing can ease the reader to understand.”

The advantage also stated by Langan (2005: 13) that “clustering can generate ideas for the important information students have in mind.” Langan also added (2008: 31) that “clustering can give you an early sense of how ideas and details relate to one another.”

Also, Pica (1986) defined “it is one of the creative techniques that motivates and interests students to avoid boredom in composing.”

Steele and Steele (1991: 44) explain further that grouping gives students a way to organize thinking about writing.

On the other hand, Styati (2010: 33) said the writing use clustering technique also has disadvantages.

#### **The Concept of Interest**

##### **a. The Definition of Interest**

Chaplin in Sakkir (2011: 25) stated that interest is (1) an enduring attitude which engages the individuals’ attention to make it selective toward the object of interest, (2) the feeling that a certain activity, avocation, or object is worth or significance to the individual, and (3) a state of motivation, or set which guides behavior in a certain direction toward certain goals.

Hidi and Renninger (2006:112) defined “interest as a motivational variable refers to the

psychological state of engaging or the predisposition to re-engage with particular classes of objects, events, or ideas over time.

### **b. Types of Interest**

James et al. in Mahareni (2011: 28) categorized interest into four types, namely: expressed interest, manifest interest, tested interest, and inventoried interest.

### **c. Factors Influence Students' Interest**

There are two factors that can influence the students' motivation as well as their interest in learning; they are internal(the students attitude towards a subject and the students aptitude or linguistic ability) and external factors (school factor, which may involve the teachers, the students, and the lesson material; Family factors such as mental support; and social environmental factors).

Based on Ur (1996: 281), there are ways of arousing interest in tasks, namely:Clear goals,Varied topics and tasks, Visuals, Tension and challenge games, Entertainment, Playacting, Information gap, Personalization, and Open-ended cues.

### **d. Interest and Learning**

The relationship between interest and learning is further fleshed out by the observation that new learning is depending upon interest. Learning cannot occur unless the organism is interested in learning.

## **Method**

### **Research Design**

This research applied quasi-experimental with nonequivalent control group design. It involved two groups; the experimental group was treated by applying clustering technique while the control group without clustering technique. Both groups were given pre-test and post-test. The pre-test was given to find out the prior knowledge of students while post-test was used to find out the effect of clustering technique toward writing ability of the

eleventh-grade students' of SMA Negeri 1 Pancarijang.

This design outline as follows:

EG	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>
CG	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>

(Gay et al., 2006: 258)

Figure 1. Research Design

Where: EG= Experimental group  
CG =Control group  
O1 =Pre-test  
O2 =Post-test  
X1 =The treatment for the experimental group  
X2 =The treatment for the control group

### **Population**

The population of this research was the eleventh-grade students in the academic year 2013-2014 of SMA Negeri 1 Pancarijang. The students were spread in five classes of exact science program and three classes of social science program (XI IPA 1, XI IPA 2, XI IPA 3, XI IPA 4, XI IPA 5, XI IPS1, XI IPS 2, XI IPS 3)The total number of population was 294 students.

### **Sample**

First, the sample was chosen between exact science and social science of the eleventh-grade students of SMA Negeri 1 Pancarijang. The researcher selected exact science class. Then the researcher chose two classes as sample among five classes of exact science. Finally, the researcher selected XI IPA 1 as the experimental group and XI IPA 3 as the control group. Both XI IPA 1 and XI IPA 3 consist of 33 students,so the total sample of the research was 66 students.

### **The instrument of the Research**

In this research, the researcher used two kinds of instruments to collect the data, namely the writing test and questionnaire.

## The procedure for Collecting Data

The following procedures were used to collect data:

1. Writing Test
  - a. Pre-test

Pre-test gave conducting treatment at the first meeting

- b. Post-test
  - 1) After giving the treatment (for experimental and control group).
  - 2) The researcher gave a score to the students' result test.
2. Questionnaire

## Treatment

The researcher gave the treatment for experimental group by applying clustering technique as pre-writing activity while the control group was treated without clustering technique. The researcher conducted treatment for five meetings in three weeks. Each meeting ran for 90 minutes.

Both groups were treated with the same genre namely analytical exposition. The topics of composition for both groups were also same. It was covered by the theme namely education, technology, environment, country development, and teachers' reflection.

## RESULTS

### Findings

#### 1. The Students' Writing Ability

- a. Scoring classification of students' pre-test.

Table 2. The Classification of Students' Score for Experimental Group and Control Group on Pre-test

Classification	Score	Experiment al Group		Control Group	
		F	%	F	%
Very Good	86 – 100	0	0	0	0
Good	71 – 85	5	15.2	2	6.1
Average	56 – 70	10	30.3	11	33.

Poor	41 – 55	11	33.3	16	48.5
Very Poor	0 – 40	7	21.2	4	12.1
<b>Total</b>		33	100.0	33	100.0

Based on the table 2., it is known that the students' score in pre-test result of experimental group, most of them were in poor category, none of the students was classified into very good, 5 (15.2%) students were classified into good, 10 (30.3%) students were classified into average, 11 (33.3%) students were classified into poor, and 7 (21.2%) students were classified into very poor.

On the other side, most of the students' pre-test score of control group were categorized in poor classification too, none of them was classified into very good, 2 (6.1%) students were classified into good, 11 (33.3%) students were classified into average, 16 (48.5%) students were classified into poor, and 4 (12.1) students were classified into very poor.

- b. The mean score and standard deviation of students' pre-test

Table 3. The Mean Score and Standard Deviation of Students' Pre-test for Experimental Group and Control Group

Class	Mean Score	Standard Deviation
Experimental Group	55.4	15.0
Control Group	54.3	11.1

Table 3. shows that the mean score of pre-test of experimental group and control group were categorized in poor level. Therefore, the researcher concluded that the students' mean score of the experimental group was relatively similar with the control group. It means that there was no significant difference between the students' writing ability between experimental and control groups before treatment.

- c. Scoring classification of students' post-test



*Table 4. The Classification of Students' Score for Experimental Group and Control Group on Post-test*

Classification	Score	Experimental Group		Control Group	
		F	%	F	%
Very Good	86 – 100	8	24.2	1	3.0
Good	71 – 85	16	48.5	4	12.1
Average	56 – 70	8	24.2	21	63.6
Poor	41 – 55	1	3.0	7	21.2
Very Poor	0 – 40	0	0	0	0
<b>Total</b>		33	100.0	33	100.0

From the table above, it can be seen that most of the students in experimental group were classified into good category, 8 (24.2%) students were in very good classification, 16 (48.5%) were in good classification, 8 (24.2%) were in average classification, and 1 (3.0%) students was in poor classification. There were not any students in very poor classification. It means that the students' score range was enhanced two levels up, from poor to good level. It shows that the students' writing ability had been enhanced after they were treated by applying clustering technique.

Meanwhile, in the control group, only 1 (3.0%) student was in very good classification, 4 (12.1%) students were in good classification, 21 (63.6%) students were in average classification, 7 (21.2%) students were in poor classification, and none of the students was in very poor classification.

- d. The mean score and standard deviation of students' post-test

*Table 5. The Mean Score and Standard Deviation of Students' Post-test for Experimental Group and Control Group*

Class	Mean Score	Standard Deviation
Experimental Group	77.0	11.5
Control Group	62.2	10.7

The table above shows that the mean score of both groups is different after being given treatment. The

mean score of the experimental group in post-test was enhanced from 55.4 to 77.0. It means that the mean score was enhanced from poor level to good level.

On the other hand, in control group, the mean score of post-test was enhanced from 54.3 to 62.2. The mean score was enhanced from poor level to average level. Even though it was enhanced, but the score was not significantly different. It proved that writing ability of the students who applied clustering technique is better than who did not apply clustering technique.

- e. Test of significance (t-test)

The hypothesis was tested by using inferential analysis. In this case, the researcher applied independent t-test analysis using SPSS 21.0 program for Windows evaluation version. The purpose was to know whether or not the difference between the result of students' mean score on experimental group and control group is statically significant at the level of significant  $\alpha = 0.05$  for independent sample, the degree of freedom  $(N_1 + N_2 - 2) = 64$ . The result of the calculation is shown as follow.

*Table 6. The t-test Value of The Students' Writing Ability on Experimental Group and Control Group*

Variables	T-test Value	T-test Table
Pre-test	0.318	2.000
Post-test	5.382	2.000

Based on the students' result obtained and stated in findings above, the researcher used t-test in inferential statistic through SPSS 21.0 program for Windows evaluation version to test the hypothesis. In the pre-test, the researcher found that the t-test value was lower than the t-table ( $0.318 < 2.000$ ). It means that  $H_0$  is accepted and  $H_1$  is rejected. While in relation to the finding of post-test, the t-test value was higher than the t-table ( $5.382 > 2.000$ ). This means that  $H_0$  is rejected and  $H_1$  is accepted, on a significant level of  $\alpha = 0.05$ . It means that the application of clustering technique enhances students' ability in writing analytical exposition text in the eleventh grade of SMA Negeri 1 Pancarijang.

## 2. The Students' Difference Score of Pre-test and Post-test in Five Components of Writing Scoring both Experimental Group and Control Group.

In the tables below, the researcher presented the students' pre-test and post-test score for experimental group and control group in five components of writing.

### a. Content

Table 7. The Pre-test and Post-test Score of Content in Writing for both Groups

Class	Content		Mean Score	
	Pre-test	Post-test	Pre-test	Post-test
Experimental Group	548	794	16.6	24.1
Control Group	568	626	17.2	18.9

In the table above, in assessing the content of writing shows that there was enhancement after giving treatment. The score of the experimental group was enhanced from 548 to 794. The mean score was also enhanced from 16.6 to 24.1. It means that the score was enhanced from poor level to good level. While in control group, the score was enhanced, from 568 to 626, and the mean score from 17.2 to 18.9, but the pre-test and post-test score were not significantly different. Both of the results were classified into the average level. We can also see that the post-test score of the experimental group was higher than the control group. The mean score of post-test in the experimental group was 24.1 while in control group was 18.9. It proved that the application of clustering technique has a good effect to enhance the content of the writing.

### b. Organization

Table 8. The Pre-test and Post-test Score of Organization in Writing for both Groups

Class	Organization	Mean Score
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	Pre-test	Post-test	Pre-test	Post-test
Experimental Group	363	526	11.0	15.9
Control Group	369	474	11.2	14.4

Based on the table 8., it is known that there was an enhancement in the organization of writing after giving treatment. The score of the experimental group was enhanced from 363 to 526. The mean score was also enhanced from 11.0 to 15.9. It means that the score was enhanced from poor level to good level. While in control group, the score was enhanced too, from 369 to 474, and the mean score from 11.2 to 14.4. The score was enhanced from average level to good level.

It also can be seen that the post-test score of the experimental group was higher than the control group. The mean score of post-test in the experimental group was 15.9 while in control group was 14.4. It is a proof that the application of clustering technique has a good effect to enhance the organization of writing.

### c. Vocabulary

Table 9. The Pre-test and Post-test Score of Vocabulary in Writing for both Groups

Class	Vocabulary		Mean Score	
	Pre-test	Post-test	Pre-test	Post-test
Experimental Group	372	488	11.3	14.8
Control Group	352	405	10.7	12.3

Table 9. shows that after the treatments were given, there was an enhancement in the vocabulary of writing. The score of the experimental group was enhanced from 372 to 488. The mean score was also enhanced from 11.3 to 14.8. It means that the score was enhanced from an average level to good level. Meanwhile in control group, the score was enhanced from 352 to 405 and the mean score

was enhanced from 10.7 to 12.3. It was enhanced from poor level to average level.

In the table, it can be known that in assessing language use of writing, the experimental group had a higher score than the control group in post-test. The mean score of post-test in the experimental group was 14.8 while in control group was 12.3. It means that clustering technique is an effective technique to enhance vocabulary writing.

d. Language use

*Table 10. The Pre-test and Post-test Score of Language Use in Writing for both Groups*

Class	Language Use		Mean Score	
	Pre-test	Post-test	Pre-test	Post-test
Experimental Group	449	612	13.6	18.6
Control Group	401	448	12.2	13.6

In table 10., the score of language use in writing shows a difference between pre-test and post-test after the treatments were given. The score of the experimental group was significantly enhanced from 449 to 612. The mean score was also enhanced from 13.6 to 18.6. It means that the score was enhanced from poor level to good level. On the other hand, the score of the control group was enhanced too, from 401 to 448 and the mean score from 12.2 to 13.6, but the difference was not significant. Both of the results were classified into the poor level.

The table also shows that the post-test score of the experimental group still dominated the post-test score of the control group. The mean score of post-test in the experimental group was 18.6 while in control group was 13.6. It means that the application of clustering technique is effective to enhance language use of writing.

e. Mechanics

*Table 11. The Pre-test and Post-test Score of Mechanics in Writing for both Groups*

Class	Mechanics		Mean Score	
	Pre-test	Post-test	Pre-test	Post-test
Experimental Group	95	121	2.9	3.7
Control Group	103	101	3.1	3.1

From the table above, it can be seen that in assessing mechanics of writing, the score between pre-test and post-test had a significant difference in the experimental group. The score was enhanced from 95 to 121, and the mean score was enhanced from 2.9 to 3.7. It means that the score was enhanced from an average level to good level. While in control group, the pre-test and the post-test score was decreased.

The score was decreased from 103 to 101. The mean score of pre-test and post-test was same. It was 3.1. Both of the results were classified into the average level.

The data above proved that the application of clustering technique enhances mechanics of writing because the post-test score of the experimental group was higher than the control group. The mean score of post-test in the experimental group was 3.7 while in control group was 3.1.

In order to know which component of writing was enhanced highly among five components, the researcher presents the difference between the students' mean score for both groups in the following tables.

*Table 12. The Difference of Students' Mean Score in Five Writing Components of Experimental Group*

Component s	Pre - test	Post -test	Differenc e	Remark
Content	16.6	24.1	7.5	Enhanced

Organization	11.0	15.9	4.9	Enhanced
Vocabulary	11.3	14.8	3.5	Enhanced
Language Use	13.6	18.6	5.0	Enhanced
Mechanics	2.9	3.7	0.8	Enhanced

The table above shows that the students' mean score of content was the highest enhancing component. It enhanced 7.5 points, then it was followed by language use (5.0), organization (4.9), vocabulary (3.5), and the lowest enhancing component was mechanics (0.8). It can be concluded that the application of clustering technique enhanced five components of writing.

On the other side, only four writing components of students in control group were enhanced. They were content, organization, vocabulary, and language use. Meanwhile, the students' mean score of mechanics in post-test was same with the pre-test.

Table 13. The Difference of Students' Mean Score in Five Writing Components of Control Group

Components	Pre - test	Post -test	Difference	Remark
Content	17.2	18.9	1.7	Enhanced
Organization	11.2	14.4	3.2	Enhanced
Vocabulary	10.7	12.3	1.6	Enhanced
Language Use	12.2	13.6	1.4	Enhanced
Mechanics	3.1	3.1	0	Unchanged

Based on table 13, the highest enhancing component of writing in control group was an organization which was enhanced 3.2 points. It was followed by content (1.7) and vocabulary (1.6). The lowest enhancing component was language use (1.4) while mechanics did not change.

### 3. The Students' Interest

The main aim to distribute the questionnaire to the students in this research is to know about students' interest in the application of clustering technique in writing analytical exposition text. The questionnaire was distributed to the students of XI IPA 1 (experimental group) after given a post-test.

The questionnaire was answered individually based on the students' opinion after the treatment was conducted in applying clustering technique as a pre-writing activity. The data was analyzed by using Likert Scale. The results show that the students were interested in the application of clustering technique in writing analytical exposition text. These results can be seen in the table below.

Table 14. The Rate Percentage of Students' Interest

Category	Interval Score	Frequency	Percentage
Strongly Interested	85 – 100	22	66.7
Interested	69 – 84	11	33.3
Moderate	52 – 68	0	0
Uninterested	36 – 51	0	0
Strongly Uninterested	20 – 35	0	0
<b>Total</b>		<b>33</b>	<b>100.0</b>

In relation to the percentage analysis of students' interest on the table 4.11 above, the analysis showed that there were no students who state negative statement to the application of clustering technique in writing analytical exposition text, 22 students (66.7%) were strongly interested who got score in interval 85-100 and 11 students (33.3%) were interested in interval 69-84. The table above indicates the students were strongly interested in the application of clustering technique in writing analytical exposition text. This is supported by the following table.

Table 15 The Mean Score of Students' Interest

Total Respondent	Total of Students' Score	Mean Score
33	2871	87.0

The table 15. shows that the mean score of students' interest was 87.0 which was categorized as strongly interested. Then, it can be concluded that the application of clustering technique in writing analytical exposition text is interesting.

## Discussion

### 1. The Students' Ability in Writing Analytical Exposition Text by Applying Clustering Technique

The description of the collected data through the test as explained in the previous section showed that the students' ability in writing analytical exposition text was enhanced after the treatment by applying clustering technique, especially for the experimental group. It was proved by the mean score of post-test for the experimental group was higher than the mean score of the pre-test for the experimental group ( $77.0 > 55.4$ ). It became good level from poor level.

The post-test score of the experimental group also showed that there was an enhancement of five components of writing scoring. It was supported by the enhancement of mean score of five components of writing scoring. The mean score of content was enhanced from 16.6 to 24.1, an organization was enhanced from 11.0 to 15.9, and in vocabulary was also enhanced from 11.3 to 14.8. The mean score of language use was also enhanced from 13.6 to 18.6 and in mechanics was enhanced from 2.9 to 3.7. The highest enhancing component was content (7.5 points), and the lowest enhancing component was mechanics (0.8 points).

Besides that, based on the data in the previous section, the achievement of students in experimental group and control group after the treatment is significantly different, where the students who applied clustering technique had a higher score than the students in control group who did not apply clustering technique in writing. It was supported by the difference between the

mean score of post-test in the experimental group (77.0) was higher than the control group (62.2).

This research data indicated that the application of clustering technique significantly enhanced the students' ability in writing analytical exposition text. Even though both applying clustering technique and conventional technique (without clustering technique) could enhance the students' writing ability, however, the application of clustering technique in writing process gave a better effect than the application of conventional technique. This result goes in line with what Tyner (1985: 176-177) stated that clustering is beneficial in seeing the relationship between details, in organizing information in an orderly fashion, and in developing specific support for their main ideas. It supports Langan (2005: 13) who said that clustering could generate ideas for the important information students have in mind. Furthermore, the result of the research also supports the statement of Langan (2008: 31) that clustering can give you an early sense of how ideas and details relate to one another.

Based on inferential statistical tests at the significance level  $\alpha = 0.05$ , in the experimental group pre-test and control group, the researchers found that the t-test was lower than t-table ( $0.318 < 2,000$ ) meaning that there was no significant difference in pre-test between the experimental group and the control group. While on the post-test result for both groups, it showed that the t-test value was higher than t-table ( $5.382 > 2.000$ ). It means that  $H_1$  was accepted and  $H_0$  was rejected. It is concluded that there was a significant difference between achievement of the students who applied clustering technique and those who did not apply clustering technique (conventional technique) in writing analytical exposition. In other words, there was an enhancement of the ability in writing analytical exposition text after applying a clustering technique to the eleventh-grade students of SMA Negeri 1 Pancarijang.

### 2. The Students' Interest in the Application of Clustering Technique in Writing Analytical Exposition Text

The result of the findings showed that the eleventh-grade students of SMA Negeri 1

Pancarijang had high interest in the application of clustering technique in writing analytical exposition text. It was proved by the mean score of the questionnaire was 87.0 which was classified into strongly interested category. It is in line with Pica (1986) which stated that clustering technique motivates and interests students to avoid boredom in composing.

The analysis showed that the application of clustering technique influenced the students' interest in writing analytical exposition text significantly. Clustering technique is a visual map of related ideas about a topic which helps people to think in a visual way. It is relevant to Ur (1996: 281), who said that visual is one of several ways to arouse interest. The learners should have something to look at that is eye-catching and relevant. It means that clustering technique is good applicable technique to be applied in the pre-writing stage of composing.

In this research, the interest of students was considered as output because they were expected to have interest in the application of clustering technique. The students gave responses that by applying clustering technique as pre-writing activity, they became interested in writing analytical exposition text. It helped the students to enjoy the writing process and grow more confident and comfortable expressing their own thoughts in writing.

Furthermore, from the explanation about the result of writing test and questionnaire above, it indicated that the application of clustering technique was more effective and useful to enhance the students' achievement as well as the students' interest in writing analytical exposition text. It was supported by the writing test mean score of the experimental group in post-test was enhanced from 55.4 to 77.0. It means that the score classification was enhanced two levels up, from poor to good level. Meanwhile, the mean score of students' interest was 87.0 which was classified as strongly interested category.

The findings relate to Nation (2009: 93-95) that teaching and learning activities of writing course should be interesting for learners. The students use their interests to help them in writing. If they learn

and compose with full interest, then they can be expected to get a better result.

## **Conclusions**

Based on the findings and discussion as previously stated, the researchers put forward conclusions as follows:

1. The application of clustering technique enhanced the students' ability in writing analytical exposition text in the eleventh grade of SMA Negeri 1 Pancarijang. The achievement in writing analytical exposition of the students who applied clustering technique and those who did not apply clustering technique had a significant difference. It was proved by the mean score in post-test of experimental group was higher than the mean score of control group ( $77.0 > 62.2$ ) and the t-test value on post-test was higher than t-table ( $5.382 > 2.000$ ). The five components of writing namely content, organization, vocabulary, language use, and mechanics also were significantly enhanced by the application of clustering technique.
2. The application of clustering technique in writing analytical exposition text was interesting for the eleventh-grade students of SMA Negeri 1 Pancarijang. It was supported by the mean score of students' answers in the questionnaire (87.0) which was classified as strongly interested category.

## **Suggestions**

Considering the conclusion above, the researcher gives some suggestions as follows:

1. The application of clustering technique is suggested in the process of teaching writing since it has been proven successful in enhancing students' ability especially in writing analytical exposition text. This technique can motivate the students to write, to stimulus their ideas and to organize their thinking before they develop them in a paragraph. In addition, a clustering technique is also interesting for the students to be applied in the pre-writing stage of composing.

2. This research was restricted on the application of clustering technique to enhance students' writing ability in one genre of the KTSP namely analytical exposition text. Therefore, it is recommended that the further researcher apply the same technique to another genre of the KTSP such as narrative, recount, procedure, hortatory exposition, explanation, discussion, etc.
3. This study was focused on the application of clustering technique as a pre-writing activity. It is recommended for another researcher to study several options for pre-writing activities that can be applied in teaching writing, such as free-writing, cubing, interviewing, the boomerang, etc.

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