

**THE EFFECTIVENESS OF DYADIC ESSAY TECHNIQUE  
IN TEACHING WRITING  
VIEWED FROM STUDENTS' CREATIVITY**

**(An Experimental Research at the Second Semester Students of English  
Education Department, IKIP PGRI Bojonegoro, in the Academic Year of  
2011/2012)**



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# THE EFFECTIVENESS OF DYADIC ESSAY TECHNIQUE IN TEACHING WRITING VIEWED FROM STUDENTS' CREATIVITY

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## ABSTRACT

This research is aimed at finding out: (1) whether or not Dyadic Essay Technique is more effective than Clustering Technique in teaching writing; (2) whether the students who have high creativity have better writing ability than those who have low creativity; and (3) whether there is an interaction between teaching techniques and creativity in teaching writing. This experimental research was carried out in IKIP PGRI Bojonegoro in the academic year of 2011/2012 from April to June 2012. The population was the second semester students of English Education Department in the academic year of 2011/2012, and the number of population was 168 students who were divided into four classes. The samples, which were selected by using cluster random sampling, were IB as the experimental group and ID as the control group. Each group consists of 42 students. The experimental group was treated by using Dyadic Essay Technique, while the control group was treated by using Clustering Technique. The data analysis shows the following findings: (1) Dyadic essay Technique is more effective than Clustering Technique in teaching writing; (2) students with high creativity have better writing ability than those having low creativity; and (3) there is an interaction between teaching techniques and creativity in teaching writing.

*Keywords: Dyadic Essay Technique, Clustering Technique, Writing Ability, Creativity*

## INTRODUCTION

Writing as a skill involves a number of complex rhetorical and linguistic operations which must be taught. The act of writing is deprived of an immediate context of communication. Thus, for effective writing, the writer has to use a large number of formal features in order to help his/her readers infer the intended meaning. Failure to use these features correctly causes vagueness, ellipsis and ambiguity in some writings.

Writing becomes important because of some reasons. Raimes (1983: 3) states that writing helps the students to learn since it reinforces the grammatical structures, idioms, and vocabulary that the teachers have been teaching the students. Besides, when the students write, they also have a chance to be adventurous with the language, to go beyond what they

have just learned to say, to take risks. The next is that when they write, they necessarily become very involved with the new language, the effort to express ideas and the constant use of eye, hand and brain is a unique way to reinforce learning.

Writing in EFL classes is difficult for both teachers and students because there are many aspects to deal with. Raimes (1983: 6) mentions those aspects are syntax, content, the writers' process, audience, purpose, word choice, organization, mechanics and grammar. Byrne (1993: 3) mentions three aspects which make writing difficult. The first is the psychological problem. Writing is a solitary activity. The teachers cannot get direct feedback like in speaking activity. The second is linguistics problem. The writers have to ensure that the choice of words, sentence structure, and other cohesive devices are correct for conveying their message. The last is the cognitive problem. Writing is learned through a process of instruction. It is not a natural process like speaking. Both Raimes and and Byrne basically have the same idea, but Raimes does not classify the problem. Audience and purpose of writing is included in Byrne's psychological problem. Byrne's linguistic problem covered syntax, word choice, mechanic, and grammar. Meanwhile, Raimes' writer process, organization and content are covered in Byrne cognitive problem.

Because of that, learning to write is not an easy task to do. Many students still make errors and mistakes and, then, they are fossilized. Their interest becomes less and less and students begin to create negative stimuli about learning to write. This condition drives the students to assume that writing is a very difficult task to do. The problem emerges as students are not familiar yet with the types of written discourse in English due to lack of exposure. Consequently, they are not able or willing to think directly in English. They, therefore, tend to formulate their ideas in Indonesian language when they express ideas in writing. Afterward they try to translate them in English which is not an easy task and even dangerous.

To help the teachers in teaching writing to university students, teachers may use interesting teaching techniques to present their teaching materials that also help them in creating fun class. Two of the alternative techniques are dyadic essay technique and clustering technique which are suggested to be applied in teaching writing.

Considering that background, the writer formulates the problems of this study as follows:

1. Is dyadic essay technique more effective than clustering technique to teach writing?
2. Do students who have high creativity have better writing ability than those who have low creativity?

3. Is there any interaction between teaching techniques and students' creativity in teaching writing?

The objectives of this research in detail are:

1. To find out whether dyadic essay technique is more effective than clustering technique in teaching writing.
2. To find out whether students who have high creativity have better writing ability than those who have low creativity.
3. To find out whether there is an interaction between teaching techniques and students' creativity in teaching writing.

Review of related literature:

Byrne (1984: 1) states that writing is the act of forming graphic symbols. Farbairn and Winch (1996: 32) state that writing is about conveying meaning by using words that have been selected and put together in a written or printed form. Ur (1996: 163) writing is the expressing of ideas, the conveying of a message to the readers, so that the ideas themselves should arguably be seen as the most aspects of writing.

Barkley, Cross, and Major (2005: 235) state that dyadic essay is a technique in which students in pairs write essay questions and model answers for each other, exchange questions, and after responding, compare their answers to the model answer. It is particularly useful for identifying the most important feature of a learning activity and formulating and answering questions about that activity.

Clustering technique is developed by Gabrielle Luser Rico (1983). Rico (1983) states that clustering is a technique to divide some related ideas and write down in a blank of paper without evaluating the truth or value of the ideas themselves. Clustering technique can be used in any kind of writing genres, such as report, essay, proposal, short story, or poem (De Porter, 1999: 184)

In line with Rico (1983), Hernowo (2004: 195) states that clustering technique can produce writing that can deliver its message with the same comprehension and surge as spoken language.

Dawson and Essid (2010: 1) say that clustering is a type of prewriting that allows the learners to explore many ideas around some stimulus as soon as they occur to the learners. Like brainstorming or free associating, clustering allows learners to begin without clear ideas.

Munandar (2009: 68) defines verbal creativity as an ability to think creatively and to measure one's fluency, flexibility, and originality of a verbal form which deals with words and sentences.

Mednick and Mednick in Sinolungan (in Faisal, 2010: 42) say that verbal creativity is an ability to see a relationship of different ideas and to combine these ideas into new associations. Children with this special ability are able to create new patterns based on their own thought in their cognitive mind. Guilford in Rockler (1988: 45) also states that verbal creativity is an ability to think divergently. Thinking divergently means that it tries to find any possible alternative solution upon a problem.

## RESEARCH METHODOLOGY

Related to this study, the writer used experimental study because the aim of this study is revealing the effect of teaching techniques and students' creativity towards the students' writing ability. It involves three variables. The first variable is independent variable. In this study, the independent variable is teaching techniques. The second variable is a dependent variable. The dependent variable in this study is writing ability. The third variable is a secondary independent variable or moderator/attributive variable. It is creativity.

The population of this study is the Second Semester Students of IKIP PGRI Bojonegoro in the academic year of 2011/2012. The total number of the population in this research is 168 students who are divided into 4 classes, IA, IB, IC, and ID.

In this study, the writer only took two classes of the Second Semester Students of IKIP PGRI Bojonegoro. The two classes were IB and ID. IB was the experimental class and ID was the control class.

The sample, in this study, was chosen randomly from the population of clusters which is usually called as Cluster Random Sampling. It means that all the members of the cluster must be included in the sample.

## RESULTS AND DISCUSSIONS

### Hypotheses Testing

Table 1. The summary of a 2 x 2 Multifactor Analysis of Variance

Source of variance	SS	df	MS	F <sub>o</sub>	F <sub>t(0.05)</sub>	Conclusion
Between columns (teaching techniques)	618.8571	1	618.8571	36.40336	3.96	H <sub>0</sub> is rejected
Between rows (level of creativity)	2928.762	1	2928.762	172.2801	3.96	H <sub>0</sub> is rejected
Columns by rows (interaction)	80.04762	1	80.04762	4.708683	3.96	H <sub>0</sub> is rejected
Between groups	3627.667	3	1209.222			

Within groups	1360	<b>80</b>	<b>17</b>			
Total	4987.667	83				

Based on the summary of 2 x 2 Multifactor Analysis of Variance (ANOVA) above, some interpretations can be drawn as follows:

1. The impacts of employing teaching techniques (dyadic essay technique and clustering technique) upon the students' writing ability. Based on the table, it can be seen that dyadic essay technique is more effective than clustering technique to teach writing.
2. The effect of creativity level upon the students' writing ability. Based on the table, it can be seen that the students who have high creativity have better writing ability than the students who have low creativity.
3. The interaction effect of teaching techniques and creativity level upon the students' writing ability. Based on the table, it can be seen that there is an interaction effect between teaching techniques and creativity upon students' writing ability. Thus, the effect of teaching techniques on performance of writing depends on the degree of creativity.

Table 2. The Summary of Tukey Test

Between groups	$q_0$	$q_{t(.05)}$	Meaning	Category
$A_1 - A_2$	8.53	2.86	$q_0 > q_t$	Significant
$B_1 - B_2$	18.56	2.86	$q_0 > q_t$	Significant
$A_1B_1 - A_2B_1$	6.48	2.95	$q_0 > q_t$	Significant
$A_1B_2 - A_2B_2$	2.58	2.95	$q_0 < q_t$	Not significant

Based on the summary of Tukey Test above, the interpretations can be drawn as follows:

1. Comparing two means between-columns (dyadic essay technique is compared with clustering technique)

By comparing two means between-columns ( $A_1 - A_2$ ), it can be found that  $q_0$  is 8.53. The value of  $q_t$  for  $\alpha=0.05$  and  $n=42$  is 2.86. Because  $q_0$  (8.53) is higher than  $q_t$  (2.86), dyadic essay technique differs significantly from clustering technique to teach writing. The mean score of the students who are taught by using dyadic essay technique (77.88) is higher than the mean score of the students who are taught by using clustering technique (72.45). *Therefore, it can be concluded that dyadic essay technique is more effective than clustering technique to teach writing.*

2. Comparing two means between-rows (high creativity is compared with low creativity)

By comparing two means between-rows ( $B_1 - B_2$ ), it can be found that  $q_0$  is 18.56. The value of  $q_t$  for  $\alpha=0.05$  and  $n=42$  is 2.86. Because  $q_0$  (18.56) is higher than  $q_t$  (2.86), the students who have high creativity are significantly different from the students who have low

creativity in writing ability. The mean score of the students who have high creativity (81.07) is higher than the mean score of the students who have low creativity (69.26). *Therefore, it can be concluded that the students who have high creativity have better writing ability than the students who have low creativity.*

3. Comparing two means columns by rows (dyadic essay technique is compared with clustering technique) for the students having high creativity

By comparing two means columns by rows ( $A_1B_1 - A_2B_1$ ), it can be found that  $q_0$  is 6.48. The value of  $q_t$  for  $\alpha=0.05$  and  $n=21$  is 2.95. Because  $q_0$  (6.48) is higher than  $q_t$  (2.95), the students who have high creativity and taught by using dyadic essay technique are significantly different from the students who have high creativity and taught by using clustering technique in writing ability. The mean score of the students who have high creativity and taught by using dyadic essay technique (84.76) is higher than the mean score of the students who have high creativity and taught by using clustering technique (77.38). *Therefore, it can be concluded that the students who have high creativity and taught by using dyadic essay technique have better writing ability than the students who have high creativity and taught by using clustering technique.*

4. Comparing two means columns by rows (dyadic essay technique is compared with clustering technique for the students having low creativity)

By comparing two means columns by rows ( $A_1B_2 - A_2B_2$ ), it can be found that  $q_0$  is 2.58. The value of  $q_t$  for  $\alpha=0.05$  and  $n=21$  is 2.95. Because  $q_0$  (2.58) is lower than  $q_t$  (2.95), it means that the students who have low creativity and taught by using dyadic essay technique are **not significantly different** from the students who have low creativity and taught by using clustering technique in writing ability. *Therefore, it can be concluded that the students' writing ability between the students who have low creativity and taught by using dyadic essay technique and the students who have low creativity and taught by using clustering technique is not significantly different.*

## Discussion

By considering the data analyses above, there are some conclusions that can be drawn.

1. Dyadic essay technique is more effective than clustering technique to teach writing.

Needless to say, teaching technique plays an important role in teaching and learning process. Teaching technique is one of the aspects of teaching and learning process that needs to be fully considered by the teacher. Good teaching technique will influence much the students' attitude toward the subject.

In general, dyadic essay technique makes the learning more effective, attractive, meaningful, and successful. Dyadic essay also can improve students' critical thinking. Dyadic essay technique becomes especially important for some reasons. Firstly, using dyadic essay technique makes the students work cooperatively with their partner in the class. They can share each other about their ideas. Secondly, dyadic essay technique encourages the students to find the good idea in writing, because they have found some information from the learning activity before such as reading an assignment, listening to a lecture, or watching a film. Thirdly, by working collaboratively with their friends, the students will try to analyze their friends' work in writing. They can correct the mistakes made by their friends. Sherman (1998: 1) states that reflective writing, such as in dyadic essay, in the context of a public forum in which students are required to react to each other's writing engages students in a process of critical thinking.

Dyadic essay technique has many advantages as a functional unit of collaborative learning. Active participation in the collaborative process is essential for learning to occur. By working collaboratively with their friends, the students will try to analyze their friends' work in writing. They can correct the mistakes made by their friends.

Sherman (1998: 1), states that in dyadic essay, the students are relying on peers for learning. It means that students work together to teach one another, and they alternate between the roles of student and teacher. This technique combines elements of both motivational and cognitive approaches to collaboration. The technique also promotes cognitive processing by using a structured approach to teaching and learning within a tutoring context. This technique also promotes active processing of material using activities that are strongly linked to achievement.

From the statement above, it can be concluded that dyadic essay technique has some advantages such as: (1) it can promote effective learning; (2) it can combine both motivational and cognitive approaches to collaboration; (3) it can promote cognitive process through a structured approach to teaching and learning within a tutoring context; (4) it can promote the students' achievement and the students' self confidence.

On the other hand, clustering technique cannot navigate like what dyadic essay technique does. Clustering technique is a kind of brainstorming activity that one can use to generate ideas. This technique is used for collecting thoughts around some stimulus, for finding focus, and for allowing a sense of the whole arrangement to emerge even though all the details are not yet apparent. In short, it is a discovery process. In clustering technique, the students learn how to generate, develop, and arrange the ideas that have to be used in their everyday lives as a valuable and satisfying writing. Reid (1993: 6) mentions that the invention of clustering

helps writers to generate, develop, and arrange their ideas. It can be said that clustering helps the learners in developing their ideas.

Clustering involves writing down words or phrases and engaging in free association. Each association is written down and connected to the original of associated words are produced. Dawson and Essid (2010: 1) state that there are some steps: (1) choosing words or phrases; (2) putting the words or phrases in central; (3) circling the words or phrases; (4) writing words all around the word or phrase that associate with the word in central; and (5) connecting the new words or phrases to previous one with lines. Moreover, clustering technique helps the writers or learners to start the writing activity from the new expectation words and develop them in bubbles or circle forms. The learners start to write down the ideas and then the ideas are connected by using an arrow or line. It is used to overcome the difficulty in developing ideas. But, in this case, the students sometimes still get difficulties in arranging long sentences. Finally, the result of this study shows that dyadic essay is more effective than clustering technique to teach writing.

2. The students who have high creativity have better writing ability than the students who have low creativity.

Creative individuals have a great deal of energy. This great deal of energy makes them energetic and always ready to do everything. They will see any kinds of things, including the difficult one, as challenges to conquer. They like challenges and enjoy its every single activity. They like to explore their ideas and imagination and to think freely.

Furthermore, students with high creativity have a combination of playfulness, discipline, and also responsibility. They like to alternate between imagination and fantasy at one end, and rooted sense of reality at the other. Besides, they do not like to be bound. They like to be given freedom to think and to express themselves in many ways. This kind of characteristics, in the end, leads the students who have creativity to get better score since they have better flexibility, fluency, and originality of thinking which are important in producing a piece of writing.

Csikszentmihalyi (1996: 58-73) defines the characteristics of the creative personality as follows:

- a. Creative individuals have a great deal of energy, but they are also often quiet and at rest.
- b. Creative individuals tend to be smart, yet also naïve at the same time.

- c. Creative individuals have a combination of playfulness and discipline, and responsibility and irresponsibility.
- d. Creative individuals alternate between imagination and fantasy at one end, and rooted sense of reality at the other.
- e. Creative people seem to harbor opposite tendencies on the continuum between extroversion and introversion.
- f. Creative individuals are also remarkable humble and proud at the same time.
- g. Creative individuals to a certain extent escape rigid gender role stereotyping and have a tendency toward androgyny.
- h. Generally, creative people are thought to be rebellious and independent.
- i. Most creative individuals are very passionate about their work, yet they can be extremely objective about it as well.
- j. The openness and sensitivity of creative individuals often exposes them to suffering pain yet also a great deal of enjoyment.

On the contrary, according to the statement stated by Csikszentmihalyi (1996: 58-73) about the characteristics of creative personality above, it can also be inferred that students with low creativity tend to be passive. They do any kinds of tasks only based on the instruction given and do not really like if they are asked to think beyond what is given. In addition, they will be reluctant to do activities which require them to think creatively. They like something simple and like being guided. Students with low creativity usually see process and challenge as burdens. The more activities they have to do, the more burdens they will have. They do not really like activities because they like simple, guided, and straightforward activities which in turns make the teacher should control them intensively. Uebergang (2012: 1) states that limited creativity and views affect how we act. It means that the students who have low creativity will get difficulties in generating ideas and expressing it into written form. Munandar (1999: 25) states that everyone has different level of creativity which affects their ways of thinking, their behavior, and their competences in all aspects. These are some of the reasons why their writing scores are less than those having high creativity. Their low creativity makes them unable to express their ideas better. This can be seen from the results of their writing ability in which the scores of both control and experimental groups are lower than those having high level of creativity from both groups given treatment.

3. There is an interaction between teaching techniques and students' creativity in teaching writing.

Good teaching technique challenges students to perform better learning. They also minimize boredom and energize students to do more than usual. Good teaching technique increases students' creativity. Students are more creative when they are taught using challenging and interesting teaching technique.

Creativity as a process can be formulated as a form of thought in which an individual finds out new relationship, answer, methods, or new ways in facing a problem. Csikszentmihalyi (1996: 58-73) states that creative individuals have a great deal of energy. This great deal of energy makes them energetic and always ready to do everything. They will see any kinds of things, including the difficult one, as challenges to conquer. They like challenges and enjoy its every single activity. They like to explore their ideas and imagination and to think freely. Students with high creativity have a combination of playfulness, discipline, and also responsibility. They like to alternate between imagination and fantasy at one end, and rooted sense of reality at the other. Besides, they do not like to be bound. They like to be given freedom to think and to express themselves in many ways. So, the students with high level of creativity are able to manifest nice learning activity into their writing. Uebergang (2012: 1) states that creativity is associated with the ability to quickly think what is in our mind. It means that the students who have high creativity will easily express what in their mind in the form of writing.

In dyadic essay, students individually write an essay question and a model answer on a reading assignment, lecture, or other presentation of content. Then, students pairs exchange questions, write a response to the partner's question, and then trade, read, and compare model in-class answers. Then, they collaboratively write an essay based on the answer they have compared and discussed. According to Barkley, Cross, and Major (2005: 246) this collaborative learning technique gives students practice identifying the most important feature of a learning activity and formulating and answering questions about that activity. It also gives students an opportunity to rehearse responding to essay questions with the added advantage of having a sample response with which they compare their answers. This, of course, requires students to be more creative in doing so. In short, dyadic essay technique is easily done by the students who have high creativity. On the other hand, the students with low creativity have some difficulties in doing dyadic essay technique due to their insufficient storage of vocabulary and ability to understand materials. Therefore, the students with high

creativity are able to optimize their potentials when dyadic essay technique is implemented in their classroom activity.

On the contrary, according to the statement stated by Csikszentmihalyi (1996: 58-73) about the characteristics of creative personality, it can be inferred that students with low creativity tend to be passive. They do any kinds of tasks only based on the instruction given and do not really like if they are asked to think beyond what is given. In addition, they will be reluctant to do activities which require them to think creatively. They like something simple and like being guided. Students with low creativity usually see process and challenge as burdens. The more activities they have to do, the more burdens they will have. They do not really like activities because they like simple, guided, and straightforward activities which in turns make the teacher should control them intensively. Therefore, they need certain techniques to help them generating their ideas into written form.

Clustering technique is a kind of brainstorming activity that one can use to generate ideas. This technique is used for collecting thoughts around some stimulus, for finding focus, and for allowing a sense of the whole arrangement to emerge even though all the details are not yet apparent. In short, it is a discovery process. In clustering technique, the students learn how to generate, develop, and arrange the ideas that have to be used in their everyday lives as a valuable and satisfying writing. Reid (1993: 6) mentions that the invention of clustering helps writers to generate, develop, and arrange their ideas. It can be said that clustering helps the learners in developing their ideas. Dawson and Essid (2010: 1) say that clustering is a type of prewriting that allows the learners to explore many ideas around some stimulus as soon as they occur to the learners. Like brainstorming or free associating, clustering allows learners to begin without clear ideas. Kaufman and Sternberg (2006: 82) state that brainstorming is a technique used by Osborn (1953) to facilitate and stimulate creativity for individuals having low creativity. De Prado (1982) uses brainstorming to (a) stimulate and develop the different aspects of creativity (fluency, or the ability to generate multiple ideas; flexibility, or a broad view of category and analysis; and originality, or the ability to produce unique, rare, and unusual ideas); (b) generate new ideas and alternatives to complete a working project; and (c) create a working climate of trust, happiness, and productivity, which favors free expression, group cohesion, and efficiency. De Prado in Kaufman and Sternberg (2006: 82) states that brainstorming helps facilitate participation among members of a working team, promotes mental flexibility and a wealth and variety of innovative ideas, teaches attitudes of tolerance and respect for all ideas, and encourages the development of vocabulary in the classroom.

Therefore, the students having low creativity will be suitable when they are taught using clustering technique in their classroom activity because it can promote their creative thinking.

Finally, the result of this research shows that teaching techniques and creativity play an important role to the students' writing ability. Teaching techniques and creativity mutually influence one another in writing ability. It means that writing ability depends on the creativity level and teaching techniques. Dyadic essay technique is more effective for the students having high creativity and clustering technique is more effective for the students having low creativity. Therefore, it can be said that there is an interaction effect between teaching techniques and creativity upon students' writing ability.

## CONCLUSION, IMPLICATION, AND SUGGESTION

### A. Conclusion

1. In general, dyadic essay technique as one of the models of collaborative learning is more effective than Clustering Technique to teach writing to the second semester students of English Education Department, IKIP PGRI Bojonegoro, in the academic year of 2011/2012.
2. The students having high level of creativity have better writing ability especially in report text than those having low level of creativity to the second semester students of English Education Department, IKIP PGRI Bojonegoro, in the academic year of 2011/2012.
3. There is interaction between teaching techniques (dyadic essay technique and clustering technique) and creativity to teach writing to the second semester students of English Education Department, IKIP PGRI Bojonegoro, in the academic year of 2011/2012.

### B. Implication

The result of this research implies that dyadic essay is an effective teaching technique to teach writing. It is good to be applied in teaching writing, especially for students in university. Here are some steps needed to be followed in teaching writing using dyadic essay technique: (1) The teacher gives a learning activity such as reading a text or watching a video; (2) The students write essay questions related to the content of learning activity; (3) They write a model response of their own questions on separated answer sheet; (4) In pairs, the students exchange their essay questions with their friends' (their model answer is not included); (5) The students write the answers of their friends' questions; (6) The students discuss and compare the essay questions and model answers in pairs; (7) After discussing and comparing their answers with their friends', the students write an essay or text by developing the model

answers they have discussed; (8) Then, after writing an essay, the students in pairs discuss and revise their essay writing; and (9) Finally, the teacher conducts general discussion and gives feedback to the students' work. By following the steps above, dyadic essay can be applied well in teaching writing. Therefore, the students' writing ability can be improved significantly.

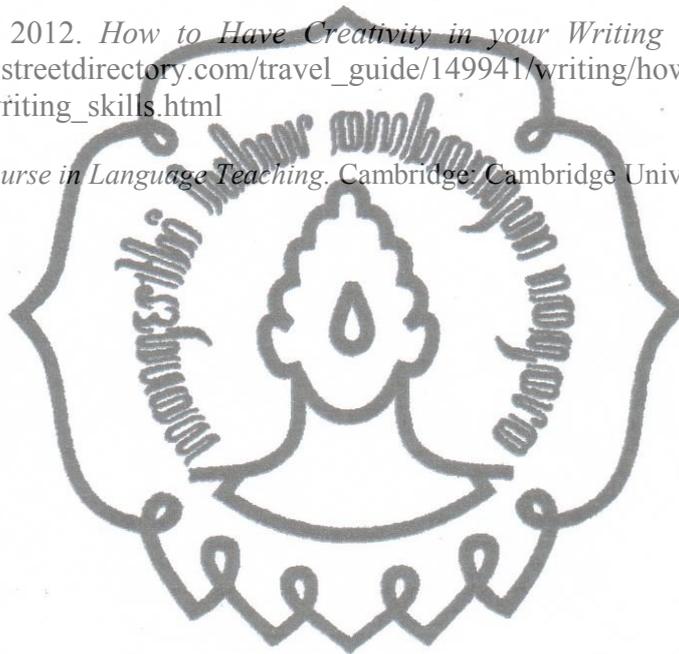
### C. Suggestion

Based on the research findings the conclusion of this research is that Dyadic Essay Technique is an effective technique in teaching writing especially for students with high creativity. Therefore, it is recommended that: (1) lecturers should apply Dyadic Essay Technique to make students enjoy their learning in the classroom; (2) the students need to be actively involved in the learning activities in the classroom, asking questions, reading books, or learning from other learning sources; and (3) future researchers may conduct the same kind of research with different sample and condition.

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## CHAPTER I

### INTRODUCTION

#### A. Background of the Study

Language is the means of social control. Human beings cooperate with one another through meaningful noises (spoken words) and scratches (written words). Language is social and we are constantly involved in the process of social interaction which makes it possible (Nicholas, 1982: 76). Learning a foreign language/second language is a complex process, as language is not just an act of putting meaningful words together. It needs a physical, intellectual, and emotional response if we have to send or receive messages in it. Learning a foreign language involves a new culture, a new way of thinking, feeling, and acting. The learner has to be fluent, accurate, and meaningful (Graff, 1985: 64).

Among many languages in the world, English becomes one of the most important and influential languages. The survey in 2002 indicated that if one is able to master English, he or she could communicate with over 700 million people (LBPP LIA, 2002: 11). Being able to get in touch with a sheer number of people all over the world, one will get many advantages. An obvious benefit one can obtain from mastering English is that he or she will find it easy to exchange and share any information and knowledge. Therefore, it is undeniable that English is a global language having a very important role in many aspects of life, like international communication, trading, and diplomacy as well as education.

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In order to gain the success of the English teaching as a means of international communication, teaching English must focus on the four basic skills: listening, speaking, reading, and writing. Writing as one of the four skills taught in schools is important since it is not just an end result. Writing is a process that helps the students develop their ideas and logical thinking. Principally, to write means to try to produce a written message. Smith in Hernowo (2003: 113) states that there are two reasons why people write: to communicate with others and to provide something for people themselves.

Writing as a skill involves a number of complex rhetorical and linguistic operations which must be taught. The act of writing is deprived of an immediate context of communication. Thus, for effective writing, the writer has to use a large number of formal features in order to help his/her readers infer the intended meaning. Failure to use these features correctly causes vagueness, ellipsis and ambiguity in some writings.

Writing becomes important because of some reasons. Raimes (1983: 3) states that writing helps the students to learn since it reinforces the grammatical structures, idioms, and vocabulary that the teachers have been teaching the students. Besides, when the students write, they also have a chance to be adventurous with the language, to go beyond what they have just learned to say, to take risks. The next is that when they write, they necessarily become very involved with the new language, the effort to express ideas and the constant use of eye, hand and brain is a unique way to reinforce learning.

In developing writing as a communicative skill, students should constantly be made aware that particular topics in writing fit particular

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situations and conform to particular conventions. Conventionally, legal writings use long sentences, formal language and precise definitions to avoid ambiguity and misinterpretations. In the context of physical sciences, writing is characterized by short sentences and short forms or symbolic signs. The role of the language teacher, therefore, is to teach his students to master not only the language skills but also to master the standard language which is free from grammatical errors. The term standard means the language which is standardized and accepted for use in formal communication.

Developing the writing skill is more complicated than other language skills. The reality shows that in composing grammatical and comprehensible sentences, the students face some difficulties to choose the appropriate words and to formulate grammatical sentences. This happens because writing ability requires the knowledge of the rule of sentences, good content, grammar, and vocabulary, and the knowledge of mechanics. Nevertheless, to master these requirements is not easy to do for the students. The inconsistency of the rules and the word meaning becomes the real hindrances.

Writing in EFL classes is difficult for both teachers and students because there are many aspects to deal with. Raimes (1983: 6) mentions those aspects are syntax, content, the writers' process, audience, purpose, word choice, organization, mechanics and grammar. Byrne (1995: 3) mentions three aspects which make writing difficult. The first is the psychological problem. Writing is a solitary activity. The teachers cannot get direct feedback like in speaking activity. The second is linguistics problem. The writers have to ensure that the choice of words, sentence structure, and other

cohesive devices are correct for conveying their message. The last is the cognitive problem. Writing is learned through a process of instruction. It is not a natural process like speaking. Both Raimes and and Byrne basically have the same idea, but Raimes does not classify the problem. Audience and purpose of writing is included in Byrne's psychological problem. Byrne's linguistic problem covered syntax, word choice, mechanics, and grammar. Meanwhile, Raimes' writer process, organization and content are covered in Byrne cognitive problem.

Most L2 learners might agree that writing is the most difficult skills for them to master. The difficulty lies not only in generating and organizing ideas, but also in translating these ideas into readable text. The skills involved in writing are highly complex. L2 writers have to pay attention to higher level skills of planning and organizing as well as lower skills of spelling, punctuation, word choice, and so on. The difficulty then becomes more pronounced if their language proficiency is weak.

Because of that, learning to write is not an easy task to do. Many students still make errors and mistakes and, then, they are fossilized. Their interest becomes less and less and students begin to create negative stimuli about learning to write. This condition drives the students to assume that writing is a very difficult task to do. The problem emerges as students are not familiar yet with the types of written discourse in English due to lack of exposure. Consequently, they are not able or willing to think directly in English. They, therefore, tend to formulate their ideas in Indonesian language

when they express ideas in writing. Afterward they try to translate them into English which is not an easy task and even dangerous.

Furthermore, the main activities of English teacher in teaching writing in EFL context involve conceptualizing, planning, and delivering course. At first sight, this seems to be mainly an application of practical professional knowledge gained through hands-on classroom experience. Teachers' classroom decisions are always informed by their theories and beliefs about what writing is and how people learn to write. Everything the teachers do in the classroom, the techniques and the materials they adopt, the teaching style they assume, the task they assign, are guided by both practical and theoretical knowledge, and their decisions can be more effective if that knowledge is explicit. A familiarity with what is known about writing, and about teaching writing, can therefore help us to reflect on our assumption and enables us to apply current teaching techniques with an informed and critical eye.

The statements above give the language teachers signals that conducting writing process is not as simple as other language skills. It needs some skills, such as: (1) using vocabularies; (2) generating the ideas; and (3) using tenses or grammar for writing. After writing using at least three skills above, the product of writing should be examined, changed, and edited to get the perfect writing. Writing performance is different from other skills because it needs the accurate situation or context, and of course, the structure of every sentence must be right to avoid misunderstanding.

To help the teachers in teaching writing to university students, teachers may use interesting teaching techniques to present their teaching materials

that also help them in creating fun class. Two of the alternative techniques are dyadic essay technique and clustering technique which are suggested to be applied in teaching writing.

According to Barkley, Cross, and Major (2005: 246) dyadic essay technique is a kind of collaborative learning technique. The students individually write an essay question and a model answer on a reading assignment, lecture, or other presentation of content. In the next class period, students in pairs exchange questions, write a response to the partner's question, and then trade, read, and compare model in-class answers. Then, the students write an essay or text based on their model answers they have discussed. After that, the students collaboratively discuss and revise their essay writing. This collaborative learning technique gives students practice identifying the most important feature of a learning activity and formulating and answering questions about that activity. It also gives students an opportunity to rehearse responding to essay questions with the added advantage of having a sample response with which to compare their answers. In this collaborative learning technique, the students also get the peer revision from their partners. So, they will be able to compare and revise their writing.

Meanwhile, clustering technique is a technique to divide some related ideas and write down in a blank paper without evaluating the truth or value of the ideas themselves. Then, the students write some sentences or paragraphs using the words or phrases they made before. Clustering technique can be used in any kind of writing genres, such as report, essay, proposal, short story, or poem. Clustering technique is used for collecting thoughts around

some stimulus, for finding a focus, and for allowing a sense of the whole arrangement to emerge even though all the details are not yet apparent. In short, it is a discovery process.

In addition, both techniques will be applied successfully in teaching writing if they are supported by the students' creativity. Creativity plays an important role to produce a good and understandable writing. Creativity itself is a mental and social process involving the generation of new ideas or concepts, or new associations of the creative mind between existing ideas or concepts. Creativity is fueled by the process of either conscious or unconscious insight. An alternative conception of creativeness is that it is simply the act of making something new. From a scientific point of view, the products of creative thought are usually considered to have both originality and appropriateness. Another adequate definition of creativity is that it is an "assumption-breaking process". Creative ideas are often generated when one discards preconceived assumptions and attempts a new approach or method that might seem to others unthinkable. The creativity that has a very influential factor to yield a good writing is verbal creativity. It is an ability to think creatively and to measure one's fluency, flexibility, and originality of a verbal form, which deals with words and sentences. Moreover, verbal creativity is an ability to form and create new ideas and then combine them into something new referring to the existing information. The new ideas reflect fluency, flexibility, and originality that can be seen in divergent thought revealed verbally.

Considering that background, the researcher is interested in conducting experimental research entitled “The Effectiveness of Dyadic Essay Technique in Teaching Writing Viewed from Students’ Creativity (An Experimental Research at the Second Semester Students of English Education Department, IKIP PGRI Bojonegoro, in the Academic Year of 2011/2012)”.

## **B. Identification of the Problems**

Dealing with the background of the study above, the writer identifies some problems, such as:

1. Does teaching writing using dyadic essay technique influence the students’ writing ability?
2. Does teaching writing using clustering technique influence the students’ writing ability?
3. Does the students’ creativity influence their writing ability?
4. Will the students who have high creativity achieve better result in writing when they are taught using dyadic essay technique?
5. Will the students who have low creativity achieve better result in writing when they are taught using clustering technique?
6. Which one is better, the students who have high creativity or low creativity in their writing ability?
7. Is there any interaction between teaching techniques and the students’ creativity in teaching writing?

### C. Limitation of the Problems

Since there are several problems that emerge on the identification of the problems above, the writer is concerned only with some of the problems stated in the identification of the problems. This limitation, however, is taken because of some factors as follows:

1. The writer does not have the ability to investigate all of the problems thoroughly.
2. Time allotment and financial allocation are also limited.

This study is limited to some related variables. The writer's problems are only focused on dyadic essay technique and clustering technique as the experimental variables. Besides, the teaching writing will be concentrated on the teaching writing to the Second Semester Students of IKIP PGRI Bojonegoro in the academic year of 2011/2012.

In addition, the writer believes that the most influencing factor in determining the success of the teaching and learning process in English teaching at the Second Semester Students of IKIP PGRI Bojonegoro is the students' creativity. Therefore, the writer is also eager to find out whether there will be an interaction between teaching techniques and the students' creativity in teaching writing.

### D. Statement of the Problems

From the background of the study, limitations of the problems, and the problems identification, the writer formulates the problems of this study as follows:

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1. Is dyadic essay technique more effective than clustering technique to teach writing?
2. Do students who have high creativity have better writing ability than those who have low creativity?
3. Is there any interaction between teaching techniques and students' creativity in teaching writing?

#### **E. Objectives of the Study**

Generally, the objectives of this study are connected to the formulation of the problems. This study is aimed at knowing the influence of dyadic essay technique, clustering technique, and the students' creativity in terms of the students' writing ability. The objectives of this research in detail are:

1. To find out whether dyadic essay technique is more effective than clustering technique in teaching writing.
2. To find out whether students who have high creativity have better writing ability than those who have low creativity.
3. To find out whether there is an interaction between teaching techniques and students' creativity in teaching writing.

#### **F. Benefits of the Study**

The benefits of this study are as follows:

1. Theoretically, this study can support the theories on teaching English writing as a foreign language.
2. Practically, the result of this study will be useful for:

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a. Other teachers

- 1) This study motivates teachers to find a new method or technique which is appropriate in teaching writing.
- 2) This study encourages the teachers to develop their creativity to improve teaching learning process.
- 3) This study improves the teachers' capability to conduct teaching and learning activity appropriately.
- 4) This study gives the way of facilitating, controlling, and monitoring the students' writing activity.

b. The students

This study enables the students to study writing in pairs. They can give feedback to their partners' writing. They also get the different experience in learning writing through this study. Furthermore, dyadic essay technique can help the students develop their ability in writing, their creativity, critical thinking, and avoid boredom.

c. The institution

This study can be used by IKIP PGRI Bojonegoro, because it provides valuable information for the improvement of teaching writing through dyadic essay technique and clustering technique.

d. Other researchers

This study can be a reference for further similar studies done by other researchers.

e. The writer

This study can improve and give the writer a new experience, build brand-new schemata and knowledge on teaching and learning process. It functions as the measurement whether or not he can practice and apply all of the theoretical knowledge to a real class of his own. Besides, it also gives him knowledge of personality, persistence, and patience.



## CHAPTER II

### REVIEW OF RELATED LITERATURE

In order to sharpen the theoretical framework of this study, this chapter is devoted to review some relevant theories and studies concerning with writing ability, dyadic essay technique, clustering technique, and creativity. Next, the writer will discuss rationale based on the reviewed theories to propose the basic assumption. Eventually, based on the rationale, the writer proposes the hypothesis of this study.

#### A. The Nature of Writing

The real reason for writing is to communicate with others so that the writers are not alone, but they are part of the human race they belong to. One way to begin is to try to open up some channels of communication (Schoen, et.al, 1982: 3). Writing is one of the four skills which have to be mastered in learning language. But in fact, the students still cannot transfer their idea when they are asked to write in English. Students' skill in writing can increase if they are given opportunities to learn before the teacher gives an assignment. Zamel in Nunan (1991: 88) states that writing skill can develop rapidly when students' concerns and interests are acknowledged, when they are given numerous opportunities to write.

Classroom has important role for the students to practice their writing in English because the society, in this case is their classmates, have ability in the same range. Blanchard and Root (1998: 1) state that learning to write in a new

language is not always easy. It is not only challenging but also fun. If the students learn to speak and read in a new language, the students will be ready to begin writing too. The students will feel that writing in English is easy when they find comfort environment, such as a classroom.

When writing, people use graphic symbols such as letters or the combination of letters which relate to the sounds when someone speaks. Byrne (1995: 1) states that writing is the act of forming symbols. However, writing is not merely the formations of graphic symbols just as speech is not merely the production of sounds. More than that, writing involves the act of arranging symbols accordingly to certain conventions to form words and the words have to be arranged in such a way to form sentences.

Farbairn and Winch (1996: 32) state that writing is about conveying meaning by using words that have been selected and put together in a written or printed form. Dvorak in Hadley (1993: 291) states that writing refers to all activities that involve transferring thought to paper. Byrne (1995: 3) presents the differences between spoken and written language as shown on table 2.1.

Table 2.1. The Differences between Spoken and Written Language

<b>Spoken</b>	<b>Written</b>
1. Takes place in a context, which often reference clear	1. Creates its own context and therefore has to be fully explicit.
2. Speaker and listener (s) in contact. Interact and exchange roles.	2. Reader not present and no interaction possible
3. Usually person addressed is specific	3. Reader not necessarily known to writer
4. Immediate feedback given and expected: <ol style="list-style-type: none"> <li>a. Verbal: question, comments, murmurs, grunts</li> <li>b. Non-verbal: facial expression</li> </ol>	4. No immediate feedback possible. Writer may try to anticipate reader's reaction and corporate them into text.

5. Speech is transitory. Intended to be understood immediately. If not, listeners expected to interact.	5. Writing is permanent. Can be reread as often as necessary and at own speed.
6. Sentences often incomplete and sometimes ungrammatically. Hesitations and pauses common and usually some redundancy and repetition.	6. Sentences expected to be successfully constructed, and linked and organized to form a text.
7. Range of devices (stress, intonation, pitch, speed) to help convey meaning. Facial expressions, body movements and gestures also used for this purposes.	7. Devices to help convey meaning are punctuation, capitals and underlining (for emphasis). Sentence boundaries clearly indicated.

Raimes (1983: 4) states some differences between writing and speaking, as follows:

1. Speech is universal; everyone acquires a native language in the first few years of life. Not everyone learns to read and write.
2. The spoken language has dialect variations. The written language generally demands standard form of grammar, syntax, and vocabulary.
3. Speakers use their voice (pitch, stress, rhythm) and bodies (gestures and facial expressions) to help convey their ideas. Writers have to rely on the words on the page to express their meaning.
4. Speakers use pauses and intonation. Writers use punctuation.
5. Speakers pronounce. Writers spell.
6. Speaking is usually spontaneous and unplanned. Most writing takes time, planned, can go back and change what we have written.
7. A speaker speaks to a listener who is right there, nodding or frowning, interrupting, and questioning. For the writer, the reader's response is either delayed or nonexistent. The writer has only that one chance to

convey information and be interesting and accurate enough to hold the reader's attention.

8. Speech is usually informal and repetitive. We say things like, "What I mean is...." or "Let me start again." Writing, on the other hand, is more formal, and compact. It progresses logically with fewer digressions and explanations.

9. Speakers use simple sentences, with connecting words like however, who, and in addition.

The purpose of writing according to Ur (1996: 163) is the expressing of ideas, the conveying of a message to the readers, so that the ideas themselves should arguably be seen as the most aspects of writing. Some other aspects such as neat handwriting, correct spelling and punctuation, acceptable grammar and careful selection of vocabulary, however, are things that need some attention to be paid by a writer. Some skills are needed to produce a clear and understandable writing, such as manipulating proper words and arranging the words coherently and know the characteristics of good writing. It means that the writer should have the ability in arranging his or her ideas into a possible order. In addition, good writing should also be well written.

A writer should master the aspects of writing. Dealing with the aspects of writing, Hughes (1996: 91) mentions five aspects of writing; they are (1) grammar, (2) vocabulary, (3) mechanics, (4) fluency and (5) form. Brown (2003: 244) also has scale for rating composition (writing), they are: (1) organization (introduction, body, and conclusion), (2) logical development of ideas (content), (3) punctuation, spelling and mechanics, (4) style and quality

expression (vocabulary, variety of structure, word choice). According to Reid (1993: 236-237), the aspects of writing are organization, content, vocabulary, language use, and mechanics.

## **B. Teaching Writing**

### **1. The Importance of Teaching Writing**

Learning language should master the productive skill and the receptive skill. In receptive skill and productive skill, the students must understand both the spoken language and the written language. Receptive skill involves listening and reading, and productive skill involves speaking and writing.

Hammond in Nunan (1991: 86) believes that it is crucial to understand the relationships between oral and written language in order to develop an effective pedagogy of teaching. The students have to master both spoken and written, especially writing because there are some books written in English. In addition, Paul and Goione (1973: 3) state that writing is not scared activity. The teacher does not make the students afraid of writing. Give the students support and let them write, because expressing thought through writing is not easy for most people. According to Reid (1993: 236-237) writing is a subject that involves some aspects in order to make it understandable. Those aspects are organization, content, vocabulary, language use, and mechanics.

Teaching writing skills officially has been given to the students from the fourth of Elementary Schools. Yet the students still have a lot of

difficulties in expressing ideas in writing a composition in English. During the teaching learning process, a teacher should give more help, practices, and chances to EFL students to explore and express their ideas. Formally, teaching course is focused on grammar or on an elaborate discussion of the theory of writing only. This condition makes the EFL students get sleepy and bored during the class.

Angelo (1980: 1) says that writing would still be valuable in education because writing can help one think critically, to clarify thoughts, and the deeper perception. Another opinion is from Byrne (1995: 5); writing is often needed for formal and informal test, to get through college with good grades. Many tests are essay test, and even in other subjects than English, composition researches are required. Writing English can also increase opportunities for career as Fowler (1965: 40) points out that the written word is increasing demand in the business world both as a key to get job and the success in it.

According to Byrne (1995: 4) there are three factors which influence writing process, they are: (1) psychological problem, a teacher is expected to be able to write his/her own without the possibility of interaction or feedback, and this makes the act of writing difficult; (2) linguistics problem, a teacher must keep the communication through his/her own efforts and to ensure, both through his/her choice of sentences structure and by the way his/her sentences are linked together and sequenced, that the text he/she writes or produces can be interpreted on its own; (3) cognitive problem, a teacher has to master the written form of the language and to learn certain

structures which are important for effective communication in writing. A teacher learns how to organize his/her ideas and thought in such a way that they can be understood by the reader who is not present, and perhaps by the reader who is not known to us.

To overcome those problems mentioned above, the English teachers need to be aware that writing should be taught in various ways and manners so that the students are interested in studying. The teacher should also phase the writing tasks from the simplest stage to the more complex one, so that the students are not frustrated with writing.

## 2. Writing Assessment

Thornbury (2005: 127) proposes two main ways of scoring in written test, *holistic scoring* and *analytic scoring*. Holistic scoring uses a variety of criteria to procedure a single score. Analytic scoring focuses on the principles function of the text and therefore offers some feedback potential, but no wash back for any of the written production that enhances the ultimate accomplishment of the purposes.

In Brown (2004: 242), there are some advantages of using holistic scoring: (1) fast evaluation; (2) relatively high inter-rater reliability; (3) the score represent “standard” that are easily interpret by lay person; (4) the score tends to emphasize the teacher strength; (5) applicability to writing across many different discipline. The disadvantages that must be taken into consideration on whether to use holistic scoring are: (1) raters need to be extensively trained to use the scale accurately; (2) one sore makes

differences across the sub skills within each score; (3) the scale of descriptive text may not apply equally to all kinds of text; (4) no wash back potential for classroom instructional purposes, holistic scores may provide very little information and wash back for further stages learning.

Classroom evaluation of learning is best served through analytic scoring. Analytic scoring is in order to capture its closer association with classroom language instruction than with formal testing.

Based on the theories above the scoring rubric applied in this thesis is as shown in table 2.2.

Table 2.2 Scoring Rubric

Aspect of writing	Range	Score	Criterion
Content	30-27	Excellent to very good	Knowledgeable. Substantive, through development of thesis. Relevant to assigned topic.
	26-22	Good to average	Some knowledge of subject. Adequate range. Limited development of thesis. Mostly relevant to topic, but lacks detail.
	21-17	Fair to poor	Limited knowledge of subject. Little substance. Inadequate development of topic.
	16-13	Very poor	Does not show knowledge of subject. Non-substantive. Not pertinent, or not enough to evaluate.
Organization	20-18	Excellent to very good	Fluent expression. Ideas clearly stated/supported. Succinct. Well-organized. Logical sequencing cohesive.
	17-14	Good to average	Somewhat choppy. Loosely organized but main ideas stand out. Limited support. Logical but incomplete sequencing.
	13-10	Fair to poor	Non-fluent. Ideas confused or disconnected. Lack logical sequencing, and development.
	9-7	Very poor	Does not communicate. No organization, or not enough to evaluate.
Diction	20-18	Excellent to very good	Sophisticated range. Effective word/idiom choice and usage. Word form mastery.

			Appropriate register.
	17-14	Good to average	Adequate range. Occasional errors of word/idiom form, choice, usage but meaning not obscured.
	13-10	Fair to poor	Limited range. Frequent errors of word/idiom form, choice, usage. Meaning confused or obscured.
	9-7	Very poor	Essentially translation. Little knowledge of English vocabulary idioms. Word form or not enough to evaluate.
Language use	25-22	Excellent to very good	Effective complex constructions. Few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions.
	21-18	Good to average	Effective but simple constructions minor problem in complex constructions. Several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions, but meaning seldom obscured.
	17-11	Fair to poor	Major problems in simple/complex constructions. Frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions, and/fragments, run-ons, deletions. Meaning confused/obscured.
	10-5	Very poor	Virtually no mastery of sentence constructions rules. Dominated by errors. Does not communicate. Or not enough to evaluate.
Mechanics	5	Excellent to very good	Demonstrate mastery of conventions. Few errors of spelling, punctuation, capitalization, paragraphing.
	4	Good to average	Occasional errors of spelling, punctuation, capitalization, paragraphing, but meaning not obscured.
	3	Fair to poor	Frequent errors of spelling, punctuation, capitalization, paragraphing. Poor handwriting. Meaning confused or obscured.
	2	Very poor	No mastery of convention. Dominated by errors of spelling, punctuation, capitalization, paragraphing. Handwriting illegible or not enough to evaluate.

Reid (1993: 236-237)

### 3. Micro Skills and Macro Skills of Writing

#### Micro skills

- a) Produce graphemes and orthographic patterns of English.
- b) Produce writing at an efficient rate of speed to suit the purpose.
- c) Produce an acceptable core of words and use appropriate word order patterns.
- d) Use acceptable grammatical systems (e.g. tense, agreement, and pluralisation), patterns and rules.
- e) Express a particular meaning in different grammatical forms.
- f) Use cohesive devices in written discourse.

#### Macro skills

- a) Use the rhetorical forms and conventions of written discourse.
- b) Appropriately accomplish the communicative functions of written texts according to form and purpose.
- c) Convey links and connections between events, and communicate such relations as main idea, supporting idea, new information, given information, generalization, and exemplification.
- d) Distinguish between literal and implied meanings when writing.
- e) Correctly convey culturally specific references in the context of the written text.
- f) Develop and use a battery of writing strategies, such as accurately assessing the audience's interpretation, using pre-writing devices, writing with fluency in the first draft, using paraphrases and

synonyms, soliciting peer and instructor feedback, and using feedback for revising and editing.

From previous elaboration it can be concluded that writing ability is the act of expressing ideas or thoughts in communication using graphic symbols which are arranged based on certain rules and conventions. The rules and conventions are concerning with the aspects of **content**, **organization**, **word choice**, **language use**, and **mechanics**. Aspect of **content** is talking about the ability to think creatively and develop thoughts, excluding all irrelevant information. **Organization** is the logical order of sentences presented so that the arrangement of the sentences makes sense; it involves unity and coherence. **Diction** is the ability to choose and use wide range of proper words and idioms. **Language use** is the ability to apply sentence structure and other grammatical features. **Mechanical** aspect is related to the ability to use correctly those conventions peculiar to the written language, counting punctuation, capitalization, and spelling.

### C. Collaborative Learning

Many students often assume that they are in competition one another. This assumption subscribes to a culture where a form of conflict can prevail. Alternatively, even if the latter is not always the case, there are still solitary students who beaver away alone oblivious to the potential support that group work can offer.

Group work assumes an alternative way of learning by expressing and exploring diverse idea and experiences in collaborative atmosphere. It is not about competing with fellow students and winning, but about using the range of resources available in the group to deepen understanding, to sharpen judgment and to extend knowledge. It involves mutual support and culture of shared commitment. It is important to remember that individuals within such groups are assessed not only on their contribution to the project, but also their ability to work within a group, the ability to be involved in a collaborative way of solving problems.

According to Barkley, et al., (2005: 4), there are other terms of collaborative learning, such as cooperative learning, team learning, group learning, or peer-assisted learning. Besides, there are also many definitions of collaborative learning stated by experts. However, there are only some definitions of collaborative learning will be discussed in this research, they are:

1. According to Gerlach (1994: 12), collaborative learning is based on the idea that learning is a naturally social act in which participants talk among themselves.
2. According to MacGregor (1990), collaborative learning is an umbrella term for a variety of educational approaches involving joint intellectual effort by students, or students and teachers together. Usually students are working in groups of two or more, mutually searching for understanding, solutions, meanings, or creating products. Collaborative learning activities vary widely, but most centre on students' exploration *commit to user*

or application of the course material, not simply the teachers' presentation or explication of it.

3. Dillenbourg (1999: 2) defines collaborative learning as a situation in which two or more people learn or attempt to learn something together. "Two or more" may be interpreted as a pair, a small group (3-5 subjects) or a class (20-30 subjects). "Learn something" may be interpreted as "follow a course", perform learning activities such as problem solving". "Together" may be interpreted as different forms of interaction which may be face-to-face or computer-mediated.

Based on the definition above, it can be concluded that collaborative learning is a learning activity where students come together in groups, in which each student has same responsibility for his/her own learning and in which students work together, share their opinion to maximize their ability in teaching learning, and mutually search for understanding, solutions, meanings, or creating products. Students gain their learning objective through their effort and the effort of the members of their group. It can be seen that collaborative learning is more than just small group activity. There are some characteristics belonging to collaborative learning.

### **1. The Characteristics of Collaborative Learning**

Collaborative learning has been defined in different ways. However, Crandall in Arnold (1999: 227) mentions five characteristics of collaborative learning activity. The following is the detail of those five characteristics:

### **a. Positive Interdependence**

Positive interdependence is a positive correlation among the students. Collaborative learning requires positive interdependence. Dorney (1997: 484) says that cooperative classroom is characterized by positive interdependence. When there is no positive interdependence in the learning activity, it means that the learning activity is not cooperative. Kagan (2000: 2) states that positive interdependence is positive correlation among outcomes where the students are positively interdependent when a gain for one is gain for another and they, therefore, feel them to be on the same side. According to Joyce (2005: 20) positive interdependence can be built into the task by jigsawing information, by limiting information, by having single team product, through team roles, or by randomly selecting one student to answer for the team. Based on the theory, it can be said that learning can be cooperative when positive interdependence occurs in the learning activity that is when students feel that a gain for one is a gain for another.

### **b. Face-to-Face group Interaction**

Another characteristic of collaborative learning is the emphasis on small group interaction. In collaborative learning situation, students interact, assist one another with learning task, and promote one another's success. It means that when the students get the difficulties in learning they may ask for help from others. Orlic, et al. (1998: 277) say that the small group setting allows the students to work directly with one to another, to share opinions and ideas, to come to common understanding and to work as a team to ensure to member's success and acceptance. Concerning with cooperative group, Joyce

(2005: 21) recommends that the small group consists of two students, when the largest one consists of six students. In other words, a learning group can be cooperative if it is not more than six so that the group's members are able to interact and assist one another directly to achieve their success. It may happen because small group can encourage all members to participate and benefit from multiple ideas and roles of the individual members. Besides, by using face-to-face interaction, learning can become active rather passive. Thus, in collaborative learning situation, group interaction should be enhanced.

### c. Individual Accountability

Individual accountability is the individual responsibility for doing his or her share of the work and for the material. Johnson and Johnson in Dorney (1997: 484) argue that collaborative learning works best when the group rewards for learning are combined with individual accountability in order to ensure that participants perform their share of the works. Each group's member should have something to be contributed to his/her group in order to gain group's success. In collaborative learning setting, each student is held accountable for his/her own academic progress and task completion, apart from the accomplishment of the group as a whole. In collaborative learning, individuals are asked to sign statements describing their contribution to particular object. Crandall in Arnold (1999: 2280) states that individual accountability is encouraged through the assignment of specific roles or tasks, and individuals are held accountable for the success of each of the other members. Accountability is also developed through activities, which ask

learners to engage self-evaluation concerning with their participations and their attitudes and actions towards the other members. In other words, in collaborative learning, each student must be held individually responsible for doing his/her own effort for learning. He/she cannot rely only upon the effort of the members of his/her group.

#### **d. Development of Small Group Social Skills**

It has been stated that collaborative learning involves group interaction. To be able to interact among group's members, students should have social skills that are the skills for working together effectively. Crandall in Arnold (1999: 228) states that collaborative learning groups to succeed individuals need to develop not only linguistics but also social skills which facilitate teamwork, create trust, and enhance communication. It means that students need to learn and to work together as a team and how to help each other, assuming responsibility for their own and each other's learning. Based on the explanation, it can be assumed that collaborative learning activity should encourage students to develop their social skills so that they can work together with one another as well.

#### **e. Group Processing**

Besides engaging in group tasks, learners also need to reflect upon their group's experiences, how group members interact in doing the task, the kind and number as different views are suggested or one in noticeable silent or vocal. Group processing is needed to evaluate how well the students learn and how well the cooperative group works. According to Joyce (2005: 2), group processing means giving students the time and procedure to analyze how well

they are using necessary collaborative skills. Students need to evaluate how well they are meeting their goals, what actions help them to recognize what action seem to hurt group interaction. It will help them to recognize what actions should or should not be done when they work together as a team. In this way, next time, they can improve the effectiveness of their collaborative learning activity.

Those characteristics of collaborative learning can be used to create comfortable environment for the students to participate in writing. Positive interdependence will make students feel they learn together, not compete each other. They are asked to be cooperative, not competitive. Group interaction encourages them to get more idea, because they may share opinion with others. Individual accountability will motivate them to think more deeply because they want to give their group some contributions. The social skills can increase students' self-confidence, because they are not alone but involved in a team work. They know how to ask question, share opinion and present point of view. The last characteristics of collaborative learning, group processing, will make students know how to work cooperatively. In other words, all those characteristics, if applied properly, can increase the effectiveness of the teamwork.

## **2. The Benefits of Collaborative Learning**

The reason why collaborative learning is used is because it offers many benefits. Panitz (1996: 1-2) mentions some benefits of collaborative learning as follows:

*commit to user*

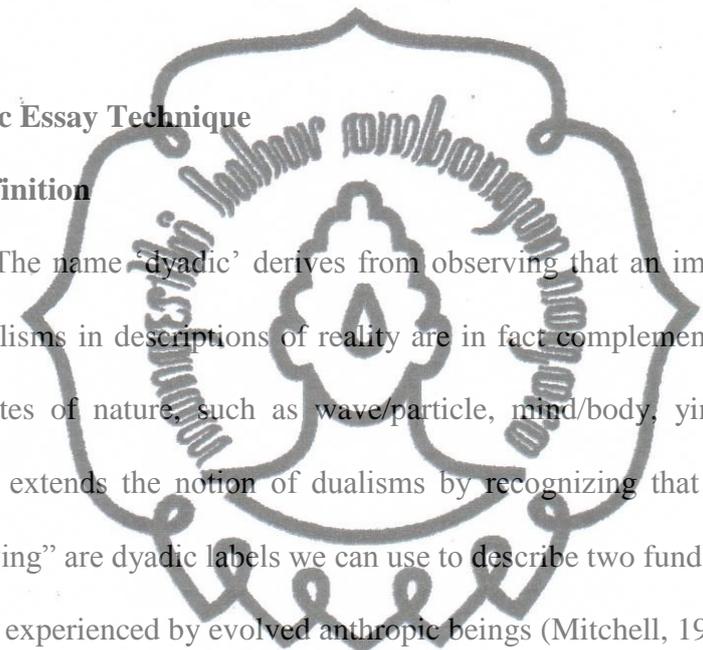
- a. Develops higher level thinking skills;
- b. Promotes student-faculty interaction and familiarity;
- c. Increases student retention;
- d. Builds self esteem in students;
- e. Enhances student satisfaction with the learning experience;
- f. Promotes a positive attitude toward the subject matter;
- g. Develops oral communication skills;
- h. Develops social interaction skills;
- i. Promotes positive race relations;
- j. Creates an environment of active, involved, exploratory learning;
- k. Uses a team approach to problem solving while maintaining individual accountability;
- l. Encourages diversity understanding;
- m. Encourages student responsibility for learning;
- n. Involves students in developing curriculum and class procedures;
- o. Students explore alternate problem solutions in a safe environment;
- p. Stimulates critical thinking and helps students clarify ideas through discussion and debate;
- q. Enhances self management skills;
- r. Fits in well with the constructivist approach;
- s. Establishes an atmosphere of cooperation and helping schoolwide;
- t. Students develop responsibility for each other;
- u. Builds more positive heterogeneous relationships;
- v. Encourages alternate student assessment techniques;

- w. Fosters and develops interpersonal relationships;
- x. Modelling problem solving techniques by students' peers;
- y. Students are taught how to criticize ideas, not people;
- z. Sets high expectations for students and teachers;
- aa. Promotes higher achievement and class attendance;
- bb. Students stay on task more and are less disruptive;
- cc. Greater ability of students to view situations from others' perspectives (development of empathy);
- dd. Creates a stronger social support system;
- ee. Creates a more positive attitude toward teachers, principals and other school personnel by students and creates a more positive attitude by teachers toward their students;
- ff. Addresses learning style differences among students;
- gg. Promotes innovation in teaching and classroom techniques;
- hh. Classroom anxiety is significantly reduced;
- ii. Test anxiety is significantly reduced;
- jj. Classroom resembles real life social and employment situations;
- kk. Students practice modeling societal and work related roles;
- ll. CL is synergistic with writing across the curriculum;
- mm. CL activities can be used to personalize large lecture classes;
- nn. Skill building and practice can be enhanced and made less tedious through CL activities in and out of class;
- oo. CL activities promote social and academic relationships well beyond the classroom and individual course;

- pp. CL processes create environments where students can practice building leadership skills;
- qq. CL increases leadership skills of female students;
- rr. In colleges where students commute to school and do not remain on campus to participate in campus life activities, CL creates a community environment within the classroom.

## D. Dyadic Essay Technique

### 1. Definition



The name 'dyadic' derives from observing that an impressive number of dualisms in descriptions of reality are in fact complementary, inseparable attributes of nature, such as wave/particle, mind/body, yin/yang, etc. The model extends the notion of dualisms by recognizing that "existence" and "knowing" are dyadic labels we can use to describe two fundamental facets of reality experienced by evolved anthropic beings (Mitchell, 1995: 1).

Barkley, Cross, and Major (2005: 235) state that dyadic essay is a technique in which students in pairs write essay questions and model answers for each other, exchange questions, and after responding, compare their answers to the model answer. It is particularly useful for identifying the most important feature of a learning activity and formulating and answering questions about that activity.

From the definitions above, it can be concluded that dyadic essay technique is a technique in teaching writing in which the students in pairs write essay questions and their answers on separate sheet. After that, they

exchange their questions and answers with others', compare their model and discuss together with their partners.

## 2. Description and Purpose of Dyadic Essay

Barkley, Cross, and Major (2005: 246) state that in dyadic essay technique students individually write an essay question and a model answer on a reading assignment, lecture, or other presentation of content. In the next class period, students pairs exchange questions, write a response to the partner's question, and then trade, read, and compare model in-class answers. After that, the students write an essay based on the model answers they have discussed. Finally, the students in pairs revise their essay writing. This collaborative learning technique gives students practice identifying the most important feature of a learning activity and formulating and answering questions about that activity. It also gives students an opportunity to rehearse responding to essay questions with the added advantage of having a sample response with which they compare their answers.

## 3. Preparation

Writing a good essay question is a difficult task, and one with which students are often unfamiliar. This collaborative learning technique will work best when you have spent some time teaching students how to write good essay questions and answers. Consider preparing a handout with guidelines and sample questions and responses that model the level of complexity and depth you expect.

#### 4. Teaching Steps of Dyadic Essay Technique

- a. Outside of class, students reflect on a learning activity (such as reading an assignment, listening to a lecture, watching film) and formulate and write essay questions;
  - b. On separate sheet of paper, students prepare a model response to their own question (usually a couple of paragraphs);
  - c. Students bring a copy of their essay questions and model answers to class;
  - d. Students form pairs, exchange essay questions, and write responses;
  - e. Students trade model answers and compare and contrast their in-class answers with their partner's model answer;
  - f. Partners discuss their responses first for one essay question and then for the other, paying special attention to similar and dissimilar ideas.
- (Barkley, et al., 2005: 246-247)

According to Millis, et al., (1993) the procedures of conducting dyadic essay are:

- a. Instructor assigns reading a text or watching a video;
- b. Student formulates an essay question;
- c. Student prepares a model response to their question. (No longer than one page, single-spaced);
- d. Student brings essay question and copy of answer on separate pages.
- e. Students exchange essay questions;
- f. Students write an essay to the question they receive;

- g. Students compare their answer with the model answer and discuss. (When evaluating questions, students look for clarity, importance, etc. criterion may be established for model answers);
- h. Instructor conducts general discussion after all students have received copies of the questions.

According to Sherman (1998), the procedures of conducting dyadic essay technique are:

**To be accomplished outside of class:**

- a. Text reading: entire class reads a text given by the instructor;
- b. Question writing: each student writes a question attempting to integrate or link issues which they perceive to be important in both reading assignments;
- c. Answer writing: each student then writes a model answer to their own questions;
- d. Before coming to class each student reproduces a single copy of their question (their answer is not included);

**To be accomplished in class:**

- e. Question exchange: students exchange copies of their questions with each other;
- f. Writing: students spend approximately 25 minutes writing answers to each others' questions;
- g. While students writing answer to each others' questions, the instructor makes copies of all the questions for later distribution to the entire class;

- h. Reading: students read each others' answers. The original poser of the question reads a peer's answer while that peer reads the originator's answer. This is not always a reciprocal exchange and therefore usually involves three people: e.g., B writes an answer to A's question and C answers B's question. Therefore, B must interact with both A and C;
- i. Confrontation: the students then engage in dialogue over convergent and divergent ideas which they have encountered in each others' essays;
- j. Class discussion: a general discussion follows the passing out of copies submitted for that day;
- k. Peer evaluation: students evaluate each other questions and answers.
- l. Instructor evaluation: the instructor then evaluates both the questions and answers.

From the theories above, it can be concluded that there are some steps in conducting dyadic essay technique. The steps are as follows:

- a. The teacher gives a learning activity such as reading a text or watching a video;
- b. The students write essay questions related to the content of learning activity;
- c. They write a model response of their own questions on separated answer sheet. This activity stimulates the students to make a good **content and organization**, to choose the appropriate vocabulary (**diction**), and to use the correct **grammar and mechanics**;

- d. In pairs, the students exchange their essay questions with their friends' (their model answer is not included);
- e. The students write the answers of their friends' questions. This activity encourages the students to develop the **content, organization, grammar, diction, and mechanics**;
- f. The students discuss and compare the essay questions and model answers in pairs;
- g. After discussing and comparing their answers with their friends', the students write an essay or text by developing the model answers they have discussed. This activity stimulates the students to make a good **content and organization**, to choose the correct **diction**, to use the correct **grammar** and **mechanics**;
- h. Then, after writing an essay, the students in pairs discuss and revise their essay writing;
- i. Finally, the teacher conducts general discussion and gives feedback to the students' work.

## 5. The Advantages and Disadvantages of Dyadic Essay Technique

Dyadic essay technique has many advantages as a functional unit of collaborative learning. The likelihood of participation by all students is increased when there are only two individuals involved. The larger the group, the more opportunity there is for diffusion of responsibility among group members or for exclusion of some members. Active participation in the collaborative process is essential for learning to occur.

Sherman (1998: 1), states that in dyadic essay, the students are relying on peers for learning. It means that students work together to teach one another, and they alternate between the roles of student and teacher. This technique combines elements of both motivational and cognitive approaches to collaboration. The technique also promotes cognitive processing by using a structured approach to teaching and learning within a tutoring context. This technique also promotes active processing of material using activities that are strongly linked to achievement.

From the statement above, it can be concluded that dyadic essay technique has some advantages such as: (1) it can promote effective learning; (2) it can combine both motivational and cognitive approaches to collaboration; (3) it can promote cognitive process through a structured approach to teaching and learning within a tutoring context; (4) it can promote the students' achievement and the students' self confidence.

Besides, according to Barkley, et al., (2005: 250), dyadic essay also has the potential disadvantages. The disadvantages are as follows: (1) it is possible for the students to learn the information incorrectly; (2) the students who are less creative will get difficulties in doing the discussion; (3) it is difficult for the teacher to read all of the questions and answers all of the time, so, the teacher must check the students' work occasionally to help measuring overall accuracy.

## **E. Clustering Technique**

### **1. Definition of Clustering Technique**

Clustering technique is developed by Gabrielle Luser Rico (1983). Rico (1983) states that clustering is a technique to divide some related ideas and write down in a blank of paper without evaluating the truth or value of the

ideas themselves. Clustering technique can be used in any kind of writing genres, such as report, essay, proposal, short story, or poem (De Porter, 1999: 184)

In line with Rico (1983), Hernowo (2004: 195) states that clustering technique can produce writing that can deliver its message with the same comprehension and surge as spoken language.

Dawson and Essid (2010: 1) say that clustering is a type of prewriting that allows the learners to explore many ideas around some stimulus as soon as they occur to the learners. Like brainstorming or free associating, clustering allows learners to begin without clear ideas.

From the definitions above, it can be concluded that clustering technique is a technique for collecting some related ideas, words, or concepts around some stimulus to help the writers to develop their writing before starting the writing activity. In short, it is a discovery process.

## 2. How to Make Clustering Diagram

Clustering diagram contains of a main topic as a center and related ideas as branches. To draw this diagram, first, in the center of paper, write the topic and draw a “balloon” around it. This is the center or core. Then, write related ideas in balloons around the core. Think about each of these ideas and make more balloons around them.

The following is the example of clustering diagram:

Figure 2.1

Clustering Diagram

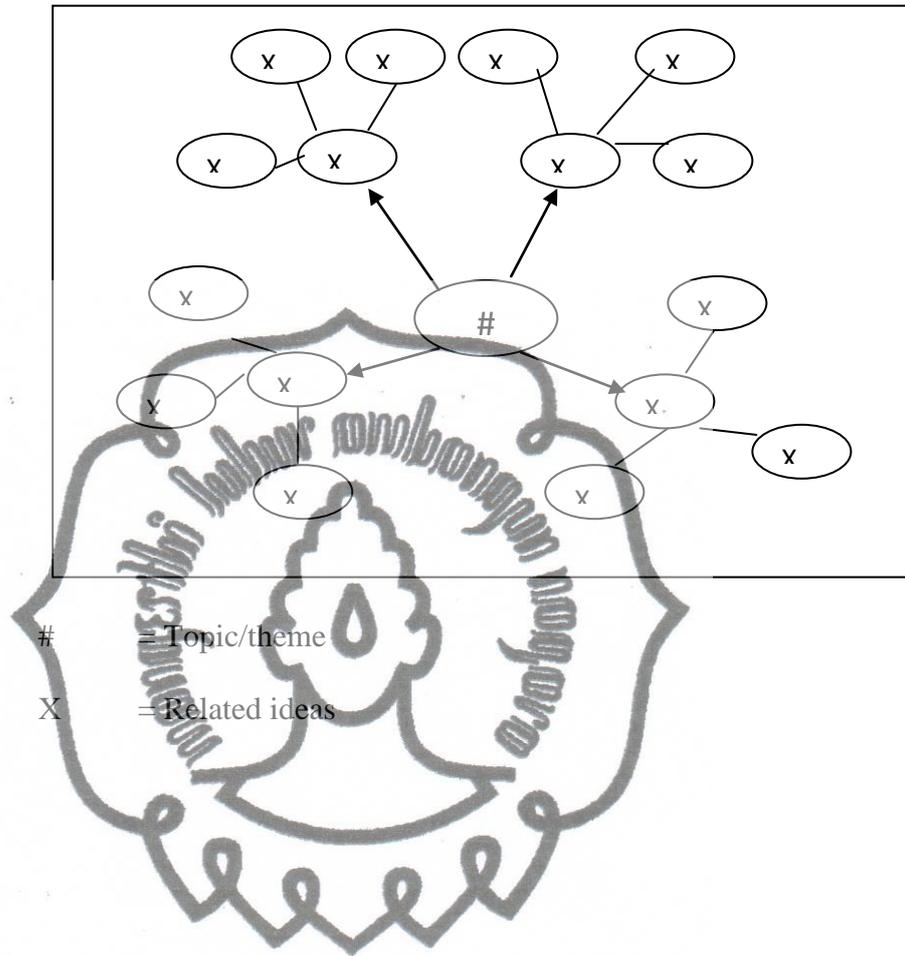
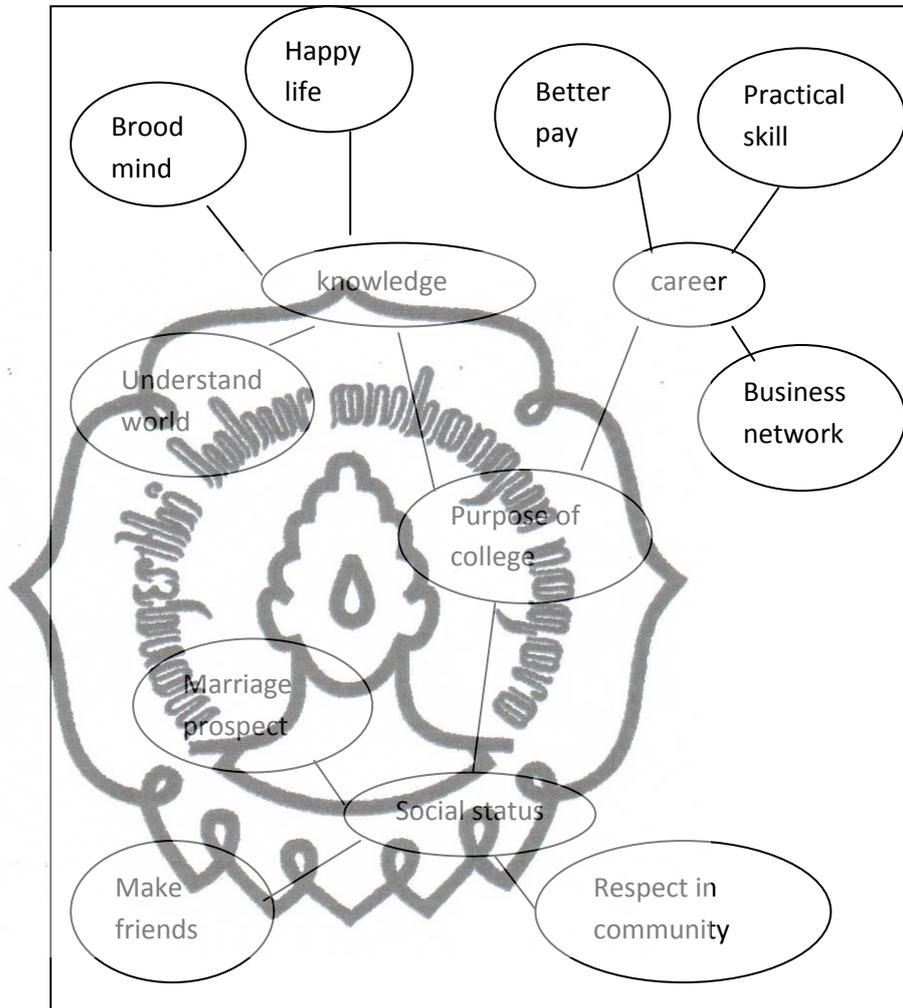


Figure 2.2

Example of Clustering Diagram



### 3. Teaching Steps of Clustering Technique

Meade (2010: 1-2) mentions that there are some procedures to do clustering technique:

- a. Write a word or phrase on a clean piece of paper;
- b. Circle the word and let connection flow, write down each new word or phrase that comes to mind, circle it, and connect it with a line;
- c. Keep the hand moving all the time;
- d. Cluster for a while;
- e. Continue adding to the cluster;
- f. Write a piece without worrying about perfection.

Bambang Yudi Cahyono (2009: 88) states that the teaching and learning process is conducted through the following procedures:

- a. Pre-writing
  - 1) The teacher writes a theme on the whiteboard;
  - 2) The teacher draws a sample of cluster, and asks the students to competitively complete the provided cluster;
  - 3) The teacher gives the example of descriptive phrase based on cluster;
  - 4) The teacher asks the students to make a cluster on their own.
- b. Whilst-writing
  - 1) The teacher asks the students individually write an essay based on a certain theme;
  - 2) The students try to make cluster based on the theme given by the teacher;

- 3) The students write an essay based on the cluster they have made.
- c. Post-writing
- 1) The teacher asks the students if clustering technique helps them in writing;
  - 2) The teacher evaluates the students' writing product.

From the theories above, it can be concluded that there are some steps in conducting clustering technique. The steps are as follow:

- a. The teacher writes a theme on the whiteboard;
- b. The teacher draws a sample of cluster, and asks the students to competitively complete the provided cluster;
- c. The teacher gives the example of descriptive phrase based on cluster;
- d. The teacher asks the students individually to write an essay based on a certain theme;
- e. The teacher asks the students to make a cluster on their own through following steps: (1) the students write a word or phrase on a clean piece of paper, circle the word or phrase that comes to mind, and connect it with a line (this activity encourages the students to choose the appropriate vocabulary (**diction**) and to use correct spelling and punctuation (**mechanics**)); (2) they must keep the hand moving all the time; (3) they must cluster the word or phrase for a while and continue adding to the cluster;
- f. The students write their essay based on the cluster they made (this activity encourages the students to make a good **content**, to make a good **organization**, and to use correct **grammar** and **mechanics**);

- g. The teacher evaluates the students' writing product.

#### 4. The Advantages and Disadvantages of Clustering Technique

There are several advantages of using clustering technique as brain storming: (1) Learners try to think actively and express their idea; (2) It trains learners to think fast and logically; (3) It stimulates learners to be always prepared with problem given by teacher; (4) It improves learner's participation in absorbing the learning material; (5) Those who feel less mastered or less active receive help from other learners or from the teacher; (6) It creates competitive learning atmosphere; (7) Learners feel relaxed, cheerful and free; (8) It strengthens democracy and discipline (Roestiyah, 1991: 95). There are some other advantages of the use of brain storming (Johnson, 1991: 74): (1) To provide an alternative method of introducing new material, beside reading and lecture; (2) To create information interdependence among participants to increase their sense of mutuality; (3) To ensure that participants orally rehearse and cognitively elaborate the information being learned; and (4) To model a structured lesson cooperatively.

Besides, it also has several weaknesses (Roestiyah, 1991: 74) such as: (1) Teachers do not give ample time for each learner to think; (2) The slow learners are always left behind; (3) Those who are superior to others often dominate the talk; (4) The teacher never gives conclusion and he just arouses and collects their ideas; (5) The students do not know whether

- their answer is correct; (6) It does not assure the solution of the problem;
- (7) The topic may stray to unexpected direction.

## 5. Teaching Steps of Dyadic Essay Technique and Clustering Technique

Table 2.3 contains teaching steps of dyadic essay technique and clustering technique in teaching writing.

Table 2.3 Teaching Writing Using Dyadic Essay Technique and Clustering Technique

Dyadic Essay Technique	Clustering Technique
<ol style="list-style-type: none"> <li>1. The teacher gives a learning activity such as reading a text, watching a video, or giving a lecture;</li> <li>2. The students write essay questions related to the content of learning activity;</li> <li>3. They write a model response of their own questions on separated answer sheet. This activity stimulates the students to make a good <b>content and organization</b>, to choose the appropriate vocabulary (<b>diction</b>), and to use the correct <b>grammar and mechanics</b>;</li> <li>4. In pairs, the students exchange their essay questions with their friends' (their model answer is not included);</li> <li>5. The students write the answers of their friends' questions. This activity encourages the students to develop the <b>content, organization, grammar, diction, and mechanics</b>;</li> <li>6. The students discuss and compare the essay questions and model answers in pairs;</li> <li>7. After discussing and comparing their answers with</li> </ol>	<ol style="list-style-type: none"> <li>1. The teacher writes a theme on the whiteboard;</li> <li>2. The teacher draws a sample of cluster, and asks the students to competitively complete the provided cluster;</li> <li>3. The teacher gives the example of descriptive phrase based on cluster.</li> <li>4. The teacher asks the students individually to write an essay based on a certain theme;</li> <li>5. The teacher asks the students to make a cluster on their own through following steps: (1) the students write a word or phrase on a clean piece of paper, circle the word or phrase that comes to mind, and connect it with a line (this activity encourages the students to choose the appropriate vocabulary (<b>diction</b>) and to use correct spelling and punctuation (<b>mechanics</b>)); (2) they must keep the hand moving all the time; (3) they must cluster the word or phrase for a while and continue adding to the cluster;</li> <li>6. The students write their essay based on the cluster they made</li> </ol>

<p>their friends', the students write an essay or text by developing the model answers they have discussed. This activity stimulates the students to make a good <b>content</b> and <b>organization</b>, to choose the correct <b>diction</b>, to use the correct <b>grammar</b> and <b>mechanics</b>;</p> <p>8. Then, after writing an essay, the students in pairs discuss and revise their essay writing;</p> <p>9. Finally, the teacher conducts general discussion and gives feedback to the students' work.</p>	<p>(this activity encourages the students to make a good <b>content</b>, to make a good <b>organization</b>, and to use correct <b>grammar</b> and <b>mechanics</b>).</p> <p>7. The teacher evaluates the students' writing product.</p>
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Table 2.4. states the difference of steps in teaching writing, between Dyadic Essay Technique and Clustering Technique based on Competence Standard, Basic Competence, the indicators of teaching writing.

Table 2.4. The Difference of Steps in Teaching Writing based on Standard Competence, Basic Competence, and the Objection

No.	Components of Lesson Plan	Dyadic Essay Technique	Clustering Technique
1.	Competence Standard	The students are able to make simple text/essay using the pattern of simple sentence, compound sentence, and complex sentence correctly.	The students are able to make simple text/essay using the pattern of simple sentence, compound sentence, and complex sentence correctly.
2.	Basic Competence	Writing a short essay of report accurately and fluently to interact in daily life.	Writing a short essay of report accurately and fluently to interact in daily life.
3.	Indicators	The students arrange and express their ideas into paragraph and text using good organization, content, diction, grammar, and mechanics.	The students arrange and express their ideas into paragraph and text using good organization, content, diction, grammar, and mechanics.

4.	Steps of Teaching Writing	<ol style="list-style-type: none"> <li>1. The teacher gives a learning activity such as reading a text, watching a video, or giving a lecture;</li> <li>2. The students write essay questions related to the content of learning activity;</li> <li>3. They write a model response of their own questions on separated answer sheet. This activity stimulates the students to make a good <b>content and organization</b>, to choose the appropriate vocabulary (<b>diction</b>), and to use the correct <b>grammar and mechanics</b>;</li> <li>4. In pairs, the students exchange their essay questions with their friends' (their model answer is not included);</li> <li>5. The students write the answers of their friends' questions. This activity encourages the students to develop the <b>content, organization, grammar, diction, and mechanics</b>;</li> <li>6. The students discuss and compare the essay questions and model answers in pairs;</li> <li>7. After discussing and comparing their answers with their friends', the students write an essay or text by developing the model answers they have discussed. This activity stimulates the students to make a good <b>content and organization</b>, to choose</li> </ol>	<ol style="list-style-type: none"> <li>1. The teacher writes a theme on the whiteboard;</li> <li>2. The teacher draws a sample of cluster, and asks the students to competitively complete the provided cluster;</li> <li>3. The teacher gives the example of descriptive phrase based on cluster.</li> <li>4. The teacher asks the students individually to write an essay based on a certain theme;</li> <li>5. The teacher asks the students to make a cluster on their own through following steps: (1) the students write a word or phrase on a clean piece of paper, circle the word or phrase that comes to mind, and connect it with a line (this activity encourages the students to choose the appropriate vocabulary (<b>diction</b>) and to use correct spelling and punctuation (<b>mechanics</b>)); (2) they must keep the hand moving all the time; (3) they must cluster the word or phrase for a while and continue adding to the cluster;</li> <li>6. The students write their essay based on the cluster they made (this activity encourages the students to make a good <b>content</b>, to make a good <b>organization</b>, and to use correct <b>grammar and mechanics</b>).</li> </ol>
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		<p>the correct <b>diction</b>, to use the correct <b>grammar</b> and <b>mechanics</b>;</p> <p>8. Then, after writing an essay, the students in pairs discuss and revise their essay writing;</p> <p>9. Finally, the teacher conducts general discussion and gives feedback to the students' work.</p>	7. The teacher evaluates the students' writing product.
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## F. Creativity

### 1. Concept of Creativity

Change comes in many forms and offers problems as well as solution. Change confronts people in the form of new technological devices and procedures that may bring displacement and intimidation as often as they offer convenience and improvement. Today's students must become effective problem-solvers, and education facilitates this aspect of their growth. The solution to the major difficulties will require cooperation, foresight, and creativity.

Hanson and Eller (1999: 353) state that educational psychologists agree that creativity is very important in the educational process, but most also agree that the concept and definition of creativity have been difficult to pin down. Rockler (1988: 6) defines creativity as a means by which a person obtains a new perspective and, as a result, brings something new to consciousness.

Thrower in Hanson and Eller (1999: 358) says that creativity is a critical part of the learning environment with both teachers and students.

Research on creativity in the learning environments has shown that given students of equal intelligence, the more creative student will demonstrate higher levels of achievement. As a teacher, creativity is behavior that can be facilitated and encouraged in the classroom.

According to Rockler (1988: 6), creativity theory derives from two separate sources: the study of intelligence and the development of psychoanalysis. The relationship between intelligence theory and education can predict the potential school process of children.

Guilford and Torrance in Rockler (1988: 45-46) identify seven components of creativity:

1. Sensitivity to problems. Without this sensitivity, the students will find few problems to solve and little opportunity for creative expression.
2. Fluency. Fluency requires multiple responses to the same given information in a limited time. It is the ability to generate multiple solution to a problem or answers to a question.
3. Flexibility. The flexible individual is less threatened by new situation. Flexibility facilitates creativity by helping pupils increase their ability to make the familiar strange.
4. Originality. Originality is the quality most commonly associated with creativity. It can be defined in many ways but generally means the ability to see what most people do not know. It can be viewed as the acceptance of dissociation.

5. Elaboration. Elaboration is the ability to expand one's view thing or process. A person can take a common object and increase its uses from something to dozens other possibilities.
6. Redefinition. Redefinition refers to the ability to reorganize what is known to make it useful in solving a problems
7. Penetration. Penetration suggests that the creative person can see more things than what appears on the surface in any given situation. Creative persons are particularly adept at penetration, often going beyond the information given.

## 2. The Importance of Creativity

Most people, including teachers, are unable to distinguish between what is creative and what they personally like. But if the teacher shows to be creative, he/she is also stimulating the quality in his/her students.

Actually, creativity cannot be measured using intelligence test and cannot be associated with personality types. Creativity can be found in almost all aspects of learning, vocation, and lifestyle. But according to Torrance in Hanson and Eller (1999: 354), creativity is measured by four criteria:

1. Fluency. The ability of an individual to generate alternatives for a given problem. The more ideas or alternatives a person can generate, the higher the probability one will be an appropriate solution.
2. Flexibility. The ability to produce variation in ideas.
3. Elaboration. The ability to elaborate or develop and refine ideas to solve problems.

4. Originality. An individual's ability to generate original and unconscious solution.

Based on the explanation above, it can be concluded that creativity is the ability to obtain a new perspective and, as a result, brings something new to consciousness. To measure the students' creativity, the teacher can use these criteria (1) fluency, (2) flexibility, (3) elaboration, and (4) originality.

### 3. Verbal Creativity

#### a. Definition of Verbal Creativity

Verbal creativity consists of two words: verbal and creativity. Azwar (2005: 44) states that verbal refers to any understanding towards relationship of words, vocabularies, and communication mastery. Sinolungan (in Faisal, 2010: 42) states that:

*dengan pembentukan ide melalui kata-kata, serta mengarahkan fokus menentukan jelas tidaknya pengertian mengenai ide yang disampaikan.*

Munandar (2009: 68) defines verbal creativity as an ability to think creatively and to measure one's fluency, flexibility, and originality of a verbal form which deals with words and sentences.

Mednick and Mednick in Sinolungan (in Faisal, 2010: 42) say that verbal creativity is an ability to see a relationship of different ideas and to combine these ideas into new associations. Children with this special ability are able to create new patterns based on their own thought in their cognitive mind. Guilford in Rockler (1988: 45) also states that verbal

creativity is an ability to think divergently. Thinking divergently means that it tries to find any possible alternative solution upon a problem.

Based on the definitions above, it can be concluded that verbal creativity is an ability to form and create new ideas and then combine them into something new referring to the existing information. The new ideas reflect fluency, flexibility, and originality that can be seen in divergent thought revealed verbally.

Alisyahbana (1983: 29) mentions that one of the important factors to support the verbal creativity development is a social need that leads to a formation of new and certain form pattern or system because the existing old one cannot fulfill the present need. In a certain condition, people may feel unhappy and unsatisfied toward their relation with others in society. As a result, they think to find out and create a new form, pattern and system that may meet the desired requirement to improve their relationship among each other.

Munandar (2009: 59) mentions that developing verbal creativity involves:

- 1) The development of cognitive aspect that can be done by stimulating fluency, flexibility, and originality of thought and can be seen from their strong curiosity, original ideas, imagination, and ability to develop ideas with his or her own ways.
- 2) The development of affective aspect that can be achieved by improving creative attitude and interests, and can be seen from

their freedom to express their ideas freely, ability in arts, eagerness to try something new and risky, confidence, and patience.

- 3) The development of psychomotor aspect supported by providing educational facilities that enable pupils to develop their ability to create innovative and creative work and can be recognized from their ability and eagerness to be persistent and perseverance on their ideas, independence, and bravery.

Considering the above explanation, it can be concluded that the development of verbal creativity covers cognitive aspects, which deal with fluency, flexibility, and originality of thought, affective aspects, which are ability to express ideas freely, ability in arts, and eagerness to try something new, and risky, and psychomotor aspects dealing with ability to create innovative and creative work. Besides, culture and society where an individual lives influence the development of one's verbal creativity.

#### **b. Measuring Verbal Creativity**

According to Isaken and Puccio (1988: 664), there are two ways to measure verbal creativity. The first is to measure creative style by a 32-item questionnaire and the second is by verbal creativity test. Test of verbal creativity which is specially constructed in Indonesia is verbal creativity test designed by Utami Munandar in 1977. This test is based on Guilford's Intellectual Structure supported by divergent thinking dimension, content dimension, and verbal thinking dimension. Munandar

(2009: 68) designs this test into six sub-tests with four items in each of this verbal creativity test:

1) Word Initials

In this test, a subject should think as many words starting with certain letters as possible in two minutes. The purpose of this test is to measure the fluency with words that meet certain determined criteria used in English.

2) Word Creation

When doing this test, a subject is required to arrange as many words from a given word as possible in two minutes. This test is aimed at measuring not only fluency with words but also fluency to arrange words into a grammatically correct sentence pattern in English.

3) Sentence Formulation from Three Letters

For this test, a subject has to arrange as many sentences as possible from three given letters in which the first letter has been determined in three minutes. In arranging a sentence, a subject may freely place each letter in a formed sentence. However, he/she is not allowed to write the words he/she writes before. This test is to measure the fluency in expressing something in the form of sentence meeting a certain grammatical English pattern.

4) Similar Characteristics

The objective of this test is to find out as many things from two similar characteristics given as possible in two minutes. This kind of

test is to measure the fluency in expressing ideas meeting certain given criterion.

#### 5) Extraordinary Uses of Words

The purpose of this test is to think of as many devices that have unusual uses as possible in two minutes. This test is to measure the flexibility of minds since a subject should not be influenced by the common uses of a device. In the other hand, a subject needs to think beyond what a device is used in everyday life. This test is to measure both the flexibility of minds and the originality of minds. In this test, the originality is measured statistically by considering the uniqueness or unusualness of a written answer.

#### 6) Consequences or Effects

In this test, a subject needs to think as many consequences as possible from a given condition in four minutes. This test requires a subject to be imaginative and to be able to express his imagination into a written form. What this test measures is the fluency in expressing ideas and the ability to elaborate an idea into a specific matter yielding various implications.

This research will employ a set of adapted and modified Munandar's verbal creativity test. There are some reasons why it is necessary to adapt and modify this test. First, it is the fact that this test is for subjects of 10 – 18 years old. Second, the subject's age of this research is considered over 18 years old. Consequently, it is not necessary to use the provided criteria to determine the level of creativity. Then, in this

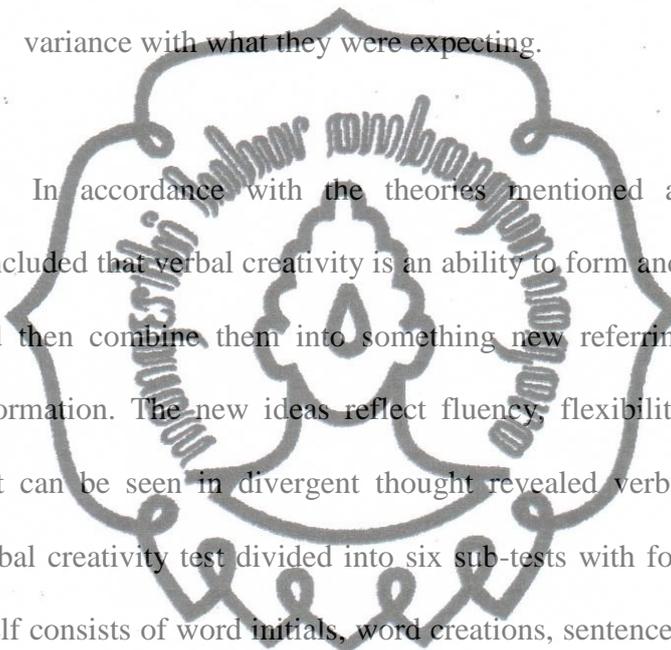
research, the median of the creativity test scores is used to determine the level of creativity for each control and experimental class. Third, since the original test is in Indonesian, it is necessary to interpret and adapt each test item into English.

### c. Factors Influencing Creativity

According to Rockler (1988: 7), there are some factors influencing creativity as follows:

- 1) Pressure to perform and emphasis on language tables.
- 2) Expectations and suggestions that languages are dull involve rote learning and are for swats.
- 3) The fact that effective communication requires accuracy – a skill which is all too often overlooked in other disciplines.
- 4) Time constraints.
- 5) Supposed lack of resources (money goes into other subject areas).
- 6) Actual lack of resources for capital outlay and maintenance.
- 7) Lack of technical expertise.
- 8) Thinking too ambitiously or not thinking ambitiously enough.
- 9) Teacher's fear of loss of control.
- 10) Unhelpful time-tabling (only short stretches available for language classes).
- 11) Fear of failure on the part of teacher and students.
- 12) Conservative attitude of students peer pressure (must not enjoy classes).
- 13) Teacher ground down, lack of stamina, too jaded to experiment.

- 14) Set syllabus leading to exams.
- 15) Teacher fearing disapproval of peers due to their possible reactions (inadequacy, jealousy, etc.).
- 16) Students can prefer what is perceived in terms of being right/wrong or black/white.
- 17) The time required to adjust, when what is expected of students is at variance with what they were expecting.



In accordance with the theories mentioned above, it can be concluded that verbal creativity is an ability to form and create new ideas and then combine them into something new referring to the existing information. The new ideas reflect fluency, flexibility, and originality that can be seen in divergent thought revealed verbally by means of verbal creativity test divided into six sub-tests with four items. The test itself consists of word initials, word creations, sentence formulation from three letters, similar characteristics, extraordinary usage of words, and consequences or effects.

## G. Review of Related Research

There have been some more researches in improving writing ability, either by implementing teaching methods, techniques, or materials. One of them is conducted by Aghbar, Ali Asghar, and Mohammed Alam (1992). They conduct a research entitled “The Effectiveness of Full Dyadic Writing as a Technique for Teaching Writing to Students of English as a Second

language (ESL)”. The subjects were 31 college students of diverse cultural backgrounds enrolled in ESL sections of Freshman English. Each chose a partner with a different native language with whom to write two essays, the first and fifth of the course. For the first, three pairs volunteered to have the entire writing process videotaped for closer observation. Scores on the first dyadic essay were compared with the second essay of the course, written individually, and the scores of the second dyadic essay were compared with individual scores of the fourth essay of the course. Students also recorded reactions to collaborative writing after each dyadic essay. Results indicate students performed better on the first dyadic essay than on the subsequent individual essay, but showed no gain in the second dyadic essay over the other individual assignment examined. The taped dyad showed very different dynamics of cooperation. Responses to the first dyadic assignment were overwhelmingly positive. Comments on the second dyadic assignment were more general and included more negative reactions. The technique is seen as useful for both teaching and research.

Sherman (1995) conducted a research about Dyadic Essay Confrontation (DEC). The DEC technique described below focused on ten short essay writing experiences which were assigned throughout the semester. At regularly scheduled times each student had to write a brief essay question and a model answer primarily based on assigned readings and text material. Students were instructed that their questions should be comparative in nature and, as the class went in, earlier material and chapter content could and should be drawn upon. The questions should require some thought and not be

trivial in the sense that one could construct an objective multiple choice test format with highly convergent answers. In addition to the regularly scheduled textbook chapters, several primary author reprints were distributed. Students were encouraged to integrate the content of these additional readings into both their questions and answers. Those who did integrate these materials into their questions and answers were rated higher by the instructor than those who merely stayed within the confines of the text or one single article. Both peer and instructor evaluations were also used. Five attributes including: (1) General Impression; (2) Importance; (3) Clarity; (4) Integration; and (5) Creativity, were rated on a 0 (poor) to 4 (excellent) scales. Evaluation of the quality of both the questions as well as the answers was a considerable portion (40%) of the course grade. The questions should have been neatly typed on two forms (templates) which were provided by the instructor. One copy contained only their question and had space available for someone else to answer. The person who answered the question in class identified themselves by signing the bottom of their sheet. The other copy had both the question and the expected answer on the bottom half of the page along with identification information as to who contributed the question. Greater importance was assigned to the prepared answer than the one which they wrote in class. Thus, a prepared question and answer was already committed to writing when students came to class. In class they were randomly divided into triads (a deck of cards was used to randomize grouping) in which they exchanged their questions among themselves. They were then given 30 minutes to write their answers to someone else's question. Each question had

to be germane to the regularly scheduled topic in the syllabus/calendar of events. However, because such a wide breadth of information was available for selection, the specific content of a question was not predictable. Thus a certain amount of random indeterminance was the general rule for these activities. What one student felt was important enough to integrate into their question, another student might have completely ignored. Students had to come to class prepared. This was an "open book" experience and all notes and related readings were available as resources in answering another's question. After completion of the in-class writing, each student had to confront the student who wrote the question. Since the answer was already previously prepared outside of class, a certain amount of commitment had already been made. Conceptual conflict or convergence was thus achieved in these dyadic meetings where each student usually came in contact with at least two other students. This was usually a time of lively discussion. After the dyadic meetings had taken place, the instructor distributed copies of all questions so that everyone could see what others believed was an important question to ask of the materials. The students then had to rate each others' questions and answers. This reciprocal peer assessment was both oral and written and would be similar to descriptions of "peer assessment of writing". Whole class discussions then ensued where all students had an opportunity to engage in additional discourse about the questions/answers for that session. The instructor rated all questions and answers as well as contributed written comments outside of class and returned the materials to the students at their

next regularly scheduled meeting. The Undergraduate classes did not receive the DEC treatment.

Urban in 2005 also conducted a research about testing creativity. The title of his research is “Assessing Creativity”: The Test for Creative Thinking-Drawing Production (TCT-DP)”. TCT-DP, its design, concept and evaluation scheme as well as experiences and result of application are described. The test was designed to mirror a more holistic concept of creativity than mere quantitatively oriented, traditional divergent thinking tests. The specific design using figural fragments is explained. The drawing production is evaluated by means of a set of criteria, which at the same time represent the underlying test construct. The test has been normed with various age and ability groups. The result shows that there were no significant differences between male and female subjects.

Faisal in 2010 conducted a research entitled “The Effectiveness of Internet-Based Material to Teach Writing Viewed from the Students Creativity”. The results of his research are: (1) Internet-Based Material is effective to teach writing; (2) Students having high creativity have a better writing ability than those having low creativity; (3) There is an interaction between teaching technique and students’ creativity in teaching writing.

There are some similarities between the researches mentioned above and the research that will be conducted later. It is undeniable that the previous researches focused on the use of methods, techniques, and approaches to teach certain skill. In this research, the writer will use dyadic essay technique and clustering technique to teach writing. Besides, one of the researches

mentioned above also used creativity as attributive variable and the writer will also use creativity as his attributive variable. But there are also some differences. One of them is that the previous research used teaching materials in the experiment, but the writer will use teaching technique in the experiment.

## H. Rationale

Based on the theories reviewed above, the writer proposes the basic assumption to develop hypothesis as follows:

### 1. Dyadic essay technique and clustering technique to teach writing for university students.

Dyadic essay technique makes the learning more effective, attractive, meaningful, and successful. Dyadic essay technique becomes especially important for some reasons. Firstly, using dyadic essay technique makes the students work cooperatively with their partner in the class. They can share each other about their ideas. Secondly, dyadic essay technique encourages the students to find the good idea in writing, because they have found some information from the learning activity before such as reading an assignment, listening to a lecture, or watching a film. Thirdly, by working collaboratively with their friends, the students will try to analyze their friends' work in writing. They can correct the mistakes made by their friends.

This technique is developed to improve writing skill and used to facilitate thinking in the classroom setting and also used to stimulate for

the classroom discussion. Through teaching steps of dyadic essay technique, the students will be able to generate their ideas into a good text using a good content, vocabulary, organization, grammar, and mechanics. For example, when they formulate the essay questions and write the answer of the questions, it means that they try to generate their ideas into a good **content** and a good **organization**. They also choose the correct **diction**, use the correct **grammar** and **mechanics**. All of writing indicators (**content, organization, diction, grammar, and mechanics**) can be developed when the students write an essay or text and collaboratively revise their essay after they discuss and compare the model answers. Besides, dyadic essay is very interesting for the students because they can do the activities collaboratively with their friends. They will not be shy to express their ideas. They can share their ideas with their friends. Therefore, this technique will be very interesting for them and can make them more creative by discussing with their friends.

On the other hand, clustering technique cannot navigate like what dyadic essay technique does. Clustering technique is a kind of brainstorming activity that one can use to generate ideas. This technique is used for collecting thoughts around some stimulus, for finding focus, and for allowing a sense of the whole arrangement to emerge even though all the details are not yet apparent. In short, it is a discovery process. The invention of clustering helps writers to generate, develop, and arrange their ideas. It can be said that clustering helps the learners in developing their ideas. Through brainstorming activity, especially clustering technique, the

students try to find words/phrases and group the words/phrases based on their cluster. It means that they try to choose the appropriate vocabulary (**diction**) and to use the correct **mechanics**. Then, when the students write an essay/text using the words or phrases they made in the cluster, it means they try to develop a good **content**, to make a good **organization**, and to use the correct **grammar**. Although clustering technique also can develop all indicators of writing, in clustering technique, the students will still get difficulties in expressing their ideas in the form of long sentences. Thus, it is assumed that dyadic essay technique is more effective than clustering technique in teaching writing.

**2. The achievement of writing ability between the students who have high creativity and the students who have low creativity.**

Creative individuals have a great deal of energy. This great deal of energy makes them energetic and always ready to do everything. They will see any kinds of things, including the difficult one, as challenges to conquer. They like challenges and enjoy its every single activity. They like to explore their ideas and imagination and to think freely.

Furthermore, students with high creativity have a combination of playfulness, discipline, and also responsibility. They like to alternate between imagination and fantasy at one end, and rooted sense of reality at the other. Besides, they do not like to be bound. They like to be given freedom to think and to express themselves in many ways. This kind of characteristics, in the end, leads the students who have creativity to get

better score since they have better flexibility, fluency, and originality of thinking which are important in producing a piece of writing.

On the contrary, students with low creativity tend to be passive. They do any kinds of tasks only based on the instruction given and do not really like if they are asked to think beyond what is given. In addition, they will be reluctant to do activities which require them to think creatively. They like something simple and like being guided. Students with low creativity usually see process and challenge as burdens. The more activities they have to do, the more burdens they will have. They do not really like activities because they like simple, guided, and straightforward activities which in turns make the teacher should control them intensively.

Based on the explanation above, the writer assumes that the students who have high creativity will have better achievement in writing than those who have low creativity.

### **3. The interaction effect between teaching techniques and students' creativity upon students' writing ability.**

Interaction is reciprocal events that require at least two objects and two actions. Interaction occurs when these objects and actions mutually influence one another. Based on the definition above, it is assumed that there is an interaction between teaching techniques and students' creativity to teach writing. There are some reasons why it is so.

In dyadic essay, students individually write an essay question and a model answer on a reading assignment, lecture, or other presentation of

content. In the next class period, students pairs exchange questions, write a response to the partner's question, and then trade, read, and compare model in-class answers. Then, they collaboratively write an essay based on the answer they have compared and discussed. This collaborative learning technique gives students practice identifying the most important feature of a learning activity and formulating and answering questions about that activity. It also gives students an opportunity to rehearse responding to essay questions with the added advantage of having a sample response with which they compare their answers. This, of course, requires students to be more creative in doing so. In short, dyadic essay technique will be easily done by the students who have high creativity. Based on this assumption, it is likely that students with high creativity will be able to optimize their potentials when dyadic essay technique is implemented in their classroom activity.

On other hand, it is assumed that students with low creativity have some difficulties in doing dyadic essay technique due to their insufficient storage of vocabulary and ability to understand materials. Therefore, they need certain techniques to help them generating their ideas into written form.

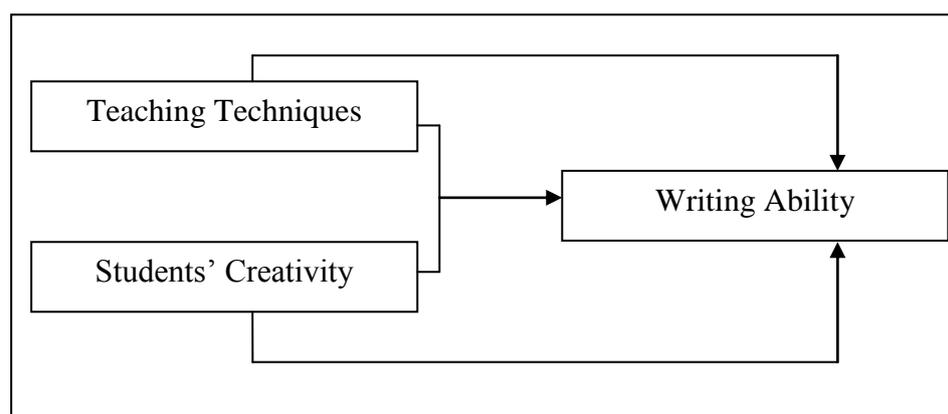
Clustering technique is a kind of brainstorming activity that one can use to generate ideas. This technique is used for collecting thoughts around some stimulus, for finding focus, and for allowing a sense of the whole arrangement to emerge even though all the details are not yet apparent. In short, it is a discovery process. In clustering technique, the students learn

how to generate, develop, and arrange the ideas that have to be used in their everyday lives as a valuable and satisfying writing. The students having low creativity, therefore, will be suitable when they are taught using clustering technique in their classroom activity. The students who have low creativity will easily learn when they are taught using clustering technique, because by using this technique, they can also promote their creativity.

Finally, the writer assumes that there is an interaction effect between teaching techniques and creativity upon students' writing ability. For students who have high creativity, dyadic essay technique is an appropriate technique. For those who have low creativity, clustering technique is an appropriate technique.

Since this research tries to find out the effectiveness of dyadic essay technique in teaching writing viewed from the students' creativity, the rationale is presented below:

Figure 2.3 The Interaction among Teaching Techniques, Creativity, and Writing Ability



## I. Hypothesis

Based on the rationale, the writer proposes the hypothesis of this study as the following:

1. Dyadic essay technique is more effective than clustering technique to teach writing for the Second Semester Students of English Education Department, IKIP PGRI Bojonegoro in the Academic Year of 2011/2012;
2. The students who have high creativity have a better achievement in writing ability than the students who have low creativity at the Second Semester Students of English Education Department, IKIP PGRI Bojonegoro in the Academic Year of 2011/2012;
3. There is an interaction between teaching techniques and the students' creativity in teaching writing at the Second Semester Students of English Education Department, IKIP PGRI Bojonegoro in the Academic Year of 2011/2012.

## CHAPTER III

### RESEARCH METHODOLOGY

#### A. Time and Place of the Study

This research was carried out at the Second Semester Students of English Education Department, IKIP PGRI Bojonegoro in the academic year of 2011/2012. It is located at Jl. Panglima Polim 46 Bojonegoro. And this study was conducted on April until June 2012.

This research was carried out in the even semester of 2011/2012 Academic Year. There were three steps in this research: preparation, implementation, analysis of the data and research report. The details of each activity are as follows:

1. Preparation
  - a. December 2011 : Title Consultation
  - b. January - February 2012 : Proposal Draft Consultation
  - c. March 2012 : Proposal Draft Seminar
  - d. March 2012 : Instrument Consultation
2. Implementation
  - a. March 2012 : Research Permission
  - b. April – June 2012 : Data Collection
3. Analysis of Data and Research Report
  - a. June 2012 : Data Analysis and Research Report

## B. Research Method

This research is categorized as an experimental research since it attempts to provide treatment to experimental group and maintain control over all factors that may affect the result of an experiment. In the other word, the experimental research attempts to investigate the influence of one or more variables to other variables (Ary, 2007: 317).

Experimental research has some characteristics as follows: (1) manipulation or treatment of an independent variable; (2) other extraneous variables are controlled; (3) effect is observed of the manipulation of the independent variable on the dependent variable (Ary, 2007: 338).

Experimental research, as postulated by Fraenkel and Wallen (1993: 240), is one of the most powerful research methods researchers can use. It is claimed as the best way to establish cause-and-effect relationships between variables and directly attempts to influence a particular variable. Moreover, Christensen (2000: 23) states that through experimentations, cause and effect relationship can be identified. The purpose of experimental study is to investigate the cause and effect of a certain condition.

Considering the explanation above, related to this study, the writer used experimental study because the aim of this study is revealing the effect of teaching techniques and students' creativity towards the students' writing ability. It involves three variables.

The first variable is independent variable. In this study, the independent variable is teaching techniques. It is also recognized as experimental or treatment variable. There are two teaching techniques that were used in this

study, namely dyadic essay technique and clustering technique. Both of these techniques were used differently for two groups of Second Semester Students at IKIP PGRI Bojonegoro in the academic year of 2011/2012. Fraenkel and Wallen (1993: 242) also explain that in the experimental research, it is important to make comparison group because it serves the purpose of determining whether the treatment has had an effect or whether one treatment is more effective than another. In this study, the group that will be taught using dyadic essay technique is as the experimental group and the group that will be taught using clustering technique is as the control group.

The second variable is a dependent variable. The dependent variable in this study is writing ability of the students at the Second Semester Students of IKIP PGRI Bojonegoro. This variable is the factor which was observed and measured to determine the effect of the independent variable. In short, considering the explanation above, this experiment used two groups, namely experimental group and control group.

The third variable is a secondary independent variable or moderator/attributive variable. It is selected to determine if it affects the relationship between the primary independent variable (teaching techniques: dyadic essay technique and clustering technique) and dependent variable (writing ability). In short, in this study, the students' creativity as the last variable is a kind of variable that was labeled with two different names, i.e. high creativity and low creativity.

In addition, as an experimental study, the writer used quasi-experimental design. Quasi-experiments are sometimes called natural

experiments because membership in the treatment level is determined by conditions beyond the control of the experimenter (subjects are already in the box). An experiment may seem to be a true experiment, but if the subjects have not been randomly assigned to the treatment condition, the experiment is a quasi-experiment (quasi=seeming, resembles).

Nunan (1992: 41) puts forward that a quasi-experiment is characterized by several things. It has pre- and post-test; it has experimental and control groups; it has no random assignment of subjects. In accordance with Nunan, Campbell (1968: 259) defines a quasi-experiment referring to application of an experimental mode of analysis and interpretation to bodies of data not meeting the full requirements of experimental control.

In this study, the writer used a factorial design to extend the number of relationship that may be examined. Fraenkel and Wallen (1993: 255) state that they are essentially modification of either the post-test only control group or pre-test-post-test control group designs, which permit the investigation of additional independent variables.

As an experimental study, there are at least two groups in this experiment, control group and experimental group. The control group is the class that was taught using clustering technique and the experimental group is the class that was taught using dyadic essay technique. They were given different treatment. After the treatment, the groups were given post-test. In addition, before the treatment, the students were classified based on their creativity. The students' creativity is classified into high and low. By doing

so, the writer can find out what teaching technique can be better used to teach the students who have high creativity and those who have low creativity.

The proposed experimental design of the independent and dependent variables can be seen at a 2X2 Factorial Design, the table can be seen as follow:

Table 3.1 Factorial Design 2X2

Factor A	Teaching Techniques		
	Dyadic Essay Technique Experimental Group (Group A <sub>1</sub> )	Clustering technique Control Group (Group A <sub>2</sub> )	
Factor B	High (B <sub>1</sub> )	Group A <sub>1</sub> B <sub>1</sub> (students having high creativity taught using dyadic essay technique)	Group A <sub>2</sub> B <sub>1</sub> (students having high creativity taught using clustering technique)
	Low (B <sub>2</sub> )	Group A <sub>1</sub> B <sub>2</sub> (students having low creativity taught using dyadic essay technique)	Group A <sub>2</sub> B <sub>2</sub> (students having low creativity taught using clustering technique)
Students' Creativity			

The picture shows that (1) by comparing the observation under treatment variable, Dyadic Essay Technique (A<sub>1</sub>) to observation under Clustering technique (A<sub>2</sub>), it is possible to contrast the effectiveness of those teaching techniques to teach writing to university students viewed from their

creativity; (2) by comparing  $A_1B_1$  to group  $A_2B_1$ , it can be pointed which teaching technique is better applied to teach writing to university students having high creativity; (3) by comparing group  $A_1B_2$  to group  $A_2B_2$ , it can be pointed which teaching technique is better applied to teach writing to university students having low creativity; and (4) by comparing the individual cell effects, group  $A_1B_1$  versus  $A_2B_1$ , group  $A_1B_2$  versus  $A_2B_2$ , it is possible to identify the interaction of types of teaching techniques and students' creativity that might exist.

### C. Subjects of the Study

#### 1. Population

Ary (2007: 138) states that the larger group about which the generalization is made is called population. A population is defined as "all members of any well-defined class of people, events or objects." Population is the group to which the researcher would like the result of the study to be generalized (Fraenkel and Wallen, 1993: 554). Chase (in Destari, 2010: 56) postulates population as a number of individuals which have at least one similar characteristic. Johnson and Christensen (2000: 158) propose that population is the set of all elements. Furthermore, Wiersma (2001: 259) explains population refers to the total of the elements, subjects, or members that possess a specified set of one or more common characteristics. Dealing with those definitions of population, it can be said that the population of this study is the Second Semester Students of IKIP PGRI Bojonegoro in the

academic year of 2011/2012. The total number of the population in this research is 168 students who are divided into 4 classes, IA, IB, IC, and ID.

## 2. Sample

In *Educational Research, Quantitative and Qualitative Approaches*, Johnson and Christensen (2000: 158) explain that sample is a set of elements taken from a large population according to certain rules. In line with them, Fink (1995: 1) defines the same opinion that a sample is a set of elements taken from large population according to certain rules. Fraenkel and Wallen (1993: 556) state that sample is a group in which information is obtained, preferably selected in such a way that the sample represents a larger group. Ary (2007: 138) states that the small group that is observed is called a sample. In addition, the sample is considerably smaller than the population, though in this case of a relatively small population, the sample maybe nearly the same size (Mason and Bramble, 1997: 113).

Considering the definitions above, it can be inferred that the sample should represent the population since the research result will be generalized to the population because a sample is a part of population. In this study, the writer only took two classes of the Second Semester Students of IKIP PGRI Bojonegoro. The two classes were IB and ID. IB was the experimental class and ID was the control class.

### 3. Sampling

A technique used for getting samples is called sampling. Sampling is the process of drawing a sample from population (Christensen, 2000: 156). Fraenkel and Wallen define that sampling is the process of selecting a number of individuals (a sample) from a population, preferably in such way that the individuals represent the larger group from which they were selected. Mason and Bramble (1997: 192) postulate that each class has the same opportunity to be the sample. In addition, in *Introduction to Research in Education*, Ary (2007: 143) defines as follows:

The researcher would choose a number of schools randomly from a list of schools and then include all the students in those schools in the sample. This kind of probability sampling is referred to as cluster sampling since the unit chosen is not an individual but a group of individuals who are naturally together. These individuals constitute a cluster insofar as they are alike with respects to characteristics relevant to the variables of the study.

Seeing the definitions above, the writer intends to use cluster random sampling in getting two classes. The major concern in determining the cluster random sampling is that every class or unit has an equal chance of being selected from the frame or list. The sample, in this study, was chosen randomly from the population of clusters and then two clusters were selected. It means that all the members of the cluster must be included in the sample. The steps to take sample are as follows:

*commit to user*

- a. Writing down the name of each class on small piece of paper.
- b. Rolling the paper and putting it into a can
- c. Shaking the can to mix the pieces of paper.
- d. Dropping the rolled paper one by one as many as needed.

By using cluster random sampling, two classes were taken as sample then those 2 classes were randomly chosen as an experimental class and a control class.

#### **D. Techniques of Collecting the Data**

Fraenkel and Wallen (1993: 101) state that the data are the kinds of information researchers obtain on the subject of their research. An important decision for researchers to make during the planning phase of an investigation, therefore, is what kind (s) of data they intend to collect. The study's device to collect the data is called an instrument.

#### **1. Research Variables**

There are one dependent variable and two independent variables in this research. The dependent variable is writing ability and the independent variables are teaching techniques and creativity.

##### **a. Dependent Variable**

##### **1) Writing ability**

##### **a) Operational Definition**

Writing ability can be defined as an ability to communicate all the ideas or imaginations into the form of structured pattern so that the readers may understand what the writers mean in their writing.

b) Indicator

The indicator of the writing ability in this research was the students writing in the form of essay. The scoring was based on indicators of writing ability, namely organization, content, grammar, diction, and mechanics.

c) Measurement Scale

The measurement scale in this research was nominal scale based on the blue print of the essay writing and scoring rubric covering organization, content, grammar, vocabulary, and mechanics.

Table 3.2 Blueprint of Writing Test

Competence Standard / Basic Competence	Skills Measured	Indicators	Instrument
<p><b>Competence Standard:</b> The students are able to make simple text/essay using the pattern of simple sentence, compound sentence, and complex sentence correctly.</p> <p><b>Basic Competence:</b> Writing a short essay of report accurately and fluently to interact in daily life.</p>	<ul style="list-style-type: none"> <li>➤ Organization</li> <li>➤ Content</li> <li>➤ Diction</li> <li>➤ Grammar</li> <li>➤ Mechanics</li> </ul>	<p>Students are able to arrange and express their ideas into paragraph and text using good <b>organization</b> (coherence, cohesion, and unity), <b>content</b> (appropriate topic/theme, originality, logic), <b>diction</b> (word selection, vocabulary idiom), <b>grammar</b> (tenses, articles, pronoun, etc), and <b>mechanics</b> (spelling and punctuation).</p>	<p>Write a 150-word report text consisting of general classification paragraph and description paragraph. Your writing will be evaluated based on the <b>organization, content, diction, grammar, and mechanics.</b></p>

There were two scorers for writing tests. Based on the measured skills on the blue print, the aspects scored for each point are as follows:

Table 3.3 The Scoring Standard based on Reid (1993: 236-237)

Aspect of writing	Range	Score	Criterion
Content	30-27	Excellent to very good	Knowledgeable. Substantive, through development of thesis. Relevant to assigned topic.
	26-22	Good to average	Some knowledge of subject. Adequate range. Limited development of thesis. Mostly relevant to topic, but lacks detail.
	21-17	Fair to poor	Limited knowledge of subject. Little substance. Inadequate development of topic.
	16-13	Very poor	Does not show knowledge of subject. Non-substantive. Not pertinent, or not enough to evaluate.
Organization	20-18	Excellent to very good	Fluent expression. Ideas clearly stated/supported. Succinct. Well-organized. Logical sequencing cohesive.
	17-14	Good to average	Somewhat choppy. Loosely organized but main ideas stand out. Limited support. Logical but incomplete sequencing.
	13-10	Fair to poor	Non-fluent. Ideas confused or disconnected. Lack logical sequencing, and development.
	9-7	Very poor	Does not communicate. No organization, or not enough to evaluate.
Diction	20-18	Excellent to very good	Sophisticated range. Effective word/idiom choice and usage. Word form mastery. Appropriate register.
	17-14	Good to average	Adequate range. Occasional errors of word/idiom form, choice, usage but meaning not obscured.
	13-10	Fair to poor	Limited range. Frequent errors of word/idiom form, choice, usage. Meaning confused or obscured.
	9-7	Very poor	Essentially translation. Little knowledge of English vocabulary idioms. Word form or not enough to evaluate.
Language use	25-22	Excellent to very good	Effective complex constructions. Few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions.
	21-18	Good to average	Effective but simple constructions minor problem in complex constructions. Several errors of agreement, tense, number, word order/function, articles, pronouns,

			prepositions, but meaning seldom obscured.
	17-11	Fair to poor	Major problems in simple/complex constructions. Frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions, and/fragments, run-ons, deletions. Meaning confused/obscured.
	10-5	Very poor	Virtually no mastery of sentence constructions rules. Dominated by errors. Does not communicate. Or not enough to evaluate.
Mechanics	5	Excellent to very good	Demonstrate mastery of conventions. Few errors of spelling, punctuation, capitalization, paragraphing.
	4	Good to average	Occasional errors of spelling, punctuation, capitalization, paragraphing, but meaning not obscured.
	3	Fair to poor	Frequent errors of spelling, punctuation, capitalization, paragraphing. Poor handwriting. Meaning confused or obscured.
	2	Very poor	No mastery of convention. Dominated by errors of spelling, punctuation, capitalization, paragraphing. Handwriting illegible or not enough to evaluate.

## b. Independent Variables

### 1) Verbal Creativity

#### a) Operational Definition

Verbal creativity is one's ability to bear something new in the form of ideas or real work having creative or affective thought.

#### b) Creativity Test

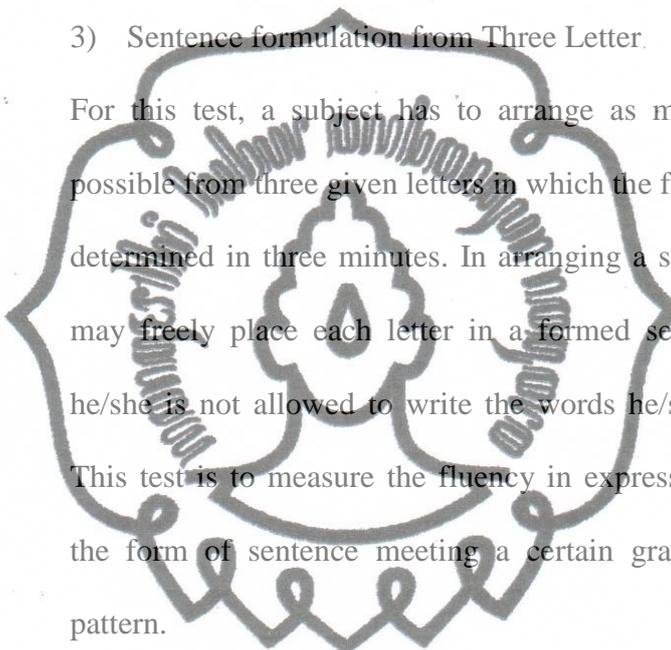
##### 1) Word Initial

In this test, a subject should think as many words starting with certain letters as possible in two minutes. The purpose of this test is to measure the fluency with words that meet certain determined criteria used in English.

## 2) Word Creation

When doing this test, a subject is required to arrange as many words from a given word as possible in two minutes. This test is aimed at measuring not only fluency with words but also fluency to arrange words into a grammatically correct sentence pattern in English.

## 3) Sentence formulation from Three Letter.



For this test, a subject has to arrange as many sentences as possible from three given letters in which the first letter has been determined in three minutes. In arranging a sentence, a subject may freely place each letter in a formed sentence. However, he/she is not allowed to write the words he/she writes before. This test is to measure the fluency in expressing something in the form of sentence meeting a certain grammatical English pattern.

## 4) Similar characteristic

The objective of this test is to find out as many things from two similar characteristics given as possible in two minutes. This kind of test is to measure the fluency in expressing ideas meeting certain given criterion.

## 5) Extraordinary uses of Words

The purpose of this test is to think of as many devices that have unusual uses as possible in two minutes. This test is to measure the flexibility of minds since a subject should not be influenced

by the common uses of a device used in everyday life. This test is to measure both the flexibility of minds and the originality of minds. In this test, the originality is measured statistically by considering the uniqueness or unusualness of a written answer.

6) Consequences or Effects

In this test, a subject needs to think as many consequences as possible from a given condition in four minutes. This test requires a subject to be imaginative and to be able to express his imagination into a written form. What this test measures is the fluency in expressing ideas and the ability to elaborate an idea into a specific matter yielding various implication.

c) Indicator

The indicator to know students' verbal creativity was the score taken from the adapted and modified verbal creativity test designed by Munandar in 1997 set up in chapter 2.

d) Measurement Scale

After giving the creativity test to the students, the researcher analyzed the result of the test. It was in the form of nominal scale with two categories: high and low.

High creativity: score  $\geq$  Me

Low creativity: score  $\leq$  Me

Me is the midpoint of the score of students' creativity test.

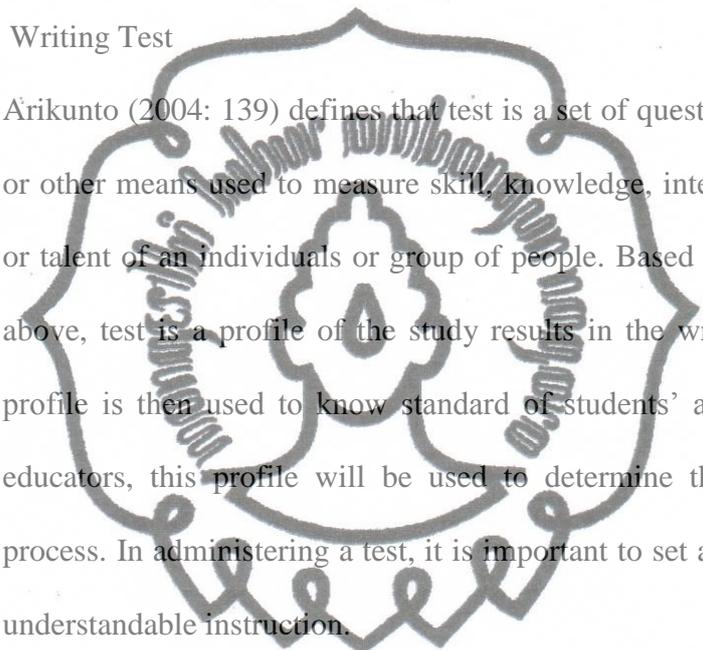
Median is said to be the appropriate measure of central tendency

when the set of scores is not evenly distributed (Sprinthall, 1990: 115).

## 2. Research Instruments

There were two main instruments in this research, namely writing test and verbal creativity test.

### a. Writing Test



Arikunto (2004: 139) defines that test is a set of questions or exercises or other means used to measure skill, knowledge, intelligence, ability, or talent of an individuals or group of people. Based on the definition above, test is a profile of the study results in the written form. This profile is then used to know standard of students' achievement. For educators, this profile will be used to determine the next learning process. In administering a test, it is important to set and determine an understandable instruction.

Before administering a test to the students, the researcher should firstly check the readability of the instrument. Readability is defined as reading ease, especially as it results from a writing style. To know the readability of the writing test, the researcher, firstly, asks the students who are not the members of experimental or control group to read and understand the instruction of the writing test.

#### 1) Expert Judgment

The validity and reliability for writing test instrument were validated by using expert judgment. Budiyo (2004: 59) mentions *commit to user*

that to judge whether a test instrument has high validity, it is necessary to ask for expert's opinion. The expert judgment is to know if the test is based on the given materials, if the test is understandable, if the test is based on the blue print, and if the instruction is clear and understandable (Budiyono, 2004: 58).

## 2) Readability Test

In administering a test, it is important to set and determine understandable instruction. It is necessary since there have been some cases in which students failed to do the test due to their inability to understand the given instruction. Hughes (1996: 39-40) mentions some factors to write a good instruction. First, the instruction should be clear and explicit. Second, it should avoid the supposition that all students know what is intended. Third, the test writer should not rely on the students' power of telepathy to elicit the desired behavior.

The following is the instruction of writing test (see appendix 9, page: 264):

“Write a 150-word report text consisting of general classification paragraph and description paragraph. Your writing will be evaluated based on the *organization, content, diction, grammar, and mechanics*”. Topic: “**Butterflies**”

Table 3.4 Writing Instruction Questionnaire (see appendix 11, page: 266)

No	Pertanyaan	Yes	No
1.	Apakah perintah soal tersebut cukup jelas dan tidak bermakna ambigu?		
2.	Apakah perintah soal tersebut menyebutkan secara tersurat bagaimana cara mengerjakan soal tersebut?		
3.	Apakah perintah soal tersebut menyebutkan secara tersurat berapa banyak kata yang harus dibuat dalam teks?		
4.	Apakah perintah soal tersebut menyebutkan secara tersurat hal-hal apa yang akan dinilai dalam teks yang dihasilkan?		
5.	Apakah perintah soal tersebut menyebutkan secara tersurat teks yang harus dibuat?		

b. Verbal Creativity Test

1) Readability Test

Just like in writing test, in conducting verbal creativity test, it is also urgently needed to use readability test. Readability tests are formulae for evaluating the readability of text, usually by counting syllables, words and sentences. Readability tests are often used as an alternative to conducting an actual statistical survey of human readers of the subject text (a readability survey). It means that the teacher must give a clear and an understandable instruction. It is necessary since there have been some cases in which the students failed to do the test due to their inability to understand the given instruction. Hughes (1996: 39-40) states that a good instruction follows some requirements such as: (1) it must be clear and explicit; (2) it should avoid the supposition that all students know what is intended; (3) it should not rely on the students' power of telepathy to elicit the desire behavior.

Table 3.5 Creativity Test Instruction Questionnaire (see appendix 6, page: 259)

No	Pertanyaan	Yes	No
1.	Apakah perintah soal tersebut cukup jelas dan tidak bermakna ambigu?		
2.	Apakah perintah soal tersebut menyebutkan secara tersurat bagaimana cara mengerjakan soal tersebut?		
3.	Apakah perintah soal tersebut menyebutkan secara tersurat berapa banyak kata/kalimat yang harus dibuat untuk masing-masing nomor?		
4.	Apakah perintah soal tersebut menyebutkan secara tersurat tenggang waktu yang diberikan untuk setiap soal?		
5.	Apakah terdapat contoh yang cukup jelas untuk masing-masing soal?		

### E. Techniques of Analyzing the Data

The objective of this study is to investigate the combined effects of dyadic essay technique and students' creativity in teaching writing. The experiment investigating the combined effects of two or more independent variables is called a factorial design and the results are analyzed by means of multifactor analysis of variance (Ary, 2007: 196).

The writer used descriptive analysis and inferential analysis in this study. The descriptive analysis is used to know the mean, median, mode, and standard deviation of the scores of the writing test.

#### 1. Descriptive Analysis

The writer used a descriptive analysis and inferential analysis in this study. The descriptive analysis is used to know the mean, median, mode, and standard deviation of the scores of the writing test.

##### a. Mean

Tuckman (1978: 250) states that "the mean or average is computed by adding a list of scores and then dividing by the numbers of  
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scores”. The algebraic formula used to determine the mean for frequency distribution is:

$$\bar{X} = \frac{\sum f_i X_i}{n}$$

Where:  $\bar{X}$  = the mean

$\sum f_i X_i$  = the sum of frequency multiplied by midpoint

N = the number of cases

(Ngadiso, 2009).

#### b. Median

Ary (2007: 153) expresses that “The median is defined as the point in a distribution of measures below which 50 percent of the cases lie (which means that the other 50 percent will be above this point)”. The algebraic formula used to determine the median for frequency distribution is:

$$Me = L + i \left( \frac{\frac{n}{2} - cfb}{fw} \right)$$

Where:

Me = median

L = the lower limit of the interval within which the median lies

$i$  = interval (class width)

cfb = the cumulative frequency in all interval below the interval containing the median

fw = the frequency of cases within the interval containing the median

(Ngadiso, 2009).

## c. Mode

According to Ary (2007: 103), “the mode is that value in a distribution that occurs most frequently”. He adds that mode can be more than one in a distribution. The algebraic formula used to determine the mode for frequency distribution is:

$$Mo = L + i \left( \frac{f_1}{f_1 + f_2} \right)$$

Where:

$Mo$  = mode

$L$  = the lower limit of the interval within which the mode lies

$i$  = interval (class width)

$f_1$  = the frequency of the interval containing mode reduced by that of the previous interval

$f_2$  = the frequency of the interval containing mode reduced by that of the following interval

(Ngadiso, 2009)

## d. Standard Deviation

$$s = \sqrt{\frac{\sum f_i X_i^2 - \frac{(\sum f_i X_i)^2}{n}}{n-1}} \quad (\text{For Frequency distribution})$$

(Ngadiso, 2009).

## e. Draw histogram / polygon to know where the polygon goes.

A histogram (sometimes referred to a bar graph) is a graph in which the frequencies are represented by bars. A frequency polygon is constructed from the grouped data. In constructing a histogram and a

frequency polygon, a researcher needs to group the scores into systematic order that is called as class interval.

## 2. Normality and Homogeneity

The normality and homogeneity of the data should also be known, it is done before testing the hypothesis. The formulas are:

### a. Normality test

The algebraic formula used to determine the normality is:

$$z_i = \frac{X - \bar{X}}{s} \text{ where } s = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} \text{ or } \sqrt{\frac{\sum X^2 - \frac{(\sum X)^2}{n}}{n-1}} \text{ or } \sqrt{\frac{\sum x^2}{n-1}}$$

If  $L_o$  is lower than  $L_t$ , the sample is in normal distribution.

(Ngadiso, 2009).

### b. Homogeneity test

The algebraic formula used to determine the homogeneity is:

$$\chi^2 = (\ln 10) \{B - \sum (n_i - 1) \log s_i^2\}$$

Note :

$\chi_o = \chi$  observation

$\chi_t = \chi$  table

The level of significance  $\alpha : 0.05$  (7.815)

if  $\chi_o^2$  is lower than  $\chi_t^2$ , the data are homogeneous.

(Ngadiso, 2009).

## 3. ANOVA

The last is the use of multifactor analysis of variance 2x2.  $H_o$  is rejected if  $F_o > F_t$  and if  $H_o$  is rejected the analysis is continued to know

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which groups are different. The design of multifactor analysis of variance is as follows:

Table 3.6 The Design of Multifactor Analysis of Variance 2 x 2 ANOVA

Main Effects	Teaching Techniques		
		Dyadic Essay Technique (A <sub>1</sub> )	Clustering technique (A <sub>2</sub> )
Simple Effects	High (B <sub>1</sub> )	A <sub>1</sub> B <sub>1</sub>	A <sub>2</sub> B <sub>1</sub>
	Low (B <sub>2</sub> )	A <sub>1</sub> B <sub>2</sub>	A <sub>2</sub> B <sub>2</sub>
Students' Creativity		A <sub>1</sub>	A <sub>2</sub>

Notes:

A<sub>1</sub> : The mean score of writing test of experimental class which is taught using dyadic essay technique.

A<sub>2</sub> : The mean score of writing test of control class which is taught using clustering technique.

B<sub>1</sub> : The mean score of writing test of students having high creativity.

B<sub>2</sub> : The mean score of writing test of students having low creativity.

A<sub>1</sub>B<sub>1</sub>: The mean score of writing test of students having high creativity who are taught using dyadic essay technique.

A<sub>2</sub>B<sub>1</sub>: The mean score of writing test of students having high creativity who are taught using clustering technique.

A<sub>1</sub>B<sub>2</sub>: The mean score of writing test of students having low creativity who are taught using dyadic essay technique.

A<sub>2</sub>B<sub>2</sub>: The mean score of writing test of students having low creativity who are taught using clustering technique.

The steps for the computation of 2 x 2 ANOVA:

- a. The total sum of squares:

$$\sum x_t^2 = \sum X_t - \frac{(\sum X_t)^2}{N}$$

- b. The sum of squares between groups:

$$\sum x_b^2 = \frac{(\sum X_1)^2}{n_1} + \frac{(\sum X_2)^2}{n_2} + \frac{(\sum X_3)^2}{n_3} + \frac{(\sum X_4)^2}{n_4} - \frac{(\sum X_t)^2}{N}$$

- c. The sum of squares within groups:

$$\sum x_w^2 = \sum x_t^2 - \sum x_b^2$$

- d. The between-columns sum of squares:

$$\sum x_{bc}^2 = \frac{(\sum X_{c1})^2}{n_{c1}} + \frac{(\sum X_{c2})^2}{n_{c2}} - \frac{(\sum X_t)^2}{N}$$

- e. The between-rows sum of squares:

$$\sum x_{br}^2 = \frac{(\sum X_{r1})^2}{n_{r1}} + \frac{(\sum X_{r2})^2}{n_{r2}} - \frac{(\sum X_t)^2}{N}$$

- f. The sum-of-squares interaction:

$$\sum x_{int} = \sum x_b^2 - (\sum x_{bc}^2 + \sum x_{br}^2)$$

- g. The number of degrees of freedom associated with each source of variation:

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df for between-columns sum of squares:  $C - 1$

df for between-rows sum of squares:  $R - 1$

df for interaction:  $(C - 1)(R - 1)$

df for between-groups sum of squares:  $G - 1$

df for within-groups sum of squares:  $\sum (n - 1)$

df for total sum of squares:  $N - 1$

Where:

df is degree of freedom

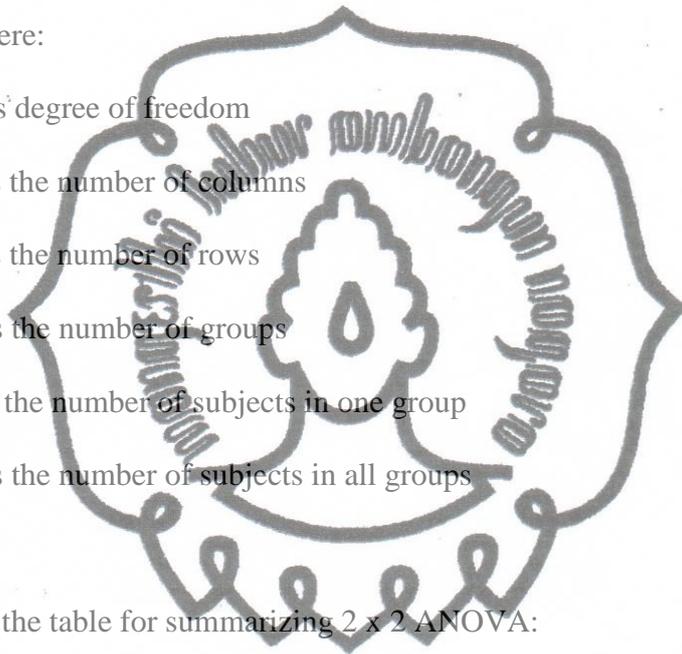
C is the number of columns

R is the number of rows

G is the number of groups

n is the number of subjects in one group

N is the number of subjects in all groups



(Ngadiso, 2009).

Here is the table for summarizing 2 x 2 ANOVA:

Table 3.7 The Summary of 2 x 2 Factorial Design ANOVA

Source of Variance	SS	df	MS	F <sub>o</sub>	F <sub>t(.05)</sub>
Between columns (teaching techniques)					
Between rows (levels of creativity)					
Columns by rows (interaction)					
Between groups					
Within groups	<i>commit to user</i>				

#### 4. Tukey Test

After analyzing the data by ANOVA, the writer used Tukey HSD test. HSD is Honestly Significant Different. Tukey test is a statistical test generally used in conjunction with an ANOVA. Tukey test is used in order to know that there is a difference between group means. It means, in this study, Tukey test is used to know the difference between groups/cells.

The steps for computation of Tukey test:

- a. Dyadic essay technique is compared with clustering technique

$$q = \frac{\bar{X}_{c_1} - \bar{X}_{c_2}}{\sqrt{\text{error variance}/n}}$$

- b. High creativity is compared with low creativity

$$q = \frac{\bar{X}_{r_1} - \bar{X}_{r_2}}{\sqrt{\text{error variance} / n}}$$

- c. Dyadic essay technique is compared with clustering technique for students having high creativity

$$q = \frac{\bar{X}_{c_1 r_1} - \bar{X}_{c_2 r_1}}{\sqrt{\text{error variance}/ n}}$$

- d. Dyadic essay technique is compared with clustering technique for students having low creativity

$$q = \frac{\bar{X}_{c_1 r_2} - \bar{X}_{c_2 r_2}}{\sqrt{\text{error variance}/n}} \text{ or } q = \frac{\bar{X}_{c_2 r_2} - \bar{X}_{c_1 r_2}}{\sqrt{\text{error variance}/n}}$$

The analysis of the result of the computation is (1)  $q_o$  is compared with  $q_t$ , if  $q_o > q_t$ , the difference is significant; and (2) to know which one is better, the means are compared.

## F. Statistical Hypothesis

The researcher formulated the statistical hypothesis that consists of null hypothesis ( $H_0$ ) and alternative hypothesis ( $H_1$ ). The statistical hypotheses are as follows:

1. The difference between dyadic essay technique and clustering technique to teach writing to the second semester students of IKIP PGRI Bojonegoro.

$$H_0: \mu_{A1} \leq \mu_{A2}$$

$$H_1: \mu_{A1} > \mu_{A2}$$

Note:

$H_0$ : There is no significant difference in writing ability between the students who are taught using dyadic essay technique and students who are taught using clustering technique.

$H_1$ : The students who are taught using dyadic essay technique have better writing ability than students who are taught using clustering technique.

2. The difference in writing ability between students who have high creativity with the students who have low creativity in writing.

$$H_0: \mu_{B1} \leq \mu_{B2}$$

$$H_1: \mu_{B1} > \mu_{B2}$$

Note:

$H_0$ : There is no significant difference in writing ability between the students who have high creativity and students who have low creativity.

$H_1$ : The students who have high creativity have better writing ability than the students who have low creativity.

3. The interaction between teaching techniques and students' creativity in teaching writing.

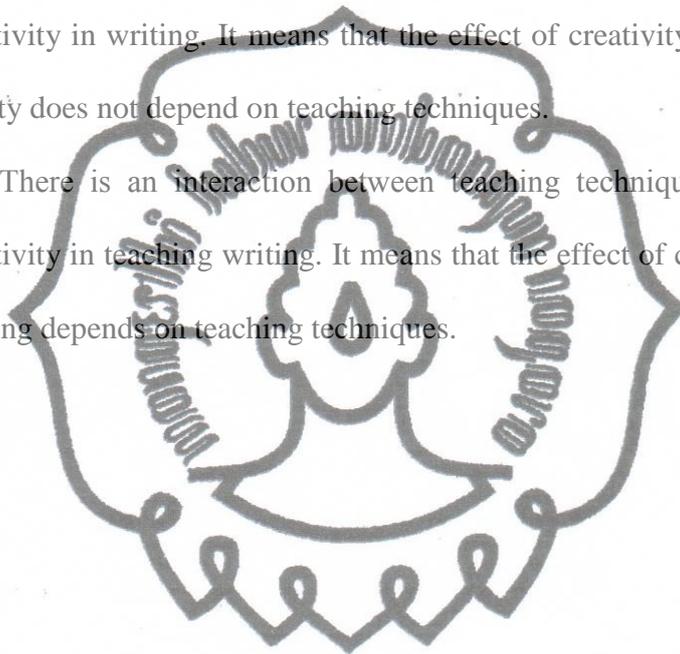
$$H_0: \mu_A \times \mu_B \leq 0$$

$$H_1: \mu_A \times \mu_B > 0$$

Note:

$H_0$ : There is no interaction between teaching techniques and students' creativity in writing. It means that the effect of creativity level on writing ability does not depend on teaching techniques.

$H_1$ : There is an interaction between teaching techniques and students' creativity in teaching writing. It means that the effect of creativity level on writing depends on teaching techniques.



## CHAPTER IV

### RESULTS AND DISCUSSIONS

#### A. Data Description

As pointed earlier, the study is aimed at investigating the combined effects of teaching techniques and creativity in enhancing students' writing ability. This study was conducted at IKIP PGRI Bojonegoro. The writer took two classes from English department as the sample; those are class IB as the experimental class and class ID as control class. Each class consists of 42 students.

The writer gave different treatments to the two classes. The control class was treated by using clustering technique and the experimental class was treated by using dyadic essay technique. Besides, the writer also conducted verbal creativity test for both classes to measure the students' creativity level. At the end of the treatment, the students were given a post test. The data, which are analyzed in this study, are the result of the post test. The description includes mean, mode, median, and standard deviation. Based on the groups analyzed, the description of the data are divided into eight groups, they are as follows:

1. The description of the writing scores of the students taught by using dyadic essay technique ( $A_1$ ).
2. The description of the writing scores of the students taught by using clustering technique ( $A_2$ ).

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3. The description of the writing scores of the students having high creativity (B<sub>1</sub>).
4. The description of the writing scores of the students having low creativity (B<sub>2</sub>).
5. The description of the writing scores of the students having high creativity who are taught by using dyadic essay technique (A<sub>1</sub>B<sub>1</sub>).
6. The description of the writing scores of the students having high creativity who are taught by using clustering technique (A<sub>2</sub>B<sub>1</sub>).
7. The description of the writing scores of the students having low creativity who are taught by using dyadic essay technique (A<sub>1</sub>B<sub>2</sub>).
8. The description of the writing scores of the students having low creativity who are taught by using clustering technique (A<sub>2</sub>B<sub>2</sub>).

Before the data are analyzed by using multifactor analysis of variance (ANOVA), here is the description of each group:

### **1. The description of the writing scores of the students taught by using dyadic essay technique (A<sub>1</sub>)**

Based on the calculation result of the writing scores of the students taught by using dyadic essay technique (A<sub>1</sub>), the highest score is 90 and the lowest one is 64. The range is 26, from the total number ( $n$ ) = 42. The number of classes used is 6, and the class width (interval) used is 5. From the calculation result of statistics, the mean score achieved by the students is 77.88, the mode score is 77.16, the median score is 77.72, and the

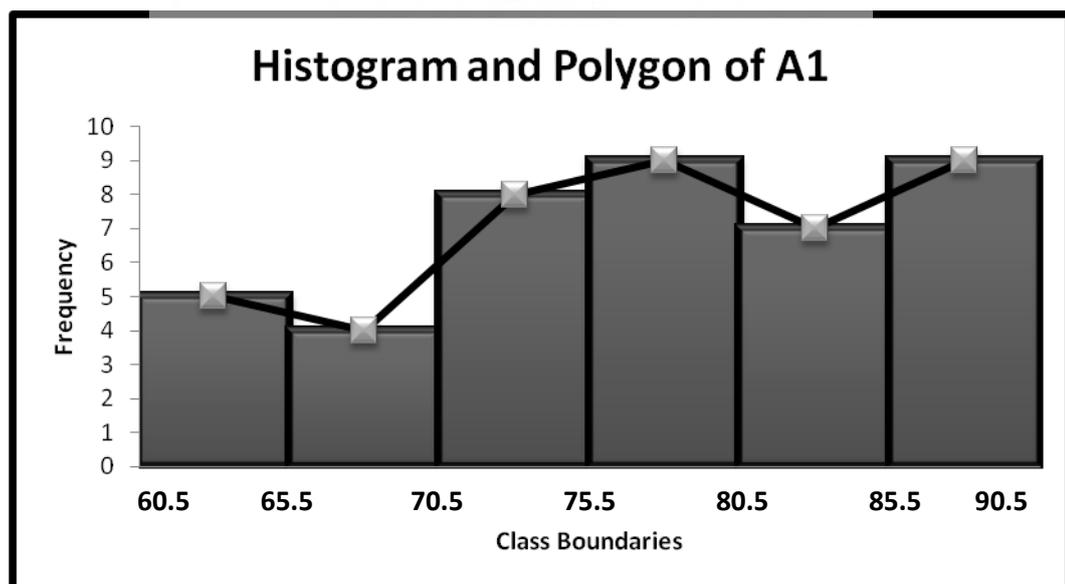
standard deviation is 8.23. For the complete computation see appendix 23 (pages: 289 – 290).

The frequency distribution of writing scores of the students who are taught by using dyadic essay technique on the whole can be seen in table 4.1 and histogram and polygon in figure 4.1.

Table 4.1 Frequency Distribution of Writing Scores of the Students Taught by Using Dyadic Essay Technique ( $A_1$ )

Interval	$f_i$	$X_i$	$f_i X_i$	$c_i$	$c_i^2$	$f_i c_i$	$f_i(c_i^2)$	$X_i^2$	$f_i(X_i^2)$
61 - 65	5	63	315	-3	9	-15	45	3969	19845
66 - 70	4	68	272	-2	4	-8	16	4624	18496
71 - 75	8	73	584	-1	1	-8	8	5329	42632
76 - 80	9	78	702	0	0	0	0	6084	54756
81 - 85	7	83	581	1	1	7	7	6889	48223
86 - 90	9	88	792	2	4	18	36	7744	69696
$\Sigma$	42		3246			-6		34639	253648
Mean	77.88								
Mode	77.16								
Median	77.72								
Sd	8.23								

Figure 4.1 Histogram and Polygon of  $A_1$



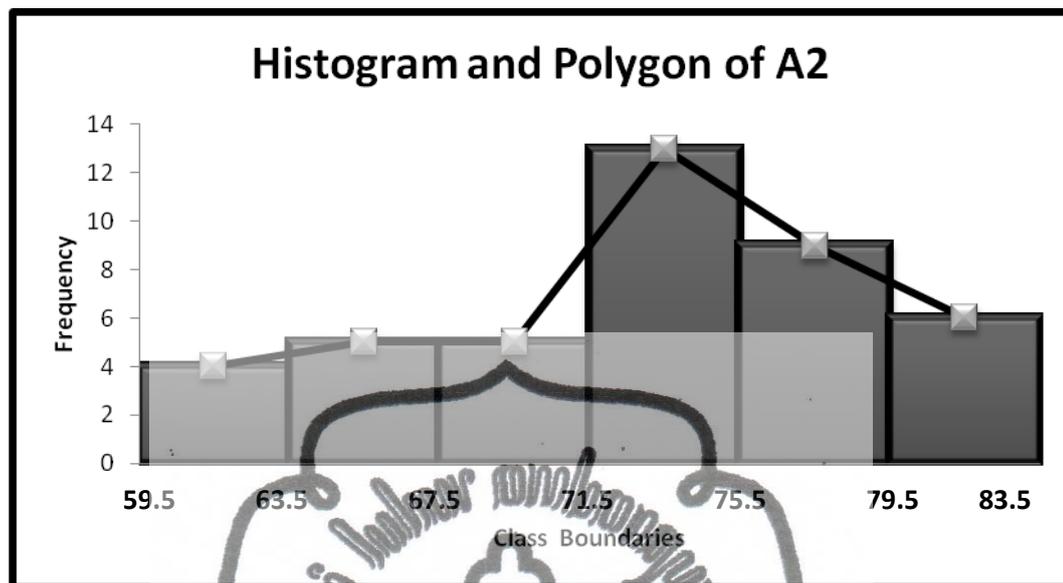
## 2. The description of the writing scores of the students taught by using clustering technique (A<sub>2</sub>)

Based on the calculation result of the writing scores of the students taught by using clustering technique (A<sub>2</sub>), the highest score is 82 and the lowest one is 60. The range is 22, from the total number ( $n$ ) = 42. The number of classes used is 6, and the class width (interval) used is 4. From the calculation result of statistics, the mean score achieved by the students is 72.45, the mode score is 74.16, the median score is 73.65, and the standard deviation is 6.03. For the complete computation see appendix 24 (pages: 291 –292).

The frequency distribution of writing scores of the students who are taught by using clustering technique on the whole can be seen in table 4.2 and histogram and polygon in figure 4.2.

Table 4.2 Frequency Distribution of Writing Scores of the Students Taught by Using Clustering Technique (A<sub>2</sub>)

Interval	$f_i$	$X_i$	$f_i X_i$	$c_i$	$c_i^2$	$f_i c_i$	$f_i (c_i^2)$	$X_i^2$	$f_i (X_i^2)$
60 - 63	4	61.5	246	-3	9	-12	36	3782.25	15129
64 - 67	5	65.5	327.5	-2	4	-10	20	4290.25	21451.25
68 - 71	5	69.5	347.5	-1	1	-5	5	4830.25	24151.25
72 - 75	13	73.5	955.5	0	0	0	0	5402.25	70229.25
76 - 79	9	77.5	697.5	1	1	9	9	6006.25	54056.25
80 - 83	6	81.5	489	2	4	12	24	6642.25	39853.5
<b><math>\Sigma</math></b>	<b>42</b>		<b>3063</b>			<b>-6</b>		<b>30953.5</b>	<b>224870.5</b>
<b>Mean</b>	<b>72.45</b>								
<b>Mode</b>	<b>74.16</b>								
<b>Median</b>	<b>73.65</b>								
<b>Sd</b>	<b>6.03</b>								

Figure 4.2 Histogram and Polygon of A<sub>2</sub>

### 3. The description of the writing scores of the students having high creativity (B<sub>1</sub>)

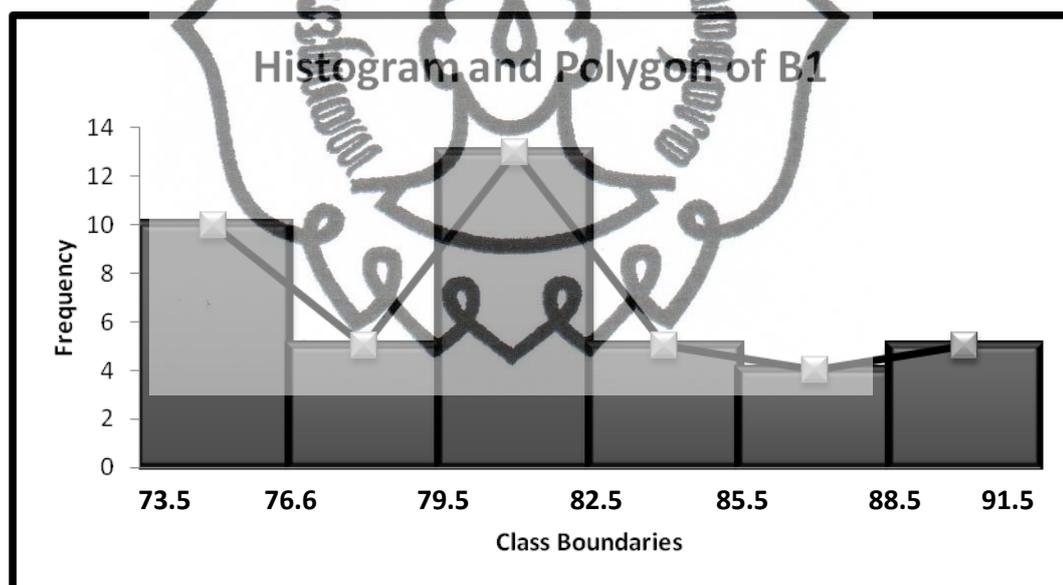
Based on the calculation result of the writing scores of the students having high creativity (B<sub>1</sub>), the highest score is 90 and the lowest one is 74. The range is 16, from the total number ( $n$ ) = 42. The number of classes used is 6, and the class width (interval) used is 3. From the calculation result of statistics, the mean score achieved by the students is 81.07, the mode score is 81, the median score is 80.88, and the standard deviation is 4.93. For the complete computation see appendix 25 (pages: 293 – 294).

The frequency distribution of writing scores of the students having high creativity on the whole can be seen in table 4.3 and histogram and polygon in figure 4.3.

Table 4.3 Frequency Distribution of Writing Scores of the Students Having High Creativity ( $B_1$ )

Interval	$f_i$	$X_i$	$f_i X_i$	$c_i$	$c_i^2$	$f_i c_i$	$f_i (c_i^2)$	$X_i^2$	$f_i (X_i^2)$
74 - 76	10	75	750	-2	4	-20	40	5625	56250
77 - 79	5	78	390	-1	1	-5	5	6084	30420
80 - 82	13	81	1053	0	0	0	0	6561	85293
83 - 85	5	84	420	1	1	5	5	7056	35280
86 - 88	4	87	348	2	4	8	16	7569	30276
89 - 91	5	90	450	3	9	15	45	8100	40500
$\Sigma$	42		3411			3		40995	278019
Mean	81.07								
Mode	81								
Median	80.88								
Sd	4.93								

Figure 4.3 Histogram and Polygon of  $B_1$



#### 4. The description of the writing scores of the students having low creativity ( $B_2$ )

Based on the calculation result of the writing scores of the students having low creativity ( $B_2$ ), the highest score is 78 and the lowest one is 60.

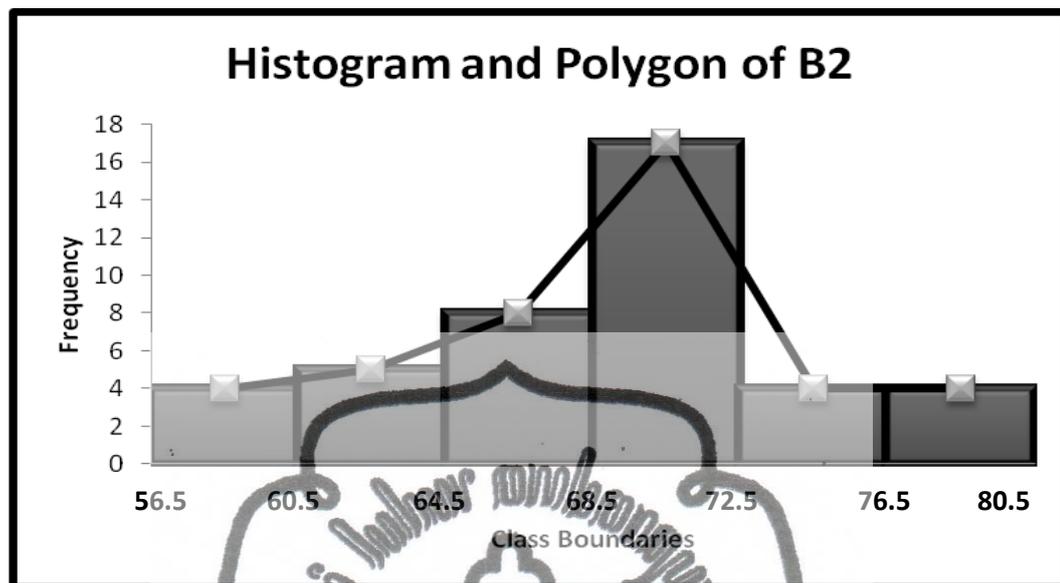
The range is 18, from the total number ( $n$ ) = 42. The number of classes

used is 6, and the class width (interval) used is 4. From the calculation result of statistics, the mean score achieved by the students is 69.26, the mode score is 70.14, the median score is 69.44, and the standard deviation is 5.46. For the complete computation see appendix 26 (pages: 295 – 296).

The frequency distribution of writing scores of the students having low creativity on the whole can be seen in table 4.4 and histogram and polygon in figure 4.4.

Table 4.4 Frequency Distribution of Writing Scores of the Students Having Low Creativity (B<sub>2</sub>)

Interval	$f_i$	$X_i$	$f_i X_i$	$c_i$	$c_i^2$	$f_i c_i$	$f_i(c_i^2)$	$X_i^2$	$f_i(X_i^2)$
57 - 60	4	58.5	234	-3	9	-12	36	3422.25	13689
61 - 64	5	62.5	312.5	-2	4	-10	20	3906.25	19531.25
65 - 68	8	66.5	532	-1	1	-8	8	4422.25	35378
69 - 72	17	70.5	1198.5	0	0	0	0	4970.25	84494.25
73 - 76	4	74.5	298	1	1	4	4	5550.25	22201
77 - 80	4	78.5	314	2	4	8	16	6162.25	24649
<b><math>\Sigma</math></b>	<b>42</b>		<b>2889</b>			<b>-18</b>		<b>28433.5</b>	<b>199942.5</b>
<b>Mean</b>	<b>69.26</b>								
<b>Mode</b>	<b>70.14</b>								
<b>Median</b>	<b>69.44</b>								
<b>Sd</b>	<b>5.46</b>								

Figure 4.4 Histogram and Polygon of B<sub>2</sub>

**5. The description of the writing scores of the students having high creativity who are taught by using dyadic essay technique (A<sub>1</sub>B<sub>1</sub>)**

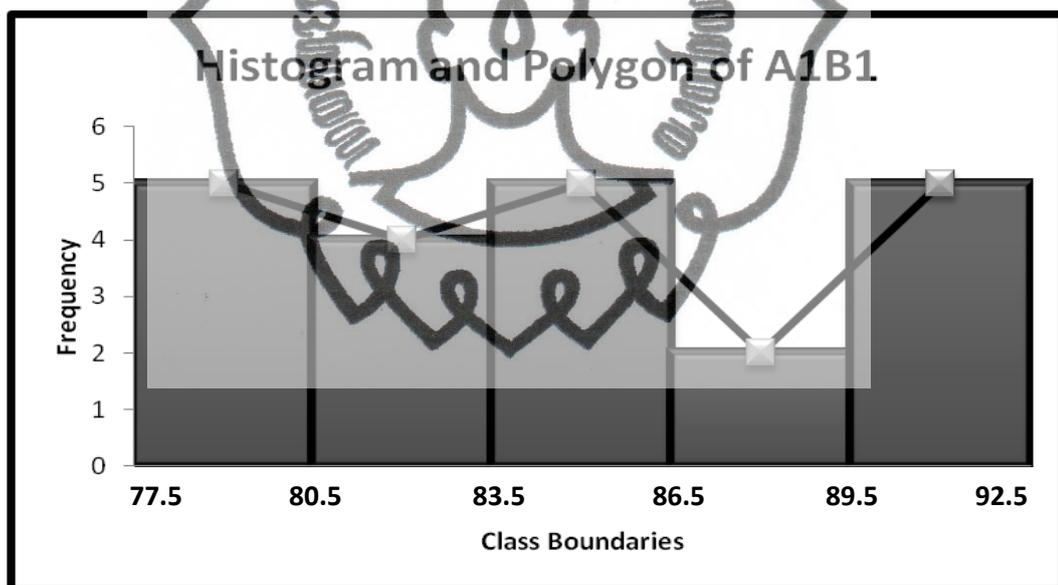
Based on the calculation result of the writing scores of the students having high creativity who are taught by using dyadic essay technique (A<sub>1</sub>B<sub>1</sub>), the highest score is 90 and the lowest one is 80. The range is 10, from the total number ( $n$ ) = 21. The number of classes used is 5, and the class width (interval) used is 3. From the calculation result of statistics, the mean score achieved by the students is 84.76, the mode score is 80, the median score is 84.4, and the standard deviation is 3.17. For the complete computation see appendix 27 (pages: 297 – 298).

The frequency distribution of writing scores of the students having high creativity who are taught by using dyadic essay technique on the whole can be seen in table 4.5 and histogram and polygon in figure 4.5.

Table 4.5 Frequency Distribution of Writing Scores of the Students Having High Creativity who are Taught by Using Dyadic Essay Technique (A<sub>1</sub>B<sub>1</sub>)

Interval	f <sub>i</sub>	X <sub>i</sub>	f <sub>i</sub> X <sub>i</sub>	c <sub>i</sub>	c <sub>i</sub> <sup>2</sup>	f <sub>i</sub> c <sub>i</sub>	f <sub>i</sub> (c <sub>i</sub> <sup>2</sup> )	X <sub>i</sub> <sup>2</sup>	f <sub>i</sub> (X <sub>i</sub> <sup>2</sup> )
78 - 80	5	79	395	0	0	0	0	6241	31205
81 - 83	4	82	328	1	1	4	4	6724	26896
84 - 86	5	85	425	2	4	10	20	7225	36125
87 - 89	2	88	176	3	9	6	18	7744	15488
90 - 92	5	91	455	4	16	20	80	8281	41405
<b>Σ</b>	<b>21</b>		<b>1779</b>			<b>40</b>		<b>36215</b>	<b>151119</b>
<b>Mean</b>	<b>84.76</b>								
<b>Mode</b>	<b>80</b>								
<b>Median</b>	<b>84.4</b>								
<b>Sd</b>	<b>3.17</b>								

Figure 4.5 Histogram and Polygon of A<sub>1</sub>B<sub>1</sub>



**6. The description of the writing scores of the students having high creativity who are taught by using clustering technique (A<sub>2</sub>B<sub>1</sub>)**

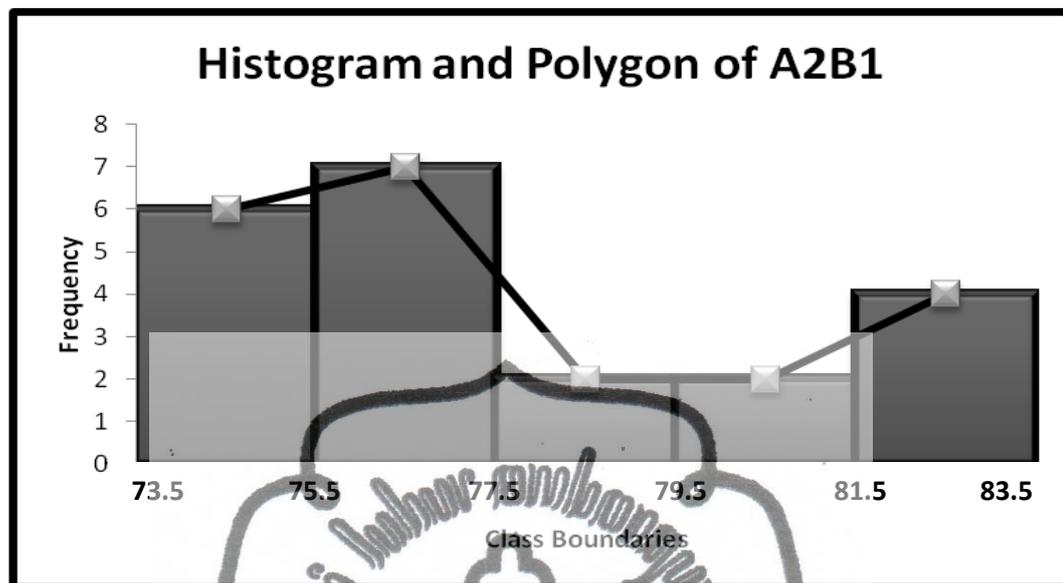
Based on the calculation result of the writing scores of the students having high creativity who are taught by using clustering technique (A<sub>2</sub>B<sub>1</sub>), the highest score is 82 and the lowest one is 74. The range is 8,

from the total number ( $n$ ) = 21. The number of classes used is 5, and the class width (interval) used is 2. From the calculation result of statistics, the mean score achieved by the students is 77.38, the mode score is 75.83, the median score is 76.78, and the standard deviation is 2.09. For the complete computation see appendix 28 (pages: 299 – 300).

The frequency distribution of writing scores of the students having high creativity who are taught by using clustering technique on the whole can be seen in table 4.6 and histogram and polygon in figure 4.6.

Table 4.6 Frequency Distribution of Writing Scores of the Students Having High Creativity who are Taught by Using Clustering Technique (A<sub>2</sub>B<sub>1</sub>)

Interval	$f_i$	$X_i$	$f_i X_i$	$c_i$	$c_i^2$	$f_i c_i$	$f_i (c_i^2)$	$X_i^2$	$f_i (X_i^2)$
74 - 75	6	74.5	447	-1	1	-6	6	5550.25	33301.5
76 - 77	7	76.5	535.5	0	0	0	0	5852.25	40965.75
78 - 79	2	78.5	157	1	1	2	2	6162.25	12324.5
80 - 81	2	80.5	161	2	4	4	8	6480.25	12960.5
82 - 83	4	82.5	330	3	9	12	36	6806.25	27225
<b><math>\Sigma</math></b>	<b>21</b>		<b>1630.5</b>			<b>12</b>		<b>30851.25</b>	<b>126777.3</b>
<b>Mean</b>	<b>77.38</b>								
<b>Mode</b>	<b>75.83</b>								
<b>Median</b>	<b>76.78</b>								
<b>Sd</b>	<b>2.09</b>								

Figure 4.6 Histogram and Polygon of A<sub>2</sub>B<sub>1</sub>

**7. The description of the writing scores of the students having low creativity who are taught by using dyadic essay technique (A<sub>1</sub>B<sub>2</sub>)**

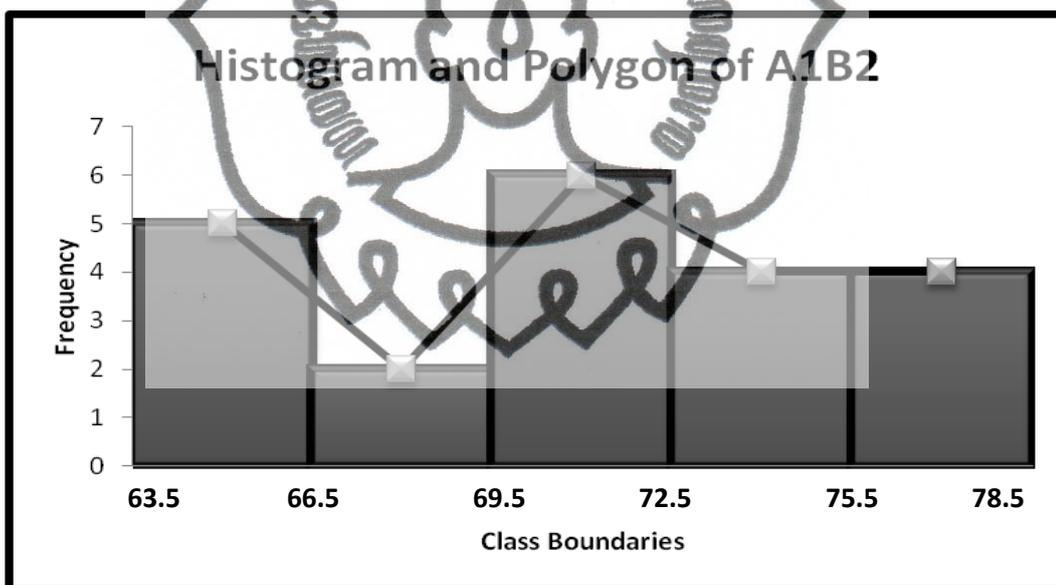
Based on the calculation result of the writing scores of the students having low creativity who are taught by using dyadic essay technique (A<sub>1</sub>B<sub>2</sub>), the highest score is 78 and the lowest one is 64. The range is 14, from the total number ( $n$ ) = 21. The number of classes used is 5, and the class width (interval) used is 3. From the calculation result of statistics, the mean score achieved by the students is 71, the mode score is 71.5, the median score is 71.25, and the standard deviation is 3.04. For the complete computation see appendix 29 (pages: 301 – 302).

The frequency distribution of writing scores of the students having low creativity who are taught by using dyadic essay technique on the whole can be seen in table 4.7 and histogram and polygon in figure 4.7.

Table 4.7 Frequency Distribution of Writing Scores of the Students Having Low Creativity who are Taught by Using Dyadic Essay Technique (A<sub>1</sub>B<sub>2</sub>)

Interval	f <sub>i</sub>	X <sub>i</sub>	f <sub>i</sub> X <sub>i</sub>	c <sub>i</sub>	c <sub>i</sub> <sup>2</sup>	f <sub>i</sub> c <sub>i</sub>	f <sub>i</sub> (c <sub>i</sub> <sup>2</sup> )	X <sub>i</sub> <sup>2</sup>	f <sub>i</sub> (X <sub>i</sub> <sup>2</sup> )
64 - 66	5	65	325	-2	4	-10	20	4225	21125
67 - 69	2	68	136	-1	1	-2	2	4624	9248
70 - 72	6	71	426	0	0	0	0	5041	30246
73 - 75	4	74	296	1	1	4	4	5476	21904
76 - 78	4	77	308	2	4	8	16	5929	23716
<b>Σ</b>	<b>21</b>		<b>1491</b>			<b>0</b>		<b>25295</b>	<b>106239</b>
<b>Mean</b>	<b>71</b>								
<b>Mode</b>	<b>71.5</b>								
<b>Median</b>	<b>71.25</b>								
<b>Sd</b>	<b>3.04</b>								

Figure 4.7 Histogram and Polygon of A<sub>1</sub>B<sub>2</sub>



**8. The description of the writing scores of the students having low creativity who are taught by using clustering technique (A<sub>2</sub>B<sub>2</sub>)**

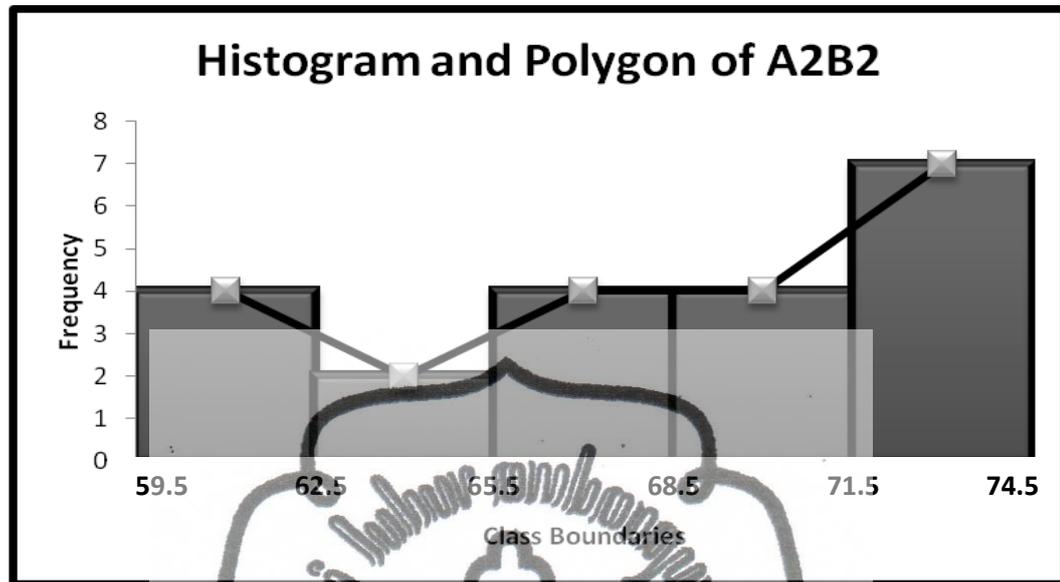
Based on the calculation result of the writing scores of the students having low creativity who are taught by using clustering technique (A<sub>2</sub>B<sub>2</sub>), the highest score is 72 and the lowest one is 60. The range is 12, from the

total number ( $n$ ) = 21. The number of classes used is 5, and the class width (interval) used is 3. From the calculation result of statistics, the mean score achieved by the students is 67.52, the mode score is 72.4, the median score is 68.87, and the standard deviation is 3.21. For the complete computation see appendix 30 (pages: 303 – 304).

The frequency distribution of writing scores of the students having low creativity who are taught by using clustering technique on the whole can be seen in table 4.8 and histogram and polygon in figure 4.8.

Table 4.8 Frequency Distribution of Writing Scores of the Students Having Low Creativity who are Taught by Using Clustering Technique (A<sub>2</sub>B<sub>2</sub>)

Interval	$f_i$	$X_i$	$f_i X_i$	$c_i$	$c_i^2$	$f_i c_i$	$f_i (c_i^2)$	$X_i^2$	$f_i (X_i^2)$
60 - 62	4	61	244	-4	16	-16	64	3721	14884
63 - 65	2	64	128	-3	9	-6	18	4096	8192
66 - 68	4	67	268	-2	4	-8	16	4489	17956
69 - 71	4	70	280	-1	1	-4	4	4900	19600
72 - 74	7	73	511	0	0	0	0	5329	37303
<b><math>\Sigma</math></b>	<b>21</b>		<b>1431</b>			<b>-34</b>		<b>22535</b>	<b>97935</b>
<b>Mean</b>	<b>67.52</b>								
<b>Mode</b>	<b>72.4</b>								
<b>Median</b>	<b>68.87</b>								
<b>Sd</b>	<b>3.21</b>								

Figure 4.8 Histogram and Polygon of A<sub>2</sub>B<sub>2</sub>

## B. Prerequisite Testing

The statistics analysis needs several requirements that have to be met, namely normality testing and homogeneity testing.

### 1. Normality Testing

Liliefors testing is used to compute the normality of the data. The normality test is to check whether the data are in normal distribution or not. If  $L_o$  (L obtained) is lower than  $L_t$  (L table) at the level of significance  $\alpha = 0.05$  on Liliefors, the sample is in normal distribution. The formula used in testing the normality is:

$$z_i = \frac{X - \bar{X}}{s} \quad \text{where } s = \sqrt{\frac{\sum(X - \bar{X})^2}{n-1}} \quad \text{or} \quad \sqrt{\frac{\sum X^2 - \frac{(\sum X)^2}{n}}{n-1}} \quad \text{or} \quad \sqrt{\frac{\sum x^2}{n-1}}$$

The following table presents the results of normality testing. The complete computation for each can be found in Appendix 31 – 38 (pages: 305 – 320).

Table 4.9 The Summary of Normality Testing

No	Group	$L_o$	Number of Group	$L_{t(0.05)}$	Test Result	Conclusion
1	Writing scores of the students taught by using dyadic essay technique ( $A_1$ )	0.0725	42	0.1367	$L_o < L_t$	Normal
2	Writing scores of the students taught by using clustering technique ( $A_2$ )	0.0719	42	0.1367	$L_o < L_t$	Normal
3	Writing scores of the students having high creativity ( $B_1$ )	0.1070	42	0.1367	$L_o < L_t$	Normal
4	Writing scores of the students having low creativity ( $B_2$ )	0.1007	42	0.1367	$L_o < L_t$	Normal
5	Writing scores of the students having high creativity who are taught by using dyadic essay technique ( $A_1B_1$ )	0.1467	21	0.1900	$L_o < L_t$	Normal
6	Writing scores of the students having high creativity who are taught by using clustering technique ( $A_2B_1$ )	0.1668	21	0.1900	$L_o < L_t$	Normal
7	Writing scores of the students having low creativity who are taught by using dyadic essay	0.1588	21	0.1900	$L_o < L_t$	Normal

	technique (A <sub>1</sub> B <sub>2</sub> )					
8	Writing scores of the students having low creativity who are taught by using clustering technique (A <sub>2</sub> B <sub>2</sub> )	0.1562	21	0.1900	L <sub>o</sub> < L <sub>t</sub>	Normal

The summary of normality testing using Liliefors formula shows that all of the values of L<sub>o</sub> are lower than L<sub>t</sub>. Therefore, it can be concluded that all data are in normal distribution.

## 2. Homogeneity Testing

The homogeneity testing used in this study is by implementing Bartlett formula. The test is done to find out whether the data are homogeneous or not. This test is important because homogeneity of the data shows that the population is well-formed.

The following table presents the summary of homogeneity testing result while for complete computation can be found in appendix 39 (pages: 321 – 322).

Table 4.10 The Summary of Homogeneity Testing

Sample	df	1/(df)	s <sub>i</sub> <sup>2</sup>	Log s <sub>i</sub> <sup>2</sup>	(df) Log s <sub>i</sub> <sup>2</sup>
1	20	0.05	14.89048	1.172909	23.45817173
2	20	0.05	24.5	1.389166	27.78332169
3	20	0.05	9.047619	0.956534	19.13068612
4	20	0.05	19.5619	1.291411	25.8282228
<b>Σ</b>	<b>80</b>	<b>0.2</b>			<b>96.20040235</b>
<b>χ<sup>2</sup></b>	<b>5.14</b>			<b>χ<sub>t</sub><sup>2</sup></b>	<b>7.81</b>
<b>Conclusion</b>	<b>HOMOGENEOUS</b>				

Based on the result of homogeneity testing, it was gained that the value of chi-square observation is 5.14 while the table value of the chi-square for  $df=3$  at the level of significance  $\alpha=0.05$  is 7.815. Because  $\chi_o^2$  is lower than  $\chi_t^2$ , it can be concluded that the data are homogeneous.

### C. Hypotheses Testing

The hypothesis testing is to know whether the null hypotheses ( $H_o$ ) is rejected or accepted. Multifactor Analysis of Variance (ANOVA) is used to test the hypotheses. Statistically, the  $H_o$  (null hypotheses) is accepted if  $F_o$  is lower than or the same as  $F_t$  ( $F_o \leq F_t$ ). On the other hand,  $H_o$  (null hypotheses) is rejected if  $F_o$  is higher than  $F_t$  ( $F_o > F_t$ ). The data analysis by using ANOVA can be summed up as follows (the complete computation can be found in Appendix 40, pages: 323 - 327):

Table 4.11 The summary of a 2 x 2 Multifactor Analysis of Variance

Source of variance	SS	df	MS	$F_o$	$F_{t(.05)}$	Conclusion
Between columns (teaching techniques)	618.8571	1	618.8571	36.40336	3.96	$H_o$ is rejected
Between rows (level of creativity)	2928.762	1	2928.762	172.2801	3.96	$H_o$ is rejected
Columns by rows (interaction)	80.04762	1	80.04762	4.708683	3.96	$H_o$ is rejected
Between groups	3627.667	3	1209.222			
Within groups	1360	<b>80</b>	<b>17</b>			
Total	4987.667	83				

Based on the summary of 2 x 2 Multifactor Analysis of Variance (ANOVA) above, some interpretations can be drawn as follows:

- a. The impacts of employing teaching techniques (dyadic essay technique and clustering technique) upon the students' writing ability.

As it is seen from the result of two-way ANOVA with the same columns, the value of  $F_o$  is compared to the  $F_{table}$  in which  $df_{numerator}$  is 1 and  $df_{denominator}$  is 80 at the level of significance  $\alpha=0.05$ . Based on the table, the value of  $F_o$  is 36.40, while the value of  $F_{table}$  is 3.96. It means that  $H_o$  is rejected. *Therefore, it can be concluded that dyadic essay technique differs significantly from clustering technique in their effect on the students' writing ability.* Based on the mean score, it is seen that the mean score of the students who are taught by using dyadic essay technique (77.88) is higher than the mean score of the students who are taught by using clustering technique (72.45). *It means that dyadic essay technique is more effective than clustering technique to teach writing.*

b. The effect of creativity level upon the students' writing ability.

Based on the result of two-way ANOVA with the same rows, the value of  $F_o$  is compared to the  $F_{table}$  in which  $df_{numerator}$  is 1 and  $df_{denominator}$  is 80 at the level of significance  $\alpha=0.05$ . Based on the table, the value of  $F_o$  is 172.28, while the value of  $F_{table}$  is 3.96. It means that  $H_o$  is rejected. *Therefore, it can be concluded that the difference between students' writing ability of those subjects with high creativity and those with low creativity is significant.* Based on the mean score, it is seen that the mean score of the students who have high creativity (81.07) is higher than the mean score of the students who have low creativity (69.26). *It means that the students who have high creativity have better writing ability than the students who have low creativity.*

- c. The interaction effect of teaching techniques and creativity level upon the students' writing ability.

Based on the result of two-way ANOVA with the same cells, the value of  $F_o$  is compared to the  $F_{table}$  in which  $df_{numerator}$  is 1 and  $df_{denominator}$  is 80 at the level of significance  $\alpha=0.05$ . Based on the table, the value of  $F_o$  is 4.71, while the value of  $F_{table}$  is 3.96. It means that  $H_o$  is rejected.

*Therefore, it can be concluded that there is an interaction effect between teaching techniques and creativity upon students' writing ability. Thus, the effect of teaching techniques on performance of writing depends on the degree of creativity.*

Having analyzed the variance, the researcher needs to do Tukey testing to test the different mean of each group.  $q$  is found by dividing the difference between the means by the square root of the ration of within group variation and the sample size.

The following table presents the summary of testing the significant level of mean difference using Tukey Test (the complete computation can be found in Appendix 41, pages: 328 - 329):

Table 4.12 The Summary of Tukey Test

Between groups	$q_o$	$q_{t(.05)}$	Meaning	Category
$A_1 - A_2$	8.53	2.86	$q_o > q_t$	Significant
$B_1 - B_2$	18.56	2.86	$q_o > q_t$	Significant
$A_1B_1 - A_2B_1$	6.48	2.95	$q_o > q_t$	Significant
$A_1B_2 - A_2B_2$	2.58	2.95	$q_o < q_t$	Not significant

Based on the summary of Tukey Test above, the interpretations can be drawn as follows:

*commit to user*

- a. Comparing two means between-columns (dyadic essay technique is compared with clustering technique)

By comparing two means between-columns ( $A_1 - A_2$ ), it can be found that  $q_o$  is 8.53. The value of  $q_t$  for  $\alpha=0.05$  and  $n=42$  is 2.86. Because  $q_o$  (8.53) is higher than  $q_t$  (2.86), dyadic essay technique differs significantly from clustering technique to teach writing. The mean score of the students who are taught by using dyadic essay technique (77.88) is higher than the mean score of the students who are taught by using clustering technique (72.45). *Therefore, it can be concluded that dyadic essay technique is more effective than clustering technique to teach writing.*

- b. Comparing two means between-rows (high creativity is compared with low creativity)

By comparing two means between-rows ( $B_1 - B_2$ ), it can be found that  $q_o$  is 18.56. The value of  $q_t$  for  $\alpha=0.05$  and  $n=42$  is 2.86. Because  $q_o$  (18.56) is higher than  $q_t$  (2.86), the students who have high creativity are significantly different from the students who have low creativity in writing ability. The mean score of the students who have high creativity (81.07) is higher than the mean score of the students who have low creativity (69.26). *Therefore, it can be concluded that the students who have high creativity have better writing ability than the students who have low creativity.*

- c. Comparing two means columns by rows (dyadic essay technique is compared with clustering technique) for the students having high creativity

By comparing two means columns by rows ( $A_1B_1 - A_2B_1$ ), it can be found that  $q_o$  is 6.48. The value of  $q_t$  for  $\alpha=0.05$  and  $n=21$  is 2.95. Because  $q_o$  (6.48) is higher than  $q_t$  (2.95), the students who have high creativity and taught by using dyadic essay technique are significantly different from the students who have high creativity and taught by using clustering technique in writing ability. The mean score of the students who have high creativity and taught by using dyadic essay technique (84.76) is higher than the mean score of the students who have high creativity and taught by using clustering technique (77.38). *Therefore, it can be concluded that the students who have high creativity and taught by using dyadic essay technique have better writing ability than the students who have high creativity and taught by using clustering technique.*

- d. Comparing two means columns by rows (dyadic essay technique is compared with clustering technique for the students having low creativity)

By comparing two means columns by rows ( $A_1B_2 - A_2B_2$ ), it can be found that  $q_o$  is 2.58. The value of  $q_t$  for  $\alpha=0.05$  and  $n=21$  is 2.95. Because  $q_o$  (2.58) is lower than  $q_t$  (2.95), it means that the students who have low creativity and taught by using dyadic essay technique are *not*

*significantly different* from the students who have low creativity and taught by using clustering technique in writing ability. *Therefore, it can be concluded that the students' writing ability between the students who have low creativity and taught by using dyadic essay technique and the students who have low creativity and taught by using clustering technique is not significantly different.*

#### D. Discussion

By considering the data analyses above, there are some conclusions that can be drawn.

1. Dyadic essay technique is more effective than clustering technique to teach writing.

Needless to say, teaching technique plays an important role in teaching and learning process. Teaching technique is one of the aspects of teaching and learning process that needs to be fully considered by the teacher. Good teaching technique will influence much the students' attitude toward the subject.

In general, dyadic essay technique makes the learning more effective, attractive, meaningful, and successful. Dyadic essay also can improve students' critical thinking. Dyadic essay technique becomes especially important for some reasons. Firstly, using dyadic essay technique makes the students work cooperatively with their partner in the class. They can share each other about their ideas. Secondly, dyadic essay technique encourages the students to find the good idea in writing, because

they have found some information from the learning activity before such as reading an assignment, listening to a lecture, or watching a film. Thirdly, by working collaboratively with their friends, the students will try to analyze their friends' work in writing. They can correct the mistakes made by their friends. Sherman (1998: 1) states that reflective writing, such as in dyadic essay, in the context of a public forum in which students are required to react to each other's writing engages students in a process of critical thinking.

Dyadic essay technique has many advantages as a functional unit of collaborative learning. Active participation in the collaborative process is essential for learning to occur. By working collaboratively with their friends, the students will try to analyze their friends' work in writing. They can correct the mistakes made by their friends.

Sherman (1998: 1), states that in dyadic essay, the students are relying on peers for learning. It means that students work together to teach one another, and they alternate between the roles of student and teacher. This technique combines elements of both motivational and cognitive approaches to collaboration. The technique also promotes cognitive processing by using a structured approach to teaching and learning within a tutoring context. This technique also promotes active processing of material using activities that are strongly linked to achievement.

From the statement above, it can be concluded that dyadic essay technique has some advantages such as: (1) it can promote effective learning; (2) it can combine both motivational and cognitive approaches to collaboration; (3) it can promote cognitive process through a structured

approach to teaching and learning within a tutoring context; (4) it can promote the students' achievement and the students' self confidence.

On the other hand, clustering technique cannot navigate like what dyadic essay technique does. Clustering technique is a kind of brainstorming activity that one can use to generate ideas. This technique is used for collecting thoughts around some stimulus, for finding focus, and for allowing a sense of the whole arrangement to emerge even though all the details are not yet apparent. In short, it is a discovery process. In clustering technique, the students learn how to generate, develop, and arrange the ideas that have to be used in their everyday lives as a valuable and satisfying writing. Reid (1993: 6) mentions that the invention of clustering helps writers to generate, develop, and arrange their ideas. It can be said that clustering helps the learners in developing their ideas.

Clustering involves writing down words or phrases and engaging in free association. Each association is written down and connected to the original of associated words are produced. Dawson and Essid (2010: 1) state that there are some steps: (1) choosing words or phrases; (2) putting the words or phrases in central; (3) circling the words or phrases; (4) writing words all around the word or phrase that associate with the word in central; and (5) connecting the new words or phrases to previous one with lines. Moreover, clustering technique helps the writers or learners to start the writing activity from the new expectation words and develop them in bubbles or circle forms. The learners start to write down the ideas and then the ideas are connected by using an arrow or line. It is used to overcome

the difficulty in developing ideas. But, in this case, the students sometimes still get difficulties in arranging long sentences. Finally, the result of this study shows that dyadic essay is more effective than clustering technique to teach writing.

2. The students who have high creativity have better writing ability than the students who have low creativity.

Creative individuals have a great deal of energy. This great deal of energy makes them energetic and always ready to do everything. They will see any kinds of things, including the difficult one, as challenges to conquer. They like challenges and enjoy its every single activity. They like to explore their ideas and imagination and to think freely.

Furthermore, students with high creativity have a combination of playfulness, discipline, and also responsibility. They like to alternate between imagination and fantasy at one end, and rooted sense of reality at the other. Besides, they do not like to be bound. They like to be given freedom to think and to express themselves in many ways. This kind of characteristics, in the end, leads the students who have creativity to get better score since they have better flexibility, fluency, and originality of thinking which are important in producing a piece of writing.

Csikszentmihalyi (1996: 58-73) defines the characteristics of the creative personality as follows:

- a. Creative individuals have a great deal of energy, but they are also often quiet and at rest.

- b. Creative individuals tend to be smart, yet also naïve at the same time.
- c. Creative individuals have a combination of playfulness and discipline, and responsibility and irresponsibility.
- d. Creative individuals alternate between imagination and fantasy at one end, and rooted sense of reality at the other.
- e. Creative people seem to harbor opposite tendencies on the continuum between extroversion and introversion.
- f. Creative individuals are also remarkable humble and proud at the same time.
- g. Creative individuals to a certain extent escape rigid gender role stereotyping and have a tendency toward androgyny.
- h. Generally, creative people are thought to be rebellious and independent.
- i. Most creative individuals are very passionate about their work, yet they can be extremely objective about it as well.
- j. The openness and sensitivity of creative individuals often exposes them to suffering pain yet also a great deal of enjoyment.

On the contrary, according to the statement stated by Csikszentmihalyi (1996: 58-73) about the characteristics of creative personality above, it can also be inferred that students with low creativity tend to be passive. They do any kinds of tasks only based on the instruction given and do not really like if they are asked to think beyond what is given. In addition, they will be reluctant to do activities which require them to think creatively. They like something simple and like

being guided. Students with low creativity usually see process and challenge as burdens. The more activities they have to do, the more burdens they will have. They do not really like activities because they like simple, guided, and straightforward activities which in turns make the teacher should control them intensively. Uebergang (2012: 1) states that limited creativity and views affect how we act. It means that the students who have low creativity will get difficulties in generating ideas and expressing it into written form. Munandar (1999: 25) states that everyone has different level of creativity which affects their ways of thinking, their behavior, and their competences in all aspects. These are some of the reasons why their writing scores are less than those having high creativity. Their low creativity makes them unable to express their ideas better. This can be seen from the results of their writing ability in which the scores of both control and experimental groups are lower than those having high level of creativity from both groups given treatment.

3. There is an interaction between teaching techniques and students' creativity in teaching writing.

Good teaching technique challenges students to perform better learning. They also minimize boredom and energize students to do more than usual. Good teaching technique increases students' creativity. Students are more creative when they are taught using challenging and interesting teaching technique.

Creativity as a process can be formulated as a form of thought in which an individual finds out new relationship, answer, methods, or new ways in facing a problem. Csikszentmihalyi (1996: 58-73) states that creative individuals have a great deal of energy. This great deal of energy makes them energetic and always ready to do everything. They will see any kinds of things, including the difficult one, as challenges to conquer. They like challenges and enjoy its every single activity. They like to explore their ideas and imagination and to think freely. Students with high creativity have a combination of playfulness, discipline, and also responsibility. They like to alternate between imagination and fantasy at one end, and rooted sense of reality at the other. Besides, they do not like to be bound. They like to be given freedom to think and to express themselves in many ways. So, the students with high level of creativity are able to manifest nice learning activity into their writing. Uebergang (2012: 1) states that creativity is associated with the ability to quickly think what is in our mind. It means that the students who have high creativity will easily express what in their mind in the form of writing.

In dyadic essay, students individually write an essay question and a model answer on a reading assignment, lecture, or other presentation of content. Then, students pairs exchange questions, write a response to the partner's question, and then trade, read, and compare model in-class answers. Then, they collaboratively write an essay based on the answer they have compared and discussed. According to Barkley, Cross, and Major (2005: 246) this collaborative learning technique gives students

practice identifying the most important feature of a learning activity and formulating and answering questions about that activity. It also gives students an opportunity to rehearse responding to essay questions with the added advantage of having a sample response with which they compare their answers. This, of course, requires students to be more creative in doing so. In short, dyadic essay technique is easily done by the students who have high creativity. On the other hand, the students with low creativity have some difficulties in doing dyadic essay technique due to their insufficient storage of vocabulary and ability to understand materials. Therefore, the students with high creativity are able to optimize their potentials when dyadic essay technique is implemented in their classroom activity.

On the contrary, according to the statement stated by Csikszentmihalyi (1996: 58-73) about the characteristics of creative personality, it can be inferred that students with low creativity tend to be passive. They do any kinds of tasks only based on the instruction given and do not really like if they are asked to think beyond what is given. In addition, they will be reluctant to do activities which require them to think creatively. They like something simple and like being guided. Students with low creativity usually see process and challenge as burdens. The more activities they have to do, the more burdens they will have. They do not really like activities because they like simple, guided, and straightforward activities which in turns make the teacher should control them intensively.

Therefore, they need certain techniques to help them generating their ideas into written form.

Clustering technique is a kind of brainstorming activity that one can use to generate ideas. This technique is used for collecting thoughts around some stimulus, for finding focus, and for allowing a sense of the whole arrangement to emerge even though all the details are not yet apparent. In short, it is a discovery process. In clustering technique, the students learn how to generate, develop, and arrange the ideas that have to be used in their everyday lives as a valuable and satisfying writing. Reid (1993: 6) mentions that the invention of clustering helps writers to generate, develop, and arrange their ideas. It can be said that clustering helps the learners in developing their ideas. Dawson and Essid (2010: 1) say that clustering is a type of prewriting that allows the learners to explore many ideas around some stimulus as soon as they occur to the learners. Like brainstorming or free associating, clustering allows learners to begin without clear ideas. Kaufman and Sternberg (2006: 82) state that brainstorming is a technique used by Osborn (1953) to facilitate and stimulate creativity for individuals having low creativity. De Prado (1982) uses brainstorming to (a) stimulate and develop the different aspects of creativity (fluency, or the ability to generate multiple ideas; flexibility, or a broad view of category and analysis; and originality, or the ability to produce unique, rare, and unusual ideas); (b) generate new ideas and alternatives to complete a working project; and (c) create a working climate of trust, happiness, and productivity, which favors free expression,

group cohesion, and efficiency. De Prado in Kaufman and Sternberg (2006: 82) states that brainstorming helps facilitate participation among members of a working team, promotes mental flexibility and a wealth and variety of innovative ideas, teaches attitudes of tolerance and respect for all ideas, and encourages the development of vocabulary in the classroom. Therefore, the students having low creativity will be suitable when they are taught using clustering technique in their classroom activity because it can promote their creative thinking.

Finally, the result of this research shows that teaching techniques and creativity play an important role to the students' writing ability. Teaching techniques and creativity mutually influence one another in writing ability. It means that writing ability depends on the creativity level and teaching techniques. Dyadic essay technique is more effective for the students having high creativity and clustering technique is more effective for the students having low creativity. Therefore, it can be said that there is an interaction effect between teaching techniques and creativity upon students' writing ability.

## CHAPTER V

### CONCLUSION, IMPLICATION, AND SUGGESTION

#### A. Conclusion

The conclusions of the research which are based on the statistical analyses and the findings in chapter IV can be drawn as follows:

1. In general, dyadic essay technique as one of the models of collaborative learning is more effective than Clustering Technique to teach writing to the second semester students of English Education Department, IKIP PGRI Bojonegoro, in the academic year of 2011/2012.
2. The students having high level of creativity have better writing ability especially in report text than those having low level of creativity to the second semester students of English Education Department, IKIP PGRI Bojonegoro, in the academic year of 2011/2012.
3. There is interaction between teaching techniques (dyadic essay technique and clustering technique) and creativity to teach writing to the second semester students of English Education Department, IKIP PGRI Bojonegoro, in the academic year of 2011/2012.

Based on the research finding, it can be concluded that dyadic essay technique is an effective technique to teach writing for the second semester students of English Education Department, IKIP PGRI Bojonegoro, in the academic year of 2011/2012.

## B. Implication

The result of this research implies that dyadic essay is an effective teaching technique to teach writing. It is good to be applied in teaching writing, especially for students in university. Here are some steps needed to be followed in teaching writing using dyadic essay technique: (1) The teacher gives a learning activity such as reading a text or watching a video; (2) The students write essay questions related to the content of learning activity; (3) They write a model response of their own questions on separated answer sheet; (4) In pairs, the students exchange their essay questions with their friends' (their model answer is not included); (5) The students write the answers of their friends' questions; (6) The students discuss and compare the essay questions and model answers in pairs; (7) After discussing and comparing their answers with their friends', the students write an essay or text by developing the model answers they have discussed; (8) Then, after writing an essay, the students in pairs discuss and revise their essay writing; and (9) Finally, the teacher conducts general discussion and gives feedback to the students' work. By following the steps above, dyadic essay can be applied well in teaching writing. Therefore, the students' writing ability can be improved significantly.

### C. Suggestion

Based on the conclusions and implications above, there are some suggestions proposed for lecturers, students, and future researcher:

#### 1. For the lecturers

It is important for the lecturers to make teaching learning situation especially in teaching writing become interesting rather than having stressful and boring. Therefore, they should apply dyadic essay technique to make students enjoy their learning in the classroom. The more students enjoy learning, the more effective the learning is. dyadic essay technique gives students chance to develop ideas deeply, create effective team work, obtain new perspective, work collaboratively, learn to criticize and accept criticism, give peer correction, and be responsible for their own learning duties.

#### 2. For students

As the university students, they have to be more active in learning and should not consider the lecture as the only source. They have to open their mind to use various sources to get new knowledge in writing. They have to be more diligent, innovative, creative, and academically active not only in class but also out of class. They should improve their writing ability by themselves not depending on their lecturers.

### 3. For other researchers

The result of this study, hopefully, can urge other researchers to conduct further study concerning with the teaching techniques used and the role of creativity to improve students' writing ability.

Moreover, this experimental study is not the end for the improvement of the teaching techniques used. Even though the result of the data analyses of this study shows that dyadic essay technique is better to teach writing to university students, but, it does not mean that clustering technique is a bad teaching technique.

This study has some weaknesses, which enable other researchers to conduct a better study. It can be developed into a wider point of view. Last but not least, it is only the beginning and it can become a reference for other researchers.

