



**THE EFFECT OF CLUSTERING STRATEGY ON
STUDENTS ABILITY IN WRITING DESCRIPTIVE
TEXT AT GRADE VIII OF SMPN 6
PADANGSIDIMPUAN**

A THESIS

*Submitted to the Institute for Islamic Studies Padangsidimpuan
as a Partial Fulfillment of the Requirement
for the Degree of Education (S.Pd) in English*

Written by:

**YUNITA SARI
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**TARBIYAH AND TEACHERS TRAINING FACULTY
INSTITUTE FOR ISLAMIC STUDIES
PADANGSIDIMPUAN**

2017



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item : 7 (seven) exemplars

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Assalamu'alaikum Wr.Wb.

After reading, studying and giving advice for necessary revision on thesis belongs to *Yunita Sari*, entitled "*The Effect of Clustering Technique on Students Ability in Writing Descriptive Text at grade VIII of SMPN 6 Padangsidimpuan.*", we approved that the thesis has been acceptable to complete therequirement to fulfill for the degree of Graduate of Education (S.Pd.) in English.

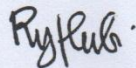
Therefore, we hope that the thesis will soon be examined in front of the Thesis Examiner Team of English Department Tarbiyah and Teacher Training Faculty IAIN Padangsidimpuan.

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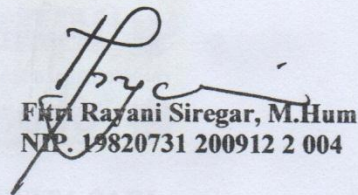
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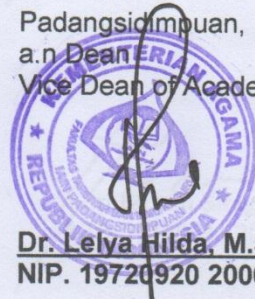
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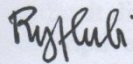


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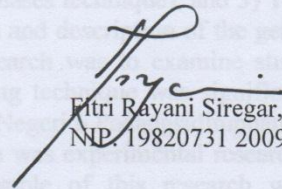
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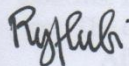
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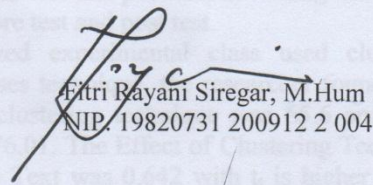


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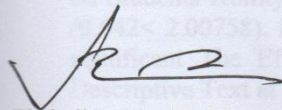
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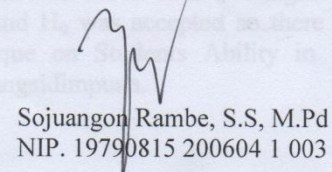
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ABSTRACT

In this research, researcher found students ability in writing descriptive text were: 1) students had lack of vocabulary, 2) students got bored of writing descriptive text using conventional technique (three phases technique), and 3) The students were difficult distinguish between identification and description of the generic structure in descriptive text. The purpose of this research was to examine student's ability in writing descriptive text by using clustering technique was significantly better than three phases technique at grade VIII SMP Negeri 6 Padangsidimpuan.

The approach used in this research was experimental research. Population in this research was 248 students and sample of this research was 53 students. Researcher chose two classes as sample using normality and homogeneity test. They were VIII-1 as experimental class was 27 students and VIII-2 as control class was 26 students. In this research, researcher gave pre-test and post-test in writing descriptive text. The data was derived from interview, pre test and post test.

After the data have been analyzed experimental class used clustering technique and control class used three phases technique, the researcher found mean score of experimental class before using clustering technique was 65.6 and mean score after using clustering technique was 76.01. The Effect of Clustering Technique on Students Ability in Writing Descriptive Text was 0.642 with t_t is higher than t_0 ($0.642 < 2.00758$). It means H_a was rejected and H_0 was accepted so there was no significant The Effect of Clustering Technique on Students Ability in Writing Descriptive Text at grade VIII of SMPN 6 Padangsidimpuan.

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Padangsidimpuan, 29 September 2017
Researcher

YUNITA SARI
Reg. Number. 13 340 0075

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CHAPTER I

INTRODUCTION

A. Background of Problem

English is one of international languages in the world and important language in schools, business, and social as well as interaction in internet among countries to another countries. It is used by students in schools and countries for communication. English is regarded as essential language in globalization era.

English is taught as in elementary school, junior high school, senior high school and university. There are four main skills in English teaching: they are listening, speaking reading, and writing. Listening and reading are called receptive skill and speaking and writing are called productive skills.

Curriculum is guide of learning in school. Based on Minister of Education and Culture (KEMENDIKBUD). There are ten curriculum have been used as 1947, 1952, 1964, 1968, 1975, 1984, 1994, 2004, 2006, and 2013 curriculum. This change based on country need for building competences and quality social in development era. Based on Indonesian curriculum, Junior high school curriculum make English lesson as important lesson. Students have studied in school about listening, speaking, reading and writing. All English lessons are set in syllabus.

Syllabus is setting stage for course development and management. Syllabus describes major elements. It is used as planning a language course and provides basis for its instructional focus and content.¹ Students must master one of genres as descriptive text. Syllabus states students can write descriptive text and know generic structure in descriptive text.

Writing is one of four language skills, writing is a way to convey ideas by written. Writing is important to be learned and mastered by every individual. Writing is communication indirectly. We can make expression about something and improve new ideas. Writing is taught after listening, speaking, and reading. It is hardest skill to be mastered. Writing is made from important components such as contents, vocabularies, grammar, forms, mechanics, style, coherence, topic, and cohesion. The practice of writing must has formulate ideas, organize and sequence points in logical order, select vocabulary, check for grammatical correctness, spell words correctly as writing descriptive text.

Descriptive text is description about things. Descriptive text has many ideas or topic will be described. Descriptive text has text elements and rhetorical structure, it is identification and description. Identification contains about interesting things. Description is described one living or nonliving things and organizing topic.

¹Jack C.Richard, *Curriculum Development in Language Teaching* (Amerika: The Press Syndicate of University of Cambridge, 2001), p. 152.

Based on private interview with English teacher in SMPN 6 Padangsidempuan namely Mrs. Rahma Wati Hasibuan said problems of writing ability are: First, students do not have many vocabularies. Vocabulary is one way to make easy in writing, but students are ordered by teacher to write by model dictation, they usually use the dictionary because they do not know written of words, so it makes them difficult to write.

Second, students are lack of ideas. The good ideas are seen of content a descriptive text such as identification and description. The students of SMPN 6 Padangsidempuan are lack of idea because they do not understand about identification and description, so it makes them do not write descriptive text.

The last, students do not understand about structure in sentences. The structure sentences are very important to write, such as arranges sentene , paragraph and text. The teacher's explanation makes student cannot write. Students are ordered by teacher to write. They always write based on teacher said without think how to arrange part of writing, so it makes them do not write descriptive text.

Researcher got another information, from some students at grade VIII of SMPN 6 Padangsidempuan besides Mrs Rahma wati Hasibuan as English teacher in SMPN 6 Padangsidempuan, , they said that they are anxiety, they do not understand about descriptive text and how to describe something in writing. They are difficult to find ideas so they are lazy to write. Researcher want to know students ability in writing descriptive text.

There are many writing techniques in writing descriptive text as three phases technique, outlining, listing, free writing, brainstorming, discussing a topic or question, conducting some outside research, instructor- initiated questions and probes and clustering. Mrs. Rahma Wati Hasibuan uses Three Phases Technique, this technique ask teacher as facilitator and center of student's activity, but many students are difficult to arrange sentences become descriptive text using three phases technique. The researcher will apply Clustering technique. It might help in conceptualization of text and study descriptive text using Clustering technique. Clustering can generate ideas and to explore the relationships between those ideas.

However, a personal classroom illustration is probably best way to again and understanding of clustering. The teacher will explain: how to get students to focus. It is not just on individual details but structure of text. Based on explanation above, the researcher believed important of conducting a quantitative research of which purpose is to investigate **“The Effect Of Clustering Technique on Students Ability Writing Descriptive Text at Grade VIII SMP Negeri 6 Padangsidimpuan”**.

B. Identification of problems

Based on title and background of problems, the researcher had found many problems on students ability writing descriptive text at grade VIII SMP Negeri 6 Padangsidimpuan. First, Students were difficult to express their idea

in writing descriptive text. Second, students did not have good technique in writing and they did not know about writing techniques, such as: group brainstorming, rapid free writing, wh-questions, clustering. The last is students did not understand components of descriptive text. They did not have many vocabularies to write, so students cannot write English text correctly. It made them did not understand about descriptive text clearly.

C. Limitation of problem

The problem in writing at grade VIII SMP Negeri 6 Padangsidempuan was very large, many techniques were used to improve in writing. Researcher was impossible to research all of problems. The researcher focused on Clustering technique to improve the students ability in writing. This research was conducted quantitative research at grade VIII in academic years 2017/2018 SMP Negeri 6 Padangsidempuan.

D. Formulation of problem

In conducting the research, researcher describes the formulation of problems as follow:

1. How was students ability in writing descriptive text by using clustering technique at grade VIII SMP Negeri 6 Padangsidempuan?
2. How was students ability in writing descriptive text by using conventional technique at grade VIII SMP Negeri 6 Padangsidempuan?

3. Was the students ability in writing descriptive text by using clustering technique more significant than conventional technique at grade VIII SMP Negeri 6 Padangsidempuan?

E. Purpose of Research

Based on formulation of problems above, researcher determines the purpose of research they are:

1. To describe students ability in writing descriptive text by using clustering technique at grade VIII SMP Negeri 6 Padangsidempuan.
2. To describe students ability in writing descriptive text by using conventional technique at grade VIII SMP Negeri 6 Padangsidempuan.
3. To examine the students ability in writing descriptive text by using clustering technique more significant than conventional technique at grade VIII SMP Negeri 6 Padangsidempuan.

F. Significance of research

The significances of research are:

1. As an information to the headmaster of SMP Negeri 6 Padangsidempuan.
The headmaster can motivate and give suggestion teachers to be a professional so they can improve students ability in English especially writing.

2. As an information to the teachers about ability for students so they can motivate the students of SMP Negeri 6 Padangsidempuan. This research was used as source of teaching writing skill and as an input to teachers in teaching and learning process through the effect of clustering technique on students ability writing descriptive.
3. As an information to another the researchers, who want to do research the same problems as information about the topics, so, researcher hopes this research can help other researcher as references and standing point for studying the other subject. This research can give them information about teaching technique in writing skill, especially Clustering technique. It makes them easier inir research. .

G. Outline of Thesis

The systematic of this research is divided into five chapters. Each chapter has of one sub chapter with detail as follow:

Chapter I discuss of introduction, consist of background of problem, identification of problem, limitation of problem, formulation of problem, the aims of research, the significance of research, and definition operational variables.

Chapter II contain theoretical description, related findings, conceptual frame work, and hypothesis.

Chapter III is about methodology and in research methodology consist of research design, population and sample, instrument of research, the

techniques of collection and the last the technique of data analysis and outline of thesis.

Chapter IV is result of research, data analyzing that consist of description of data, discussion of research and limitation of research.

Chapter V is about the conclusion and suggestion.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Theoretical description

1. Assessment of Writing

a. Definition of writing

Writing is one of skills in language learning. Writing sends information from writer to reader. It is a largely a solitary act. Writing depends primarily on word writers choose and form they give to their ideas.¹Harry A.Greene and friends conclude definition writing

Writing is one mean for expressing thought, the effectiveness of thought, and thus of the writing is dependent upon both the natural ability and the experiences of the individual and writing is the stage in which the writer produces a through draft of the paper. Writing is regarded as a continuous, coordinated performance and a process of immense perceptual, linguistic, and cognitive complexity. it is an extremely complex cognitively in which the writer is required demonstrate control of a number of variable simultaneously.²

In addition, David Nunan states that writing can be defined by a series of contrast:

- 1) It is both a *physical* and a *mental act*. At the most basic level, writing is the physical act of committing words or ideas to some medium, whether it is hieroglyphics inked onto parchment or an e-mail message typed into computer. On other hand, writing is the

¹H.Douglas Brown, *Teaching by Principle*,(USA: Prentice Hall 1994), p.333-334

²Harry A, Greene and friends, *Developing Language Skills in the Elementary School* (Boston, London, Sydney), p. 284.

mental work of inventing ideas, thinking about how to express them, and organizing them into statements and paragraphs that will be clear to a reader.

- 2) Its purpose is both to *express* and *impress*. Writer typically serve two master: themselves and their own desires to express and idea or feeling, and readers also called the audience, who need to have ideas expressed in certain ways.
- 3) It is both a *process* and a *product*. The writer imagines, organizes, drafts, edits, reads and rereads. This process of writing is often cyclical, and sometimes disorderly. Ultimately, what the audience sees, whether it is instructor or a wider audience, is a product-an essay, letter, story, or research report.³

Based on definition above. Writing is a process express ideas and add information in writing form that it is involved in generating the letters, words, sentences, paragraphs and texts. Goals in writing process give ideas or information and express their thinking clearly. Reader can get information or idea easier and know what they read.

a. Assessment of Writing

Assessment of writing, we have looked at writer and type of knowledge writers bring to writing task. Two important components in assessment of writing are the nature of the task and scoring criteria. From evaluating of writing, students will know in advance on what criteria work will be evaluate.

One way to do this present a checklist of criteria the end of the prompt that student can use to editing and revising their writing. It can

³David Nunan, *Practical English Language Teaching* (New York: McGarw Hill, 2003), p.88

improve their writing and make understanding concept writing, how to express their thinking, ideas, by their writing. After students make planning, drafting, editing and final draft and can copying, reproduction, combination and guide writing after that students can evaluate their writing.

Level of achievements in writing taken from Arthur Hughes categories in five areas are:

Table 1 : Level of assessment in writing

Grammar

No	Indicator	Score
1	Few (if any) noticeable error of grammar or word order	6
2	Some errors of grammar nor word order which do not however, interfere with comprehension	5
3	Error of grammar or word order fairly frequency occasional rewriting necessary for full comprehension	4
4	Error of grammar or word order frequent: effort of interpretation sometimes required on reader's a part	3
5	Error of grammar or word order frequent: reader often has to rely on own interpretation	2
6	Errors of grammar of word order so severe as to make comprehension virtually impossible	1

Vocabulary

No	Indicator	Score
1	Use of vocabulary and idiom rarely (if at all) distinguishable from that of educated native writer	6
2	Occasionally uses inappropriate term or relies on circumlocutions; expression of ideas hardly impaired	5
3	Uses wrong or inappropriate words fairly frequently; expression of ideas may be limited because of inadequate vocabulary	4
4	Limited vocabulary and frequent errors clearly hinder expression of ideas	3
5	Vocabulary so limited and so frequently misused that reader must often rely on own interpretation	2
6	Vocabulary limitations so extreme as to make comprehension virtually impossible	1

Mechanic

No	Indicator	Score
1	Few (if any) noticeable lapses in punctuation or spelling	6
2	Occasional lapses in punctuation or spelling which do not, however, interfere with comprehension	5
3	Errors in punctuation or spelling fairly frequent; occasional re writing necessary for full comprehension	4
4	frequent errors in spelling or punctuation ; lead sometimes to obscurity	3
5	Errors in spelling or punctuation so frequent that reader must often rely on own interpretation	2
6	Errors in spelling or punctuation so severe as to make comprehension virtually impossible	1

Fluency (style and ease of communication)

No	Indicator	Score
1	Choice of structure and vocabulary consistently appropriate ; like that of educated native writer	6
2	Occasional lack of consistency in choice of structures and vocabulary which does not, however, impair, overall ease of communication	5
3	Patchy with some structures or vocabulary items noticeably inappropriate to general style	4
4	Structures or vocabulary items sometimes not only inappropriate but also misused ; little sense of ease of communication	3
5	Communication often impaired by completely inappropriate or misused structures or vocabulary items	2
6	A hotch – potch of half – learned misused structures and vocabulary items rendering communication almost impossible	1

Form (organisation)

No	Indicator	Score
1	Highly organized ; clear progression of ideas well linked; like educated native writer	6
2	Material well organized; link could occasionally be clearer but communication not impaired	5
3	Some lack of organisation ; re-writing required for clarification of ideas	4
4	Little or no attempt at connectivity, though reader can deduce some organisation	3
5	Individual ideas may be clearly, but very difficult to deduce connection between them	2
6	Lack of organisation so severe that communication is seriously impaired ⁴	1

⁴Arthur Hughes, *Testing for Language Teacher*, new (New York: Cambridge University Press, 1990) p.91-93

2. Clustering technique

a. Definition of Clustering technique

Clustering like spokes on a wheel or any another pattern in connecting lines, depend on how individual association are drawn to relate each other by having students. Students share their cluster pattern with other students in classroom. Teacher allows students to be exposes wide variety of approach subject material in writing. The researcher has five definitions of clustering as:

First definition is from Deporter and Hemacki. They state a clustering technique is developed to improve writing skill previously. It is used students in thinking facilitate to use white board in classroom.⁵ They emphasize that clustering is the way to classify the ideas and share into a piece of paper by making the connection with core of idea.

Second definition is from Cooper and Alexelrod. They state clustering is an invention activity which reveals possible relations among facts and ideas.⁶ Third definition is from Oshima and Hogue, they state clustering is Brainstorming activity. It is used to generate

⁵Deporter and Hemacki, Clustering technique in pre writing, accessed on <https://clustering.co.id> retrieved on October 25th 2016.p. 13

⁶ Cooper and Alexelrod, Definition of clustering, accessed on <https://clustering-technique.com> retrieved October 25th 2016.p.45

ideas.⁷ It means clustering is interest activities. Students can explore their ideas into center circle on their books and make branch from center circle, it is part of topic.

Fourth definition is from Rule. He states clustering technique is associated in writing several topics a descriptive text by students. This technique allows students to explore much and facilitate in writing descriptive text.⁸ Clustering technique is an exercise in thinking, being capable of generating surprising and ideas from writer.

The last definition is from Thomas E. Tyner. He states clustering technique in developing through for a topic by beginning with most general ideas and move in more specific details.⁹ It is a beneficial seeing relationship details in organizing information an orderly fashion, and developing specific support of their main ideas. They concluded clustering technique is from general ideas. It is made from specific topic. Specific topic is developed as information to support and make a text.

Based on five definitions and explanations above. Clustering technique is a technique to find out ideas as possible. Clustering can stimulate ideas to connect right and left brain hemisphere. It helps

⁷ Oshima and Hogue, *writing Academic English*. (New York: Addison Wesley, 1999).p.8

⁸ Rule, clustering technique, accessed on www.academypublication.com retrieved October25th 2016.p. 32

⁹ Thomas E. Tyner, *writing voyage*.(California: Wadsworth, 1985).p. 176-177

students to see most important ideas, how ideas are related, organize their ideas and last it makes students to understand potential text forming.

Clustering is powerful tool in free writing to generate ideas from students mind. Clustering begin with a key word or central idea are placed on center of white board or books students (teacher uses students to generate suggestion) jot down in a few minutes all of free association are triggered by subject matter-using simply words or short phrases.

b. Steps of Clustering Technique

Clustering technique can use in kinds of text. Steps of Clustering technique as follow:

- 1) In a word or phrase, write your topic in the center of a piece of paper. Circle it
- 2) Also in a word or phrase, write down the main parts or central ideas of your topic. Circle these, and connect them to the topic in the center.
- 3) The next step is to generate facts, details, examples, or ideas related in any way to these main parts of the topic. Cluster these around the main part.¹⁰

Based on steps of clustering technique above. Steps of clustering technique are: first students write main topic or what they think about something as school, her friends, her family, her book.

¹⁰ Rise B. Axelord and Charles Cooper, *Guide to Writing* (New York: St. Marti's Press inc, 1985),p.461

Example of places as Padangsidempuan, The beach in Sibolga, Jam Gadang in Bukit tinggi. Their topic is written into a circle in their paper. It will be described in their writing.¹¹ Information is needed from writers or students.

Second, students put main topic in center of circle. Students describe the main topic into small elements or in detail sections. They draw it inside circle, it is connected by lines to center of diagram. Example of students main topic. Their main topic are school, students write school in center circle. School is divided into five topics as class rooms, teachers, class mates, lessons and students. Students write class rooms, teachers, class mates, lessons and students in part of main topic.

The last steps of Clustering technique is write title from main topic as school of example above and describe five topics as class rooms, teachers, class mates, lessons and students make minimum five paragraphs. First paragraph is classrooms, second paragraph is teachers, third paragraph is class mates, fourth paragraph is lessons and last paragraph is students. Students arrange sentences to make a paragraph from every topic, after that five paragraphs are made on a descriptive text form.

¹¹ *Ibid*, p.465

Another opinion is taken from Karen. Karen states steps in clustering technique. First begin with topic sentence that states the develop sub topic. Second include several sentences that support the sub topic. Third is stick to the topic. Fourth arrange the sentences that order topic makes sense. The last is use signal words to help the reader understand how the topic in paragraph is connected.¹²

Clustering technique has steps to write a text as descriptive text. First students write main topic into a circle. Students put main idea or topic to center of circle. Students describe main topic into small elements or detail sections. They draw it inside the circle that connected with lines to center of diagram.

Based on steps of clustering technique above. Steps of clustering technique are first students make circle form students write topic text on circle form. Second, students develop topic or sub topic in part circle of topic. The last, students write sub topic into sentences and make a paragraphs to a complete text.

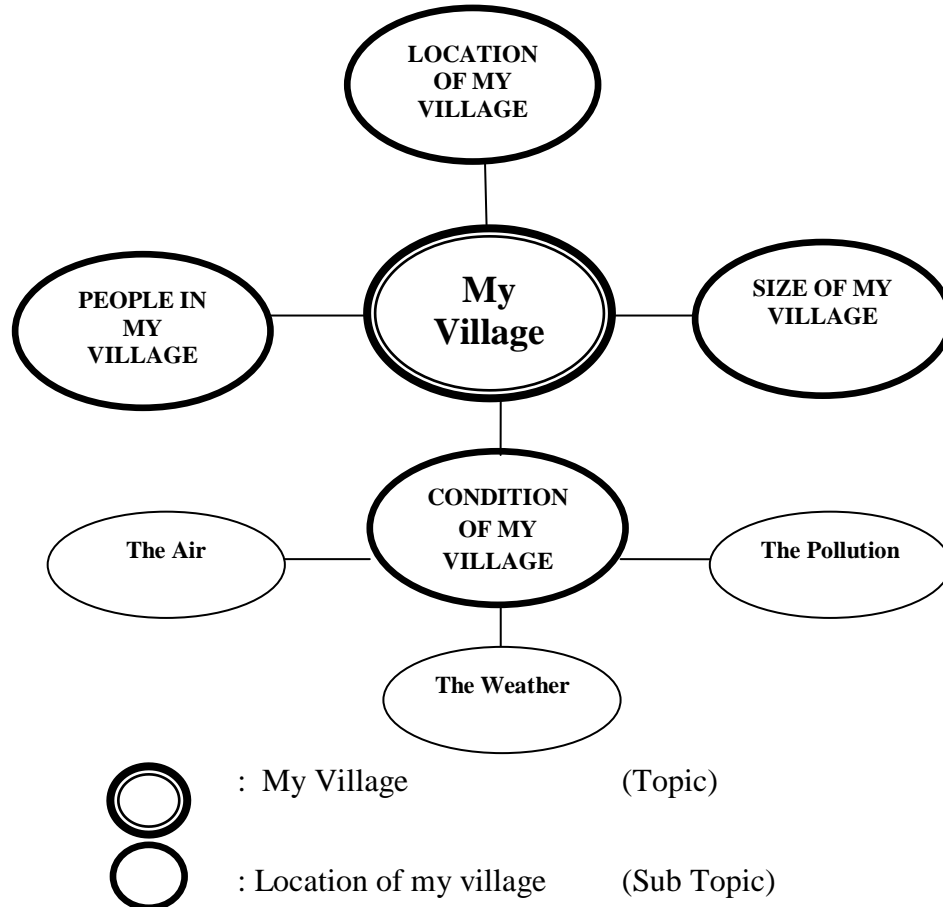
c. Characteristics of Clustering Technique

Clustering technique has characteristics. The characteristics of clustering can make students creative and remember stages and how circle topic and mind, so they will be comprehend and they can use clustering with their style in writing. Characteristics of clustering technique as follow:

¹² Karen Blanchard and Cristine Root, *ready to writer A first Composition text 3rd*, (Longman: Person Education inc,2003).p. 43

- 1) It involves writing down a central idea, radiating related ideas out from the center.
- 2) By personalizing the map with their symbol, and designs the student will be constructing visual and meaningful relationship between ideas that will assist in their recall and comprehension.
- 3) Many students found it useful their page on the side and do a mind map in landscape style.
- 4) Some of most useful clustering is hose that are added to over a period of time.¹³More understand, research make diagram of clustering as follow:

Picture I : Diagram of Clustering Technique



¹³Ali Husin, characteristics of clustering, <https://characteristicsofclustering.co.id> accessed at October 25th, 2016 retrieved on 10:00 pm

Size of my village (Sub Topic)

Condition of my village (Sub Topic)

People of my village (Sub Topic)

Based on diagram clustering above. Black circle is topic of text. Students make topic into black circle example my village. White circle is sub topic. Sub topic is part of topic. Sub topic diagram clustering above is four. First is location, second is size of my village, third is condition of my village and the last is people of my village.

Sub topics above are developed and make part of sub topic as sub topic condition of my village is the air, pollution and weather. Clustering process is present a way to involve talent of mute right brain on complex symbolic activity that we call as writing, in clustering process, we begin topic on middle of paper then write other words and circle around sub topics.

Based on characteristics of clustering technique are students can find their topics as title in text. Students put their topic into central circle. Topic is developed in making sub topics. Sub topics are part of topic. Sub topics are main topic in every paragraph to make a completed text.

d. Advantages and disadvantages of clustering technique

Teacher and students can find advantages and disadvantages of clustering, because clustering is one of technique makes students successful in writing class and it help the students better in writing skill. Deporter states advantages of clustering technique are three:

- 1) Clustering technique makes Students can see and make relationship between ideas.
- 2) Clustering technique can help students developing their topic.
- 3) Clustering technique can search to find concept.¹⁴

Based on advantages of clustering technique above. The advantages of clustering technique are: first, Clustering technique makes students more creative, because students are given to release their thinking to pour their ideas.¹⁵This technique is used students cannot accept ideas from teacher or another source as books, but this technique makes students can play and think so every students find ideas or topics in class.

Second, Clustering technique spurred in students thinking and writing obstruction. Writing has obstruction such as difficult to find ideas or topic and they don't know technique will use in writing. Clustering can help students to minimal their obstruction in writing.

¹⁴ Deporter, teknik clustering, accessed on <https://academimia.edu.ac.id> retrieved December 10th 2016, p. 29

¹⁵ *Ibid.* p. 33

Third, clustering technique make an optimal right brain, because right brain is place to give ideas, spirits and emotionals. Clustering technique can develop students right brain, so students use their right brain in writing use clustering technique.

The last of advantages of clustering technique is giving free students to find ideas or topic and put in their writing. Students are easy to write text and students can develop their topic into sub topic without afraid and mistake in their writing based on topic.

Clustering technique is very good to use in teaching writing. Clustering technique generally makes students creative and active study in writing. It is effective technique to improve students in studying. Students more understand how to procedure in writing and know technique in writing.

Clustering technique has advantages as explain above, so clustering has disadvantages as follow:

- 1) Teacher must give more motivation on passive students.
- 2) Clustering technique make teacher extra guide students if teacher cannot guide students so clustering technique is fail in teaching.
- 3) Sometime clustering technique is not according as material in teaching.¹⁶

¹⁶ *Ibid*,p. 13

Based on disadvantages of clustering technique. Every technique has disadvantages. Disadvantages of clustering technique is some time students are not active to expression their ideas in writing and teacher must give more guide to students and students ideas are not according material in writing, so clustering technique will not be used and it will made it is not interest technique.

3. Conventional Technique

a. Definition of conventional technique

Cottel & Millis, in *traditional teaching techniques vs. teaching through the application* mentions that, the teaching techniques used may differ in terms of the degree of influence on active learning.¹⁷ The traditional or conventional teaching techniques are teacher-centered and include the use of lectures and discussions while the problem solving element is presented by and/or discussed with the instructor; the syllabus, the teaching materials and the student assessments are determined by the tutor and transmitted to students in various lectures.¹⁸

¹⁷Cottel and Millis on Belias Dimitrios, traditional teaching techniques vs. teaching through the application of information and communication technologies in the accounting field: quo vadis?, accessed on https://is.muni.cz/th/86952/ff_m_b1/MgrDiplomkaBoumova.pdf, retrieved on September, 23rd 2016, p. 75-76

¹⁸*Ibid*

The traditional technique teach by the researchers is primarily based on an analytic approach, which begins with words, definitions and translations then analyzes the words into different parts of speech to teach them. The ordinary process of teaching a lesson in such classes is that the teacher usually starts the lesson by explaining the meaning of the new words in Indonesian. Then, the teacher asks a student to write some parts of the writing and helps them to write those parts into Indonesian. After finishing the writing, the teacher explains the grammatical structures of the writing. Finally, students have to do the exercises after each writing their answers to the class accompanied. After that, the teacher corrects it if they are wrong. Sometimes, the students do the exercises as homework for the next session.

b. Procedures of Conventional Technique

There are three stages of writing. the following are how to stages in writing :

1. Pre writing stages

Pre writing is first stages three phases technique in writing. This activity will do in writing. Students are given interesting activity so students are happy and have motivation in studying. Teacher introduces topic will be touch teacher as descriptive text. Teacher gives questions about topic and students answer question about topic.

2. Writing stages

Writing stage is second stages in three phases technique in writing. This stages makes students can get activity. Activity is consist topic. Topic has been taught and topic or material have

explained in pre writing stages. Students can practice what has teacher explain and teaching from material.

3. Post writing stages

Post writing stages is last of three phases technique in writing. This technique make students write and give conclusion from first and second stages. Students can get feedback and doing learning reflection.¹⁹

Based on above procedures of conventional technique, the students were not active when teaching and learning processing.

4. Descriptive text.

a. Definition of Descriptive text

Descriptive text is a text contains two components, identification and description by which a writer describes a person, an animal, a tree, a house, or camping as a topic. Next Schacter states descriptive writing is describe a person, place, or thing in a way that enables the reader to visualize it.²⁰This text is made to give information to students or reader about description.

Descriptive text is kinds of genre in writing text. Descriptive text is for describe and give information about object or topic is given. Students can make descriptive text in classroom or not. This text has one key for describe thing as How is form of object (thing) that will be

¹⁹ B. Sadeghi, stages f writing conventional technique“ Writing process, accessed on www.academypublication.com>vol03.pdf, retrieved on October, 17th 2016, p. 101

²⁰John Schacter.*The Master Teacher Series Descriptive Writing*,(New York: -,2007),p.4

described. Text descriptive makes students to image in their text, so it makes reader get positive suggestions in object of descriptive text.

The description describes parts, qualities, and characteristics: of the part of the object the function of description is to describe particular person, place or thing. There are some types of Descriptive text like John Schacter states, they are:

- 1) Description of a person, place, or thing contains sensory details that bring to life actual people, place and things.
- 2) Observation described and event the writer has witnessed. Often the event takes place over an extended period of time.
- 3) Travel Brochures contain factual information as well as persuasive language to encourage tourism.
- 4) Characteristic sketches describe fictional characters-their appearances, personalities, hopes, and dreams²¹

Based from explanation, there are some types of writing descriptive text: description of person, description of place and description of thing.

Writing descriptive text has grammatical aspect that make a text to be complete. They are:

- a) Focus on specific participants
- b) Use of attribute and identifying process
- c) Frequent use of epithets and classifiers in nominal groups
- d) Use of simple present tense.
- e) Use of descriptive adjectives
- f) Use of action verbs.²²

²¹ *Ibid*,p.101

²² John Schacter, *Op.Cit*,p. 110

Descriptive text has two elements rhetorical structure and functions. Descriptive text is same with another text. It has function and elements rhetorical structure.²³ It can be defined by a series contrast:

Table 2 : Rhetorical Structure and function

Text element	Function
Identification	<ul style="list-style-type: none"> - It is statement to describe about object will be described. - statement must interest - using adjective or degree of comparison will help in writing descriptive text.
Description	Description about condition of object such as location, means of transport, people, weather, size.

Two elements above in descriptive text are arranged in descriptive text in general position convention. Students must need the following:

- 1) An ever-expanding vocabulary that help students to precisely name events, feeling and expression.

²³ Pardiyono, *Pasti Bisa Teaching Genre Based Writing* (Yogyakarta: Andi Yogyakarta, 2007) p.36-37

- 2) A wide variety of activities, skills for unifying and focusing description then a facility with constructing comparison (metaphor, simile and personification).²⁴

The researcher makes example to give more understanding about descriptive text as follow:

My Village

One of the most comfortable places to live is my village, named Kampoeng Cinta. It is small, but clean and very shady. People live in peace in this nice place.

Identification

My village is located not too far from central town. The place is like a small hill. It has cool weather most of the time because it is located in the slope of a mount. There are many trees along the roads to this cool place. The air is fresh. It is not polluted because it is far from the industrial areas. It is only the smoke from the motorized vehicles that pollute the air.

There are about a hundred families in living in this small village. They work together to keep the village clean and healthy. The head of this village always invites all people to meet at least once a month to discuss the main problems of the village. The wonderful gate and good drainage system make this village famous among the other villages nearby.

Description

²⁴ Tara Mc Carthy, *Descriptive Writing* (USA:Saddle Back,1998)p.5

5. Clustering in Teaching descriptive text

Teaching descriptive text can use many techniques. Clustering technique is one of techniques can use in teaching descriptive text. The following are how to teach descriptive text using clustering technique in writing :

- a) Teacher introduces concept of clustering technique to students. Teacher tells students that clustering technique will help students in generate topic when students start to write as write descriptive text.
- b) Leading students to generate ideas in form clustering technique on white board as diagram clustering technique. Students put the topic in center by using circle to make it interesting, and put sub topic related to topic by using line. Students don't have worry in generating ideas. It is free for students to organize their ideas as long as related to topic given.
- c) Teacher asks students to write. First steps based on the diagram of clustering technique samples that it has been made on white board to know that students have easy when start to write using clustering technique.
- d) After students can use clustering technique, ask them through selected topic to make a procedural descriptive text refer to their own topic. Teacher gives students an evaluation to check their ability in writing descriptive text.
- e) Students can remember and see students written using clustering technique. Students writing is important part to start writing based on their topic.²⁵

Based on teaching descriptive text use clustering technique in writing above. Clustering technique is a good technique to teach descriptive text in writing. Students can make imagination for writing as their topics will be sent by written to paper as information from

²⁵Riani, teknik clustering dalam penulisan, accessed on https://is.muni.cz/th/86952/ff_m_b1/MgrDiplomkaBoumova.pdf retrieved December 10th.2016.p. 57-76

develop of students topic, That is all make several reasons why clustering technique is a good technique as follow:

First, clustering technique works on make topic and develop students topic into sub topic. Students can write a text as descriptive text. It helps students develop and improve fluency thinking and it has functions as a guide lines in delivering ideas. Second it is as a tool in organizing ideas. The last is clustering is used as a reflection tool to look back to the text. It means this technique is useful to lead and guide the students before, during and after writing process comprehensively.

Secondly, clustering technique acts as a guiding tool for students to start writing. Sometimes, pre writing stages is the most difficult stage for students to write since they deal with their effort to generate idea. Idea cannot come and go effortlessly. The cluster make student will set and guide it become a writing product as a result, they make it structurally well organize paragraph.

Finally, clustering technique works well two types of learners whether they belong to high students can write text as descriptive text and easy to make and find topic in students writing or students are low

cannot write, encourage their counterpart in finishing cluster they make.

That is all several reasons to make clustering technique can use writing text as descriptive text and clustering technique is good technique which teacher need to apply appropriate teaching technique as clustering technique in teaching students to write text in school.

B. Review of Related Finding

There were related finding to this research. First researcher was by Hanifah Paradipta Siregar. Her thesis was about “The Effect of Guide Writing on Students ‘Writing Descriptive Paragraph Ability at Grade VII SMP N5 Padangsidimpuan.” The kind of research was Experimental Research. The participant of this research chooses two classes. She choosen VII.I consist 26 students and VII.2 consist 26 students. Therefore, total sample were 52 students, she chosen theses classes because they have similar competence in English. She found that the implementation of guided writing strategy was more effective than conventional writing descriptive. Then the conclusions are scoring for rubric 4 consistent controls.²⁶

Second, another research was Teaching Descriptive Writing Using Clustering Technique at The Second Grade Students of Man Cimahi, the

²⁶HanifahParadiptaSiregar, *The Effect of Guide Writing on Students ‘ Writing Descriptive Paragraph Ability* (Padangsidimpuan: Institute Agama Islam Negeri,2014),p.43

researcher was Hermansyah. The research design of this study was an experimental one. The population was grade VIII of Man Cimahi totally 60 students. He chooses VIII.A and VIII.B. He found Teaching Descriptive Writing use Clustering technique has no significantly better result than using conventional result. It mean clustering technique wasnot effective in Teaching descriptive writing to the students of Man Cimahi. The researcher found there wasnot improvement of mean score after using Clustering on students writing descriptive text before using Clustering was 23.14. mean score using Clustering used 26.20²⁷

Third, Nur Aliyah's thesis was about "The Effect of Examples non Examples models on students writing news item text ability At Grade X SMA N 1 Padangsidimpuan." The kind of research was Experimental Research. The participant of this research chooses two classes. She chosen X-1 consist 21 students and X-2 consist 21 students.

Therefore, total sample are 42 students, she choose theses classes because they have similar competence in English. She found that the implementation of Examples non Examples models was more effective. The conclusions were scoring for rubric 4 consistent controls. After the data have analyze, the researcher found there was improvement of mean score after

²⁷Hermansyah, *Teaching Descriptive Writing use Clustering technique*,(Siliwangi Bandung: STKIP English Education Program Language and Art Department,2012)p.6

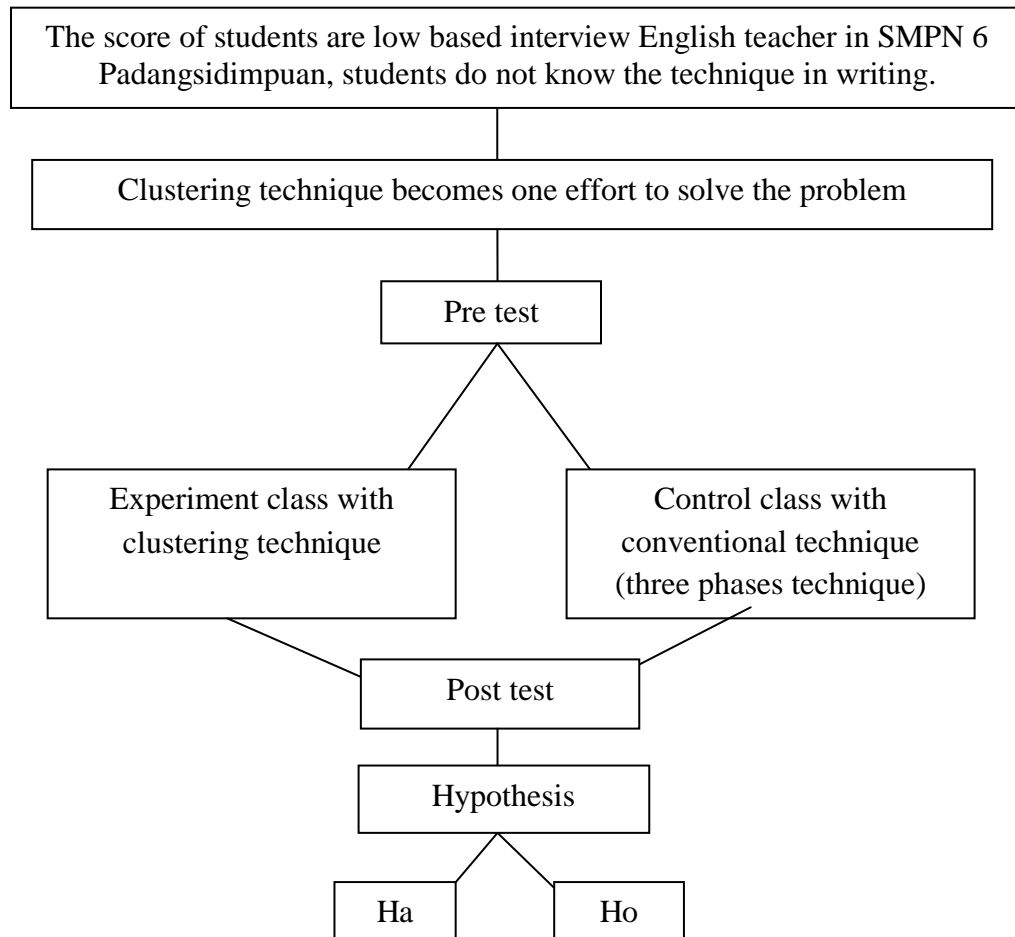
using Examples non Examples models on students writing news item text before using no example models was 63.64. mean score using example technique used 86.30²⁸

This research, researcher researched about the effect of clustering technique on students ability writing descriptive text at grade VIII SMP Negeri 6 Padangsidempuan. The research want to know the causal-effect relationship between clustering technique in writing descriptive text.

C. Conceptual Frame Work

Writing descriptive text is successful if it has many factors, organize ideas or topic in our mind. Technique is very important to teach writing descriptive text. Clustering technique can be used teacher to teach descriptive text. So the effect of clustering technique on student's ability writing descriptive text at grade VIII SMP Negeri 6 Padangsidempuan can be seen as picture below:

²⁸Nur Aliyah, *The Effect of Examples non Examples models on students writing news item text ability At Grade X SMA N 1 Padangsidempuan* (Padangsidempuan: Institute Agama Islam Negeri,2016),p.60



From the picture above, clustering technique is a technique used by teacher on writing descriptive text. In order the learning of writing descriptive the through clustering technique to easier, the teacher must be able to facilitate the students to learn effectively.

D. Hypothesis

In quantitative research, hypothesis was an interim result of the research.²⁹ L.R. Gays state is A hypothesis is a alternative prediction result of the research finding.³⁰ Research had specifies the correct processing, acquiring, and analyzing of the data, it needs to formulate hypothesis. The hypothesis of this research is as follows:

1. Ha: There was a significant students ability writing descriptive text by using clustering technique ($\mu_1 > \mu_2$)
2. Ho: There was no significant students ability writing descriptive text by using clustering ($\mu_1 = \mu_2$)

²⁹ Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, (Jakarta: Rineka Cipta, 2006), p.71

³⁰ L.R Gay and Peter Airaisan, *Educational Research for Analysis and Application*, (America: Prectice Hall, 1992), p.71

CHAPTER III

RESEARCH METHODOLOGY

A. Place and time of research

The location of research was at SMPN 6 Padangsidimpuan. It was located at Kenanga Street, Padangsidimpuan of North Sumatra. This subject of research was at VIII grade of students at SMPN 6 Padangidimpuan 2017 academic years. This research was from March 2017 until finally.

B. Research Design

The research used quantitative research. Quantitative research may be further classified as either experimental and non experimental research. Researcher used experimental research. L.R Gay stated Experimental research is only type of research that can test hypothesis to establish cause and effect.¹ It mean researcher manipulated at least one independent variable, control other relevant variables, and observes the effect on one or more dependent variables in experimental research.

From the explanation above, the experiment was a kind of research to know about causal effect relationships between one or more of variable. This research had two classes. First, experiment class and second control class. Experiment class used new technique or another

¹ *Ibid* p. 367.

technique such clustering technique but in control class used three phases technique. It can be seen from the table.

Table 3 : True Experiment Design

Class		Treatment	
Experiment class	Pre Test	Teaching writing descriptive text by using Clustering Technique	Post Test
Control Class	Pre Test	Teaching writing descriptive text by using Three Phases Technique	Post Test

C. Population and Sample

a. Population

Gay stated population is group of interest the researcher, the group to which she or he would like the result of study to be generalizable, so population was consist object or collecting elements will be research. Population of this research was grade VIII students at SMPN 6 Padangsidimpuan academic year 2017/2018. Presented as follows:

Table 4 : Population of Grade VIII students of SMP N 6 Padangsidimpuan

No	Class	Total Students
1	VIII-1	27
2	VIII-2	26
3	VIII-3	24
4	VIII-4	25
5	VIII-5	24

6	VIII-6	21
7	VIII-7	26
8	VIII-8	23
9	VIII-9	25
10	VIII-10	26
TOTAL		248

Sources : School Administration data of SMP N 6 Padangsidempuan

b. Sample

Sample was part of population. Sample was process selecting a number of individuals for a study or research from large group or population was selected. Gay and Airasian stated Sample comprises the individuals , items, or events selected from a larger group referred to as a population.²Then, Muhammad Ali stated that sample is partial taken from the whole subject and representative of population.

There were four different sampling techniques were included in the probability sampling technique. The fourth technique was random, stratified, cluster and systematic. Researcher used random sampling to take sample. Random sampling is is process of selecting a sample in such a way that all individuals in defined population have an equal and independent chance of being selected for sample. It was based on

² *Ibid*,p.73

characteristic of sample, this research want to take two classes as sample.³ this research, researcher used cluster sampling.

Random sampling was the sample, which it was taken from population without based on stratified, random, probability but it very closely with classing or grouping class in the school. So that, researcher found that two class have same characteristics, they were VIII-1 and VIII-2. They had same amount time every week in English lesson. Based on pre-observation of researcher, English teachers in V-III class stated students of VIII-1 and VIII-2 class had same ability in English lesson. This research was experiment approach so researcher took the sample of this research VIII-1 as experiment class and VIII-2 as control class. It could be seen the table as follow:

Table 5 : The Sample of Students SMP N 6 Padangsidempuan

Class	Numbers
Experiment Class by Using Clustering Technique (VIII-1)	27 Students
Control Class Using Three Phases Technique (VIII-2)	26 Students
Total	53 Students

³ Margono, *Metodologi Penelitian Pendidikan*, (Jakarta: Rineka Cipta, 2009), p.121

D. Definition of Operational Variable

1. Writing descriptive text (Variable of Y)

Writing is a process to express ideas and add information in writing form that involve in generating the letter, word, sentence, paragraph and text. The goals in writing process are to give ideas or information and writer's expression clearly so reader can get information easier after they read.

Descriptive text is a text contains two components. It is identification and description. Identification is statement to describe about object will be described. Description is condition of object such as location, people, weather and size,

Writing descriptive text is a process to collect ideas, information in describing an object, such as concrete object like people, things and animals and abstract object like feeling, sadness, and happiness in writing form.

2. Clustering Technique (Variable of X)

Clustering technique is a technique to give students opportunity to organize topic in writing and make topic and sub topic in circle, after students can organize, they develop their topics into sentence, paragraph and text.

Clustering can stimulate topics to connect right and left brain. It helps students to see and relate the most important topics, so students

understand about text as descriptive. This technique is useful to lead and guide the students before, during and after writing process

E. Instruments of research

A research must have an instrument in this research because a good instrument can go guarantee for taking the valid data. To get the data in this research, the research uses the instruments like test. The instrument is a test for students ability in writing descriptive text. Margono states “ *Tes ialah seperangkat rangsangan (stimuli) yang diberikan kepada seseorang dengan maksud untuk mendapat jawaban yang dapat dijadikan dasar bagi penetapan skor angka.*⁴ This research researcher used writing test type essay test. Essay test is attest that demand a tester to give some answer in essay form or the sentences that arranged by his word. Further, the indicator of writing which based of “clustering technique” has five indicators.

Researcher makes score of students in writing descriptive text used formulation: $\text{Score of students} \times 100 : 30 = \dots$

Example students got 27 score. Researcher makes students score is 90. Every students have been corrected by researcher used calculation based on formulation and explanation above.

$$27 \times 100 : 30 = 90$$

⁴*Ibid*,p 170

Table 6 : Indicator of writing

Grammar

No	Indicator	Score
1	Few (if any) noticeable error of grammar or word order	6
2	Some errors of grammar nor word order which do not however, interfere with comprehension	5
3	Error of grammar or word order fairly frequency occasional rewriting necessary for full comprehension	4
4	Error of grammar or word order frequent: effort of interpretation sometimes required on reader's a part	3
5	Error of grammar or word order frequent: reader often has to rely on own interpretation	2
6	Errors of grammar of word order so severe as to make comprehension virtually impossible	1

Vocabulary

No	Indicator	Score
1	Use of vocabulary and idiom rarely (if at all) distinguishable from that of educated native writer	6
2	Occasionally uses inappropriate term or relies on circumlocutions; expression of ideas hardly impaired	5
3	Uses wrong or inappropriate words fairly frequently; expression of ideas may be limited because of inadequate vocabulary	4
4	Limited vocabulary and frequent errors clearly hinder expression of ideas	3
5	Vocabulary so limited and so frequently misused that reader must often rely on own interpretation	2
6	Vocabulary limitations so extreme as to make comprehension virtually impossible	1

Mechanic

No	Indicator	Score
1	Few (if any) noticeable lapses in punctuation or spelling	6
2	Occasional lapses in punctuation or spelling which do not, however, interfere with comprehension	5
3	Errors in punctuation or spelling fairly frequent; occasional re writing necessary for full comprehension	4
4	frequent errors in spelling or punctuation ; lead sometimes to obscurity	3
5	Errors in spelling or punctuation so frequent that reader must often rely on own interpretation	2
6	Errors in spelling or punctuation so severe as to make comprehension virtually impossible	1

Fluency (style and ease of communication)

No	Indicator	Score
1	Choice of structure and vocabulary consistently appropriate ; like that of educated native writer	6
2	Occasional lack of consistency in choice of structures and vocabulary which does not, however, impair, overall ease of communication	5
3	Patchy with some structures or vocabulary items noticeably inappropriate to general style	4
4	Structures or vocabulary items sometimes not only inappropriate but also misused ; little sense of ease of communication	3
5	Communication often impaired by completely inappropriate or misused structures or vocabulary items	2
6	A hotch – potch of half – learned misused structures and vocabulary items rendering communication almost impossible	1

Form (organisation)

No	Indicator	Score
1	Highly organized ; clear progression of ideas well linked; like educated native writer	6
2	Material well organized; link could occasionally be clearer but communication not impaired	5
3	Some lack of organisation ; re-writing required for clarification of ideas	4
4	Little or no attempt at connectivity, though reader can deduce some organisation	3
5	Individual ideas may be clearly, but very difficult to deduce connection between them	2
6	Lack of organisation so severa that communication is seriously impaired ⁵	1

Table 7 : Criteria of score

No	Class of score	Predicate
1	80 – 100	Very good
2	70 – 79	Good
3	60 – 69	Enough
4	50- 59	Bad
5	0 – 49	Fail

From the indicator above, the researcher gives the writing test to students either for post test and pre test. The experiment class and the control class give some materials, which experiment class by using “Clustering

⁵Arthur Hughes, *Testing for Language Teacher*, new (New York: Cambridge University Press, 1990) p.91-93

technique” and control class without clustering technique then, the students were given test based on indicator above.

F. Validity and Reliability Instrument

The result of research will be also valid and reliable. Validity and reliability instrument are a requirement for getting the result of researcher validity and reliability. Researcher used construct validity to demand instrument is valid or not. Construct validity is a test validity based on the judgment of experts. In this case, expert will be given opinion about the instrument, what is instrument can be used or still need improving, or may be the instrument is failed.

G. Technique of Collecting Data

In completing the data, the researcher continues to the next step. The next step is collecting the data. The function of data collecting is to determine the result of research. In collecting data the researcher uses some steps. They are:

- 1) Pre test
 - a. The researcher prepares the essay written test
 - b. The researcher distributes the paper of test to students of experimental class and control class.
 - c. The researcher explains what students to do.
 - d. Giving time.
 - e. The students answer the question.

- f. Collected their paper test to researcher.
- g. The researcher checks the answer of students and finds the mean score of control and experimental class.

2) Treatment

The treatment is done after the pre-test. Control class is through three phases technique, and experimental class is through by applying clustering technique.

3) Post test

After giving treatment, the researcher conducts a post-test which the different test with the pre-test, and has not been conducted in the previous of research. This post-test is final test in the research, especially measuring the treatment, whether is an effect or not. After conducting the post-test, the researcher analyzes the data and the researcher find out the effect of using clustering technique in the experimental class. The researcher had some procedure. There are:

- a. The researcher prepared the essay written test
- b. The researcher distributed the paper of test to students of experimental class and control class.
- c. The researcher explained what students to do.
- d. Giving time.
- e. The students answered the question.
- f. Collected their paper test to researcher.

- g. The researcher checked the answer of students and found the mean score of control and experimental class.

H. Technique of Analyzing data

In experimental design, the research pattern is being done toward experimental class and control class. After experimental process, two of classes were tested with using technique of data analysis as follow:

1. Requirement test

a) Normality test

The researcher uses normality test with using *Chi – Quadrate* formula, as follow:

$$x^2 = \sum \left(\frac{f_o - f_h}{f_h} \right)$$

Where:

x^2 = Chi-Quadrate

f_o = Frequency is gotten from the sample/result of observation

(questioner)

f_h = Frequency is gotten from the sample as image from frequency

is hoped from the population.

To calculate the result of chi-quadrate, it use significant level 5% (0, 05) and degree of freedom as big as total of frequency is lessened 3 ($dk = k-3$).

b) The homogeneity of test

To test whether variants of both homogenous samples, variants equality test, that is:

$$F = \frac{\text{the biggest variants}}{\text{the smallest variant}}$$

Here, after comparing to the F_{table} , its criterion is: If $F < F_{\text{table}}$, then both samples are homogeneous.

2. Hypothesis Test

The technique in analyzing the data is used by t-test, because it is aimed to examine the difference of two variables. Such examination performed both on pre-test and pos-test score from the experimental class and control class. There is a significant students ability writing descriptive text by using clustering technique ($\mu_1 > \mu_2$) and there is no significant students ability writing descriptive text by using clustering ($\mu_1 = \mu_2$)

From explanation above, to test hypothesis researcher uses formula as follows:⁶

$$Tt = \frac{M_1 - M_2}{\sqrt{\left(\frac{\Sigma x_1^2 + \Sigma x_2^2}{n_1 + n_2 - 2}\right) \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

⁶ Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktek Edisi Revisi II*, (Jakarta: Rineka Cipta, 1993), p. 269.

Where:

T_t : The value which the statistical significance

M_1 : The average score of experimental class

M_2 : The average score of control class

X_1^2 : Deviation of experimental class

X_2^2 : Deviation of control class

n_1 : Number of experimental

n_2 : Number of control

CHAPTER IV

RESULT OF RESEARCH

As mentioned in earlier chapter, the order to evaluate the effect of using clustering technique on students' writing descriptive text, the researcher has calculated the data using pre-test and post-test. The researcher used the formulation of T-test to test the hypothesis. The researcher described the data as follow:

A. Description Data

1. Description Data of Pre-test (Before Treatment)

The pre- test scores obtained before teaching in experimental class and control class was as follow:

a. Experimental Class

Students' ability in writing descriptive text at grade VIII SMP Negeri 6 Padangsidimpuan in pre-test of experimental class. The researcher calculated the result that had been gotten by students' in answering the question (test) before researcher did treatment by using clustering technique.

There were twenty seven students' of experimental class. The lowest score was 40 and highest score was 74. Researcher made and calculated data in interval formula, so researcher got interval was 6

then computed frequency distribution of students' score of experiment class can be applied into table frequency distribution as follow:

Table 8 : The frequency distribution of students' score of
experiment class

No	Interval	Frequency	Percentages
1	40 – 45	5	18.52 %
2	46 – 51	5	18.52 %
3	52 – 57	5	18.52 %
4	58 – 63	7	25.93 %
5	64 – 69	3	11.11%
6	70 – 75	2	7.40%
	i=6	27	100 %

From the table above, the students' score in class interval between 40 – 45 was 5 students' (18.52%), class interval between 46 – 51 was 5 students' (18.52%), class interval between 52 – 57 was 5 students' (18.52%), class interval between 58 – 63 was 7 students' (25.93%), class interval between 64 – 69 was 3 students' (11.11%), class interval between 70 – 75 was 2 students' (7.40%).

The order to get description of data clearly and completely, the researcher presents them in histogram following figure :

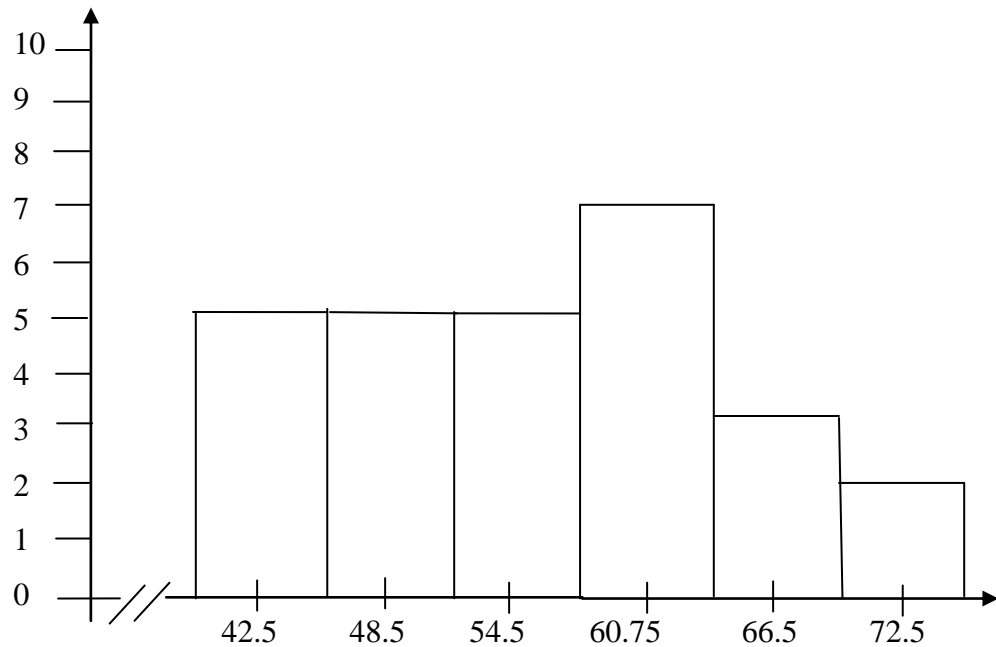


Figure 1: Description Data Pre-Test of Experimental Class

From the figure 1 above, the students' score in mid point 42.5 was 5 students', mid point 48.5 was 5 students', mid point 54.5 was 5 students', mid point 60.75 was 7 students', mid point 66.5 was 3 students', mid point 72.5 was 2.

Researcher took data from explanation above. Researcher made and calculated data in mean, median and modus formula. Researcher got mean of score in experimental class was 65.6, modus was 64.78, median was 59.48. The calculation of how to got it can be seen in (appendix 6).

b. Control Class

Students' ability in writing descriptive text at grade VIII SMP Negeri 6 Padangsidempuan in pre-test of control class. The researcher calculated the result that had been gotten by students' in answering the question (test) before researcher did treatment by using three phases technique.

There were twenty six students' of control class. The lowest score was 35 and highest score was 78. Researcher made and calculated data in interval formula, so researcher got interval was 7 then computed frequency distribution of students' score of control class can be applied into table frequency distribution as follow:

Table 9 : The frequency distribution of students' score of control class

No	Interval	Frequency	Percentages
1	35 – 41	4	15.38 %
2	42 – 48	4	15.38 %
3	49 – 55	6	23.08%
4	56 – 62	7	26.92%
5	63 – 69	2	7.69 %
6	70 – 76	2	7.69 %
7	77 – 83	1	3.86 %
	$i = 7$	26	100 %

From the table above, the students' score in class interval between 35 – 41 was 4 students' (15.38 %), class interval between 42 – 48 was 4 students' (15.38%), class interval between 49 – 55 was 6

students' (23.08%), class interval between 56 – 62 was 7 students' (26.92%), class interval between 63 – 69 was 2 students' (7.69%). class interval between 70 – 76 was 2 students' (7.69%), class interval between 77 – 83 was 1 students' (3.86%). The order to get description of data clearly and completely, the researcher presents them in histogram on following figure :

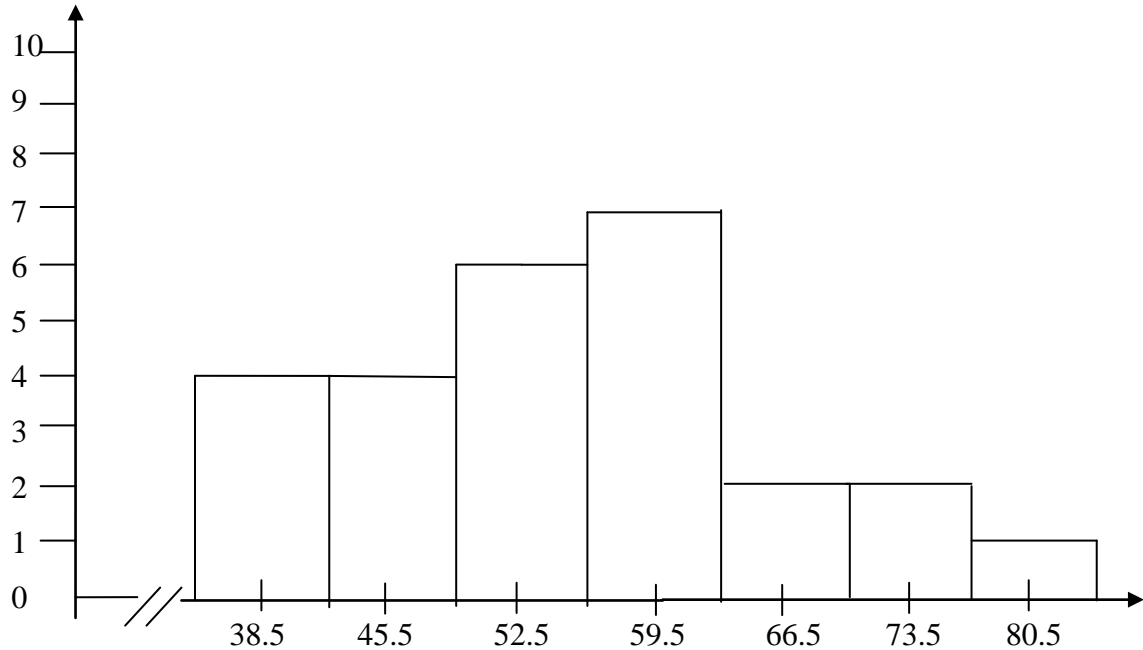


Figure 2 : Description Data Pre-Test of Control Class

From the figure 2 above, the students' score in mid point 38.5 was 4 students', mid point 45.5 was 4 students', mid point 52.5 was 6 students', mid point 59.5 was 7 students', mid point 66.5 was 2 students', mid point 73.5 was 2 students', mid point 80.5 was 1 students'.

Researcher took data from explanation above. Researcher made and calculated data in mean, median and modus formula. Researcher got mean of score in control class was 64, modus was 56.69, median was 62.5. The calculation of how to got it can be seen in (appendix 6).

2. Description Data of Post-test (After Treatment)

The post- test scores obtained after teaching in experimental class and control class was as follow:

a. Experimental Class

Students' ability in writing descriptive text at grade VIII SMP Negeri 6 Padangsidempuan used clustering technique in post-test of experimental class. The researcher calculated the result that had been gotten by students' in answering the question (test) after the researcher did treatment by using clustering technique.

There were twenty seven students' of experimental class. The lowest score was 45 and highest score was 84. Researcher made and calculated data in interval formula, so researcher got interval was 7 then computed frequency distribution of students' score of experiment class can be applied into table frequency distribution as follow:

Table 10 : The frequency distribution of students' score of
experiment class

No	Interval	Frequency	Percentages
1	45 – 51	5	18.52 %
2	52 – 58	3	11.11 %
3	59 – 65	9	33.33 %
4	66 – 72	7	25.93 %
5	73 – 79	1	3.70 %
6	80 – 86	2	7.41 %
i= 7		27	100%

From the table above, students' score in class interval between 45 – 51 was 5 students' (18.52%), class interval between 52 – 58 was 3 students' (11.11 %), class interval between 59 – 65 was 9 students' (33.33%), class interval between 57 – 65 was 9 students' (29.03 %), class interval between 66 – 72 was 7 students' (25.93 %), class interval between 80 – 86 was 2 students' (7.41%). Order to get description of data clearly and completely, the researcher presents them in histogram on following figure:

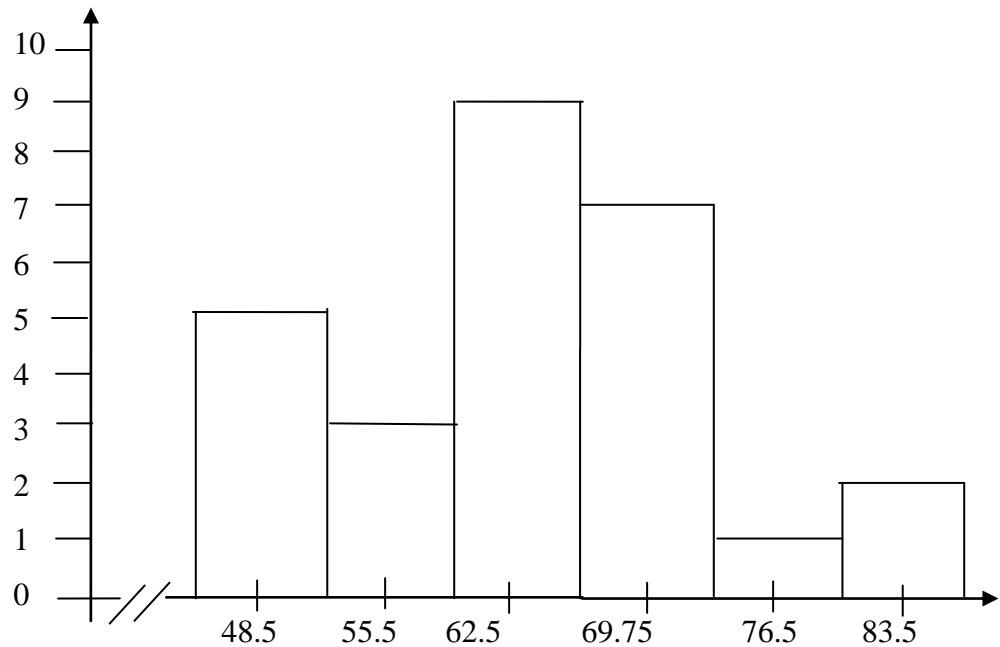


Figure 3 : Description Data Post-Test of Experimental Class

From the figure 3 above, the students' score in mid point 48.5 was 5 students', mid point 55.5 was 3 students', mid point 62.5 was 9 students', mid point 69.5 was 7 students', mid point 76.5 was 1 students', mid point 83.5 was 2 students'.

Researcher took data from explanation above. Researcher made and calculated data in mean, median and modus formula. Researcher got mean of score in experimental class was 76.01, modus was 63, median was 66.69. The calculation how to got it can be seen in (appendix 6).

b. Control Class

Students' ability in writing descriptive text at grade VIII SMP Negeri 6 Padangsidimpun used three phases technique in post-test of Control class. The researcher calculated the result that had been gotten by students' in answering the question (test) after the researcher did treatment by using three phases technique.

There were twenty six students' of control class. The lowest score was 55 and highest score was 93. Researcher made and calculated data in interval formula, so researcher got interval was 6 then computed frequency distribution of students' score of control class can be applied into table frequency distribution as follow:

Table 11 : The frequency distribution of students' score of control class

No	Interval	Frequency	Percentages
1	55 – 60	3	11.54 %
2	61 – 66	3	11.54 %
3	67 – 72	4	15.38 %
4	73 – 78	4	15.38 %
5	79 – 84	4	15.38 %
6	85 – 91	7	26.92 %
7	92– 97	1	3.86 %
i= 6		26	100 %

From table above, the students' score in class interval between 55 –60 was 3 students' (11.54 %), class interval between 61 –66 was 3 students' (11.54%), class interval between 67 – 72 was 4

students' (15.38%), class interval between 73 – 78 was 4 students' (15.38%), class interval between 79 – 84 was 4 students' (15.38%). class interval between 85 – 91 was 7 students' (26.92%), class interval between 92 – 97 was 1 students' (3.86%). The order to get description of data clearly and completely, the researcher presents them in histogram on following figure :

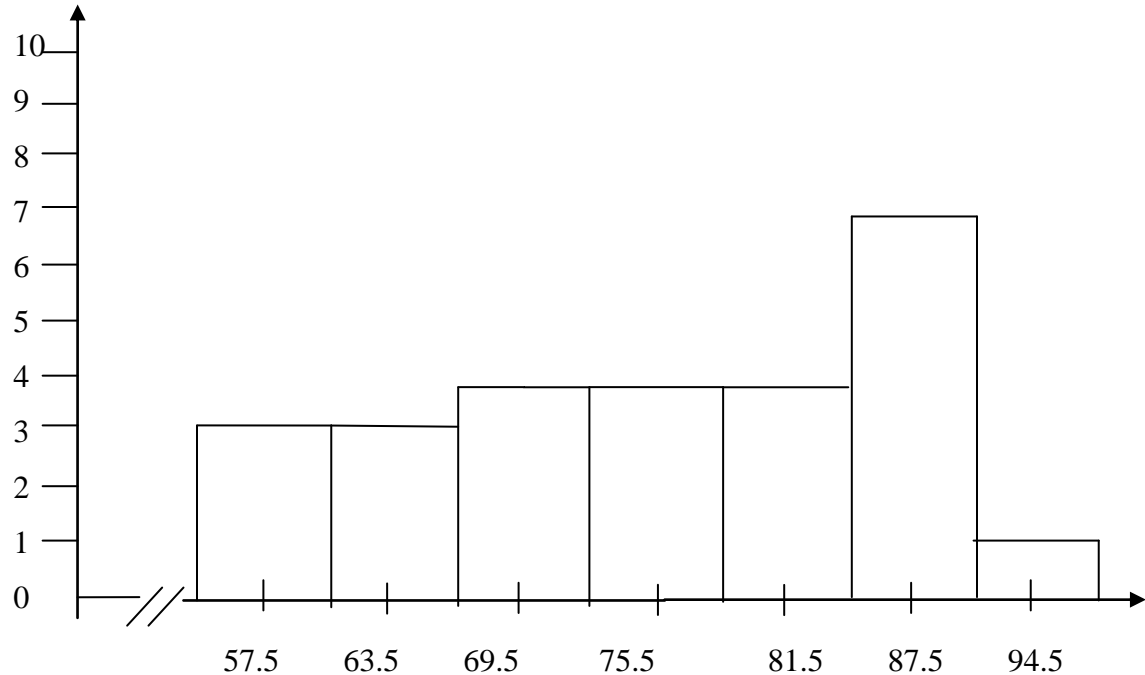


Figure 4 : Description Data Post-Test of Control Class

From the figure 4 above, the students' score in mid point 57.5 was 3 students', mid point 63.5 was 3 students', mid point 69.5 was 4 students', mid point 75.5 was 4 students', mid point 81.5 was 4

students', mid point 87.5 was 7 students', mid point 94.5 was 1 students'.

Researcher took data from explanation above. Researcher made and calculated data in mean, median and modus formula. Researcher got mean of score in control class was 96.74, modus was 86.78, median was 92.3. The calculation of how to got it can be seen in (appendix 6).

B. Data Analysis

1. Requirement Test

a. Normality and Homogeneity of Experiment and control class in Pre Test

1) Normality of Experiment and control class in Pre Test

Table 12 : Normality and Homogeneity in Pre Test

Class	Normality Test		Homogeneity Test	
	X_{count}	X_{table}	f_{count}	f_{table}
Experiment Class	25.68	26.296	0.674 < 2.007	
Control Class	14.31	26.296		

Based on above table researcher calculation, the score of experiment class $Lo = 25.68 < Lt = 26.296$ with $n = 27$ and control class $Lo = 14.31 < Lt = 26.296$ with $n = 26$, and real level $\alpha 0.05$. Cause $Lo < Lt$ in the both class. So, H_a was accepted. It means that

experiment class and control class were distributed normal. It can be seen in (appendix 6).

2) Homogeneity of Experiment and control class in Pre Test

The coefficient of $F_{\text{count}} = 0.674$ was compared with F_{table} . Where F_{table} was determined at real α 0.05, and the different numerator $dk = N-1 = 27-1 = 25$ and denominator $dk N-1 = 26-1 = 25$. So, by using the list of critical value at F distribution is got $F_{0.05} = 2.007$. It showed that $F_{\text{count}} 0.674 < F_{\text{table}} 2.007$. So, the researcher concluded that the variant from the data of Students' writing Descriptive Text at SMPN 6 Padangsidempuan by experimental and control class was homogenous. The calculation can be seen in (appendix 6).

b. Normality and Homogeneity Experiment and control class Post-Test

1) Normality of Experimental and Control Class in Post-Test.

Table 13 : Normality and Homogeneity in Post-Test

Class	Normality Test		Homogeneity Test	
	x_{count}	x_{table}	f_{count}	f_{table}
Experiment Class	8.24	11.070	0.87 < 2.007	
Control Class	8.42	11.070		

Based on the table above researcher calculation, the score of experiment class $Lo = 8.24 < Lt = 11.070$ with $n = 27$ and control class $Lo = 8.42 < Lt = 11.070$ with $n = 26$, and real level $\alpha 0.05$. Cause $Lo < Lt$ in the both class. So, H_a was accepted. It means that experiment class and control class were distributed normal. It can be seen in (appendix 7).

2) Homogeneity of Experimental and Control Class in Post-test

The coefficient of $F_{count} = 1.00$ was compared with F_{table} . Where F_{table} was determined at real $\alpha 0.05$, and the different numerator $dk = N-1 = 27-1 = 26$ and denominator $dk N-1 = 26-1 = 25$. So, by using the list of critical value at F distribution is got $F_{0.05} = 2.007$. It showed that $F_{count} < F_{table}$ ($0.87 < 2.007$). So, the researcher concluded that the variant from the data of the Students' writing Descriptive Text at SMPN 6 Padangsidimpun by experimental and control class was homogenous. The calculation can be seen on the (appendix 7)

C. Hypothesis Test

Researcher used parametric test by using T-test to analyze the hypothesis and researcher got H_0 was accepted. It can be seen in (appendix 8). Hypothesis alternative (H_0) of research was "There was no the

significant The Effect of Clustering Technique on Students' Ability Writing Descriptive Text at Grade VIII SMP Negeri 6 Padangsidimpuan.

Students were not concentrating in following learning process and it made them did not get teacher's explanation well and gave impact to post-test answer. Researcher had computed data in result of T- test formula from both averages into table T- test from both averages as follow:

Table 14 : Result of T-test from the Both Averages

Pre-test		Post-test	
t_{count}	t_{table}	t_{count}	t_{table}
-0.169	2.00758	0.642	2.00758

Based on table above researcher calculation, researcher found that t_{count} 0.642 while t_{table} 2.00758 in post test with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dk = n_1 + n_2 - 2 = 27 + 26 - 2 = 51$. Cause $t_{\text{count}} < t_{\text{table}}$ (0.642 < 2.00758), it means that hypothesis H_a was rejected and H_0 was accepted so there was no significant effect of clustering technique on students' ability writing descriptive text at grade VIII SMP Negeri 6 Padangsidimpuan. The calculation of how to got it can be seen in (appendix 8).

D. Discussion

Based on related finding, the researcher discussed result of this research and compared with related findings. It also discussed with theory that

has been stated by researcher. Theory of clustering technique stated clustering technique is a technique to find out ideas as possible that first, clustering technique made students more creative, because students are given to release their thinking to pour their ideas. This technique is used students cannot accept ideas from teacher or another source as books but this technique makes students can play and think so every students find ideas or topics in class.

Second, clustering technique spurred in students thinking and writing obstruction. Writing has obstruction such as difficult to find ideas or topic and they don't know technique will use in writing. Clustering can help students to minimal their obstruction in writing.

Third, clustering technique make an optimal right brain, because right brain is place to give ideas, spirits and emotionals. Clustering technique can develop students' right brain, so students use their right brain in writing because they use clustering technique.

The last of clustering technique was giving free students to find ideas or topic and put in their writing. Students are easy to write text and students can develop their topic into sub topic without afraid and mistake in their writing based on topic.

Based on theory in clustering above, researcher had done research. Researcher got there was no significant effect of clustering technique on

students' ability writing descriptive text at grade VIII SMP Negeri 6 Padangsidempuan. It was done because first, students' were noisy while learning process. Second, teacher did not touch affirmatively. Last, they were not concentrating in following learning process and it made them did not get teacher's explanation well and gave impact to post-test answer.

Another researcher was Hermansyah. He used clustering technique in his research. The title of his research was teaching descriptive writing using clustering technique at second grade students' of man cimahi, The research design of this study was an experimental one. The population was grade VIII of Man Cimahi totally 60 students'. He chosen VIII.A and VIII.B. He found Teaching Descriptive Writing use Clustering technique has no significantly better result than using three phases result. It means clustering technique was not effective in teaching descriptive writing to the students' of Man Cimahi. The researcher found there was not improvement of mean score after using clustering on students' writing descriptive text before using clustering was 23.14. Mean score using clustering used 26.20¹

E. Threats of Research

The researcher found the threats of research as follows:

¹ Hermansyah, *Teaching Descriptive Writing use Clustering technique*, (Siliwangi Bandung: STKIP English Education Program Language and Art Department, 2012)p.6

1. The students' were not serious in answering the pre-test and post-test. Some of still did cheating. It made the answer of test was not pure because they did not do it by themselves.
2. The students' were noisy while the learning process. They were not concentrating in following the learning process. Some of talked to their friends and some of did something outside the teacher's rule. Of course it made them cannot got the teacher's explanation well and gave the impact to the post-test answer.
3. The students' were not too enthusiastic in answering the adjective, specific participants and the generic structures of text, there are identification and description, it made them be not followed the rule of Clustering technique. When the teacher gives other text, the students' feel confused establish which the identification and description on text.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

Based on the result of the research, the conclusions of this research are:

1. Researcher had gotten data in pre test before using clustering technique, mean score of experimental class was 65.6 and mean score of control class was 64.
2. Researcher had gotten data in post test using clustering technique, mean score of experimental class was 76.01 and mean score of control class was 96.74.
3. Researcher got calculation of $t_{\text{count}} < t_{\text{table}}$ ($0.642 < 2.00758$). It means that there was no significant the effect of clustering technique on students' ability writing descriptive text at grade VIII SMP Negeri 6 Padangsidimpuan.

B. Suggestion

Based on the above conclusion, the researcher has some suggestions as follow:

1. For headmaster, provide tools and media complete in teaching writing descriptive text. That students' increase to learning English with tool and media.

2. For the English teacher of SMP Negeri 6 Padangsidempuan, it is very wise to apply the innovative approach such as Clustering technique in teaching writing descriptive text.
3. For the students', they can use Clustering technique because it can make them help to write.

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Appendix 1

RENCANA PELAKSANAAN PEMBELAJARAN (RPP)

EXPERIMENT CLASS

Nama Sekolah	: SMPN 6 Padangsidempuan
Mata Pelajaran	: Bahasa Inggris
Kelas / Semester	: VIII-1
Alokasi Waktu	: 6 x 40 menit (2 x Pertemuan)
Standar Kompetensi	: Memahami makna dalam esai pendek sederhana berbentuk descriptive text untuk berinteraksi dengan lingkungan sekitar.
Kompetensi Dasar	: Memahami makna dalam teks tulis fungsional pendek sederhana secara akurat, lancar dan berterima yang berkaitan dengan lingkungan sekitar dalam teks descriptive.
Jenis Teks	: Teks Descriptive
Aspek / Skills	: Writing (Menulis)

A. Indikator Pencapaian Kompetensi :

1. Mengidentifikasi topik dalam teks descriptive
2. Memahami fungsi social dari descriptive text
3. Menguasai generic structure dari descriptive text
4. Menuliskan descriptive text

B. Tujuan Pembelajaran :

1. Siswa mampu mengidentifikasi topik dalam teks descriptive
2. Memahami fungsi social dari descriptive text
3. Menguasai generic structure dari descriptive text
4. Menuliskan descriptive text

C. Materi Pembelajaran :

Descriptive Text

The definition of Descriptive Text

Descriptive text is a text containing two components, identification and description by which a writer describes a person, or an animal, or tree, or a house, or camping as his topic.

Text Organization

1. Identification is writing the name or something, place, pictured, city, and family with brief description.
2. Description is described parts, qualities and characteristics of thing.

D. Metode Pembelajaran :

Clustering Technique

E. Langkah – langkah Pembelajaran :

Pertemuan pertama

1. Kegiatan pendahuluan

Apersepsi

- Tanya jawan berbagai hal terkait kondisi siswa
- Warning –up activity : ask students about people, plants, animals and things

Motivasi

- menjelaskan pentingnya materi yang akan dipelajari berdasarkan materi yang harus dikuasai siswa/I

2. Kegiatan Inti

- a. Siswa/I menuliskan sebuah topik di tengah-tengah kertas atau buku mereka kemudian membuat lingkaran yang didalamnya tertulis topic yang telah mereka pikirkan.
- b. Siswa/I menulis dan mengembangkan topik mereka menjadi beberapa bagian. Kemudian melingkarinya dan menyambungkan lingkaran-

lingkaran bagian tersebut dari topik Siswa/I dan menyambungkan dengan garis-garis ke topic utama yang telah mereka buat sebelumnya.

- c. Langkah selanjutnya mengelompokkan bagian-bagian yang telah seperti bagian-bagian informasi yang detail dari bagian-bagian yang di tulis di langkah kedua. Kemudian siswa/I melingkari bagian-bagian yang telah dibuat.

3. Kegiatan Penutup

- a. Guru menanyakan kesulitan-kesulitan yang dialami siswa/I ketika proses belajar mengajar sedang berlangsung
- b. Guru menyimpulkan materi pembelajaran

Pertemuan kedua

1. Kegiatan Pendahuluan

Apersepsi

- Tanya jawan berbagai hal terkait kondisi siswa/I
- Warning –up activity : ask students about people, plants, animals and things

Motivasi

- menjelaskan pentingnya materi yang akan dipelajari berdasarkan materi yang harus dikuasai siswa/I

2. Kegiatan Inti

- a. Siswa/I menuliskan sebuah topik di tengah-tengah kertas atau buku mereka kemudian membuat lingkaran yang didalamnya tertulis topic yang telah mereka pikirkan.
- b. Siswa/I menulis dan mengembangkan topik mereka menjadi beberapa bagian. Kemudian melingkarinya dan menyambungkan lingkaran-lingkaran bagian tersebut dari topik Siswa/I dan menyambungkan dengan garis-garis ke topic utama yang telah mereka buat sebelumnya.

- c. Langkah selanjutnya mengelompokkan bagian-bagian yang telah seperti bagian-bagian informasi yang detail dari bagian-bagian yang di tulis di langkah kedua. Kemudian siswa/I melingkari bagian-bagian yang telah dibuat.

3. Kegiatan Penutup

- a. Guru menyakan kesulitan-kesulitan yang dialami siswa/I ketika proses belajar mengajar sedang berlangsung
- b. Guru menyimpulkan materi pembelajaran

F. Sumber Pembelajaran :

- 1. Buku- buku relevan
- 2. Internet

G. Penilaian :

- a. Teknik : tes tertulis
- b. Bentuk : Pertanyaan dalam bentuk essay
- c. Pedoman penelitian

Jawaban benar : skor 20

Jawaban salah : skor 0

Skor maksimal : 100

H. Indikator

No	Indicators	Scores
1	Grammar	20
2	Vocabulary	20
3	Mechanics	20
4	Fluency	20
5	Form (organization)	20
	Total	100

Standard of each element

No	Class of score	Predicate
1	80 – 100	Very good
2	70 – 79	Good
3	60 – 69	Enough
4	50- 59	Bad
5	0 – 49	Fail

Padangsidempuan, 12 mei 2017

Mengetahui

Guru mata pelajaran

Researcher

RAHMAWATI HASIBUAN S. Pd
NIP. 1990919 199801 2 005

YUNITA SARI
NIM. 13 340 0075

Kepala Sekolah
SMPN 6 Padangsidempuan

JULIHAR SAFRIANA S.Pd
NIP. 19620717 198403 2 003

Appendix 2

RENCANA PELAKSANAAN PEMBELAJARAN (RPP)

CONTROL CLASS

Nama Sekolah	: SMPN 6 Padangsidempuan
Mata Pelajaran	: Bahasa Inggris
Kelas / Semester	: VIII- 2
Alokasi Waktu	: 6 x 40 menit (2 x Pertemuan)
Standar Kompetensi	: Memahami makna dalam esai pendek sederhana berbentuk descriptive text untuk berinteraksi dengan lingkungan sekitar.
Kompetensi Dasar	: Memahami makna dalam teks tulis fungsional pendek sederhana secara akurat, lancar dan berterima yang berkaitan dengan lingkungan sekitar dalam teks descriptive.
Jenis Teks	: Teks Descriptive
Aspek / Skills	: Writing (Menulis)

I. Indikator Pencapaian Kompetensi :

5. Mengidentifikasi topik dalam teks descriptive
6. Memahami fungsi social dari descriptive text
7. Menguasai generic structure dari descriptive text
8. Menuliskan descriptive text

J. Tujuan Pembelajaran :

5. Siswa mampu mengidentifikasi topik dalam teks descriptive
6. Memahami fungsi social dari descriptive text
7. Menguasai generic structure dari descriptive text
8. Menuliskan descriptive text

K. Materi Pembelajaran :

Descriptive Text

The definition of Descriptive Text

Descriptive text is a text containing two components, identification and description by which a writer describes a person, or an animal, or tree, or a house, or camping as his topic.

Text Organization

3. Identification is writing the name or something, place, pictured, city, and family with brief description.
4. Description is described parts, qualities and characteristics of thing.

L. Metode Pembelajaran :

Three Phases Technique (conventional Technique)

M. Langkah – langkah Pembelajaran :

Pertemuan pertama

4. Kegiatan pendahuluan

Apersepsi

- Tanya jawan berbagai hal terkait kondisi siswa
- Warning –up activity : ask students about people, plants, animals and things

Motivasi

- menjelaskan pentingnya materi yang akan dipelajari berdasarkan materi yang harus dikuasai siswa/I

5. Kegiatan Inti

a. Pre writing stages

Siswa /I diberikan aktivitas yang menarik sehingga siswa/I merasa bahagia sebelum guru menjelaskan topic yang akan diajarkan seperti descriptive text setelah itu guru menjelaskan topic pembelajaran.

b. Writing stages

Pada tahap ini siswa telah melakukan pembelajaran. Pembelajaran ini berisi topic yang telah diperkenalkan dan dijelaskan di tahap pre writing. Siswa/I dapat mempraktikan atau melaksanakan seperti menulis apa yang telah dijelaskan oleh guru sesuai materi di pembelajaran.

c. Post writing

Teknik ini membuat siswa menulis dan memberikan kesimpulan dari langkah-langkah pertama dan kedua, sehingga siswa dapat berinteraksi dengan guru.

6. Kegiatan Penutup

- a. Guru menanyakan kesulitan-kesulitan yang dialami siswa ketika proses belajar mengajar sedang berlangsung
- b. Guru menyimpulkan materi pembelajaran

Pertemuan kedua

4. Kegiatan Pendahuluan

Apersepsi

- Tanya jawan berbagai hal terkait kondisi siswa
- Warning –up activity : ask students about people, plants, animals and things

Motivasi

- menjelaskan pentingnya materi yang akan dipelajari berdasarkan materi yang harus dikuasai siswa/I

5. Kegiatan Inti

- a. Pre writing stages

Siswa /I diberikan aktivitas yang menarik sehingga siswa/I merasa bahagia sebelum guru menjelaskan topic yang akan diajarkan seperti descriptive text setelah itu guru menjelaskan topic pembelajaran.

b. Writing stages

Pada tahap ini siswa telah melakukan pembelajaran. Pembelajaran ini berisi topic yang telah diperkenalkan dan dijelaskan di tahap pre writing. Siswa/I dapat mempraktikan atau melaksanakan seperti menulis apa yang telah dijelaskan oleh guru sesuai materi di pembelajaran yaitu descriptive text.

c. Post writing

Teknik ini membuat siswa menulis dan memberikan kesimpulan dari langkah-langkah pertama dan kedua, sehingga siswa dapat berinteraksi dengan guru.

6. Kegiatan Penutup

- a. Guru menanyakan kesulitan-kesulitan yang dialami siswa/I ketika proses belajar mengajar sedang berlangsung
- b. Guru menyimpulkan materi pembelajaran

N. Sumber Pembelajaran :

3. Buku- buku relevan
4. Internet

O. Penilaian :

1. Instrument

Buatlah sebuah teks descriptive berdasarkan judul dibawah ini.

- d. My teacher
- e. Sibolga
- f. My favorite singer

P. Indikator

No	Indicators	Scores
1	Grammar	20
2	Vocabulary	20
3	Mechanics	20
4	Fluency	20
5	Form (organization)	20
	Total	100

Standard of each element

No	Class of score	Predicate
1	80 – 100	Very good
2	70 – 79	Good
3	60 – 69	Enough
4	50- 59	Bad
5	0 – 49	Fail

Padangsidempuan, 12 mei 2017

Mengetahui

Guru mata pelajaran

Researcher

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Kepala Sekolah
SMPN 6 Padangsidempuan

JULIHAR SAFRIANA S.Pd
NIP. 19620717 198403 2 003

Appendix 3

INSTRUMENT FOR PRE TEST

1. Pengantar

Tes ini bertujuan untuk menjaring data dari siswa/I mengenai student's ability in writing descriptive text dan jawaban anda tidak mempengaruhi kedudukan anda di sekolah ini

2. Petunjuk

- a. Pilihlah sebuah judul di bawah ini kemudian tulis dalam bentuk teks descriptive berdasarkan pengetahuan anda.
- b. Apabila ada pertanyaan yang kurang jelas, tanyakan langsung kepada pengawas

3. Soal

Pilihlah sebuah judul di bawah ini kemudian tulis dalam bentuk teks descriptive.

- g. My best friend
- h. Padangsidempuan
- i. My mother

Validator

Researcher

FITRI RAYANI SIREGAR, M.HUM
NIP.19820731 2009 2 004

YUNITA SARI
13 340 0075

Appendix 4

INSTRUMENT FOR POST TEST

4. Pengantar

Tes ini bertujuan untuk menjaring data dari siswa/I mengenai student's ability in writing descriptive text dan jawaban anda tidak mempengaruhi kedudukan anda di sekolah ini

5. Petunjuk

- c. Buatlah sebuah teks descriptive berdasarkan judul yang tertera di dalam soal
- d. Apabila ada pertanyaan yang kurang jelas, tanyakan langsung kepada pengawas

6. Soal :

Buatlah sebuah teks descriptive berdasarkan judul dibawah ini.

- j. My best friend
- k. Padangsidempuan
- l. My mother

Validator

Researcher

FITRI RAYANI SIREGAR, M.HUM

NIP.19820731 2009 2 004

YUNITA SARI

13 340 0075

Appendix 5

THE SCORES OF PRE TEST IN VIII-1 (Experimental class)

No	Initial Name	Pre test						
		G	V	M	F	F	X	X ²
1	AK	20	12	13	10	5	60	3600
2	AN	20	15	10	20	5	60	3600
3	AS	19	14	12	8	5	58	3364
4	AF	20	13	12	12	9	65	4225
5	CF	14	9	8	8	3	42	1764
6	DM	11	11	9	7	4	42	1764
7	ES	18	15	10	9	3	55	3025
8	FM	16	11	9	9	5	50	2500
9	FY	20	18	10	7	3	58	3364
10	IH	15	14	14	10	2	55	3025
11	IL	20	23	16	7	8	74	5476
12	K	19	11	7	7	4	48	2304
13	KH	10	10	10	8	2	40	1600
14	L	15	13	12	10	5	55	3025
15	LW	14	13	10	10	1	48	2304
16	LF	15	11	11	10	3	50	2500
17	MI	12	12	9	6	3	42	1764
18	RA	20	20	15	10	5	70	4900
19	RS	20	10	9	8	3	50	2500
20	SA	15	13	11	4	2	45	2025
21	SAH	20	19	17	3	1	60	3600
22	SP	20	14	12	7	7	60	3600
23	S	20	11	10	10	4	55	3025
24	UK	17	14	12	12	5	60	3600
25	UH	16	14	13	11	1	55	3025
26	WAS	20	22	10	3	5	68	4624
27	WA	20	21	19	3	2	65	4225
TOTAL							1490	84328

THE SCORES OF POST TEST IN VIII-1 (Experimental class)

No	Initial Name	Pre test						
		G	V	M	F	F	X	X ²
1	AK	20	12	13	10	5	53	2809
2	AN	20	15	10	20	5	47	2209
3	AS	19	14	12	8	5	47	220
4	AF	20	13	12	12	8	70	4900
5	CF	14	9	8	8	3	46	2116
6	DM	11	11	9	7	4	61	3721
7	ES	18	15	10	9	3	75	5625
8	FM	16	11	9	9	5	65	4225
9	FY	20	18	10	7	3	65	4225
10	IH	15	14	14	10	2	45	2025
11	IL	20	23	16	7	8	84	7056
12	K	19	11	7	7	4	70	4900
13	KH	10	10	10	8	2	63	3969
14	L	15	13	12	10	5	68	4624
15	LW	14	13	10	10	1	50	2500
16	LF	15	11	11	10	3	69	4761
17	MI	12	12	9	6	3	61	3721
18	RA	20	20	15	10	5	80	6400
19	RS	20	10	9	8	3	60	3600
20	SA	15	13	11	4	2	68	4624
21	SAH	20	19	17	3	1	53	2809
22	SP	15	14	12	7	2	60	3600
23	S	11	11	10	10	3	63	3969
24	UK	17	14	12	12	5	70	4900
25	UH	16	14	13	11	1	68	4624
26	WAS	12	12	10	3	3	63	3969
27	WA	19	11	10	3	2	70	4900
TOTAL							1694	108990

THE SCORES OF PRE TEST IN VIII-2 (Control class)

No	Initial Name	Pre test						
		G	V	M	F	F	X	X ²
1	AJN	15	11	9	15	4	54	2916
2	AS	20	11	16	22	2	71	5041
3	AKN	12	11	15	20	3	60	3600
4	A	14	9	9	12	2	46	2116
5	AS	10	9	11	8	3	41	1681
6	AR	20	12	17	20	9	78	6084
7	DS	11	16	9	12	5	53	2809
8	D	12	13	6	12	3	46	2116
9	F	6	8	7	12	2	35	1225
10	HA	12	11	11	18	3	55	3025
11	HF	13	9	9	12	2	45	2025
12	H	16	10	12	17	3	58	3364
13	KH	12	10	11	17	2	50	2500
14	L	20	12	17	23	3	75	5625
15	MF	20	13	11	19	4	65	4225
16	M	16	9	12	17	4	58	3364
17	NL	13	11	8	1	3	48	2304
18	NJ	11	7	6	11	2	37	1369
19	NA	13	9	9	19	5	55	3025
20	RS	11	9	11	8	3	41	1681
21	RP	20	14	11	19	3	67	4489
22	RR	15	10	12	17	4	58	3364
23	RA	14	10	10	15	6	55	3025
24	SA	20	10	13	15	3	60	3600
25	SF	20	13	5	8	5	60	3600
26	SG	19	10	10	17	2	58	3364
TOTAL							1429	81537

THE SCORES OF POST TEST IN VIII-2 (Control class)

No	Initial Name	Pre test						
		G	V	M	F	F	X	X ²
1	AJN	20	18	20	20	2	80	6400
2	AS	20	19	20	20	1	80	6400
3	AKN	20	17	18	20	10	85	7225
4	A	20	18	17	20	10	85	7225
5	AS	20	16	18	19	10	82	6724
6	AR	20	19	18	20	16	93	8649
7	DS	20	20	20	20	10	90	8100
8	D	20	18	18	20	14	90	8100
9	F	20	18	18	19	10	85	7225
10	HA	18	20	20	20	10	88	7744
11	HF	20	20	20	20	10	90	8100
12	H	20	14	13	16	7	70	4900
13	KH	20	16	15	17	7	75	5625
14	L	20	16	13	15	7	70	4900
15	MF	20	15	15	17	5	72	5184
16	M	17	14	16	14	4	65	4225
17	NL	20	16	16	18	9	80	6400
18	NJ	20	16	17	15	7	75	5625
19	NA	16	14	13	17	5	65	4225
20	RS	15	11	13	12	4	55	3025
21	RP	20	15	16	17	7	75	5625
22	RR	18	15	10	10	5	58	3364
23	RA	20	17	16	15	10	78	6084
24	SA	20	15	15	5	5	60	3600
25	SF	20	20	15	5	9	69	4761
26	SG	20	14	10	10	5	61	3721
TOTAL							1976	153156

Appendix 6

Result of Normality Test of VIII 1 in Pre Test

1. The score of VIII-1 class in post test from low score to high score.

40	42	42	42	45	48	48	50	50	50	55	55
55	55	55	58	58	60	60	60	60	60	65	65
68	70	74									

2. High = 74

Low = 40

Range = high – low

$$= 74 - 40$$

$$= 34$$

3. Total of Classes = $1 + 3,3 \log (n)$

$$= 1 + 3,3 \log (27)$$

$$= 1 + 3,3 (1.431)$$

$$= 5,72$$

$$= 6$$

4. Interval = $\frac{\text{range}}{\text{Total of class}} = \frac{34}{6} = 5.7 = 6$

5. Mean

Interval Class	F	X	x	Fx	x ²	fx ²
40 – 45	5	42.5	+3	15	9	45
46 – 51	5	48.5	+2	10	4	20
52 – 57	5	54.5	+1	5	1	5
58 – 63	7	60.5	0	0	0	0
64 – 69	3	66.5	-1	-3	1	3
70 - 75	2	72.5	-2	-4	2	4
i= 6	27	-	-	23	-	77

$$\begin{aligned}
 M_x &= M^1 + i \frac{\sum fx^1}{n} \\
 &= 60.5 + 6 \left(\frac{23}{27} \right) \\
 &= 60.5 + 6 (0.85) \\
 &= 60.5 + 5.10 \\
 &= 65.6
 \end{aligned}$$

$$\begin{aligned}
 SD_t &= i \sqrt{\frac{\sum fx^2}{n} - \left(\frac{\sum fx^1}{n} \right)^2} \\
 &= 6 \sqrt{\frac{77}{27} - \left(\frac{23}{27} \right)^2} \\
 &= 6 \sqrt{2.852 - (0.852)^2} \\
 &= 6 \sqrt{2.852 - 0.726} \\
 &= 6 \sqrt{2.13} \\
 &= 6 \times 1.46 \\
 &= 8.76
 \end{aligned}$$

Table of Normality Data Test with Kuadrat Formula

Interval score	Real Upper Limit	Z score	Limit of Large of the Area	Large of Area	f_h	f_o	$(\frac{f_o - f_h}{f_h})$	
70 – 75	75.5	1.13	0.3708	0.197	5.3	2	-0.62	
64 - 69	69.5	0.45	0.1736	-0.23157	-6.3	3	-1.48	
58 – 63	63.5	-0.24	0.40517	0.226	6.1	7	0.15	
52 – 57	57.5	-0.92	0.17879	0.125	3.4	5	0.47	
46 – 51	51.5	-1.61	0.05370	0.044	1.2	5	3.16	
40 – 45	45.5	-2.34	0.00964	0.008	0.2	5	24	
	39.5	-2.98	0.00144					
X^2								25.68

Based on table above, the researcher found that $x^2_{count} = 25.68$ while $x^2_{table} = 26.296$ cause $x^2_{count} < x^2_{table}$ ($25.68 < 26.296$) with degree of freedom (dk) = $17 - 1 = 16$ and significant level $\alpha = 5\%$ so distribution of VIII-2 class (pre test) is normal.

6. Median

No	Interval	F	Fk
1	40 – 45	5	5
2	46 – 51	5	10
3	52 – 57	5	15
4	58 – 63	7	22
5	64 – 69	3	25
6	70 – 75	2	27

Position of Me in Interval of classes is number 3, that

$$Bb = 57.5$$

$$\begin{aligned}
F &= 5 \\
F_m &= 7 \\
i &= 6 \\
n &= 27 \\
1/2n &= 13.5
\end{aligned}$$

So:

$$\begin{aligned}
Me &= B_b + i \left(\frac{\frac{n}{2} - F}{f_m} \right) \\
&= 57.5 + 6 \left(\frac{13.5 - 5}{7} \right) \\
&= 57.5 + 6 (1.214) \\
&= 57.5 + 7.284 \\
&= 64.78
\end{aligned}$$

7. Modus

No	Interval	F	Fk
1	40 – 45	5	5
2	46 – 51	5	10
3	52 – 57	5	15
4	58 – 63	7	22
5	64 – 69	3	25
6	70 – 75	2	27

$$\begin{aligned}
M_0 &= L + \frac{d_1}{d_1 + d_2} i \\
L &= 57.5 \\
d_1 &= 2 \\
d_2 &= 4 \\
i &= 6 \\
\text{so :} \\
M_0 &= 57.5 + \frac{2}{2+4} 6 \\
&= 57.5 + 0.33 (6) \\
&= 57.5 + 1.98 \\
&= 59.48
\end{aligned}$$

Result of Normality Test of VIII 2 in Pre Test

1. The score of VIII-2 class in pre test from low score to high score.

35	37	41	41	45	46	46	48	50	53	54	55
55	55	58	58	58	58	60	60	60	65	67	71
75	78										

2. High = 78

Low = 35

Range = high – low

= 78 - 35

= 43

3. Total of Classes = $1 + 3,3 \log (n)$

= $1 + 3,3 \log (26)$

= $1 + 3,3 (1.415)$

= 5,67

= 6

4. Interval = $\frac{\text{range}}{\text{Total of class}} = \frac{43}{6} = 7.2 = 7$

5. Mean

Interval Class	f	X	x	Fx	x ²	fx ²
35 – 41	4	38.5	3	12	9	36
42 – 48	4	45.5	2	8	4	16

49 – 55	6	52.5	1	6	1	6
56 – 62	7	59.5	0	0	0	0
63 – 69	2	66.5	-1	-2	1	2
70 – 76	2	73.5	-2	-4	4	8
77 – 83	1	80.5	-3	-3	9	9
i= 7	26	-	-	17	-	77

$$\begin{aligned}
 M_x &= M^1 + i \frac{\sum fx^1}{n} \\
 &= 59.5 + 7 \left(\frac{17}{26} \right) \\
 &= 59.5 + 7 (0.65) \\
 &= 59.5 + 4.55 \\
 &= 64.05
 \end{aligned}$$

$$\begin{aligned}
 SD_t &= i \sqrt{\frac{\sum fx^2}{n} - \left(\frac{\sum fx^1}{n} \right)^2} \\
 &= 7 \sqrt{\frac{77}{26} - \left(\frac{17^2}{26} \right)} \\
 &= 7 \sqrt{2.96 - (0.65)^2} \\
 &= 7 \sqrt{2.73 - 0.42} \\
 &= 7 \sqrt{2.31} \\
 &= 7 \times 1.52 \\
 &= 10.64
 \end{aligned}$$

Table of Normality Data Test with Kuadrat Formula

Interval score	Real Upper Limit	Z score	Limit of Large of the Area	Large of Area	f _h	f _o	$\left(\frac{f_o - f_h}{f_h} \right)$
77 – 83	83.5	1.83	0.4664	0.09	2.34	1	-0.57
70 – 76	76.5	1.17	0.3790	0.18	4.68	2	-0.57

63 – 69	69.5	0.51	0.1950	-0.25	-6.5	2	-1.31	
56 – 62	62.5	-0.15	0.44038	0.23	5.98	7	0.17	
49 – 55	55.5	-0.80	0.21186	0.14	3.64	6	0.65	
42 – 48	48.5	-1.46	0.07215	0.06	1.56	4	1.56	
35 – 41	41.5	-2.12	0.01700	0.01	0.26	4	14.38	
	34.5	-2.78	0.00272					
X^2								14.31

Based on table above, the researcher found that $x^2_{\text{count}} = 14.31$ while $x^2_{\text{table}} = 26.296$ cause $x^2_{\text{count}} < x^2_{\text{table}}$ ($14.31 < 26.296$) with degree of freedom (dk) = $17 - 1 = 16$ and significant level $\alpha = 5\%$ so distribution of VIII-2 class (pre test) is normal.

6. Median

No	Interval	F	Fk
1	35 – 41	4	4
2	42 – 48	4	8
3	49 – 55	6	14
4	56 – 62	7	21
5	63 – 69	2	23
6	70 – 76	2	25
7	77 – 83	1	26

Position of Me in Interval of classes is number 3, that

$$\begin{aligned}
 Bb &= 55.5 \\
 F &= 6 \\
 Fm &= 7 \\
 i &= 7 \\
 n &= 26 \\
 1/2n &= 13
 \end{aligned}$$

So:

$$\begin{aligned} \text{Me} &= \text{Bb} + i \left(\frac{\frac{n}{2} - F}{fm} \right) \\ &= 55.5 + 7 \left(\frac{13-6}{7} \right) \\ &= 55.5 + 7 (1) \\ &= 55.5 + 7 \\ &= 62.5 \end{aligned}$$

7. Modus

No	Interval	F	Fk
1	35 – 41	4	4
2	42 – 48	4	8
3	49 – 55	6	14
4	56 – 62	7	21
5	63 – 69	2	23
6	70 – 76	2	25
7	77 – 83	1	26

$$M_0 = L + \frac{d1}{d1+d2} i$$

$$L = 55.5$$

$$d1 = 1$$

$$d2 = 5$$

$$i = 7$$

so :

$$\begin{aligned} M_0 &= 55.5 + \frac{1}{1+5} 7 \\ &= 55.5 + 0.17 (7) \\ &= 55.5 + 1.19 \\ &= 56.69 \end{aligned}$$

Homogeneity Test (Pre Test)

Calculation of parameter to get variant of first class as experimental class sample using direct method and variant of the second class as control class sample by using conventional technique are used homogeneity test by using formula.

$$S^2 = \frac{n \sum xi^2 - (\sum xi)^2}{n(n-1)}$$

Hypotheses:

$$H_0 : \delta_1^2 = \delta_1^2$$

$$H_1 : \delta_1^2 \neq \delta_1^2$$

A. Variant of VIII-I class is:

$$\begin{aligned} n &= 27 \\ \sum xi &= 1490 \\ \sum xi^2 &= 84328 \end{aligned}$$

$$\begin{aligned} S^2 &= \frac{n \sum xi^2 - (\sum xi)^2}{n(n-1)} \\ &= \frac{27(84328) - (1490)^2}{27(27-1)} \\ &= \frac{2276856 - 2220100}{702} \\ &= \frac{56756}{702} \\ &= 80.85 \end{aligned}$$

B. Variant of VIII-2 class is:

$$\begin{aligned} n &= 26 \\ \sum xi &= 1429 \\ \sum xi^2 &= 81537 \end{aligned}$$

$$S^2 = \frac{n \sum xi^2 - (\sum xi)^2}{n(n-1)}$$

$$\begin{aligned}
&= \frac{26(81537) - (1429)^2}{26(26 - 1)} \\
&= \frac{2119962 - 2042041}{650} \\
&= \frac{77921}{650} \\
&= 119.89
\end{aligned}$$

The formula was used to test hypothesis was:

1. VIII-1 and VIII-2:

$$F = \frac{\textit{The Biggest Variant}}{\textit{The Smallest Variant}}$$

So :

$$\begin{aligned}
F &= \frac{80.85}{119.89} \\
&= 0.674
\end{aligned}$$

After doing the calculation, researcher found that $F_{\text{count}} = 0.674$ with a 5% and $dk = 26$ and 25 from the distribution list F , researcher found that $F_{\text{table}} = 2.007$ cause $F_{\text{count}} < F_{\text{table}}$ ($0.674 < 2.007$). So there is no differences the variant between VIII-I and VIII-2 class. It means that the variant is homogenous.

Appendix 7

Result of Normality Test VIII 1 in Post Test

8. The score of VIII-1 class in post test from low score to high score.

45	46	47	47	50	53	53	60	60	61	61	61
63	63	63	65	65	68	68	68	68	69	70	70
75	80	84									

9. High = 84

Low = 45

Range = high – low

$$= 84 - 45$$

$$= 39$$

10. Total of Classes = $1 + 3,3 \log (n)$

$$= 1 + 3,3 \log (27)$$

$$= 1 + 3,3 (1.431)$$

$$= 5,72$$

$$= 6$$

11. Interval = $\frac{\text{range}}{\text{Total of class}} = \frac{39}{6} = 6.5 = 7$

12. Mean

Interval Class	f	X	x	Fx	x ²	fx ²
45 – 51	5	48.5	4	20	16	400

52 – 58	3	55.5	3	9	9	81
59 – 65	9	62.5	2	18	4	324
66 – 72	7	69.5	1	7	1	49
73 – 79	1	76.5	0	0	0	0
80 – 86	2	83.5	-1	-2	1	4
i= 7	27	-	-	52	-	858

$$\begin{aligned}
M_x &= M^1 + i \frac{\sum fx^1}{n} \\
&= 62.5 + 7 \left(\frac{52}{27} \right) \\
&= 62.5 + 7 (1.93) \\
&= 62.5 + 13.51 \\
&= 76.01
\end{aligned}$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum fx^2}{n} - \left(\frac{\sum fx^1}{n} \right)^2} \\
&= 7 \sqrt{\frac{858}{27} - \left(\frac{52}{27} \right)^2} \\
&= 7 \sqrt{31.78 - (1.93)^2} \\
&= 7 \sqrt{31.78 - 3.73} \\
&= 7 \sqrt{28.05} \\
&= 7 \times 5.30 \\
&= 37.1
\end{aligned}$$

Table of Normality Data Test with Kuadrat Formula

Interval score	Real Upper Limit	Z score	Limit of Large of the Area	Large of Area	f _h	f _o	$\left(\frac{f_o - f_h}{f_h} \right)$
80 – 86	86.5	0.28	0.1103	0.08	2.16	2	-0.07
73 – 79	79.5	0.09	0.0319	-0.43	-11.61	1	-1.09

66 – 72	72.5	-0.09	0.46414					
				0.07	1.89	7	2.70	
59 – 65	65.5	-0.28	0.38974					
				0.07	1.89	9	3.76	
52 – 58	58.5	-0.47	0.31918					
				0.06	1.62	3	0.85	
45 – 51	51.5	-0.66	0.25463					
				0.06	1.62	5	2.09	
	44.5	-0.85	0.19766					
							χ^2	8.24

Based on table above, the researcher found that $\chi^2_{\text{count}} = 8.24$ while $\chi^2_{\text{table}} = 11.070$ cause $\chi^2_{\text{count}} < \chi^2_{\text{table}}$ ($8.24 < 11.070$) with degree of freedom (dk) = 6 - 1 = 5 and significant level $\alpha = 5\%$ so distribution of VIII-2 class (pre test) is normal

13. Median

No	Interval	F	Fk
1	45 – 51	5	5
2	52 – 58	3	8
3	59 – 65	9	17
4	66 – 72	7	24
5	73 – 79	1	25

Position of Me in Interval of classes is number 3, that

$$\begin{aligned}
 Bb &= 58.5 \\
 F &= 3 \\
 Fm &= 9 \\
 i &= 7 \\
 n &= 27 \\
 1/2n &= 13.5
 \end{aligned}$$

So:

$$Me = Bb + i \left(\frac{\frac{n}{2} - F}{f_m} \right)$$

$$\begin{aligned}
&= 58.5 + 7 \left(\frac{13.5-3}{9} \right) \\
&= 58.5 + 7 (1.17) \\
&= 58.5 + 8.19 \\
&= 66.69
\end{aligned}$$

14. Modus

No	Interval	F	Fk
1	45 – 51	5	5
2	52 – 58	3	8
3	59 – 65	9	17
4	66 – 72	7	24
5	73 – 79	1	25

$$M_0 = L + \frac{d_1}{d_1+d_2} i$$

$$L = 58.5$$

$$d_1 = 6$$

$$d_2 = 2$$

$$i = 7$$

so :

$$\begin{aligned}
M_0 &= 58.5 + \frac{6}{6+2} 6 \\
&= 58.5 + 0.75 (6) \\
&= 58.5 + 4.5 \\
&= 63
\end{aligned}$$

Result of Normality Test of VIII 2 in Post Test

1. The score of VIII-2 class in post test from low score to high score.

55	58	60	61	65	65	69	70	70	72	75	75
75	78	80	80	80	82	85	85	85	88	90	90
90	93										

2. High = 93

Low = 55

Range = high – low

= 93 - 55

= 38

3. Total of Classes = $1 + 3,3 \log (n)$

= $1 + 3,3 \log (26)$

= $1 + 3,3 (1.415)$

= 5,67

= 6

4. Interval = $\frac{\text{range}}{\text{Total of class}} = \frac{38}{6} = 6.3 = 6$

5. Mean

Interval Class	f	X	X	Fx	x ²	fx ²
55 – 60	3	57.5	3	9	9	27
61 – 66	3	63.5	2	6	4	12

67 – 72	4	69.5	1	4	1	4
73 – 78	4	75.5	0	0	0	0
79 – 84	4	81.5	1	4	1	4
85 – 91	7	87.5	2	14	4	28
92– 97	1	94.5	3	3	9	9
i= 6	26	-	-	40	-	84

$$\begin{aligned}
M_x &= M^1 + i \frac{\sum fx^1}{n} \\
&= 87.5 + 6 \left(\frac{40}{26} \right) \\
&= 87.5 + 6 (1.54) \\
&= 87.5 + 9.24 \\
&= 96.74
\end{aligned}$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum fx^2}{n} - \left(\frac{\sum fx^1}{n} \right)^2} \\
&= 6 \sqrt{\frac{84}{26} - \left(\frac{40}{26} \right)^2} \\
&= 6 \sqrt{3.23 - (1.54)^2} \\
&= 6 \sqrt{3.23 - 2.37} \\
&= 6 \sqrt{0.86} \\
&= 6 \times 0.93 \\
&= 5.58
\end{aligned}$$

Table of Normality Data Test with Kuadrat Formula

Interval score	Real Upper Limit	Z score	Limit of Large of the Area	Large of Area	f_h	f_o	$\left(\frac{f_o - f_h}{f_h} \right)$
92 – 97	97.5	0.14	0.0557	-0.12	-3.12	1	-1.32
85 - 91	91.5	-0.94	0.17361	0.16	4.16	7	0.68

79 - 84	84.5	-2.19	0.01426	0.48524	12.74	4	1.69	
73 - 78	78.5	-3.27	0.4995	-0.1005	2.613	4	0.53	
67 - 72	72.5	-4.34	0.9000	0.1	2.6	4	2.54	
61 - 66	66.5	-5.42	0.8000	0.1	2.6	3	2.15	
55 - 60	60.5	-6.49	0.7000	0.1	2.6	3	2.15	
	49.5	-8.47	0.6000					
X^2								8.42

Based on table above, the researcher found that $x^2_{count} = 8.42$ while $x^2_{table} = 8.42$ cause $x^2_{count} < x^2_{table}$ ($8.42 < 11.070$) with degree of freedom (dk) = $6 - 1 = 5$ and significant level $\alpha = 5\%$ so distribution of VIII-2 class (post test) is normal.

6. Median

No	Interval	F	Fk
1	55 - 60	3	3
2	61 - 66	3	6
3	67 - 72	4	10
4	73 - 78	4	14
5	79 - 84	4	18
6	85 - 91	7	25
7	92 - 97	1	26

Position of Me in Interval of classes is number 3, that

$$Bb = 84.5$$

$$F = 4$$

$$Fm = 7$$

$$i = 6$$

$$n = 26$$

$$1/2n = 13$$

So:

$$\begin{aligned}
 Me &= Bb + i \left(\frac{\frac{n}{2} - F}{fm} \right) \\
 &= 84.5 + 6 \left(\frac{13 - 4}{7} \right) \\
 &= 84.5 + 6 (1.3) \\
 &= 84.5 + 7.8 \\
 &= 92.3
 \end{aligned}$$

7. Modus

No	Interval	F	Fk
1	55 – 60	3	3
2	61 – 66	3	6
3	67 – 72	4	10
4	73 – 78	4	14
5	79 – 84	4	18
6	85 – 91	7	25
7	92– 97	1	26

$$M_0 = L + \frac{d1}{d1+d2} i$$

$$L = 84.5$$

$$d1 = 3$$

$$d2 = 5$$

$$i = 6$$

so :

$$\begin{aligned}
 M_0 &= 84.5 + \frac{3}{3+5} 6 \\
 &= 84.5 + 0.38 (6) \\
 &= 84.5 + 2.28 \\
 &= 86.78
 \end{aligned}$$

Homogeneity Test (Post Test)

Calculation of parameter to get variant of first class as experimental class sample using direct method and variant of the second class as control class sample by using conventional technique are used homogeneity test by using formula.

$$S^2 = \frac{n \sum xi^2 - (\sum xi)^2}{n(n-1)}$$

Hypotheses:

$$H_0 : \delta_1^2 = \delta_2^2$$

$$H_1 : \delta_1^2 \neq \delta_2^2$$

A. Variant of VIII-I class is:

$$\begin{aligned} n &= 27 \\ \sum xi &= 1694 \\ \sum xi^2 &= 108990 \end{aligned}$$

$$\begin{aligned} S^2 &= \frac{n \sum xi^2 - (\sum xi)^2}{n(n-1)} \\ &= \frac{27(108990) - (1694)^2}{27(27-1)} \\ &= \frac{2942730 - 2869636}{702} \\ &= \frac{73094}{702} \\ &= 104.12 \end{aligned}$$

B. Variant of VIII-2 class is:

$$\begin{aligned} n &= 26 \\ \sum xi &= 1976 \\ \sum xi^2 &= 153156 \end{aligned}$$

$$\begin{aligned}
S^2 &= \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)} \\
&= \frac{26(153156) - (1976)^2}{26(26 - 1)} \\
&= \frac{3982056 - 3904576}{650} \\
&= \frac{77480}{650} \\
&= 119.2
\end{aligned}$$

The formula was used to test hypothesis was:

1. VIII-1 and VIII-2:

$$F = \frac{\textit{The Biggest Variant}}{\textit{The Smallest Variant}}$$

So :

$$\begin{aligned}
F &= \frac{104.12}{119.2} \\
&= 0.87
\end{aligned}$$

After doing the calculation, researcher found that $F_{\text{count}} = 0.87$ with α 5% and dk 26 and 25 from the distribution list F, researcher found that $F_{\text{table}} = 0.87$ cause $F_{\text{count}} < F_{\text{table}}$ ($0.87 < 2.007$). So there is no difference the variant between VIII-I and VIII-2 class. It means that the variant is homogenous.

Appendix 8

T- test of both averages in Pre Test

The formula was used to analyse homogeneity test of the both averages was t-test, that:

$$Tt = \frac{M_1 - M_2}{\sqrt{\left(\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$Tt = \frac{51.85 - 54.96}{\sqrt{\left(\frac{(27 - 1)80.85 + (26 - 1)119.89}{27 + 26 - 2}\right)\left(\frac{1}{27} + \frac{1}{26}\right)}}$$

$$Tt = \frac{-3.11}{\sqrt{\left(\frac{26(80.85) + 25(119.89)}{51}\right)(0.037 + 0.038)}}$$

$$Tt = \frac{-3.11}{\sqrt{\left(\frac{2102.1 + 2997.25}{51}\right)(0.037 + 0.038)}}$$

$$Tt = \frac{-3.11}{\sqrt{(5099.35)(0.075)}}$$

$$Tt = \frac{-3.11}{\sqrt{382.45}}$$

$$Tt = \frac{-3.11}{19.556}$$

$$Tt = -0.169$$

Based on researcher calculation result of homogeneity test of the both averages, researcher found that $t_{\text{count}} = -0.16$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$

and $dk = n_1 + n_2 - 2 = 27 + 26 - 2 = 51$, $t_{table} = 1.676$ So, $t_{count} < t_{table}$ ($-0.169 < 2.00758$) and H_0 is accepted, it means no difference the average between the first class as experimental class and the second class as control class in this research.

T- test of both averages in Post Test

The formula was used to analyse homogeneity test of the both averages was t-test, that:

$$Tt = \frac{M_1 - M_2}{\sqrt{\left(\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}\right) \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$Tt = \frac{62.74 - 76}{\sqrt{\left(\frac{(27 - 1)104.12 + (26 - 1)119.2}{27 + 26 - 2}\right) \left(\frac{1}{27} + \frac{1}{26}\right)}}$$

$$Tt = \frac{-13.26}{\sqrt{\left(\frac{26(104.12) + 25(119.2)}{51}\right) (0.037 + 0.038)}}$$

$$Tt = \frac{-13.26}{\sqrt{\left(\frac{2707.12 + 2980}{51}\right) (0.037 + 0.038)}}$$

$$Tt = \frac{-13.26}{\sqrt{(5687.12)(0.075)}}$$

$$Tt = \frac{-13.26}{\sqrt{426.534}}$$

$$Tt = \frac{-13.26}{20.653}$$

$$Tt = 0.642$$

Based on researcher calculation result of homogeneity test of the both averages, researcher found that $t_{\text{count}} = 0.38$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dk = n_1 + n_2 - 2 = 27 + 26 - 2 = 51$, $t_{\text{table}} = 1.676$ So, $t_{\text{count}} < t_{\text{table}}$ (0.642

<2.00758) and H_0 is accepted, it means no difference the average between the first class as experimental class and the second class as control class in this research.

Appendix 9

Percentage Points of the t Distribution

Pr df	0.25	0.10	0.05	0.025	0.01	0.005	0.001
	0.50	0.20	0.10	0.050	0.02	0.010	0.002
1	1.00000	3.07768	6.31375	12.70620	31.82052	63.65674	318.30884
2	0.81650	1.88562	2.91999	4.30265	6.96456	9.92484	22.32712
3	0.76489	1.63774	2.35336	3.18245	4.54070	5.84091	10.21453
4	0.74070	1.53321	2.13185	2.77645	3.74695	4.60409	7.17318
5	0.72669	1.47588	2.01505	2.57058	3.36493	4.03214	5.89343
6	0.71756	1.43976	1.94318	2.44691	3.14267	3.70743	5.20763
7	0.71114	1.41492	1.89458	2.36462	2.99795	3.49948	4.78529
8	0.70639	1.39682	1.85955	2.30600	2.89646	3.35539	4.50079
9	0.70272	1.38303	1.83311	2.26216	2.82144	3.24984	4.29681
10	0.69981	1.37218	1.81246	2.22814	2.76377	3.16927	4.14370
11	0.69745	1.36343	1.79588	2.20099	2.71808	3.10581	4.02470
12	0.69548	1.35622	1.78229	2.17881	2.68100	3.05454	3.92963
13	0.69383	1.35017	1.77093	2.16037	2.65031	3.01228	3.85198
14	0.69242	1.34503	1.76131	2.14479	2.62449	2.97684	3.78739
15	0.69120	1.34061	1.75305	2.13145	2.60248	2.94671	3.73283
16	0.69013	1.33676	1.74588	2.11991	2.58349	2.92078	3.68615
17	0.68920	1.33338	1.73961	2.10982	2.56693	2.89823	3.64577
18	0.68836	1.33039	1.73406	2.10092	2.55238	2.87844	3.61048
19	0.68762	1.32773	1.72913	2.09302	2.53948	2.86093	3.57940
20	0.68695	1.32534	1.72472	2.08596	2.52798	2.84534	3.55181
21	0.68635	1.32319	1.72074	2.07961	2.51765	2.83136	3.52715
22	0.68581	1.32124	1.71714	2.07387	2.50832	2.81876	3.50499
23	0.68531	1.31946	1.71387	2.06866	2.49987	2.80734	3.48496
24	0.68485	1.31784	1.71088	2.06390	2.49216	2.79694	3.46678
25	0.68443	1.31635	1.70814	2.05954	2.48511	2.78744	3.45019
26	0.68404	1.31497	1.70562	2.05553	2.47863	2.77871	3.43500
27	0.68368	1.31370	1.70329	2.05183	2.47266	2.77068	3.42103
28	0.68335	1.31253	1.70113	2.04841	2.46714	2.76326	3.40816
29	0.68304	1.31143	1.69913	2.04523	2.46202	2.75639	3.39624
30	0.68276	1.31042	1.69726	2.04227	2.45726	2.75000	3.38518
31	0.68249	1.30946	1.69552	2.03951	2.45282	2.74404	3.37490
32	0.68223	1.30857	1.69389	2.03693	2.44868	2.73848	3.36531
33	0.68200	1.30774	1.69236	2.03452	2.44479	2.73328	3.35634
34	0.68177	1.30695	1.69092	2.03224	2.44115	2.72839	3.34793

35	0.68156	1.30621	1.68957	2.03011	2.43772	2.72381	3.34005
36	0.68137	1.30551	1.68830	2.02809	2.43449	2.71948	3.33262
37	0.68118	1.30485	1.68709	2.02619	2.43145	2.71541	3.32563
38	0.68100	1.30423	1.68595	2.02439	2.42857	2.71156	3.31903
39	0.68083	1.30364	1.68488	2.02269	2.42584	2.70791	3.31279
40	0.68067	1.30308	1.68385	2.02108	2.42326	2.70446	3.30688

Percentage Points of the t Distribution

Pr df	0.25	0.10	0.05	0.025	0.01	0.005	0.001
	0.50	0.20	0.10	0.050	0.02	0.010	0.002
41	0.68052	1.30254	1.68288	2.01954	2.42080	2.70118	3.30127
42	0.68038	1.30204	1.68195	2.01808	2.41847	2.69807	3.29595
43	0.68024	1.30155	1.68107	2.01669	2.41625	2.69510	3.29089
44	0.68011	1.30109	1.68023	2.01537	2.41413	2.69228	3.28607
45	0.67998	1.30065	1.67943	2.01410	2.41212	2.68959	3.28148
46	0.67986	1.30023	1.67866	2.01290	2.41019	2.68701	3.27710
47	0.67975	1.29982	1.67793	2.01174	2.40835	2.68456	3.27291
48	0.67964	1.29944	1.67722	2.01063	2.40658	2.68220	3.26891
49	0.67953	1.29907	1.67655	2.00958	2.40489	2.67995	3.26508
50	0.67943	1.29871	1.67591	2.00856	2.40327	2.67779	3.26141
51	0.67933	1.29837	1.67528	2.00758	2.40172	2.67572	3.25789
52	0.67924	1.29805	1.67469	2.00665	2.40022	2.67373	3.25451
53	0.67915	1.29773	1.67412	2.00575	2.39879	2.67182	3.25127
54	0.67906	1.29743	1.67356	2.00488	2.39741	2.66998	3.24815
55	0.67898	1.29713	1.67303	2.00404	2.39608	2.66822	3.24515
56	0.67890	1.29685	1.67252	2.00324	2.39480	2.66651	3.24226
57	0.67882	1.29658	1.67203	2.00247	2.39357	2.66487	3.23948
58	0.67874	1.29632	1.67155	2.00172	2.39238	2.66329	3.23680
59	0.67867	1.29607	1.67109	2.00100	2.39123	2.66176	3.23421
60	0.67860	1.29582	1.67065	2.00030	2.39012	2.66028	3.23171
61	0.67853	1.29558	1.67022	1.99962	2.38905	2.65886	3.22930
62	0.67847	1.29536	1.66980	1.99897	2.38801	2.65748	3.22696
63	0.67840	1.29513	1.66940	1.99834	2.38701	2.65615	3.22471
64	0.67834	1.29492	1.66901	1.99773	2.38604	2.65485	3.22253
65	0.67828	1.29471	1.66864	1.99714	2.38510	2.65360	3.22041
66	0.67823	1.29451	1.66827	1.99656	2.38419	2.65239	3.21837
67	0.67817	1.29432	1.66792	1.99601	2.38330	2.65122	3.21639
68	0.67811	1.29413	1.66757	1.99547	2.38245	2.65008	3.21446
69	0.67806	1.29394	1.66724	1.99495	2.38161	2.64898	3.21260
70	0.67801	1.29376	1.66691	1.99444	2.38081	2.64790	3.21079
71	0.67796	1.29359	1.66660	1.99394	2.38002	2.64686	3.20903
72	0.67791	1.29342	1.66629	1.99346	2.37926	2.64585	3.20733
73	0.67787	1.29326	1.66600	1.99300	2.37852	2.64487	3.20567
74	0.67782	1.29310	1.66571	1.99254	2.37780	2.64391	3.20406
75	0.67778	1.29294	1.66543	1.99210	2.37710	2.64298	3.20249
76	0.67773	1.29279	1.66515	1.99167	2.37642	2.64208	3.20096

77	0.67769	1.29264	1.66488	1.99125	2.37576	2.64120	3.19948
78	0.67765	1.29250	1.66462	1.99085	2.37511	2.64034	3.19804
79	0.67761	1.29236	1.66437	1.99045	2.37448	2.63950	3.19663
80	0.67757	1.29222	1.66412	1.99006	2.37387	2.63869	3.19526
∞							

Appendix 10

Photo of Research



