



**THE EFFECT OF GRAMMAR TRANSLATION METHOD
ON STUDENTS' READING COMPREHENSION
AT GRADE VIII MTS S NURUL HUDA RANTAU CEMPEDAK
LABUHANBATU SELATAN**

A THESIS

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

Written By:

**ADE IRMA SURYANI
Reg. Number. 13 340 0076**

**ENGLISH EDUCATIONAL DEPARTEMENT
TARBIYAH AND TEACHER TRAINING FACULTY
THE STATE INSTITUTE FOR ISLAMIC STUDIES
PADANGSIDIMPUAN**

2017



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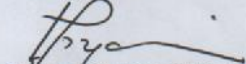
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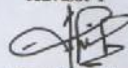
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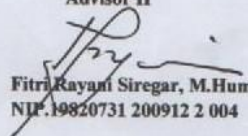
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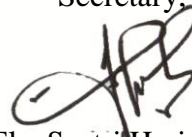
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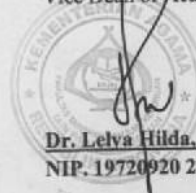
LEGALIZATION

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ABSTRACT

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This research is about the reading comprehension by using Grammar Translation Method (GTM). The researcher finds that: 1) the students are difficult in comprehending the contents of descriptive text; 2) the students are easy to get bored of reading descriptive text; 3) the students are difficult to distinguish between identification and description of the generic structure in descriptive text; 4) teacher's method in teaching reading descriptive text ability appropriate to teach descriptive text; and 5) the students only use dictionary when they are taught reading comprehension. The aim of the research is to find out the significant of Grammar Translation Method on students' reading comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan.

The approach uses in this research is experimental research which population of this research are 145 students. Then, the sample of research are 61 students, by dividing to be two classes, one class is experimental research class and the other is control class, experimental class in class VIII-1 consists of 30 and control class in class VIII-5 consists of 31 students as sample. In collecting the data, the researcher uses the multiple choice test as instrument of the research the tests are 20 tests either for pre-test and post- test. To analyze data, the researcher uses parametric with t-test formula.

After the data analyzed, the researcher finds there are the different of mean score before and after using Grammar Translation Method (GTM). Mean score of experimental class before using Grammar Translation Method that is 59.34 and mean score after using Grammar Translation Method is 87.84. The result of using Grammar Translation Method (GTM) on students' reading comprehension is $7.926 > 1.671$ with t_0 was higher than t_t . It means H_a was accepted and H_0 was rejected. So, there is a significant effect of Grammar Translation Method (GTM) on students' reading comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan.

Key words: Grammar translation method (GTM), Reading comprehension, and student.

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The Researcher

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CHAPTER I

INTRODUCTION

A. Background of the Problem

Language is one of the most important things in communication and it is used as a tool of communication among the nations in all over the world as an International language and to communicate and interact with one another. Language is a medium of communication. This helps the members of a community in the society, to communicate and interact with one another. This involves both verbal and non verbal communication.

Indonesia uses English is a foreign language. English is taught as foreign language in elementary school, junior high school, senior high school, senior high schools and university. There are four skills that must be mastered, namely: reading, speaking, listening and writing. Reading and listening are called receptive skill, while speaking and writing are called productive skills. Reading is one of the four language skill that was used to grasp the ideas that presented to get the information, reading is important to be learned and mastered by human. Reading is a way to get information from something that was written, reading is an interaction between readers and text, reading holds important matter in teaching English.

Further the minister of national education regulation (PERMENDIKNAS)¹ states also about the curriculum in Indonesian. Based on the minister of national education regulation (PERMENDIKNAS) number 24 year 2006: there a number of components covered in school-based curriculum (KTSP), such as: (1) the objectives of education institution, (2) the structure and content of school-based curriculum (KTSP), and (3) academic calendar. Basically the 2006 curriculum (KTSP) is developed from standard of

¹Peraturan Pemerintah Pendidikan Nasional, “Sistem Pendidikan Nasional” (<https://psmk.permendiknas.go.id> accesses at February 11th, 2016 retrieved on 09.00 pm).

content by schools on their context and potentiality. Thus, each school has a different way in performing KTSP. The KTSP of one school should not be the same as other schools even if it has the same study program because each school has different characteristics. English as states in standard of content is learned at elementary two hours in a week (as local content for classes IV,V, and VI) at junior and senior high schools four hours in a week except for language program in SMA-five hours in a week.

Based on above the curriculum in Indonesian, it can be concluded 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 the school about listening, speaking, reading and writing. All English lessons are set in syllabus.

Syllabus is setting the stage for course development and management. Syllabus describes the major elements that will be used in planning a language course and provides the basis for its instructional focus and content.² In the second year students of junior high school is English learning reading that students expected to be able to reading some methods in reading namely reading method, Audio-lingual Method, Structural Method and Grammar Translation Method.

Reading is learned from elementary school until University. Reading is the process of cognition, interpretation and perception of a written or printed material. With reading, the readers can explore new things, improve their self, can add their vocabulary, increase focus

²Jack C. Richard, *Curriculum Development in Language Teaching*, (Amerika: The Press Syndicate of the University of Cambridge, 2001), p.152.

and concentration, increase memory quality, and increase social contact³. These important are explained in the following paragraphs.

The first, readers can explore new things. Through reading they can explore new information, such as their hobbies, knowledge and advice. It means, reader can get much information through exploring new information to improve their hobbies, knowledge and advice.

The second, reader can improve their self, reading is an important language skill either for academic purpose or daily life demands. Students found information which were presented in written form every day and almost everywhere in the world, which demanded students to read them in order to fulfill their needs, besides, reading in educational settings is the commonest way of learning beside listening, practicing and other ways modeled by the scientist of education. The following illustration will present some significance of reading for students' life.

The third, reader can add their vocabulary. With the reading they get explain about everything and add their vocabulary that they can use in their daily activity. So, can help for delivering their idea goodly and add self- confidence when speak.

The fourth, reader can increase their social contact. With reading can influence the life aspect of human being, which they can know about characteristics and cultures of society. So if one day, they visit other place or state, they can respect the cultures.

The last, reader can increase their memory quality. With reading, can help their brain in memorize, such as character, background, ambition, history and plot of the story.

³Geoffrey Broughton, Christopher Brumfit, Roger Flavell, Peter Hill and Anita Pincas, *Teaching English as a Foreign Language*, (London: University of London Institute of Education, 1980), p. 89.

With reading can help train their brain maximally than just watching television or listening radio.

Descriptive text is a written English text in which the researcher describes an object. Reading descriptive text is reading a text which says what a persons or a things is like. Reading descriptive text has a significant role in learning language process.⁴So, the researcher concluded above, descriptive text is description about things, that thing is interesting. Descriptive text has many ideas or topic will be described.

Based on the interview with an English teacher⁵ in MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan, he said that there were some problems on reading descriptive text. First, the students were difficult in comprehending the contents of descriptive text. It means, they often have difficulties when the teacher asked them to comprehend the contents of descriptive text, because usually most of students just read the text, there is no wish to comprehend contents about descriptive text.

Second, most students were less vocabularies, as a result they did not know the meaning of sentence, and they could did reach idea for what they had read. So if the teacher explained about lesson or gave them the task to translate, they did not understand because they did not know the meaning what the teacher said and did not know the meaning of the text of the task.

Third, they often have difficulties to distinguish between identification and description of the generic structure in descriptive text. They don't know how to memorize what the different whereas there are some methods that can be used by learners to memorize or comprehend about descriptive text.

⁴Sanggam Siahaan and Kisno Shinoda, *Generic Text Structure*, (Yogyakarta: Graha Ilmu, 2008), p. 89.

⁵Abdus Syukur of English Teacher MTS s Nurul Huda Rantau Cempedak, *Private Interview*, recorded on November 15th, 2017 in MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan.

Fourth, more students were passive in the class, it caused the strategy of teaching was not suitable. The teachers taught reading comprehension by translating the text. Therefore, the students opened the dictionary when they wanted to find out the main idea of the reading text.

The last, interview with Azizah⁶, she said that English teacher did not have suitable method to teach descriptive text and the teacher just asked students to memorize back about descriptive text. Besides that, the students learned descriptive text is only by them self while learning from their books or outside of the classroom.

There were some strategies, methods or approaches that can be concluded in reading descriptive text, such us scanning, Grammar Translation Method (GTM), semantic mapping, guessing and skimming. Scanning is searching specific information without reading; Grammar Translation Method (GTM) This method is used for the purpose of helping students to read and appreciate foreign language literature; semantic mapping is can easily be overwhelmed by a long string of ideas or events; guessing is which they fill gaps in their competence by intelligent attempts; skimming is consist of quickly running one's eyes across a whole text (an essay, article, or chapter, for example) to get the gist.⁷ Skimming is handy for people who need to hunt information for print, this include reading a newspaper as well as doing research in a library.

From above approaches, strategies or method, the research chose GTM as the effective way to make easy in comprehending the variety types of text. A Larsen-Freeman states that, provides some common/typical techniques closely associated with the grammar

⁶Azizah of Student MTS s Nurul Huda Rantau Cempedak, *Interview*, Wednesday, 16th November 2017, 10.00 am.

⁷H. Doghlas, Brown, *Teaching by Principles an Interactive Approach to Language Pedagogy*, (San Francisco State University: Practice Hall Regents, 1994), p. 293-295.

translation method refers to teach the reading comprehension. They are translation of a literary passage (translating target language to native language), reading comprehension questions (finding information in a passage, making inferences and relating to personal experience), antonyms/synonyms (finding antonyms and synonyms for words or sets of words) cognates (learning spelling/sound pattern that correspond between L1 and the target language), deductive application of rule (understanding grammar rules and their exceptions, then applying them to new examples), fill-in-the-blanks (filling in gaps in sentences with new words or items of a particular grammar type), memorization (memorizing vocabulary lists, grammatical rules and grammatical paradigms), use words in sentences (students create sentences to illustrate they know the meaning and use of new words) and composition (students write about a topic using the target language).⁸ This method is students able to read literature written in the target language. To do this, students need to learn about the grammar and vocabulary of the target language.

Next Ishraq M Aqel, *Teaching Reading Comprehension through Grammar Translation Method*, said that: teaching Grammar Translation Method instructions demonstrate positive outcomes of teaching grammar on reading recall or comprehension.⁹ This approach will strengthen their cooperation because it will be necessary for them to make a good communicative competence in comprehending the texts. As result, students can read descriptive text well.

There are some reasons why the researcher chose this approach. After using Grammar Translation Method (GTM) on the result of the researcher. First, the students are

⁸Freeman Larsen Diane, *Techniques and Principles in Language Teaching*....p.19-20.

⁹M. Aqel Ishraq, *Teaching Reading Comprehension through Grammar Translation Method*, accessed on <http://www.aessweb.com/journal.detail.php?id>, retrieved on April, 03rd 2017, 09.00 pm.

able to read literature (descriptive text) written in foreign language, the students are able to translate each language into the other, the students are able to learn about the form of the target language, they would think how to describe the things to make their friends get what they mean. Second, they are known grammatical rule in the text if they are read the text and verb conjugations and other grammatical paradigm should be committed to memory. Three, the students should be conscious of the grammatical rules of the target language. Finally, this approach would strengthen their cooperation because it would be necessary for them to make a good competence in reading comprehend of the text.

The finding that has proved that this method is good for reading comprehension has been done by Dewa¹⁰ in English Education Study Program, her research was about “teaching reading comprehension through grammar translation method, she say that “GTM have the effect on students’ reading comprehension, this method used for the purpose of helping students to read and appreciate foreign language literature. It is hoped that through the study of the grammar from the target language, students will become more familiar with the target language grammar and will help them speak and write in target language better”. Thus, based on this explanation, the researcher was interest to do this research.

B. Identification of the Problems

Based on above background of the problems, there are some problems in students’ reading comprehension at grade VIII MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan:

1. The students are difficult in comprehending the contents of descriptive text.

¹⁰Dewa Made Juliarta, *Teaching Reading Comprehension through Grammar Translation Method at the VII Grade Students’ of SMP Widya Suara Sukawati in Academic Year 2103/2014*, English education study program, Faculty of Teacher Training and Education Mahasarawati Denpasar University, www.ijlass.org accessed at August 18th 2017 retrieved on 09.00 pm.

2. The students are fewer vocabularies.
3. The students are lack about the grammar rules.
4. The students are difficult distinguish between identification and description of the generic structure in descriptive text.
5. The students are passive in the class.
6. Teacher's method in teaching reading descriptive text comprehension is English teacher does not method to teach descriptive text.

C. Limitation of the Problem

Based on above identification of problem, this research is limited to difficulties of the students in comprehending the text and inappropriate method to teach ready, it is by using GTM. Moreover, it is to finds out the effect of grammar translation on students' reading comprehension; it is to reads descriptive text.

D. Formulation of the Problems

The formulations of the problems in this research are:

1. How is the students' reading descriptive text comprehension without using Grammar Translation Method (GTM) at grade VIII MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan?
2. How is the students' reading descriptive text comprehension after using Grammar Translation Method (GTM) at grade VIII MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan?
3. Is here any significant effect of using Grammar Translation Method (GTM) on students' reading descriptive text comprehension at grade VIII MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan?

E. Purposes of the Research

From above formulation of the problems above, the purposes of this research are:

1. To describe the students' reading descriptive text comprehension without using Grammar Translation Method (GTM) at grade VIII MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan.
2. To describe the students' reading descriptive text comprehension after using Grammar Translation Method (GTM) at grade VIII MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan.
3. To examine whether there is or there is not any significant effect of using Grammar Translation Method (GTM) on students' reading descriptive text comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan.

F. Significances of the Research

The significances of the research are:

1. This research can be use as source of teaching reading skill and as an input to the teacher in teaching and learning process through the effect of grammar translation method techniques on students' reading comprehension. It will give information about students reading comprehension to teacher.
2. For the English teachers, to give information or their source in teaching descriptive text. This research is also to add her method in teaching English text or descriptive text and motivate the teacher to increase her professionalism in teaching learning process.
3. This research will be useful for the future researcher as references and standing point for studying the other subject.

G. Definition of the Operation Variables

The avoiding ambiguity, this research is consists of two variables, so that following were definitions of variables:

1. Grammar Translation Method (GTM)

Grammar Translation Method is a method of foreign or second language teaching which uses translation and grammar study as the main teaching and learning activities.

2. Students' Reading Descriptive Text Comprehension

Reading descriptive text comprehension is the students' comprehension in comprehending the texts and Identification and description are the generic structure of descriptive text.

H. The Systematic of the Thesis

The systematic of this research is divides into five Chapters. Each chapter has of one sub chapters with details as follow: First chapter, it consists of background of the problems, identification of the problems, limitation of the problems, formulation of the problems, the purposes of the problems, the significances of the research, and definition operational variables.

Second chapter, it contains of the theoretical description. It is divides into subchapters which consist of description of Grammar Translation Method (GTM) and description of students' reading descriptive text comprehension. Second chapter also consisted of related findings, conceptual framework, and hypotheses.

Third chapter, it is consists of research methodology which is divides into sub chapter; time and place of the research, research design, population and sample,

instrument of research, the procedure of data collection and the technique of analyzing data and outline of the theses.

Fourth chapter, it is consists of data description, hypothesis testing, discussion and the threats of research.

Finally, fifth chapter, it is consists of conclusion about the result of this research and suggestions that were given by the researcher.

CHAPTER II

THEORITICALDESCRIPTION

A. Theoretical Description

1. Grammar Translation Method (GTM)

a. Background of Grammar Translation Method (GTM)

The GTM or also the classical Method is first uses in the teaching of the classical languages, that is method is based on the idea that the quickest way to learn a foreign language through the understanding of grammar and the use of the native language an explaining.

The GTM¹ ignores authentic spoken communication and social contexts of the language. It was also hoped that, through the study of grammar of the target language, students would become familiar with the grammar of their native language. The fundamental purpose people learned a foreign language was to be able to read literature that was written in the foreign language so that the students were provided with exercises to read and write in the foreign language. The GTM was widely used in the USA in 1980's. It was also called the classical Method since it was first used in the teaching of classical languages Latin and Greek.

¹ Bambang Setiyadi, *Teaching English as a Foreign Language*, (Graha Ilmu: Yogyakarta, 2006), p. 31.

A grammar translation method² is one of the most effective methods that focused on reading and translating the sentences which demonstrates grammatical rules to acquire English as second language. Grammar translation Method dominated European and foreign language teaching from the 1840s to the 1940s, and in modified form it continues to be widely used in some parts of the world today.

From explanation about, the researcher concludes that the background of GTM. The GTM or also the classical Method is first uses in the teaching of the classical languages, that is method is based on the idea that the quickest way to learn a foreign language through the understanding of grammar and the use of the native language an explaining.

b. The nature of GTM

Grammar : **Grammar** is taught prescriptively-trough the presentation and study of rules or rules for forming words and making sentences.

Translation : Practice is provided through **translation** exercises from the mother tongue to the target language and vice versa.

²Freeman-Larsen Diane, *Techniques and Principles in language teaching*, (Oxford University Press: 2000), p.11.

Method : **Method** is way of doing or quality of being well planned and organized. A distinctive feature of this method is its focus on translating the sentence.³

Grammar Translation Method is “a method of foreign or second language teaching which makes use of translation and grammar study as the main teaching and learning activities”.⁴ So, from explanation about definition GTM, the researcher concluded is GTM focuses on sentence structure, grammar, vocabulary and direct translation of the native language to English so the students will read the text descriptive while certain structure, grammar, vocabulary and translation the text.

c. Principles of GTM

There are some principles in GTM strategy that must applied in teaching reading, or in process of reading. Bambang Setiyadi⁵ explains that:

- 1) Grammar rules are presented and studied explicitly. Grammar is taught deductively and then practiced through translation exercise.
- 2) The primary skills to be developed are reading and writing.
- 3) Hardly any attention is paid to speaking and listening skills.
- 4) Teacher correction is the only way to make students produce the right forms of the foreign language.
- 5) The goal of foreign language learning is the ability to understand the texts written in the foreign language.
- 6) Mastering the grammar of the foreign language is essential in order for students to understand the written target language.

³International Journal of Asian Social Science “*the expert in GTM*” Accessed on <http://www.aessweb.com>, retrieved on April, 16th 2017 on 08.00 pm.

⁴Richards, J.C, Schmidt. R., *Longman Dictionary of Language Teaching and Applied Linguistics*, (Limited: Person Education, 2002), p. 231.

⁵Setiyadi, Ag. Bambang , *Teaching English as...*, p.50.

- 7) Vocabulary is learnt from bilingual word lists.
- 8) The mother tongue is used as the medium of instruction.
- 9) A paramount use of translation exercises is given.

In additional, Diane Larsen-Freeman⁶ also states that some Principles of GTM; The students are able to read literature written in foreign language; at the school the teacher ask the students to read literature, like Novel, poetry, legend, etc. which one they like, The students are able to translate each language into the other; after the students choose one of the literatures and read which one they like, they translate it each own language from source language to target language, The primary skills to be developed are reading and writing especially on literature that they choose.

The teacher is the authority in the classroom; next, after the students developed their primary skills, the teacher guide them, which one is wrong and which one is true then the teacher explain it is again, It is important for students to learn about the form of the target language; after that, the students learn about structure and grammar in the literary they read, Language learning provides good mental exercise; students determine and write in the book the form grammar, Students should be conscious of the grammatical rules of the target language, Wherever possible, verb conjugations and other grammatical paradigm should be committed to memory.

⁶Ibid, p. 102.

From explanation about, the researcher concludes that the GTM-Method had some principles, the GTM on translating grammatical forms, memorizing vocabulary, learning rules, and studying conjugations, than the research concluded in GTM the teacher is the authority in the classroom. It is very important that the students get the correct answer, students should be conscious of the grammatical rules of the target language.

d. Characteristics of the GTM

There are some characteristics in GTM strategy that must be applied in teaching reading or in process of reading.

Larsen-Freeman⁷ explains that, the characteristics of the GTM, as follows:

- 1) Classes are taught in the mother tongue, with little active use of the target language.
- 2) Much vocabulary is taught in the form of list of isolated words.
- 3) Long elaborate explanations of the intricacies of grammar are given.
- 4) Grammar provides the rules for putting words together, and instruction often focuses on the form and inflection of words,
- 5) Reading of difficult classical texts is begun early.
- 6) Little attention is paid to the content of texts, which are treated as exercise in grammatical analysis.

⁷Freeman-Larsen Diane, *Techniques and Principles*.....p. 36.

- 7) Often the only drills are exercise in translating disconnected sentences from the target into the mother tongue.
- 8) Little or no attention is given to pronunciation.
- 9) The focus is on accuracy, and not fluency.

The characteristics mentioned above are not a set of procedures of the GTM. Language teachers may develop their own procedures as long as they are in accordance with the characteristics of the GTM. Next, Pator and Calce-Murcia⁸ listed the major characteristics of Grammar Translation Method, explained that:

- 1) Classes are taught in the mother tongue, with little active use of the target language.
- 2) Much vocabulary is taught in the form of lists of isolated words.
- 3) Long elaborate explanations of the intricacies of grammar are given.
- 4) Grammar provides the rules for putting words together, and instruction often focused on the form and inflection of words.
- 5) Reading of difficult classical texts is begun early.
- 6) Little attention is paid to the content of texts, which are treated as exercise in grammatical analysis.
- 7) Often the only drills are exercise in translating disconnected sentences from the target language into the mother tongue.
- 8) Little or no attention is given to pronunciation.

From the explanation above, researcher concluded that the characteristics of Grammar Translation Method (GTM) in teaching reading consist of eight characteristics. It is ironic that this method has until very recently been so stalwart among many competing models. GTM from what

⁸Brown Douglas, *Teaching by Principles an Interactive Approach to Language Pedagogy*, (America: Hall Regents, 1994), p.53.

had gone on in foreign language classrooms for centuries beyond a focus on grammatical rules as the basis for translating from the second to the native language. The students easy to study reading if the teachers teach them use techniques grammar translation method (GTM).

e. GTM Procedures

There are some steps in GTM technique that must be applied in teaching reading to comprehend or in process of reading. Larsen-Freeman explains that:

- 1) The class reads a text written in the target language.
- 2) Students translate the passage from the target language to their mother tongue.
- 3) The teacher asks students in their native language if they have any questions, students ask question and the teacher answers the questions in their native speaker.
- 4) Students write out the answers to reading comprehension questions.
- 5) Students translate new words from the target language to their mother tongue.
- 6) Students are given a grammar rule and based on the example they apply the rule by using the new words.
- 7) Students memorize vocabulary.
- 8) The teacher asks students to state the grammar rule.
- 9) Students memorize the rule.
- 10) Errors are corrected by providing the right answers

From the explanation above, researcher concluded that the application of GTM in teaching reading has some steps. So, that is the application of GTM strategy in teaching reading that researcher might use when he taught reading in the school MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan. GTM technique was the theory that used in this research.

f. The techniques of GTM

There are some techniques in GTM strategy that must be applied in teaching reading, or in process of reading, Diane Larsen-Freeman says that:

- 1) Translation of literary passages, students translate a reading passage from the target language into their native language. The reading passage then provides that focus for several classes; vocabulary and grammatical structures in the passage are studied in subsequent lessons. The passage may be excerpted from some work from the target language literature, or a teacher may write a passage carefully designed to include particular grammar rules and vocabulary. The translation may be written or spoken or both. Students should not translate idioms and the like literally, but rather in a way that shows that they understand their meaning.
- 2) Reading comprehension question, students answer question in the target language based on their understanding of the reading passage. Often the questions are sequenced so that the first group of question asks for information contained within the reading passage. In order to answer the second group of questions, students will have to make inferences based on their understanding of the passage. This means they will have to answer passage itself. The third group of questions required students to relate the passage to the passage to their own experiences.
- 3) Antonyms/synonyms, students to find synonyms are given one set of words and are asked to find antonyms in the reading passage. A similar exercise could be done by asking students to find synonyms for a particular set of words. Or students might be asked to define a set of words based on their understanding of them as they occur in the reading passage. Other exercises that ask students to work with the vocabulary of the passage are also possible.
- 4) Cognates, students are taught to recognize cognates by learning the spelling or sound patters that correspond between the languages. Students are also asked to memorize words that look like cognates but have meanings in the target language that are different from those in the native language. This technique, of course, would only be useful in languages that share cognates.

- 5) Fill in the blanks, students are given a series of sentences with words missing, they fill in the blanks with new vocabulary items of a particular grammar type, such as prepositions or verbs with different tenses.
- 6) Memorization, students are given lists of target language vocabulary words and their native language equivalents and are asked to memorize them. Students are also required to memorize grammatical rules and grammatical paradigms such as verb conjugations.
- 7) Use words in sentences, in order to show that students understand the meaning and use of a new vocabulary items, they up sentences in which they use the new words.
- 8) Composition, the teacher gives the students a topic to write about in the target language, the topic is based upon some aspect of the reading passage of the lesson. Sometimes, instead of creating composition, students are asked to prepare a précis of the reading passage.⁹

From the explanation above, researcher concluded that the application of GTM in teaching reading consist of eight techniques, they are: Translation of literary passages, Reading comprehension question, Antonyms/synonyms, Cognates, Fill in the blanks, Memorization, use words in sentences and Composition. So, that is the application of GTM techniques in teaching reading that researcher might use why she taught reading in the school MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan. Grammar Translation Method techniques was the theory that used in this research.

⁹Freeman-Larsen Diane, *Techniques and Principles and Language Teaching*, (Second Edition).....p.19-20.

2. Conventional Method

Conventional Method is the teaching or the way that usually used by the teachers to teach the text to students. Hudson states that, that conventional method the strategy used by the teacher based on mutual agreement in a school.¹⁰ Student taught by instructing student to translate text, read text by themselves, and the least student answer exercise from teacher. The researcher interview with Azizah¹¹, she said that, the teacher did not use method to teach reading for student, the teacher read the text and explained about the lesson or gave them the task to translate, so they did not know the meaning what the teacher said and did not know the meaning of the task.

So researcher concludes conventional method is a method usually used by teacher to teach the text to students or may method used to teach learning materials based on the agreeing in the school by teacher. It means, the teacher more active than the students and still less using media when learning teaching process.

3. Reading Comprehension

a. The concept of Reading Comprehension

Reading is a receptive skill, it is transactional between a reader and writer, reading is an interactive process between a reader and the text. As a

¹⁰Hudson, *The meaning of Conventional Strategy*, (<http://www.conventional-strategy/topic/54372-strategy>), retrieved on 3rd March, 2017 at 08.00 p.m.

¹¹Azizah Student at MTs S Nurul Huda Rantau Cempedak, *Private Interview*, on 2 March, 2017.

result a writer can communicate with a reader through a text, and also reading is an interactive process between the reader and text. An interactive process happens when reader try to understand the text, while understanding the text, the readers want to communicate with ideas proposed by the writers. Therefore, Reading is the process of communication between the readers and the writers.

David Nunan¹² states that “reading is a fluent process of readers combining information from a text and their own background knowledge to build meaning”. Furthermore Douglas Brown¹³ States that “Reading is a process negotiating meaning; the reader brings to the text a set of schemata for understanding it, and it is take the product of that interaction”. Based above definition, reading is an interactive activity for talking or comprehension the message or meaning of the text.

Actually reading a textbook¹⁴ is how reader can build a complete comprehension base on many words structurally in a text. And also the process must be routine to enrich our comprehension what the text tell about. Next, Reading is the readers’ activities to get meaning or message from an author. An author all the meaning or message to reader in printed or

¹²David Nunan, *Practical English Language Teaching*, (New York: McGraw Hill, 2003), p.68.

¹³H. Douglas Brown, *Language Assessment, Principles and Classroom Practices*, (Logman: Priyanvada Abeywickrama, 2010), p. 189.

¹⁴Henry Guntur Tarigan, *Membaca Sebagai Sebuah Keterampilan Berbahasa*, (Bandung: Angkasa, 2005), p. 6.

written material. A process where an author combine words in a unity that has meaning. If an author cannot build a complex meaning in a text, they reader will not understand what text tell about.

Further, Larsen-Freeman states:

Reading is worked on from the beginning but follows from what language learners already know. After language learners can produce sounds in the target language and connect the sounds with the truth, they begin to read symbols in the target language. This process can begin after the first class and language teacher does not have to delay it.¹⁵

So, students have to reading to recognize the linguistics that related with interpretation of mathematical symbols, codes, and other symbolic systems. Then, students have to comprehend simple definition and communication and sharing information and ideas.

For most of these learners, it is the most important skill to master in order to ensure success not only in learning English but also in learning in any content class where reading English is required. With strengthened reading skills, learners will make greater progress and development in all areas of learning. Therefore, reading is a fluent process of reader combining information from a text or passage and their own background knowledge in bringing meaning to and getting meaning from printed or written material.

Finally, reading is the process of cognition, interpretation and reception of a written or printed material. Reading is fluent process of readers

¹⁵ Ag. Bambang Setiyadi, *Teaching English as a Foreign Language*, (Yogyakarta: Graha Ilmu, 2006), p. 80.

combining information from a text and their own background knowledge to build meaning. So, reading is an interactive process that happens in human minds to reconstruct the meaning for what they have read.

Description is a written English text in which the writer describes an object. In this text, the object can be a concrete or abstract object. It can be person, or an animal, or a tree, or a house, or a camping. It can be about any topic.¹⁶ Description gives sense impressions; the feel, sounds, taste, smells and look of things. Emotion may be described too, feeling such as happiness, fear, loneliness, gloom, and enjoy.

A good description is a word picture; the reader can imagine the object, place, or a person in his or her mind. It tells the reader how something looks, feels, smells, tastes and sounds.¹⁷ A good description requires careful observation and organization. Based on the definition of descriptive text, researcher concludes that descriptive text is about information on objects themselves, such as people, things, animals, landscapes and so forth. It can be concluded that reading had two aspects. The first, consist of recognition of letter or linguistics and pronunciation. So, students had to recognize the linguistics that related with word, phrase, and sentences. Second, consist of comprehension skill.

¹⁶Sanggam Siahaan and Kisno Shinoda, *Generic Text Structure*, (Yogyakarta: Graha Ilmu, 2008), p. 89.

¹⁷ Alice Oshima and Ann Hogue, *Introduction to Academic Writing, third edition*, (USA: CV.Lia Pearson Logman, 2001), p. 61.

Richard states that “Comprehension is the process by which a person understanding the meaning of written or spoken language clearly”.¹⁸ In addition, comprehension is the ability to understand the meaning from the writer or spoken language. While, according to Oxford’s Dictionary “comprehension is the power of understand”.¹⁹Next, according to Oxford Learner’s Pocket²⁰ Dictionary “Comprehension is ability to understand exercise that trains students to understand a language”.

Further, Webster’s Dictionary “comprehension is the act of grasping with the mind, understanding or knowledge, the capacity for understanding ideas, facts”.²¹ So, comprehension understands of written or spoken. In additional, Donalt states that²² “comprehension is activities that students require to demonstrate an understanding of the material through some type of manipulation or alternation of the material before answering a question. The comprehension or understanding may be evidenced by oral, writing, pictorial, or concrete presentation”.

Thus, it can be concluded that comprehension is improving or testing to understand of language (written and spoken) and comprehension is needed

¹⁸Richard A. Renandya, *Language Teaching Methodology*, (Cambridge University, 2006), p. 54.

¹⁹ A.S Homby, *Oxford Advanced Learner’s Dictionary of Current English*, (London: Casel, 2000), p.235.

²⁰Bull Victoria, *Oxford Learner’s Pocket Dictionary*,(New York: 2012), p. 86.

²¹Victoria Newfeldt, *Webster’s New World College Dictionary* (USA: Macmillan, 1991), p. 286.

²²Donalt C. Orlict., *Strategies Acquired to better Instruction*, (Bandung: Aksara, 2008), p. 65.

on reading and listening and comprehension is essential to succeed the reading, for succeeding the comprehending.

Talking about reading comprehension is the ability to understand information presented in written form. Reading comprehension is mental process in which the readers try to understand the meaning in the text by interpreting what have been read in order to find the new idea that given by the writers. And also, “reading comprehension is complex process take part of useful of good and poor ability”.²³ In other word, reading comprehension is ability of the reader to understand the text and comprehend the mean of the text.

In addition, Jeremy Harmer states: “Reading comprehension is not stopping for every word, not analyzing everything that the reader or speaker includes in the text”.²⁴ It means that readers are able to take in a stream of discourse and understand the gist of it without worrying too much about the details, so reading comprehension is the power of understand about reading the text.

Next, reading is one of important skills in learning language besides listening, writing, and speaking. “The main goals of reading are comprehension’.²⁵ People can define reading comprehension as the process of

²³ Golden Wainwright, *Speed Reading Better Recalling*, (Jakarta: Gramedia, 2007), p.42.

²⁴ Jeremy Harmer, *The Practice Of Language Teaching*,(Malaysia: Longman, 2003), p.202.

²⁵ David Nunan, *Practical English Language.....*, p. 68.

simultaneously extracting and constructing meaning through interaction and involvement with written language.

From the explanation above, researcher concluded that in considering the reader, students included all the capacities, abilities, knowledge, and experiences that a person bring to the act of reading. Text is broadly construed to include any printed text or electronic text. In considering activity, students include the purposes, the processes, and consequences associated with the act of reading.

Therefore, a reader can be a good reader if three elements engaged each other. The reader had wide range capacities and abilities. The text could be extract and construct by the reader, and the reader done a related activities. Then, to get comprehension a reader have a wide range capacities and abilities, the reader can extract and construct a meaning from a text and the reading activities have to related each other.

b. The Reading Goals

The main goals of reading are to get and search information include content and meaning of the text. Here some goals of reading such as:

- 1) Reading for identifying important information/for detail or facts.
- 2) Reading for main ideas.
- 3) Reading sequence or organization.
- 4) Reading for finding the specific information.
- 5) Reading for underlining the important information.

- 6) Reading to classify the difficult word.
- 7) Reading to evaluate.
- 8) Reading to compare or contrast²⁶

So, the main goals of reading are to get and find information include content and meaning of the text based on the purpose.

c. The Principal Approaches for Reading

There are some principal in reading, according to Brown²⁷, as

follow:

- 1) Identify your purpose in reading text
- 2) Apply spelling rules and conventions for bottom-up decoding
- 3) Use lexical analysis (prefixes, roots, suffixes, etc.) to determine meaning
- 4) Guess at meaning (of words, idioms, etc.) when you aren't certain
- 5) Skim the text for the gist and for main ideas
- 6) Scan the text for specific information (names, dates, keywords)
- 7) Use silent reading technique for rapid processing
- 8) Use marginal notes, outlines, charts, or semantic maps for understanding and retaining information
- 9) Distinguish between literal and implied meanings
- 10) Use discourse makers (e.g. "in addition", "however", "nevertheless", etc.) to process relationship.

Based on above the principal approaches for reading will give teachers well for through and reflecting as they consider their students become proficient foreign-language readers.

²⁶ Henry Guntur Tarigan, *Membaca Sebagai Suatu Keterampilan Berbahasa*, (Bandung: Angkasa, 2005), p .9.

²⁷H. Douglas Brown, *Language Assessme*,..., p. 228.

d. Reading Evaluation

After teacher gave the lesson to the students, it is necessary to know how far their ability about the lesson, to know their ability teacher must give test to the students, because testing is as tool to measure, there some techniques to make test, one of them is multiple choice question.

Weir states about test multiple choices in communicate language

Testing that:

The test is usually set out in such a way that the candidate is required to select the answer from a number given options, only one of which correct, the marking process is totally objective because the marker is not permitted to exercise judgment when marking the candidate's answer, agreement has already been reached as to the correct answer to each item. Selecting and setting item are, however subjective process and the decision about which is correct answer is a matter of subjective judgment on the part of the item writer.²⁸

Similarly, multiple choices are the candidate provides evidence of successful reading by making a mark against one out of a number of alternatives, the superficial attraction of his technique is out weighed in institutional testing by various problem enumerated. In conclusion, multiple choices are a form of evaluation in which respondents are asked to select the best possible answer out of the choices from list.

Weir lists²⁹ advantage and disadvantage of multiple choice tests, as below:

The advantages of multiple choices:

²⁸Cyrill J. Weir, *Communicate Language Testing* (New York: Prentice Hall, 1990), p. 43.

²⁹Cyrill J. Weir, *Communicate Language*p. 50.

- a. The marking, as being reliable is simple, more rapid and often more cost effective than other forms of written. The formats of the multiple choices test items are such that the intention of the test compiler is clear than candidates know what is required of them.
- b. In multiple-choice tests there is almost complete marker reliability. Candidates' marks, unlike those in subjective formats, cannot be effective by the personal judge of the marker.
- c. In more open-ended formats, example short answer questions, the candidate has to deploy the skill of writing.
- d. Because items can be pre-tested fairly easily, it is usually possible to estimate in advance the difficulty level of each item and that of the test as a whole.

Disadvantages of Multiple choices:

- a. The scores gained in multiple choice tests, as in true-false test, may be suspect because the candidate has guessed all or some of the answers.
- b. There is however a number of problems associated with used of this format.
- c. A further objection to the use of multiple choice formats is the danger of the format having an undue effect on measurement of the trait.
- d. Multiple choice tests take much longer and are more expensive and difficult to prepare than essay test.

Based on above advantages and disadvantages of multiple choices, the students are easy to answer question about the test, the researcher found advantages multiple choice are In multiple-choice tests there is almost complete marker reliability, and disadvantages are Multiple choice tests take much longer and are more expensive and difficult to prepare than essay test.

e. The concepts 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.³⁰This 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.

The function of descriptive text is to describe a particular person, can be describe some quality of the character; place or thing, can be describe of spatial order signals.³¹ It means, the function of descriptive text is to describe everything, so that reader can understand how the things, even though the reader never see or know the things.

f. The Generic Structure of Descriptive Text

Description is a text containing two components i.e., identification and description by which a writer describes a person, or an animal, or a house, or camping is his topic. The identification is to identify the object or phenomenon to be described. The description describes parts, qualities, and characteristics of the parts of the object.³² It means, the generic structure of descriptive text are identification that there is in the first paragraph and descriptions that there are in the second paragraph until the last paragraph.

³⁰John Schacter.*The Master Teacher Series Descriptive Writing*, (New York: 2007), p.4.

³¹Otong Setiawan Djuharie, *Genre dilengkapi 7000 soal Ujian Pemahaman*, (Bandung: CV YramaWidya, 2007), p.25

³²Otong Setiawan Djuharie, *Genre dilengkapi 7000.....*,p. 18

g. Language Features of Descriptive Text

Dominant grammatical aspects of descriptive text are:

- 1) Focus on specific participants
- 2) Use of relating verbs
- 3) Use of descriptive adjectives
- 4) Use of simple present tense.³³

The language features of descriptive text above is not general habits, this is not the rule that must be followed by the writer.

B. Review of Related Findings

There were some related finding in this research, the first is Ismail Elshirbini Abd-Elfatah Elashri³⁴ in his thesis concluded that there was the significant effect, the mean score of pre-test of the experimental group was 62.3 and the mean score of post- test was 73.2. For the control group, the mean score of pre-test 61 and the mean score of the post-test was 65.5. The result of t-test was higher than t-table ($6.954 > 1.665$).

The second, Dewa Made Juliarta³⁵ in her thesis concluded that there was the significant effect, the mean score of pre-test of the experimental group was

³³Otong Setiawan Djuharie, *Genre dilengkapi 7000*p. 21.

³⁴ Ismail Elshirbini Abd-Elfatah Elashri, *The Effect of Genre Based Approach (GBA) to Teaching Writing on the EFL Al-Azhr secondary Student's Writing Skills and their attitudes toward Writing at Mansoura University in Academic Year 2010/2011*, Faculty of Education Department of Mansoura University, accessed on <http://files.eric.ed.gov/fulltext/ED539137.pdf>, retrieved on August 18th 2017 at 09.00 pm.

³⁵ Dewa Made Juliarta, *Teaching Reading Comprehension through Grammar Translation Method at the VII Grade Students' of SMP Widya Suara Sukawati in Academic Year 2103/2014*,

71 and the mean score of post- test was 74.2. For the control group, the mean score of pre-test was 70 and the mean score of the post-test was 73.2. The result of t-test was higher than t-table ($3.04 > 2.75$).

The Three, Nilma³⁶ sari in her thesis concluded that there was the significant effect, the mean score of pre-test of the experimental group was 72.9 and the mean score of post-test was 74.2. For the control group, the mean score of pre-test was 70 and the mean score of post-test was 73.6. The result of t-test was higher than t-table ($3.04 > 2.75$).

The last, Ishraq M. Aqel³⁷ in his thesis concluded that there was the significant effect, the mean score of pre-test of the experimental group was 71.2 and the mean score of post- test was 80.6. For the control group, the mean score of pre-test 70.5 the mean score of the post-test was 66.8. The result of t-test was higher than t-table ($2.14 > 2.021$).

The researcher concluded that the method can improve the students' ability in reading comprehension, so, the researcher believed the thus research can complete and contribute the previous findings that the GTM method can

English education study program, Faculty of Teacher Training and Education Mahasarawati Denpasar University, www.ijlass.org accessed at August 18th 2017 retrieved on 09.00 pm.

³⁶ Nilma Sari, *The Effect of Using Genre Based Language Teaching (GBLT) On Students' Reading Descriptive Text Ability at Grade VIII SMP Negeri 2 Padangsidimpuan in Academic Year 2016/2017*, Padangsidimpuan: Faculty and Teacher Training, IAIN Padangsidimpuan, 2017.

³⁷ Ishraq M. Aqel, *The Effect of using Grammar Translation Method on Acquiring English as a Foreign Language*, Department of English Language and Literature, Faculty of Arts, Mu'tah University, Jordan, <http://www.aessweb.com> accessed at August 18th 2017 retrieved on 09.00 pm.

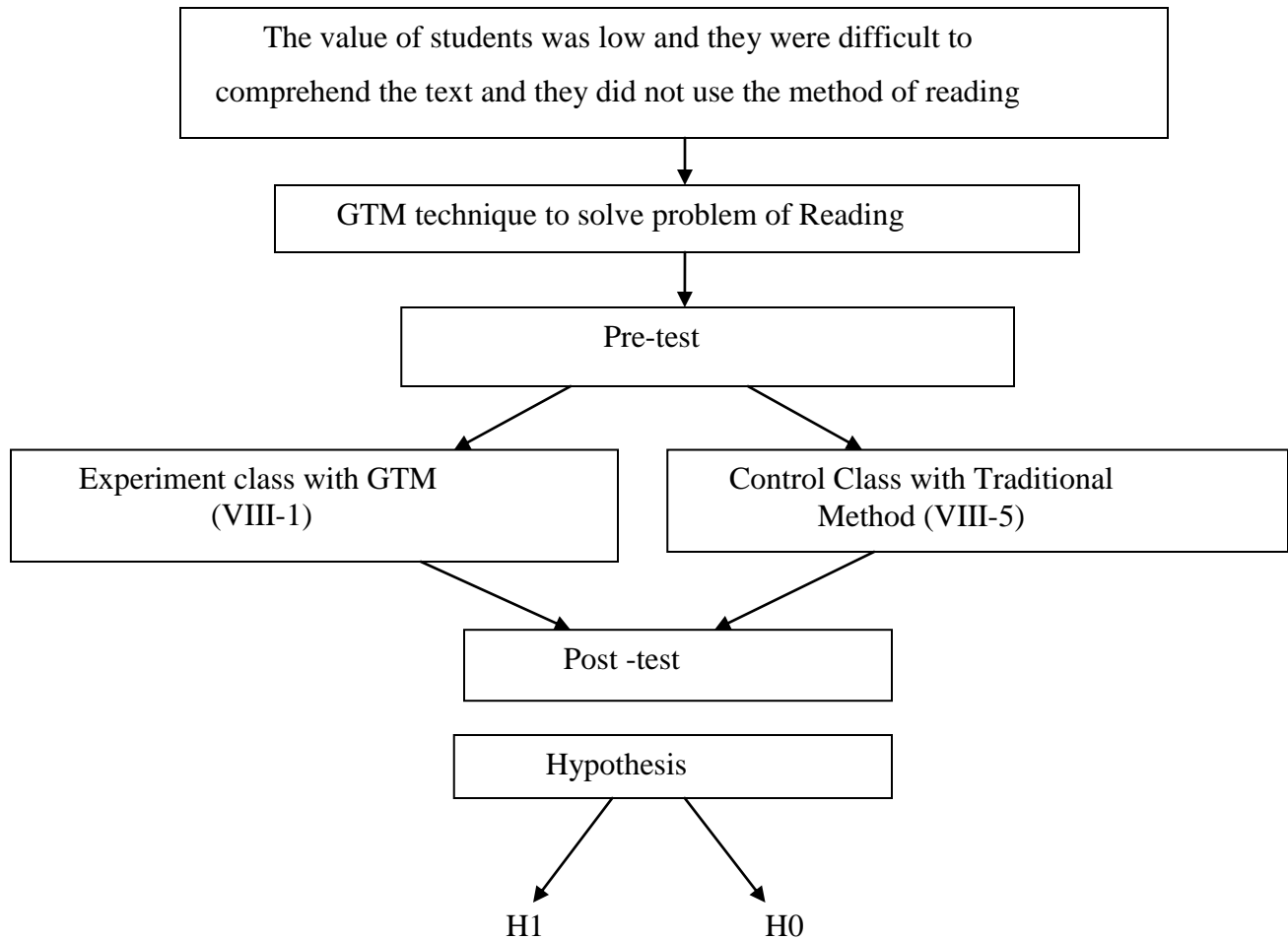
improve the student's ability in reading descriptive text comprehension at Grade VIII MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan.

C. The Conceptual Framework

The successful of reading comprehension depend on many factors. One of them is how the teacher teaches reading to the students. The suitable method is very important to teach reading. Reading comprehension is mental process in which the readers try to understand the meaning in the text by interpreting what have been read in order to find the new idea that given by the writers. The reading can enrich their knowledge and take the knowledge from text to their mind directly.

Therefore, teachers had to use a method when they were teaching reading to their students, especially, when they knew that their students is low in reading comprehension or when they were reading any book, where the method could increase their students ability in reading comprehension, so that their students become understanding the text and the book that they read.

GTM is a method in reading that can increase comprehension of someone when they are reading. This method has influence in reading, especially in reading comprehension. The Effect of GTM technique toward reading comprehension can be seen as picture follow:



Picture 1: The picture about the process of GTM strategy

From the picture above, GTM is a method that was used by teacher in teaching reading to improve students' reading comprehension. The GTM is a method that coherent for teacher and students. Teacher must be mastered the techniques of GTM, that is why, teacher must teach reading by using GTM.

On the other hand, the teacher had to mastered many skills, especially reading including (grammar, vocabulary, pronunciation, punctuation). In addition, students must use GTM strategy in reading to get reading

comprehension and GTM strategy gave the important function in reading comprehension.

Based on description above, using GTM should be seen as suitable method in teaching reading and to develop understanding of students in reading. GTM gave maximum control for teacher to teach reading with large and small classes, to convey the students' interest in reading subject through reading a text and this method can motivation the interest of the students to read English well.

D. Hypothesis

The hypothesis is need to show the researcher thinking and expectation about result to the study. In this research hypothesis is "There is a significant effect of Grammar Translation Method on students' reading comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan".

CHAPTER III

RESERACH METHODOLOGY

A. Place and Schedule of Research

This location of this researcher was at MTS S Nurul Huda Rantau Cempedak Labuhanbatu Selatan. It is at Rantau Cempedak, Labuhanbatu Selatan area. This subject of the research is at the VIII grade of students at MTS S Nurul Huda Rantau Cempedak 2017 academic years. This research had been done from March 2017 until 31 October 2017.

B. Research Design

The kind of this research is quantitative research with experimental method. It means, researcher manipulates at least one independent variable, control other relevant variables, and observes the effect on one or more dependent variables in experimental research. The researcher used two classes in this research. One of the classes was taught with Grammar Translation Method and called as experimental class or as a treatment. Meanwhile the class control class was taught by using conventional method or without treatment. It can be seen as the following table:

Table 1
Research Design

Class	Pre test	Treatment	Post test
Experimental class (VIII-1)	✓	Teaching Reading descriptive text by using GTM (Grammar Translation Method)	✓
Control class (VIII-5)	✓	Teaching Reading Descriptive Text by using conventional method	✓

C. Population and Sample

1. Population

Population is the entire object that becomes the target of the research. So, population is consist object or collecting elements was be research. Population of this research is grade VIII students at MTS S Nurul Huda Rantau Cempedak academic year 2017/2018. It can be seen in the following table:

Table 2
Population of the Research

NO	Class	Students
1	VIII-1	30
2	VIII-2	24
3	VIII-3	30
4	VIII-4	30
5	VIII-5	31
Population		145/Students

2. Sample

Sample is partial taken from the whole subject and representative of the population. So, sample is part of population that is chosen as respondent of the research. There are four different sampling techniques were included in the probability sampling technique. The fourth technique was random, stratified, cluster and systematic. Researcher used cluster sampling to take sample. Cluster sampling was used to take sample if object of population was very large. It was based on characteristic of sample; this research wants to take two classes as sample.

Cluster sampling/ non random sampling are the sample, which it will be 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-5. They had same amount time every week in English lesson. Based on pre-observation of researcher, English teachers in VIII class stated students of VIII-1 and VIII-5 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-5 as control class.

D. Procedures of Data Collection

To collect the data, the researcher had used test. In giving the test, it is divided into two kinds; pre-test and post-test.

1. Pre-test

It is a test that was given before doing the treatment to the students. It was needed to know the students' comprehension in experiment and control class before the researcher gave the treatment to experiment class. It also used to find out the homogeneity and normality level of the sample. The researcher used some steps in giving pre-test. They were:

- a. The researcher prepared the test that was filled by the students. It consisted of 20 questions.
- b. The researcher distributed the test paper to both class; experiment class and control class.
- c. The researcher explained what the students need to do.
- d. The researcher gave the times to the students to answer the questions.
- e. The researcher collected the test paper.
- f. The researcher checked the answer and counts the students' score.

2. Treatment

In the treatment, researcher divided into two class, as experiment class and control class. After giving the pre-test, the students were given treatment. The experiment class received the treatment taught by using Grammar Translation Method (GTM) the same teaching materials and the control class was taught by the using conventional method, and there are different way in teaching descriptive text between experimental and control class. The researcher chooses group A using method that is Grammar Translation

Method (as experiment class) and class B without using method (as control class). The researcher uses some steps, in teaching experimental group they were:

- a. The researcher was explained to students about function simple presents tense, introduced formula present tense, adverb of time, examples and explained (In Indonesian), the usage as well as the importance of Simple Present Tense. The teacher points out differences to Indonesian language.
- b. The researcher presented the text of descriptive text, about genres, language featured and practice of reading skill.
- c. The researcher was ordered the students read a text (descriptive) written in the target language.
- d. The students translated the passage (descriptive text) from the target language to their mother tongue.
- e. The researcher asked students in native language (Bahasa Indonesia) if they have any questions, students asked question and the researcher answered the questions in their native speaker.
- f. Students wrote out the answered of reading comprehension question.
- g. The students translated new words from target language to their mother tongue.
- h. The students made a grammar rule and based on the example they apply the rule.
- i. The students memorize vocabulary in the text.

- j. The researcher asked students to state the grammar rule.
- k. The researcher required students memorize the role.
- l. The researcher corrected errors by providing the right answer. So the teacher is the authority in the classroom.

3. Post-test

It is a test that gave after the researcher gave the treatment to experiment class. It was used to know the difference score of experiment and control class and the effect of treatment whether is an effect or not. The researcher used some steps in giving post-test. They were:

- a. The researcher prepared the test that would be filled by the students. It consists of 20 questions.
- b. The researcher distributed the test paper to both class; experiment and control class.
- c. The researcher explains what the students need to do.
- d. The researcher gave the times to the students to answer the questions.
- e. The researchers collected the test paper.
- f. The researcher checked the answer and counts the students' score.

E. Instrument of Collecting Data

The test that will be used in this research was multiple choice tests consists of four option a, b, c, and d. The researcher used students as participant. Before the researcher give the test to students', the researcher give treatment to experimental class teaching reading uses Grammar Translation Method. The

researcher as controls all the students when doing this test and the students involve this research.

In order to found the validity of the test, the researcher used the formula of $r_{pointbesimal} = r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$ before to formula $r_{pointbesimal}$, definite mean score from score total (M_t), standard deviation (SD_t), and mean score (M_p) as

$$\begin{aligned} \text{below: } r_{pbi} &= \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}} \\ &= \frac{12.54 - 11.72}{3.08} = \sqrt{\frac{0.4}{0.5}} \\ &= \frac{0.82}{3.08} \sqrt{0.8} = 2.33 \times 0.2 = 0.466 \text{ VALID} \end{aligned}$$

The result of testing the validity was 0.466. Actually, researchers have prepared 50 questions, 25 questions for pre-test and 25 questions for pre-test. But after researcher used test validity for twenty five students, and from the table of validity instrument about reading comprehension, it concluded that some items of test are invalid. So, from 25 questions of pre-test, there are 5 tests invalid. They are 1, 6, 15, 16, and 21, and 20 tests is valid. Then, from 25 questions for post-test, there were twenty tests valid and five tests invalid. They were 1, 4, 6, 7, and 18.

Therefore, after test validity the test consisted of 40 questions. 20 questions were for pre-test and 20 questions were for post-test. This test had been given to experiment and control class. To find out the score of the students

answer, the researcher give 5 score for each item. Thus maximum score of the test is 100.

There were some indicators that were used by researcher to measure students' reading descriptive text. It can be seen from the table below:

Table 3
The indicators of Reading Descriptive Text Comprehension in Pre-Test

NO	Indicators	Number of Items	Items	Total Score
1	Able to identify topic of the text	1,6,11,16	4	20
2	Able to identify main idea of the text	2,7,12,17	4	20
3	Able to identify specific information of the text	3,8,13,18	4	20
4	Able to identify characteristics of people or thing from the text	4,9,14,19	4	20
5	Able to identify the meaning of underlining word	5,10,15,20	4	20
TOTAL			20	100

Table 4
The indicators of Reading Descriptive Text Comprehension in Post-Test

NO	Indicators	Number of Items	Items	Total Score
1	Able to identify topic of the text	2,10,15,21	4	20
2	Able to identify main idea of the text	3,11,16,22	4	20
3	Able to identify specific information of the text	5,12,17,23	4	20
4	Able to identify characteristics of people or thing from the text	8,13,19,24	4	20
5	Able to identify the meaning of underlining word	9,14,20,25	4	20
TOTAL			20	100

From the indicator above, the researcher gives the reading test to students either for post-test and pre-test. The experiment class and the control class gave

some materials, which experiment class taught by using “Grammar Translation Method” and control class with using dictionary, then, the students are gives test based in indicator above.

F. Validity and Reliability Instrument

1. Validity

In this research, the researcher uses item validity to find out the validity of instrument. The test is consisted of 40 questions of multiple choice questions. It had been divided into two groups such as experimental class and control class : 20 for pre-test and 20 for post-test.

To get the validity of the each question had used to list $r_{berisial}$ with $r_{tin} 5\%$ significant: 0,361 and 1 % significant: 0,463. So, if $r_{count} > r_{table}$ the test is classified valid.

To get the validity of the test, the formula of $r_{pointbeserial}$ can be used

as follow:
$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

Where:

r_{pbi} : Coefficient item validity

M_p : Mean score

M_t : Mean score of the total score

SD_t : Standard Deviation of the total score

P : Presentation of the right answer of the item tested validity

q : Presentation of the wrong answer of the item tested validity.¹

2. Reliability

An instrument of the research must Bereliable. A reliable test is consistent and dependable. Reliability of an instrument can be found by using K-R 20 formula.² The formula is as follow:

$$R_{II} = \left(\frac{n}{n-1} \right) \left(\frac{S_{t2} - \sum pq}{S_{t2}} \right)$$

Where:

R_{II} = Reability of instrument

N = Total of Question

S_{t2} = Variants Total

p = Proporsi Subject who is right Answer(1)
N

q = Proporsi Subject who is Wrong(0)
N

Reliability is a good character of test that refers to the consistency of the measurement. The test is reliable if $r_{count} > r_{table}$ by using formulation KR-20.

3. Distinguishing Power

A good test can not only measure the students' intelligent level of understanding, but it can also measure students' lack of intelligence.

¹Anas Sudijono, *Pengantar Statistik Pendidikan*, (Jakarta: Raja GrafindoPersada, 2008), p.258.

²Suharsimi Arikunto, *Prosedur Penelitian*, (Jakarta: Rineka Cipta, 1998), p. 182.

Therefore, a test should be able to distinguish between students who are and low. To determine each test used the formula that is:

$$D = \frac{B_A}{J_A} - \frac{B_B}{J_B}$$

Where : D = The differentiating power of the item

B_A = The number of lower groups who answered correctly

B_B = The number of lower groups who answered correctly

J_A = The number of upper group students

J_B = The number of lower group students

Classification of distinguishing power:

$D < 0.00$: Everything is not good

$0.00 \leq D < 0.20$: Bad

$0.20 \leq D < 0.40$: Enough

$0.40 \leq D < 0.70$: Good

$0.70 \leq D < 1.00$: Very Good³

Table 5
The Results Distinguish Power Test (Pre-Test)

Number Item Question	$D = \frac{B_A}{J_A} - \frac{B_B}{J_B}$	Criteria
1.	$D = 11/12 - 10/12 = 0.08$	Bad
2.	$D = 5/12 - 4/12 = 0.08$	Bad
3.	$D = 3/12 - 3/12 = 0.00$	Bad
4.	$D = 5/12 - 3/12 = 0.16$	Bad

³Ahmad Nizar Rangkuti, *Metodologi Penelitian Pendidikan, Kuantitatif, Kualitatif, PTK dan Penelitian Pengembangan*, (Bandung: Citapustaka Media, 2014), p. 48-49.

5.	$D = 6/12 - 2/12 = 0.33$	Enough
6.	$D = 8/12 - 2/12 = 0.50$	Good
7.	$D = 6/12 - 3/12 = 0.25$	Enough
8.	$D = 6/12 - 3/12 = 0.25$	Enough
9.	$D = 3/12 - 3/12 = 0.00$	Bad
10.	$D = 5/12 - 4/12 = 0.08$	Bad
11.	$D = 9/12 - 5/12 = 0.33$	Enough
12.	$D = 7/12 - 3/12 = 0.33$	Enough
13.	$D = 9/12 - 7/12 = 0.16$	Bad
14.	$D = 9/12 - 5/12 = 0.33$	Enough
15.	$D = 8/12 - 6/12 = 0.16$	Bad
16.	$D = 9/12 - 2/12 = 0.58$	Good
17.	$D = 10/12 - 2/12 = 0.66$	Good
18.	$D = 11/12 - 6/12 = 0.41$	Good
19.	$D = 8/12 - 7/12 = 0.08$	Bad
20.	$D = 3/12 - 2/12 = 0.08$	Bad
21.	$D = 6/12 - 2/12 = 0.33$	Enough
22.	$D = 5/12 - 1/12 = 0.33$	Enough
23.	$D = 4/12 - 1/12 = 0.25$	Enough
24.	$D = 5/12 - 3/12 = 0.16$	Bad
25.	$D = 2/12 - 2/12 = 0.00$	Bad

Table 6
The Results Distinguish Power Test (Post-Test)

Number Item Question	$D = \frac{B_A}{J_A} - \frac{B_B}{J_B}$	Criteria
1.	$D = 11/12 - 9/12 = 0.16$	Bad
2.	$D = 5/12 - 4/12 = 0.08$	Bad
3.	$D = 3/12 - 3/12 = 0.00$	Bad
4.	$D = 5/12 - 3/12 = 0.16$	Bad
5.	$D = 13/12 - 9/12 = 0.33$	Enough
6.	$D = 8/12 - 4/12 = 0.33$	Enough
7.	$D = 7/12 - 3/12 = 0.33$	Enough
8.	$D = 6/12 - 3/12 = 0.25$	Enough
9.	$D = 4/12 - 3/12 = 0.08$	Bad
10.	$D = 13/12 - 4/12 = 0.75$	Very Good
11.	$D = 11/12 - 5/12 = 0.50$	Good
12.	$D = 7/12 - 3/12 = 0.33$	Enough

13.	$D = 12/12 - 5/12 = 0.66$	Good
14.	$D = 8/12 - 5/12 = 0.25$	Enough
15.	$D = 11/12 - 5/12 = 0.66$	Good
16.	$D = 7/12 - 5/12 = 0.16$	Bad
17.	$D = 8/12 - 6/12 = 0.16$	Bad
18.	$D = 10/12 - 7/12 = 0.25$	Enough
19.	$D = 9/12 - 7/12 = 0.16$	Bad
20.	$D = 9/12 - 8/12 = 0.08$	Bad
21.	$D = 6/12 - 2/12 = 0.33$	Enough
22.	$D = 2/12 - 1/12 = 0.08$	Bad
23.	$D = 3/12 - 1/12 = 0.16$	Bad
24.	$D = 4/12 - 1/12 = 0.25$	Enough
25.	$D = 8/12 - 3/12 = 0.41$	Good

4. Degree of difficulty

To determine the level of difficulty of each foreign item used the

formula that is: $P = \frac{B}{J_s}$

Where: P = Coefficient of difficulty.

B = The number of respondents who answered correctly.

J_s = Number of respondent test participants.

The criteria used to determine the type of difficulty level are:

P 0.00 – 0.30 = Hard

P 0.31 – 0.70 = Medium

P 0.71 – 1.00 = Easy

Table 7
The Result of Degree of difficulty test (Pre-Test)

Number Item Question	$P = \frac{B}{J_s}$	Criteria
1.	$P = 24/25 = 0.96$	Easy
2.	$P = 11/25 = 0.44$	Medium
3.	$P = 7/25 = 0.28$	Hard
4.	$P = 9/25 = 0.36$	Medium
5.	$P = 20/25 = 0.08$	Hard
6.	$P = 10/25 = 0.04$	Hard
7.	$P = 11/25 = 0.44$	Medium
8.	$P = 9/25 = 0.36$	Medium
9.	$P = 7/25 = 0.28$	Hard
10.	$P = 11/25 = 0.44$	Medium
11.	$P = 16/25 = 0.64$	Medium
12.	$P = 10/25 = 0.04$	Hard
13.	$P = 17/25 = 0.68$	Medium
14.	$P = 14/25 = 0.56$	Medium
15.	$P = 16/25 = 0.64$	Medium
16.	$P = 12/25 = 0.48$	Hard
17.	$P = 17/25 = 0.68$	Medium
18.	$P = 18/25 = 0.72$	Easy
19.	$P = 17/25 = 0.68$	Medium
20.	$P = 6/25 = 0.24$	Hard
21.	$P = 8/25 = 0.32$	Medium
22.	$P = 4/25 = 0.16$	Hard
23.	$P = 4/25 = 0.16$	Hard
24.	$P = 5/25 = 0.02$	Hard
25.	$P = 10/25 = 0.04$	Hard

Table 8
The Result of Degree of difficulty test (Post-Test)

Number Item Question	$P = \frac{B}{J_s}$	Criteria
1.	$P = 23/25 = 0.92$	Easy
2.	$P = 15/25 = 0.06$	Hard
3.	$P = 9/25 = 0.36$	Medium
4.	$P = 13/25 = 0.52$	Medium
5.	$P = 17/25 = 0.68$	Medium
6.	$P = 11/25 = 0.44$	Medium
7.	$P = 11/25 = 0.44$	Medium
8.	$P = 17/25 = 0.68$	Medium
9.	$P = 17/25 = 0.68$	Medium
10.	$P = 18/25 = 0.72$	Easy
11.	$P = 22/25 = 0.88$	Easy
12.	$P = 7/25 = 0.28$	Hard
13.	$P = 17/25 = 0.68$	Medium
14.	$P = 11/25 = 0.44$	Medium
15.	$P = 16/25 = 0.64$	Medium
16.	$P = 10/25 = 0.04$	Hard
17.	$P = 15/25 = 0.06$	Hard
18.	$P = 9/25 = 0.36$	Medium
19.	$P = 12/25 = 0.48$	Medium
20.	$P = 13/25 = 0.52$	Medium
21.	$P = 11/25 = 0.44$	Medium
22.	$P = 11/25 = 0.44$	Medium
23.	$P = 11/25 = 0.44$	Medium
24.	$P = 8/25 = 0.32$	Medium
25.	$P = 12/25 = 0.48$	Medium

G. Technique of Analyzing Data

The techniques of analyzing data that used by the researcher were:

1. Scoring Technique

To know the score, the researcher used the steps were:

- a. Total maximal score is 100.
- b. True answer would be given 5 score and false answer not given the score.
Total score $5 \times 20 = 100$.
- c. Maximal score = $\frac{\text{total of true answer}}{\text{total of test}}$

2. Requirement test

- a. Normality test

To know the normality, the researcher used *Chi-Quadrate* formula.

The formula is as follow:
$$\chi^2 = \sum \left(\frac{f_0 - f_h}{f_h} \right)$$

Where:

χ^2 = Chi-Quadrate.

f_0 = 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 is used significant level 5% (0,05) and degree of freedom as big as total of frequency is lessened 3 ($dk=k-3$). If result $\chi^2_{\text{count}} < \chi^2_{\text{table}}$. So, it can be concluded that data is distributed normal.⁴

⁴Mardalis, Metode Penelitian, : *Suatu Pendekatan Proposal*...., p. 85

b. Homogeneity Test

To found the homogeneity⁵, the researcher used *Harley Test*. The formula is as follow:

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

Hypotheses is accepted if $F_{count} \leq F_{table}$

Hypotheses is rejected if $F_{count} \geq F_{table}$

Hypothesis is rejected if $F \leq F_{\frac{1}{2}\alpha}(n_1-1) (1=n_2-1)$, while if $F_{count} > F_{table}$ hypothesis is accepted. It determined with significant level 5% (0.05) and dk numerator was (n_1-1) , while dk detominators is (n_2-1) .

3. Hypothesis test

Hypothesis is the provisional result of the research. So, the researcher needed to analyze the data which were divided into two groups; experiment class and control class.

Before analyze the data to found the hypothesis, the researcher was calculated the normality and homogeneity of the post-test. It is used to know whether the data is normal and homogenous or not. If the data is normal and homogenous, the formula that must be used to test hypothesis is t-test. The formula is as follow:

⁵Mardalis, Metode Penelitian, :*Suatu Pendekatan Proposal*.....,p. 90.

$$T_t = \frac{M_1 - M_2}{\sqrt{\left(\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \right) \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where:

t : The value which the statistical significant

M_1 : The average score of the experimental class

M_2 : The average score of the control class

S_1^1 : Deviation of the experimental class

S_2^2 : Deviation of the control class

n_1 : Number of experimental class

n_2 : Number of control class.

CHAPTER IV

DATA ANALYSIS

As mentioned in earlier chapter, in order to evaluate the effect of Grammar Translation Method on students' reading comprehension, the researcher calculated the data using pre-test and post-test. The researcher used the formulation of T-test to test hypothesis. Next, the researcher described the data as follow:

A. Description Data

1. Description of Pre-Test

a. Pre-test Experimental Class (Using GTM)

In pre-test of experimental class, the researcher calculated the results that had been gotten by the students' in answering the question (test). The score of pre-test experimental class can be seen in the following table:

Table 9
The Score of Experimental Class in Pre-test

No	The Initial Name of Students	Pre-Test
1.	AA	65
2.	ADL	50
3.	AH	50
4.	AIS	65
5.	AISL	50
6.	ES	65
7.	FH	45
8.	GN	65
9.	HH	50
10.	IEL	70
11.	IYS	65
12.	IYS	45
13.	KINH	70

14.	MAF	55
15.	MH	60
16.	MN	60
17.	MNS	45
18.	MPPT	75
19.	MY	60
20.	NS	40
21.	NWJ	60
22.	PWS	40
23.	RS	60
24.	RT	75
25.	SG	35
26.	SR	60
27.	SRA	75
28.	SS	60
29.	TRPH	30
30.	YIL	60
31.	YP	30
Total		1735
Highest score		75
Lowest score		30
Mean		59.34
Median		62.86
Modus		57.5
Range		45
Interval		8
Standard deviation		12.16
Variants		160.70

Based on the above table the total score of experiment class in pre-test was 1735, mean was 59.34, standard deviation was 12.16, variants was 160.70, median was 62.86, range was 45, modus was 57.5, interval was 8. The researcher got the highest score was 75 and the lowest score was 30. It can be seen on appendix 18. Then, the computed

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

Table 10
The frequency distribution of the students score of experiment class

No	Interval	Mid-Point	Frequency	Percentages
1	30 – 37	33.5	3	9.68%
2	38 – 45	41.5	6	19.35 %
3	46 – 53	49.5	3	9.68%
4	54 – 61	57.5	9	29.03 %
5	62 – 69	65.5	5	16.13%
6	70 – 77	73.5	5	16.13%
<i>i</i> = 8			31	100 %

From the table above, the students score in class interval between 30 – 37 was 3 students (9.68 %), class interval between 38 –45 was 6 student (19.35%), class interval between 46 – 53 was 3 students (9.68 %), class interval between 54 – 61 was 9 students (29.03 %), class interval between 62 – 69 was 5 students (16.13 %), class interval between 70 – 77 was 5 students (16.13 %).

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

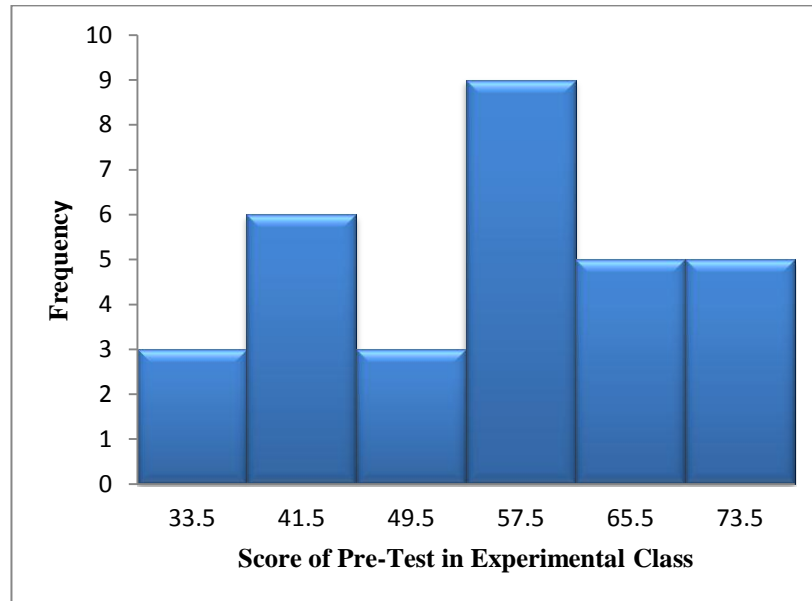


Figure 1: Description Data Pre-Test of Experimental Class

From the figure 1 above, the students score in mid- point 33.5 was 3 students, mid- point 41.5 was 6 students, mid- point 49.5 was 3 students, mid- point 57.5 was 9 students, mid- point 65.5 was 5 students, mid -point 73.5 was 5 students.

b. Score of Pre-Test Control Class (without using GTM)

In pre-test of control class, the researcher calculated the result that had been gotten by the students in answering the question (test).

The score of pre-test control class can be seen in the following table:

Table 11
The Score of Control Class in Pre-test

No	The Initial Name of Students	Pre-Test
1.	AFH	65
2.	AG	35
3.	AJP	70
4.	ALX	35
5.	ARH	70
6.	ARH	45
7.	AS	35
8.	AS	45
9.	ASH	60
10.	ATSN	55
11.	HH	60
12.	IMN	45
13.	IN	55
14.	KAH	55
15.	KAS	45
16.	MAS	60
17.	MLS	50
18.	MMT	70
19.	MN	50
20.	MRH	60
21.	MTK	55
22.	MY	25
23.	NAD	55
24.	NQH	60
25.	RA	30
26.	RH	55
27.	RPL	55
28.	RS	60
29.	RTH	60
30.	RWH	55
Total		1545
Highest score		70
Lowest score		25
Mean		53.86
Median		57.3
Modus		51.5

Range	45
Interval	8
Standard deviation	11.68
Variants	150.26

Based on the above table the total score of control class in pre-test was 1545, mean was 53.86, standard deviation was 11.68, variants were 150.26, median was 53.7, range was 45, modus was 51.5, interval was 8. The researcher got the highest score was 70 and the lowest score was 25. It can be seen on appendix 18. Then, the computed of the frequency distribution of the students' score of control class can be applied into table frequency distribution as follow:

Table 12
The frequency distribution of the students' score of control class

No	Interval	Mid-Point	Frequency	Percentages
1	25 – 32	28.5	3	10 %
2	33 – 40	36.5	3	10 %
3	41 – 48	44.5	4	13.33 %
4	49 – 56	52.5	10	33.33 %
5	57 – 64	60.5	6	20 %
6	65 – 72	68.5	4	13.33%
<i>i</i> = 8			30	100 %

From the table above, the students score in class interval between 25 – 32 was 3 students (10%), class interval between 33 – 40 was 3 students (10%), class interval between 41 – 48 was 4 students (13.33%), class interval between 49 – 56 was 10 students (33.33%), class interval between 57 – 64 was 6 students (20%).class interval

between 65 – 72 was 4students (13.33). The order to got description of the data clearly and completely, the researcher presents them in histogram on the following figure:

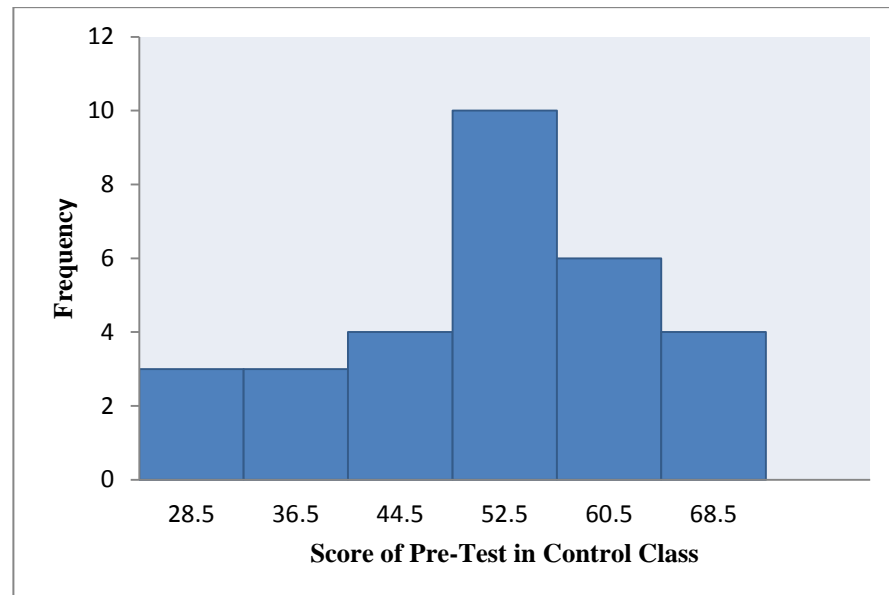


Figure 2: Description Data Pre-Test of Control Class

From the figure 2 above, the students score in mid -point 28.5 was 3students, mid- point 36.5 was 3students, mid- point 44.5 was 4students, mid-point 52.5 was 10students, mid- point 60.5 was 6students, mid-point 68.5 was 4students.

c. The Comparison between Description Data Pre-Test of Control Class and Experimental Class

Based on above figure, researcher compared between description data pre-test of control class and description data of experimental class on the following figure:

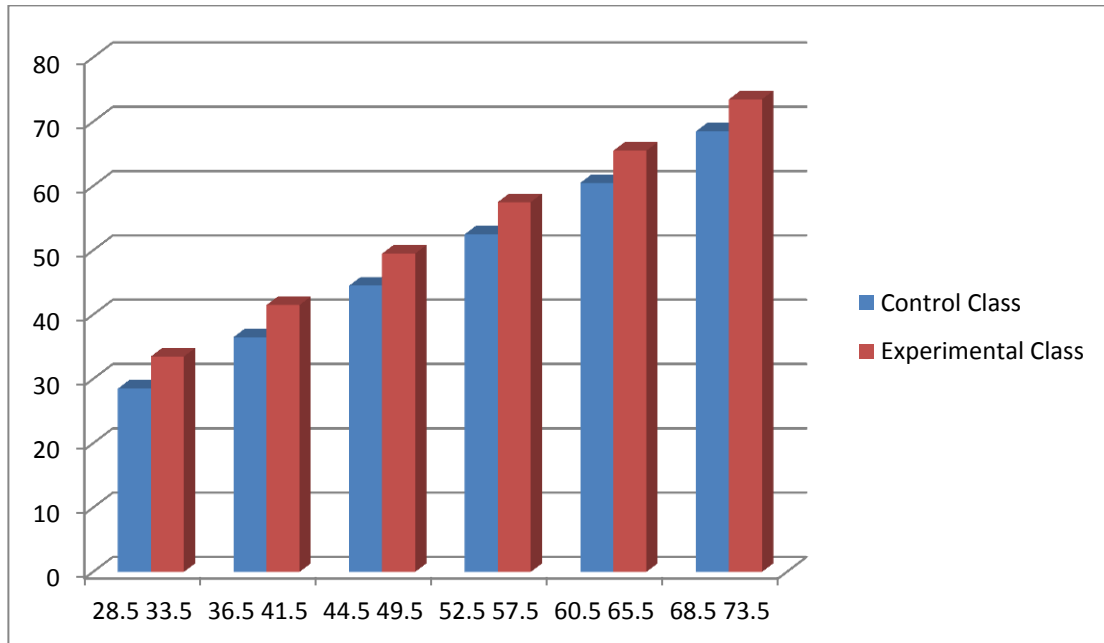


Figure 3: Description Data Pre-test of Control Class and Experimental Class

From the figure 3 above, the students' score of experimental class was higher than the students' score of control class.

2. Description Data of Post-Test

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

a. Score of Post-Test Experimental Class (Using GTM)

In post-test of experimental class, the researcher calculated the result that had been gotten by the students' in answering the question (test) after the researcher did the treatment by using grammar translation method. The score of post-test experimental class can be seen in the following table:

Table 13
The Score of Experimental Class in Post-test

No	The Initial Name of Students	Post-Test
1.	AA	75
2.	ADL	85
3.	AH	80
4.	AS	75
5.	ES	85
6.	FH	80
7.	GN	85
8.	HH	80
9.	IEL	85
10.	IPIN	85
11.	IYS	80
12.	IYS	85
13.	KINH	70
14.	MAF	90
15.	MH	75
16.	MN	95
17.	MNS	80
18.	MPPT	90
19.	MY	85
20.	NS	100
21.	NWJ	85
22.	PWS	90
23.	RS	65
24.	RT	75
25.	SG	90
26.	SR	85
27.	SRA	80
28.	SS	90
29.	TRPH	80
30.	YIL	85
31.	YP	80
Total		2575
Highest score		100
Lowest score		65
Mean		87.84
Median		87

Modus	86.52
Range	35
Interval	6
Standard deviation	7.92
Variants	54.46

Based on the above table the total score of experimental class in post-test was 2575, mean was 87.84, standard deviation was 7.92, variants was 54.46, median was 87, range was 35, modus was 86.52, interval was 6. The researcher got the highest score was 100 and the lowest score was 65. It can be seen on appendix 19. Then, the computed of the frequency distribution of the students' score of experiment class can be applied into table frequency distribution as follow:

Table 14
The frequency distribution of the students' score of Experiment class

No	Interval	Mid-Point	Frequency	Percentages
1	65 – 70	67.5	2	6.45 %
2	71 – 76	73.5	4	12.90 %
3	77 – 82	79.5	8	25.80 %
4	83 – 88	85.5	10	32.26 %
5	89 – 94	91.5	4	12.90 %
6	95 – 100	97.5	3	9.68 %
<i>i</i> = 6			31	100 %

From the table above, the students' score in class interval between 65 – 70 was 2 students (6.45 %), class interval between 71 – 76 was 4 students (12.90 %), class interval between 77 – 82 was 8 students (25.80 %), class interval between 83 – 88 was 10students (32.26 %),

class interval between 89 – 94 was 4 students (12.90 %), and the last class interval between 95-100 was students (9.68 %).

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

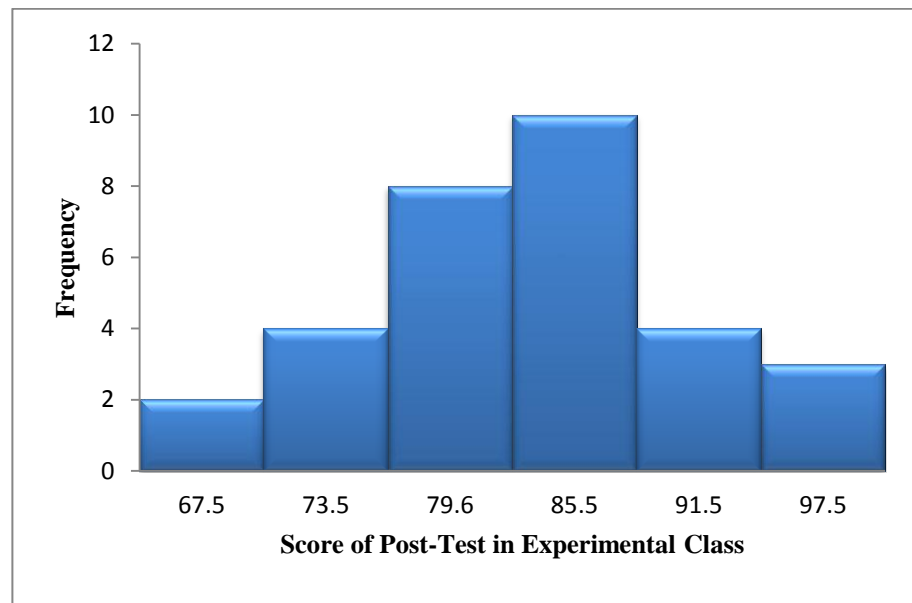


Figure 4: Description Data Post-Test of Experiment Class

From the figure 5 above, the students score in mid -point 67.5 was 2students, mid- point 73.5 was 4students, mid- point 79.5 was 8students, mid-point 85.5 was 10students, mid- point 91.5 was 4students, mid-point 97.5 was 3students.

b. Score of Post-Test Control Class (without using GTM)

In post-test of control class, the researcher calculated the result that had been gotten by the students in answering the question (test) after the researcher did the treatment by using grammar translation

method. The score of post-test experimental class can be seen in the following table:

Table 15
The Score of Control Class in Post-test

No	The Initial Name of Students	Post-Test
1.	AFH	75
2.	AG	70
3.	AJP	60
4.	ALX	70
5.	ARH	70
6.	ARH	70
7.	AS	65
8.	AS	75
9.	ASH	65
10.	ATSN	65
11.	HH	60
12.	IMN	70
13.	IN	70
14.	KAH	75
15.	KAS	60
16.	MAS	75
17.	MLS	70
18.	MMT	75
19.	MN	65
20.	MRH	60
21.	MTK	70
22.	MY	75
23.	NAD	80
24.	NQH	85
25.	RA	80
26.	RH	85
27.	RPL	75
28.	RS	75
29.	RTH	70
30.	RWH	65
Total		2040
Highest score		85

Lowest score	50
Mean	72.9
Median	72.18
Modus	71.52
Range	35
Interval	6
Standard deviation	7.98
Variants	56.21

Based on the above table the total score of control class in post-test was 2040, mean was 72.9, standard deviation was 7.98, variants was 56.21, median was 72.18, range was 35, modus was 71.52, interval was 6. The researcher got the highest score was 85 and the lowest score was 50. It can be seen on appendix 19. Then, the computed of the frequency distribution of the students' score of experiment class can be applied into table frequency distribution as follow:

Table 16
The frequency distribution of the students' score of Control class

No	Interval	Mid-Point	Frequency	Percentages
1	50 – 55	52.5	2	6.67 %
2	56 – 61	58.5	4	13.33 %
3	62 – 67	64.5	8	26.67 %
4	68 – 73	70.5	9	30 %
5	74 – 79	76.5	4	13.33 %
6	80 – 85	82.5	3	10 %
<i>i</i> = 5			30	100 %

From the table above, the students score in class interval between 50 – 55 was 2 students (6.67%), class interval between 56 –

61 was 4 students (13.33 %), class interval between 62 – 67 was 8 students (26.67%), class interval between 68 – 73 was 9 students (30%), class interval between 74 – 79 was 4 students (13.33 %), and the last class interval between 80-85 was students (10 %).

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

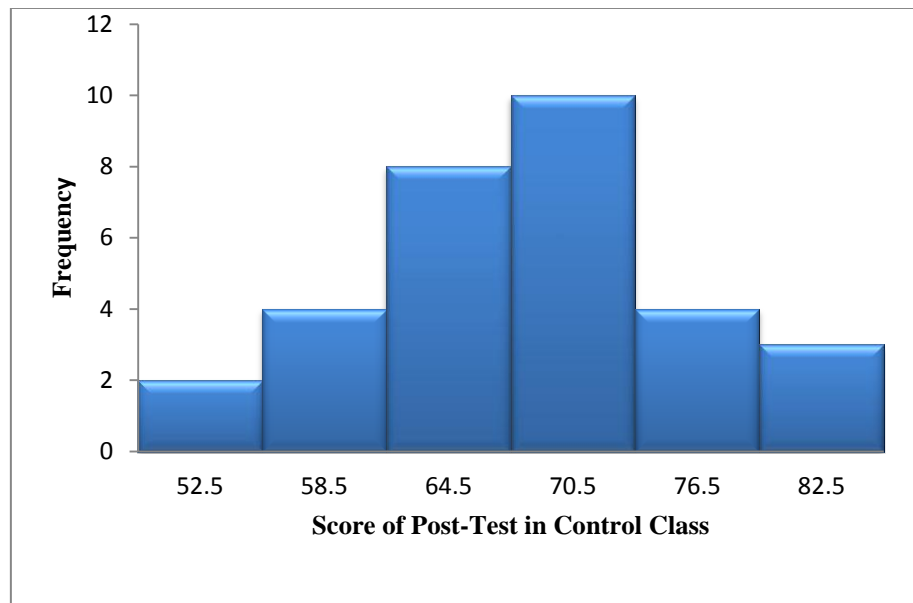


Figure 5: Description Data Post-Test of Control Class

From the figure 5 above, the students score in mid -point 52.5 was 2students, mid- point 58.5 was 4students, mid- point 64.5 was 8students, mid-point 70.5 was 9students, mid- point 76.5 was 4students, mid-point 82.5 was 3students.

c. The Comparison Description Data Post-test of Control and Experimental Class

Based on above figure, researcher compared between description data post-test of control class and description of experimental class on the following figure:

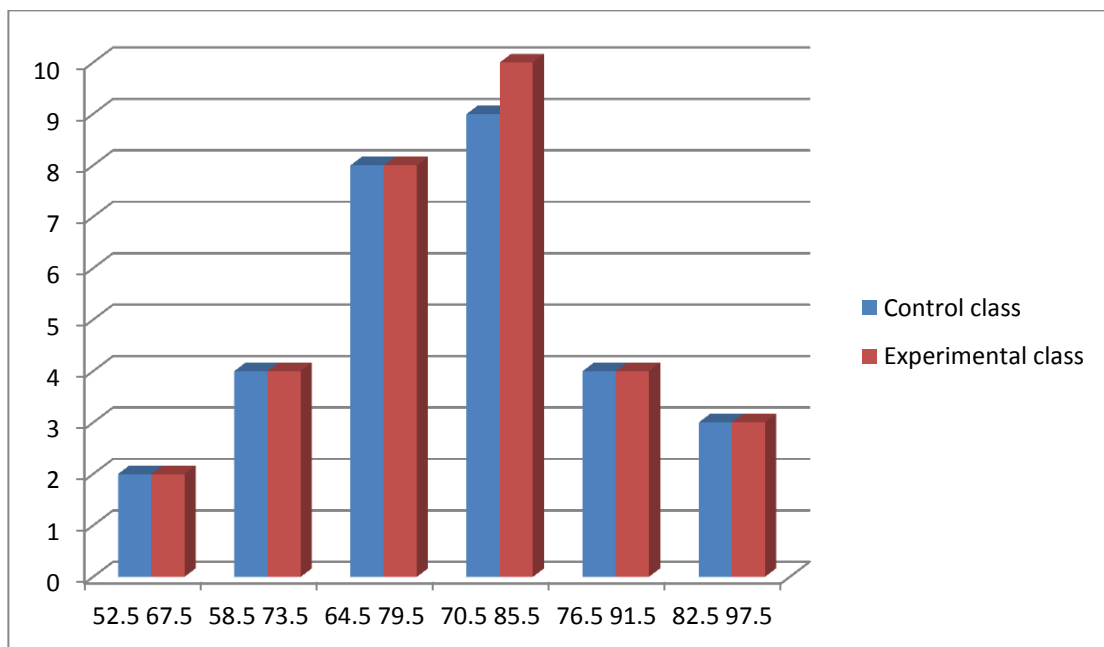


Figure 6: Description Data Post-test of Control Class and Experimental Class

It can be seen from the figure 6 above, the students' scores of experimental class was higher than the students' score of control class. The students' reading comprehension

3. Description of Comparison Score of Pre-Test and Post-Test

a. Comparison score of pre-test and post-test in experimental class

Based on students answer in pre-test and post-test in experimental class, the researcher has calculated the students' score and most of the students increased in reading for post-test and most of the students were low in reading for pre-test. Pre-test and post-test in Experimental class consisted of 31 students (VIII-1), the lowest score in pre-test was 30 whereas the highest score was 75, and the lowest score in post-test was 65 whereas the highest score was 100. In post-test the researcher apply that grammar translation method. It can be seen in the following figure below:

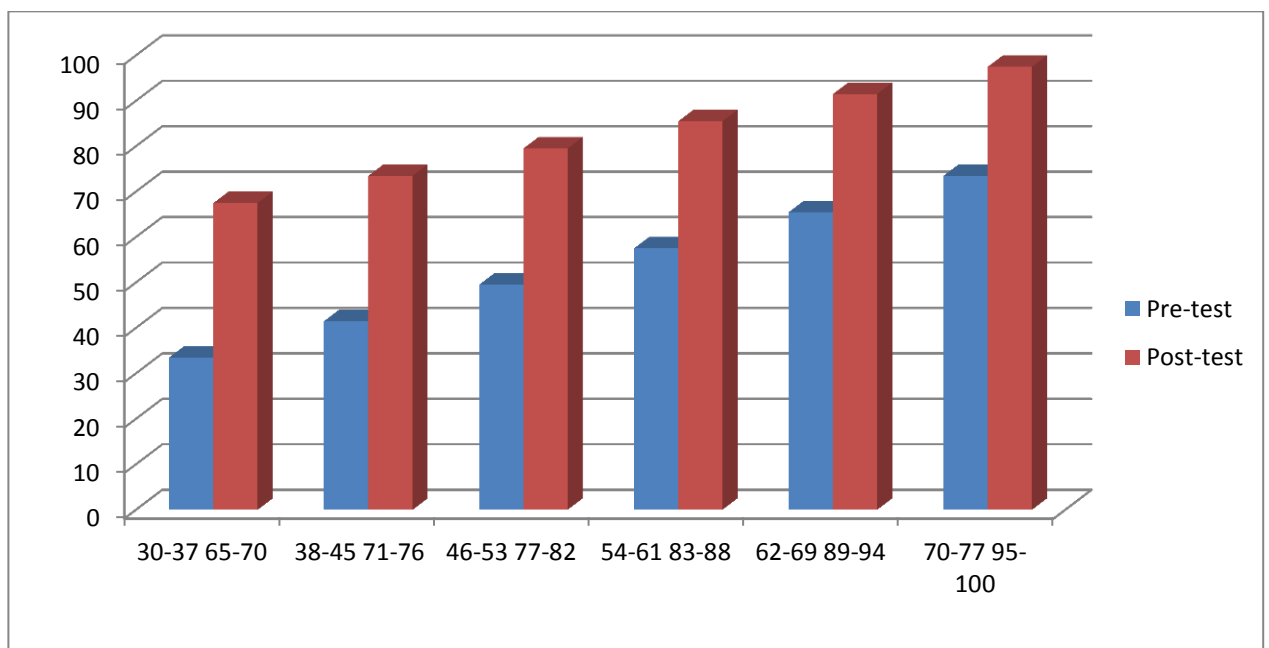


Figure 7: Figure of comparison score of students' reading comprehension in pre-test and post-test (Experimental class).

b. Comparison score of pre-test and post-test in Control class

Based on students answer in pre-test and post-test in control class consisted of 30 students (VIII-5), the researcher has calculated the students' score and most of the students both of classes were low in reading. The lowest score in pre-test was 25 and the highest score 70. The lowest score in post-test was 50 and the highest was 85. In control class for post-test the researcher applied the conventional method. It can be seen in the following figure below:

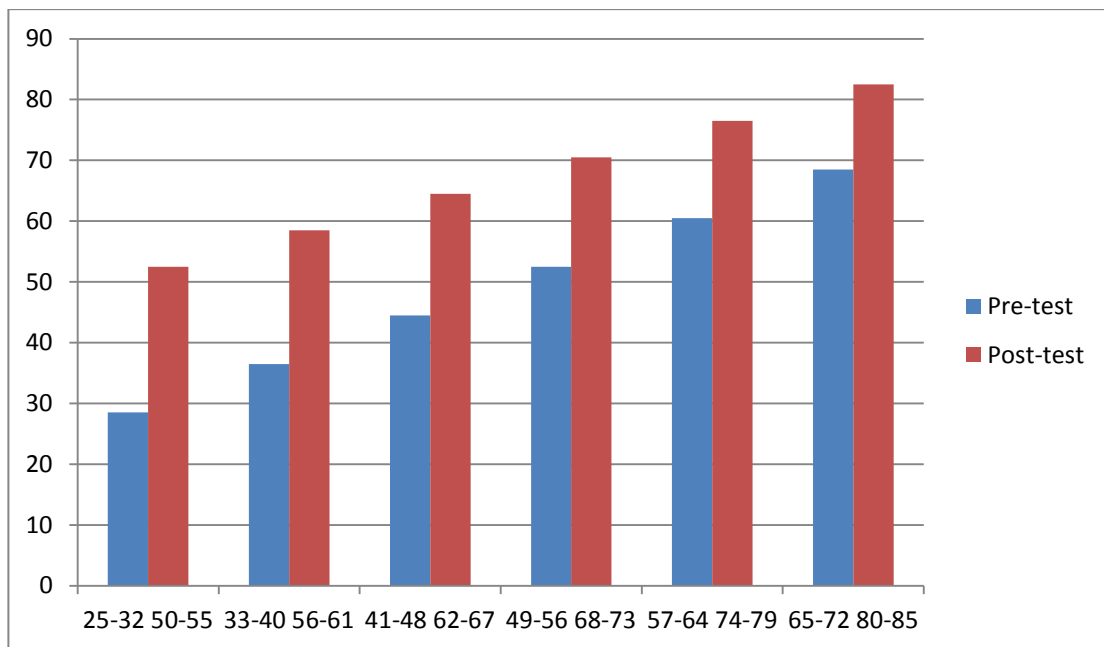


Figure 8: Figure of comparison score of students' reading comprehension in pre-test and post-test (Control class).

B. Data Analysis

1. Requirement Test

a. Normality and Homogeneity Pre Test

1) Normality of Experiment and control class in Pre Test

Table 17
Normality and Homogeneity in Pre Test

Class	Normality Test		Homogeneity Test	
	X_{count}	X_{table}	f_{count}	f_{table}
Experiment Class	0.46	11.070	1.07 < 1.85	
Control Class	-1.97	11.070		

Based on the above table researcher calculation, the score of experiment class $Lo = 0.46 < Lt = 11.070$ with $n = 31$ and control class $Lo = -1.97 < Lt = 11.070$ with $n = 30$, 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 18).

2) Homogeneity of Experiment and control class in Pre Test

The coefficient of $F_{count} = 1.07$ was compared with F_{table} . Where was determined at real $\alpha 0.05$, and the different numerator $dk = N-1 = 31-1 = 30$ and denominator $dk N-1 = 30-1 = 29$. So, by using the list of critical value at F distribution is got $F_{0.05} = 2.007$. It showed that $F_{count} 1.07 < F_{table} 1.85$. So, the

researcher concluded that the variant from the data of the Students' Reading Descriptive Text comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan by experimental and control class was homogenous. The calculation can be seen in (appendix 18).

b. Normality and Homogeneity Post-Test

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

Table 18
Normality and Homogeneity in Post-Test

Class	Normality Test		Homogeneity Test	
	X_{count}	X_{table}	f_{count}	f_{table}
Experiment Class	3.84	11.070	1.03 < 1.85	
Control Class	5.32	11.070		

Based on the table above researcher calculation, the score of experiment class $Lo = 0.46 < Lt = 11.070$ with $n = 31$ and control class $Lo = -1.79 < Lt = 11.070$ with $n = 30$, 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 16).

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

The coefficient of $F_{\text{count}} = 1.03$ was compared with F_{table} .

Where F_{table} was determined at real $\alpha 0.05$, and the different

numerator dk = $N-1 = 31-1 = 30$ and denominator dk $N-1 = 30-1 = 29$. So, by using the list of critical value at F distribution is got $F_{0.05} = 1.85$. It showed that $F_{count} < F_{table}$ $1.03 < 1.85$. So, the researcher concluded that the variant from the data of the Students' reading Descriptive Text comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan by experimental and control class was homogenous. The calculation can be seen on the (appendix 17).

2. Hypothesis Test

After calculated the data of post-test, researcher has found that post-test result of experiment and control class is normal and homogenous. Based on the result, researcher used parametric test by using T-test to analyze the hypothesis. Hypothesis alternative (H_a) of the research was "There is a significant Effect of Grammar Translation Method on students' reading comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan. The calculation can be seen on the appendix 20. The computed result of T- test from the both averages can applied into table T- test from the both averages as follow:

Table 19
Result of T-test from the Both Averages

Pre-test		Post-test	
t_{count}	t_{table}	t_{count}	t_{table}
0.86	1.671	7.926	1.671

$$H_a : \mu_1 > \mu_2$$

Where:

$H_a : \mu_1 > \mu_2$ “There was a significant effect Grammar Translation Method on students’ Reading comprehension”.

Based on the table above researcher calculation, researcher found that $t_{count} 0.86$ while $t_{table} 1.671$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dk = n_1 + n_2 - 2 = 31 + 30 - 2 = 59$. Cause $t_{count} > t_{table} (7.926 < 1.671)$, it means that hypothesis H_a was accepted and H_0 was rejected. So, there was the significant effect of Grammar Translation Method (GTM) on students’ reading comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan. In this case, the mean score of post-test experimental class by using grammar translation method was 88.21.

C. Discussion

Based on related finding, the researcher discussed the result of this research and compared with the related findings. It also discussed with the theory that has been stated by the researcher. Dewa Juliarta¹ showed that pre-test the experimental group got 63.3 for the mean score of pre-test and post-test got 80.2. Then, she found that the hypothesis of her thesis was accepted.

¹Dewa Made Juliarta, *Teaching Reading Comprehension through Grammar Translation Method at the VII Grade Students’ of SMP Widya Suara Sukawati in Academic Year 2103/2014*, English education study program, Faculty of Teacher Training and Education Mahasarawati Denpasar University, www.ijlass.org accessed at August 18th 2017 retrieved on 09.00 pm.

It means that there is a significant teaching reading comprehension through grammar translation method.

Using grammar translation method (GTM), to reading comprehensions has been significant effect. It has proved by Dewa Juliarta, who found that t_0 was higher than t_t ($3.04 > 2.75$). Besides, the researcher also found that t_0 was higher than t_t where t_0 were 7.926 and t_t was 1.671 ($7.926 > 1.671$). Where, the researcher result of t-test was the highest among the related findings. So, the result of t-test of grammar translation method (GTM) highest than the result t-test of related findings. It can be seen that among the researcher, the using of GTM gave the effect to students' reading comprehension especially at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan where it is suitable with the theory from Ishraq M Aqel, *Teaching Reading Comprehension through Grammar Translation Method*, said that: teaching Grammar Translation Method instruction demonstrate positive outcomes of teaching grammar on reading recall or comprehension.² This approach will strengthen their cooperation because it will be necessary for them to make a good communicative competence in comprehending the texts. As result, students can read descriptive text well. So, GTM has given the significant effect to the research

²M. Aqel Ishraq, *Teaching Reading Comprehension through Grammar Translation Method*, accessed on <http://www.aessweb.com/journal.detail.php?id.>, retrieved on April, 03rd 2017, 09.00 pm.

that has been done by the researcher or the other researcher who mentioned in related finding.

From the result of the researcher that is previously stated, it was proved that the students of the experimental group who were taught reading descriptive text comprehension by using GTM got better result that the control group that were taught reading descriptive text comprehension by using conventional method.

D. Threats of the Research

The researcher found the threats of the research as follows:

1. The students were not serious in answering the pre-test and post-test. Some of them still did cheating. It made the answer of the 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 them talked to their friends and some of them 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 too enthusiastic in answering the adjective, specific participants and the generic structures of the 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 the text.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

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

1. Without using Grammar Translation Method (GTM), the students' reading descriptive text comprehension was still low. It can be seen by highest score of control class in pre-test are 70 only and the lowest score was 25 and highest score of experimental class in pre-test are 75 only and the lowest score are 30. Besides, the mean score of the control class with using conventional method in pre-test are 53.86 and the mean score of the experimental class in pre-test are 59.34 it is on the level low.
2. After using Grammar Translation Method (GTM), researcher gets the highest score of experimental class became 100 and the lowest score 65. Besides, the mean score of the experimental class by using Grammar Translation Method (GTM) in post-test were 87.84 students' reading descriptive text comprehension is higher.
3. Based on the calculation result of homogeneity test of the both averages (pre-test), researcher finds that t_{count} are 0.86 are lower that t_{table} are 1.671. So, $t_{count} < t_{table}$ ($0.86 > 1.671$) and H_0 is accepted, it means no difference the average between experimental class and control class in this research and homogeneity test of the both averages (post-test), researcher finds that

t_{count} was 7.926 was higher than t_{table} was 1.671. So, $t_{count} > t_{table}$ ($7.926 > 1.671$) and H_a is accepted, it means there was difference the average between experimental class and control class in this research. The mean score of experimental class in post-test was 87.84, meanwhile the mean score of control class in post-test was 72.9 was higher than control class ($87.84 > 72.9$). It can be concluded that there was the significant effect of Grammar Translation Method (GTM) on students' reading descriptive text comprehension at grade VIII MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan where H_a was accepted and H_0 is rejected.

B. Suggestion

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

1. For headmaster, provide tools and media complete in teaching reading comprehension. The students' increase to learning English with tool and media.
2. For the English teacher of MTs S Nurul Huda Rantau Cempedak Labuhanbatu Selatan, it is very wise to apply the innovative approach such as Grammar Translation Method in teaching reading comprehension.

3. For the students, it is hopes to uses Grammar Translation Method (GTM), because it can makes them to be able to communicate or communicative competence.

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CURRICULUM VITAE

A. Identity

Name : **ADE IRMA SURYANI**
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Place/ Birthday : 03 October 1995
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Religion : Islam
Address : Dsn. Rantau Cempedak, Desa. Hutagodang, Kec.
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B. Parents

Father's name : **KHOIRUL AHYAR HASIBUAN**
Mother's name : **NURSAM**

C. Educational Background

1. Graduated Elementary School (**SD N 116255 Aek Tobang**). (2007)
2. Graduated Junior High School (**Ponpes Modren Muhammadiyah Langkat Binjai, 32 Km Pabrik Gula Kwala Madu**). (2010)
3. Graduated Senior High School (**Ponpes Darussalam Parmeraan**). (2013)
4. University Students in **IAIN Padangsidimpuan**. (2017)

Appendix 1

Experiment Class

RENCANA PELAKSANAAN PEMBELAJARAN

(RPP)

Nama Sekolah : MTS S Nurul Huda Rantau Cempedak

Mata Pelajaran : Bahasa Inggris

Kelas /Semester : VIII-1/I

Alokasi Waktu : 90 menit

Standar Kompetensi : Memahami makna dalam esei pendek sederhana berbentuk descriptif untuk berinteraksi dengan lingkungan sekitar.

Kompetensi Dasar : Membaca nyaring bermakna teks fungsional dan esei pendek sederhana berbentuk descriptif dengan menggunakan ragam bahasa tulis secara akurat, lancar dan berterima untuk berinteraksi dengan lingkungan sekitar.

Jenis teks : Descriptif teks (describing people, animal, thing and place)

Aspek/skill : Reading

Indikator

:

- Membaca dan memahami teks *descriptive*
- Mengidentifikasi ide pokok dalam teks *descriptive*
- Mampu mengidentifikasi generic structure yang ada didalam teks *descriptive*
- Mampu mengidentifikasi language feature yang ada didalam teks *descriptive*
- Memahami informasi penting yang ada dalam teks *descriptive*
- Mengidentifikasi cirri-ciri orang, hewan benda, atau tempat yang didesripsikan dalam teks *descriptive*
- Menjawab pertanyaan berdasarkan informasi yang ada dalam essay pendek berbentuk *descriptive*

Tujuan Pembelajaran:

Pada akhir pembelajaran diharapkan:

- Siswa mampu membaca dan memahami teks *descriptive*
- Siswa mampu mengidentifikasi ide pokok dalam teks *descriptive*
- Siswa mampu mengidentifikasi generic structure yang ada dalam teks *descriptive*
- Siswa mampu mengidentifikasi language features yang ada dalam teks *descriptive*

- Siswa mampu memahami informasi penting yang ada dalam teks *descriptive*
- Siswa mampu mengidentifikasi ciri-ciri orang, hewan, benda atau tempat yang dideskripsikan dalam teks *descriptive*
- Siswa mampu menjawab pertanyaan berdasarkan informasi yang ada dalam essay pendek berbentuk *descriptive*

Materi Pembelajaran: Teks In descriptive

Metode Pembelajaran: GTM (Grammar Translation Method)

Langkah-langkah Pembelajaran

A. Pendahuluan

1. Guru memasuki kelas dengan mengucapkan salam dan menyapa siswa dengan bahasa Inggris.
2. Guru meminta siswa untuk membuka kelas dengan berdo'a.
3. Guru mengabsen siswa.
4. Guru menjelaskan pentingnya materi yang akan dipelajari berikut kompetensi yang harus dikuasai siswa.
5. Guru mengaitkan kehidupan sehari-hari secara ringkas materi yang akan dipelajari.

B. Kegiatan Inti

Procedures:

1. Guru menyuruh para siswa membaca text yang ditulis dalam bahasa target.
2. Siswa menerjemahkan bagian dari bahasa target ke bahasa ibu mereka.

3. Guru meminta siswa dalam bahasa ibu mereka jika mereka memiliki pertanyaan, siswa mengajukan pertanyaan dan guru menjawab pertanyaan di penutur asli mereka.
4. Siswa menuliskan jawaban atas pertanyaan pemahaman bacaan.
5. Siswa menerjemahkan kata-kata baru dari bahasa target ke bahasa ibu mereka.
6. Siswa diberi aturan tata bahasa dan berdasarkan contoh mereka menerapkan peraturan dengan menggunakan kata-kata baru.
7. Siswa menghafal kosa kata.
8. Guru meminta siswa untuk menyatakan peraturan tata bahasa.
9. Siswa menghafal peraturan pola bahasa.
10. Kesalahan dikoreksi dengan memberikan jawaban yang benar.

C. Penutup

- 1 Guru membuat kesimpulan pelajaran.
- 2 Guru meminta siswa mengakhiri kelas dengan berdo'a.
- 3 Salam

Sumber Belajar : Buku teks yang relevan, gambar terkait tema/topic, benda-benda sekitar, kamus Bahasa Inggris, internet.

Media : Papan tulis, kapur/spidol, penghapus.

Penilaian :

Indicator pencapaian Kompetensi	Teknik penelitian	Bentuk Instrumen	Instrumen soal
1 Mengidentifikasi kalimat atau ide pokok yang terdapat dalam teks 2 Mengidentifikasi language feature dari teks 3 Mengidentifikasi informasi tertentu/penting yang terdapat dalam teks 4 Mengidentifikasi cirri-ciri dari orang, hewan, benda atau tempat yang dideskripsikan dalam teks 5 Generic structure	Teks Tulisan	Pilihan Ganda	Read the text carefully and then choose the correct answer based on the text by crossing a, b, c, or d

1 Jumlah skor maksimal keseluruhan adalah 100.

2 Jawaban benar diberi skor 5 dan jawaban salah diberi skor 0. Jumlah skor keseluruhan

$$5 \times 20 = 100.$$

3 Nilai maksimal = $\frac{\text{jumlah jawaban yang benar}}{\text{jumlah soal}}$

Experimental Class

LEARNING MATERIAL

A. Directions I: Translate the following paragraph into Bahasa Indonesia!

I have a pet. It is a dog and I call it Brownie because the color is brownish yellow. Brownie is a Chinese breed. It is a small, fluffy, and cute. It has thick brown fur. When I cuddle it, its fur feels soft. Brownie does not like bones. Every day it eats soft food like steamed rice, fish or bread. When I am at school, Brownie plays with my cat. They never fight maybe because Brownie does not bark a lot. It treats my other animal in my house gently. Brownie is really sweet and friendly animal.

B. Direction II: Answer the following questions correctly based on the text above!

1. Who is a pet?
2. What is the topic of the text?
3. What the dog eats every day?
4. Who is name a dog?
5. Why dog call is brownies?

Simple Present Tense

→ Pola kalimat untuk menyatakan kegiatan sehari-hari dan kebenaran umum.

New Words:

✓ Eat	: Makan	- Beautiful	: Cantik
✓ Live	: Tinggal	- Tall	: Tinggi
✓ Study	: Belajar	- Home	: Rumah
✓ Go	: Pergi	- Rice	: Nasi

Formula:

Positive (+)

I, You, We, They	+	V1	+ O/C
She, He, It		V1 + s/es	

Negative (-)

I, You, We, They	+	Do not	V1+ O/C
She, He, It		Does not	

Interrogative (?)

Do	+	I, You, We, They	V1+ O/C
Does		She, He, It	

Adverb of time:

- | | | | |
|-----------|--------------|-------------|----------------|
| ✓ Always | : Selalu | - Sometimes | : Kadang |
| ✓ Usually | : Biasanya | - Never | : Tidak pernah |
| ✓ Often | : Seringkali | - Once a___ | : Sekali se___ |
| ✓ Rarely | : Jarang | - every | : Setiap___ |

Example:

Habitual actions (Kegiatan sehari-hari):

1. (+) I always go to school in the morning.

(Saya selalu pergi kesekolah pagi-pagi).

(-) I do not always go to school in the morning.

(Saya tidak selalu pergi kesekolah pagi-pagi).

(?) Do you always go to school in the morning?

(Apakah kamu selalu pergi kesekolah pagi-pagi?)

2. (+) Wahyu usually drinks coffee every morning.

(Wahyu biasanya minum kopi setiap pagi)

(-) Wahyu does not usually drink coffee every morning.

(Wahyu tidak biasanya minum kopi setiap pagi)

(?) Does wahyu usually drink coffee every morning?

(Apakah wahyu biasanya minum kopi setiap pagi?)

General truth (Kebenaran umum):

- ✓ The moon shines at night
(Bulan bersinar pada malam hari)
- ✓ Bumi mengelilingi matahari
(The earth moves around the sun)
- ✓ Matahari bersinar cerah setiap pagi

(The sun shines brightly every morning)

Grammar Test:

Instruction: Fill in the blank in the following questions with correct answer!

Use the words in the bracket '()' if any.

- 1 I usually (bring)___ black pen every Tuesday morning.
- 2 We (not)___ take a bath every morning.
- 3 (not)___ you (wake up)___ early in the morning?
- 4 You (not)___ walk to school every morning.
- 5 Do not they (shop)___ once a week?
- 6 He (swim)___ in the river.
- 7 She (not)___ always (walk)___ to school every day.
- 8 (not)___ he (read)___ a newspaper?
- 9 They (sell)___ fruits and (drinks)___ every afternoon.
- 10 (not)___ we (study)___ hard every night?
- 11 Faraby often (watch)___ television every night.
- 12 ___he (wash)___ his car every week?
- 13 We (not)___ (Cross)___ that road every morning?
- 14 My mother (not)___ (go)___ to the supermarket every Sunday.
- 15 ___ they (eat)___ dinner at 6 pm every evening?
- 16 We (drink)___ orange juice every morning.
- 17 I (not)___ (walk)___ to school with my friends every day.
- 18 His father (go)___ to work by car every morning.
- 19 A tiger (run)___ very fast.
- 20 ___ we (sell)___ vegetables every morning?

Sentence Translation:

Part I. Instruction: Translate the following sentences into Bahasa Indonesia!

- He studies every night.
- Mr. Wahyu does not plant a lot of vegetables.
- Every morning, the sun shines brightly.
- I do not work in a bank.
- Do they go to the garden?

Part II. Instruction: Translate the following sentences into English!

- Saya mengerjakan PR setiap malam.
- Kami makan es cream setiap sore.
- Ade menyikat gigi setiap pagi.
- Rifadli biasanya menyisir rambut setiap pagi.
- Apakah mereka menonton TV setiap malam?

Part III. Instruction: Translate the following passage into English!

Saya punya kelinci, bulunya berwarna putih dan memiliki bintik-bintik hitam. Dia memiliki telinga panjang dan ekor pendek. Dia juga memiliki mata lucu besar berwarna merah. Kelinci saya suka makan wortel dan sayuran lainnya. Ketika saya melepaskan kelinci saya keluar dari keranjangnya, ia sering melompat kemana-mana dan sulit untuk ditangkap. Jadi, saya hanya bias menempatkan dia di kandangnya karena saya takut bahwa ia mungkin melarikan diri. Saya tidak ingin kehilangan kelinci saya karena saya sangat mencintainya.

Appendix 2

Control Class

RENCANA PELAKSANAAN PEMBELAJARAN

(RPP)

Nama Sekolah : MTS S Nurul Huda Rantau Cempedak

Mata Pelajaran : Bahasa Inggris

Kelas /Semester : VIII-5/I

Alokasi Waktu : 90 menit

Standar Kompetensi : Memahami makna teks tulis fungsional dan esei pendek sederhana berbentuk descriptif yang berkaitan dengan lingkungan sekitar.

Kompetensi Dasar :

- Membaca nyaring bermakna teks fungsional dan esei pendek sederhana berbentuk descriptif pendek dan sederhana dengan ucapan, tekanan, dan intonasi yang berterima yang berkaitan dengan lingkungan sekitar.
- Merespon makna dalam teks fungsional pendek sederhana secara akurat, lancar dan berterima yang berkaitan dengan lingkungan sekitar.

Jenis teks : Teks descriptif

Aspek/skill : Membaca

Indikator :

- Membaca dengan nyaring dan bermakna teks fungsional pendek
- Mengidentifikasi fungsi social teks fungsional pendek.

Tujuan Pembelajaran:

Pada akhir pembelajaran diharapkan:

- Siswa mampu membaca dengan nyaring dan bermakna teks fungsional pendek
- Siswa mampu mengidentifikasi fungsi social teks fungsional pendek

Materi Pembelajaran: Teks fungsional pendek, teks esai berbentuk descriptif

Metode Pembelajaran: Conventional Method

Langkah-langkah Pembelajaran

D. Pendahuluan

6. Guru memasuki kelas dengan mengucapkan salam dan menyapa siswa dengan bahasa Inggris.

7. Guru meminta siswa untuk membuka kelas dengan berdo'a.
8. Guru mengabsen siswa.
9. Guru menjelaskan pentingnya materi yang akan dipelajari berikut kompetensi yang harus dikuasai siswa.
10. Guru menjelaskan secara ringkas materi yang akan dipelajari.

E. Kegiatan Inti

1. Mendengarkan teks yang dibacakan oleh guru/teman
2. Membaca nyaring teks fungsional pendek.
3. Menyebutkan tujuan komunikatif teks fungsional pendek.

F. Penutup

- Guru membuat kesimpulan pelajaran.
- Guru memberikan tugas untuk siswa.
- Guru meminta siswa untuk mengakhiri kelas dengan berdo'a.
- Salam.

Sumber Belajar : Buku teks yang relevan, gambar terkait tema/topic, benda-benda sekitar, kamus Bahasa Inggris.

Media : Papan tulis, kapur/spidol, penghapus.

Penilaian :

Indicator pencapaian kompetensi	Teknik penelitian	Bentuk Instru ment	Instru ment soal
6 Membaca dengan nyaring dan bermakna teks fungsional pendek. 7 Mengidentifikasi fungsi social teks fungsional pendek.	Teks lisan Teks tulisan	Pilihan Ganda	Read the text aloud and clearly. choose the correct answer.

Pedoman Penilaian

A. (Jawaban benar x 2)

B. Jawaban salah nilai 0

C. Rubrik Penilaian

Uraian	Skor
Jawaban benar	2
Jawaban Salah	0

Jumlah nilai Keseluruhan = (A+B=C) X 4

Appendix 3

Instrument for Pre-Test before Validity

Name:

Class:

Instruction: choose the correct answer by crossing (X) a, b, c, or d

Question 1- 5: this text below is for question number 1 up 5. Choose the best answer based on text.

My classroom is very big. There are twenty classroom and forty chairs for students. The teacher's table is in front of the classroom. The teacher sits behind the table. Behind her is the whiteboard. Beside the whiteboard is a map of Indonesian archipelago. Under the map, there is a bookshelf. There are two windows in the room. Between the windows is a picture of Prambanan temple. I like my classroom very much.

1. What is the first paragraph about?
 - a My classroom is very big
 - b I like my classroom very much
 - c My classroom in front of table
 - d My classroom twenty chairs
2. "My classroom is very big ". The underlined word.
 - a Large
 - b Great
 - c Fat
 - d Clean
3. Where does the teacher sit?
 - a In front of the classroom
 - b Behind the whiteboard.
 - c Behind the table
 - d Under the map
4. Where is the whiteboard?
 - a behind the table
 - b Beside the teacher
 - c Behind the wall
 - d Behind the teacher
5. What is main idea from first paragraph?
 - a I like classroom very much
 - b the windows is a picture of Prambanan temple
 - c My classroom is very big

- d My classroom forty chair

Question 6- 10: this text below is for question number 6 up 10. Choose the best answer based on text.

Peter is the youngest in our family. He is fourteen years old and four years younger than me.

Peter is the best. He has long straight hair, bright eyes and a friendly smile. Sometimes he is rather naughty at home, but he usually does what he is asked to do. Peter is interested in sports very much, and at school, he plays football and tennis. He is the best badminton player in our family and Peter's favorite sport is badminton.

6. What is the first paragraph about?
 - a Peter is the youngest in our family
 - b Peter's hobby
 - c Peter's family
 - d Peter's elder brother

7. What is the main idea of the first paragraph?
 - a Peter is the youngest child in his family
 - b Peter is the oldest in his family
 - c Peter is the diligent in his family
 - d Peter is the stupid in his family

8. How is Peter in his family?
 - a He is the best badminton player in his family
 - b He is the best cooker in his family
 - c He is the best dancer in his family
 - d He is the best singer in his family

9. What the characteristic of Peter?
 - a He has long straight hair
 - b Curly hair
 - c Dark eyes
 - d Ignorant

10. "He is fourteen years old... Then me." The underlined word refers to?
 - a Peter
 - b The writer

- c The writer's brother
- d The writer's family

Question 11- 15: this text below is for question number 11 up 15. Choose the best answer based on text.

I love dogs very much. I keep some dogs in my house. They are Casper, Midas, Brownie and Dottie.

Casper is a dachshund. He's short with long body and four strong legs. Brownie is a collie. She has long and thick fur. What color is her fur? Brown, of course that's why I call her Brownie. Dottie is a Dalmatian. She has a slim body and four long legs. She has thin fur and dots all over her body. The last is Midas. He is a bulldog. He has a large head, a short neck and thick short legs. He's very strong. I always take care of my dogs every day.

11. What kind of text is the text above?
 - a Recount
 - b Descriptive
 - c Narrative
 - d Report
12. The generic structure of the text is
 - a Description--identification
 - b Identification--description
 - c Orientation--events--Reorientation
 - d Reorientation – events – Orientation
13. "She has long and thick fur". The antonym of the underlined word is...
 - a Heavy
 - b Length
 - c Short
 - d Fragrant
14. How many dogs does the writer write?
 - a 1
 - b 2
 - c 3
 - d 4
15. What does Casper look like?
 - a Short with long body and strong legs
 - b Brown, with long and thick fur

- c Slim body, long legs
- d Thin fur and dots

Question 16- 20: this text below is for question number 16 up 20. Choose the best answer based on text.

When I just hang out in a mall one day, I saw a very beautiful bag. I love this bag at the first sight.

This was the first time I've spent much money on a bag and I don't regret it. The bag is wonderful. It is made of thin but strong leather. The weight is light and the size keeps it from getting stuffed with junk. It has a long shoulder strap that I like because it keeps the bag hands-free. Its neutral color is fun and sporty. The design is simple and well-made.

The bag is very functional. It is the perfect size to carry a cell phone, a pocket sized wallet, a small book, a pack of gum, and pens. It also fits well into my laptop backpack for bike commuting to school. This bag also has more pockets inside so my small items don't all fall to the bottom. In overall I really satisfy with bag.

16. Where does the writer usually put her small items?
 - a In her pockets
 - b In her laptop backpack.
 - c In her pocket size wallet.
 - d In the pockets of her leather bag
17. What makes the small items of the writer not falling down in the bag?
 - a The satisfying bag
 - b Her laptop backpack
 - c A pocket-sized wallet
 - d The pockets inside the bag
18. "I've spent much money on a bag and I don't regret it". The underlined word refers to ...the bag.
 - a Having
 - b Seeing
 - c Buying
 - d Loving
19. What is the main idea of the last paragraph?
 - a The writer has a new bag.
 - b The bag is very functional.
 - c The bag has many pockets.
 - d The writer is satisfied with the bag
20. What is the purpose of the text?
 - a To retell the past event

- b To entertain the readers
- c To describe the writer's new bag
- d To give instruction how to buy a bag

Question 21- 25: this text below is for question number 21 up 25. Choose the best answer based on text.

My favorite toy is a doll. I named my doll Becky. I got in my 12th birthday. My dad bought it for me when he was in England. Becky is 16 cm tall doll with plastic head, arms, and legs and a white cloth stuffed body. Her body is covered with yellow, orange, and green flower bud prints. She has a long auburn-red brush-able hair, green eyes. There are freckles on her cheek. There are also two dimples near her mouth on the left and on the right. They make her more beautiful. I put her at my side when I sleep at night. I like my doll very much. I sometimes ask my friends to come to my house and play with Becky. They like Becky too.

- 21. What does the text tell us about?
 - a My favorite toy.
 - b The writer's favorite doll.
 - c A birthday party.
 - d A plastic doll.
- 22. What are on Becky's face?
 - a White cloth.
 - b Auburn red hair.
 - c Freckles and dimples.
 - d Flower bud prints.
- 23. "They make her more beautiful." The underlined word refers to...
 - a Freckles.
 - b Green eyes.
 - c The left and bright cheeks.
 - d The dimples.
- 24. What is the first paragraph about?
 - a Name is favorite toy is doll Becky's
 - b Doll Becky's is white cloth
 - c My favorite toy is a doll
 - d My name is doll Becky
- 25. Where is doll Becky's put if her sleep?
 - a Inside
 - b On the pillow
 - c On the table
 - d On the foot

Appendix 4

Instrument for Post-Test before Validity

Name:

Class:

Instruction: choose the correct answer by crossing (X) a, b, c, or d

Question 1- 5: this text below is for question number 1 up 5. Choose the best answer based on text.

My favorite toy is a doll. I named my doll Becky. I got in my 12th birthday. My dad bought it for me when he was in England. Becky is 16 cm tall doll with plastic head, arms, and legs and a white cloth stuffed body. Her body is covered with yellow, orange, and green flower bud prints. She has a long auburn-red brush-able hair, green eyes. There are freckles on her cheek. There are also two dimples near her mouth on the left and on the right. They make her more beautiful. I put her at my side when I sleep at night. I like my doll very much. I sometimes ask my friends to come to my house and play with Becky. They like Becky too.

1. What does the text tell us about?
 - e My favorite toy.
 - f The writer's favorite doll.
 - g A birthday party.
 - h A plastic doll.
2. What are on Becky's face?
 - e White cloth.
 - f Auburn red hair.
 - g Freckles and dimples.
 - h Flower bud prints.
3. "**They** make her more beautiful." The underlined word refers to...
 - e Freckles.
 - f Green eyes.
 - g The left and bright cheeks.
 - h The dimples.
4. What is the first paragraph about?
 - e Name is favorite toy is doll Becky's
 - f Doll Becky's is white cloth
 - g My favorite toy is a doll
 - h My name is doll Becky
5. Where is doll Becky's put if her sleep?
 - e Inside

- f On the pillow
- g On the table
- h On the foot

Question 6- 15: this text below is for question number 6 up 15. Choose the best answer based on text.

The National monument is a 132 meters tower in the center of Merdeka Square, Central Jakarta. It symbolizes the fight for Indonesia's independence. The monument consists of a 117.7 m obelisk on a 45 m square at a height of 17 m.

The towering monument symbolizes the philosophy of Lingga and Yoni. Lingga resembles, rice pestle (alu) and Yoni resembles mortar rice (lesung), two important items in Indonesian agricultural tradition.

The construction began in 1961 under the direction of President Soekarno and the monument was opened to the public in 1975. It is topped by a flame covered with gold foil. The monument and museum is opened daily from 08.00-15.00 everyday throughout the week, except for the last Monday of the month the monument is closed.

6. What is the second paragraph about?
 - a The towering monument
 - b The museum
 - c President Soekarno
 - d Merdeka square
7. What is main idea in the second paragraph?
 - a The National Monument is a 132 meters tower in the center of Merdeka Square, Central Jakarta.
 - b The National Monument is located in Central Java
 - c The towering monument symbolizes the philosophy of Lingga and Yoni
 - d The monument and museum is opened daily from 08.00-15.00 everyday
8. What day the National monument is closed?
 - a Saturday
 - b Sunday
 - c Monday
 - d In afternoon
9. How many meters the national monument of square platform?
 - a 117.7 m
 - b 117.6 m
 - c 117.5 m
 - d 117.4 m

10. "The towering monument symbolizes the philosophy of Lingga and Yoni."
What is the meaning of Lingga and Yoni?
- Stick and Bowl
 - Rice pestle (alu) and Mortar rice (lesung)
 - Spoon and Fork
 - Simple and Mod
11. What is the last paragraph about?
- The construction of monument
 - The construction of museum
 - The construction of Lingga
 - The construction of Yoni
12. What is main idea in the last paragraph?
- Lingga resembles, rice pestle (alu) and Yoni resembles mortar rice (lesung), two important items in Indonesian agricultural tradition.
 - The construction began in 1961 under the direction of President Soekarno and the monument was opened to the public in 1975.
 - It is topped by flame covered with gold foil
 - The monument consists of a 117.7 m obelisk on a 45 m square at a height of 17 m.
13. for the last Monday of the month the monument.....
- Was closed
 - Is closed
 - Doesn't closed
 - Were closed
14. What are the important items in Indonesian agricultural tradition?
- Lingga and Yoni
 - Merdeka square and central Jakarta
 - Lingga and Merdeka square
 - Yoni and Central Jakarta
15. "it is topped by a flame covered with gold foil." The underline word refers to....
- Museum
 - Monument
 - Lingga
 - Yoni

Question 16- 20: this text below is for question number 16 up 20. Choose the best answer based on text.

I have a special friend. She is my classmate and sits beside me. Her name is Rohmi. Rohmi is a quite girl and very simple on the look. However, I really adore her. She is not only kind but also tough.

Rohmi comes from a very simple family. Her father is a pedicel driver and her mother has passed away. She has a younger brother. His name is Rahmat. In order to help their father, Rohmi and her brother work part-time to earn some money. Rohmi sells food during our class break, while her brother sells news papers and magazines after school.

One thing that I always admire about her is that she can manage her time well, and she always looks cheerful.

16. What does the second paragraph tell you about?
 - a Rohmi and her family
 - b Rohmi and her father
 - c Rohmi and her brother
 - d Rohmi and her friends
17. "...Rohmi and her brother work part-time to earn some money. What do the underlined words mean?
 - a work for the whole of working week
 - b work for only part of each day or week
 - c work for the purpose of getting money as much as possible
 - d work for family
18. Where did the writer sit?
 - a in front of Rohmi
 - b behind Rohmi
 - c next to Rohmi
 - d far from Rohmi
19. What is the second Paragraph about?
 - a She is my classmate and sits beside me
 - b Rohmi comes from a very simple family
 - c Rohmi sells food during our class break, while her brother sells news papers and magazines after school.
 - d I have a special friend.
20. Who is young brother Rohmi?
 - a Classmate
 - b Writer's
 - c Author
 - d Rahmat

Question 21- 25: this text below is for question number 21 up 25. Choose the best answer based on text.

My classroom is very big. There are twenty classroom and forty chairs for students. The teacher's table is in front of the classroom. The teacher sits behind the table. Behind her is the whiteboard. Beside the whiteboard is a map of Indonesian archipelago. Under the map, there is a bookshelf. There are two windows in the room. Between the windows is a picture of Prambanan temple. I like my classroom very much.

21. What is the first paragraph about?
 - e My classroom is very big
 - f I like my classroom very much
 - g My classroom in front of table
 - h My classroom twenty chairs
22. "My classroom is very big". The underlined word.
 - e Large
 - f Great
 - g Fat
 - h Clean
23. Where does the teacher sit?
 - e In front of the classroom
 - f Behind the whiteboard.
 - g Behind the table
 - h Under the map
24. Where is the whiteboard?
 - e behind the table
 - f Beside the teacher
 - g Behind the wall
 - h Behind the teacher
25. What is main idea from first paragraph?
 - e I like classroom very much
 - f the windows is a picture of Prambanan temple
 - g My classroom is very big
 - h My classroom forty chair

Appendix 5

Instrument for Pre-Test after Validity

Name:

Class:

Instruction: choose the correct answer by crossing (X) a, b, c, or d

Question 1- 5: this text below is for question number 1 up 5. Choose the best answer based on text.

My classroom is very big. There are twenty classroom and forty chairs for students. The teacher's table is in front of the classroom. The teacher sits behind the table. Behind her is the whiteboard. Beside the whiteboard is a map of Indonesian archipelago. Under the map, there is a bookshelf. There are two windows in the room. Between the windows is a picture of Prambanan temple. I like my classroom very much.

6. What is the first paragraph about?
 - i My classroom is very big
 - j I like my classroom very much
 - k My classroom in front of table
 - l My classroom twenty chairs

7. "My classroom is very big". The underlined word.
 - i Large
 - j Great
 - k Fat
 - l Clean

8. Where does the teacher sit?
 - i In front of the classroom
 - j Behind the whiteboard.
 - k Behind the table
 - l Under the map

9. Where is the whiteboard?
 - i behind the table
 - j Beside the teacher
 - k Behind the wall
 - l Behind the teacher

10. What is main idea from first paragraph?

- i I like classroom very much
- j the windows is a picture of Prambanan temple
- k My classroom is very big
- l My classroom forty chair

Question 6- 10: this text below is for question number 6 up 10. Choose the best answer based on text.

Peter is the youngest in our family. He is fourteen years old and four years younger than me.

Peter is the best. He has long straight hair, bright eyes and a friendly smile. Sometimes he is rather naughty at home, but he usually does what he is asked to do. Peter is interested in sports very much, and at school, he plays football and tennis. He is the best badminton player in our family and Peter's favorite sport is badminton.

- 6. What is the first paragraph about?
 - e Peter is the youngest in our family
 - f Peter's hobby
 - g Peter's family
 - h Peters' elder brother

- 7. What is the main idea of the first paragraph?
 - e Peter is the youngest child in his family
 - f Peter is the oldest in his family
 - g Peter is the diligent in his family
 - h Peter is the stupid in his family

- 8. How is Peter in his family?
 - e He is the best badminton player in his family
 - f He is the best cooker in his family
 - g He is the best dancer in his family
 - h He is the best singer in his family

- 9. What the characteristic of Peter?
 - e He has long straight hair
 - f Curly hair
 - g Dark eyes
 - h Ignorant

10. "He is fourteen years old... Then me." The underlined word refers to?
- e Peter
 - f The writer
 - g The writer's brother
 - h The writer's family

Question 11- 15: this text below is for question number 11 up 15. Choose the best answer based on text.

I love dogs very much. I keep some dogs in my house. They are Casper, Midas, Brownie and Dottie.

Casper is a dachshund. He's short with long body and four strong legs. Brownie is a collie. She has long and thick fur. What color is her fur? Brown, of course that's why I call her Brownie. Dottie is a Dalmatian. She has a slim body and four long legs. She has thin fur and dots all over her body. The last is Midas. He is a bulldog. He has a large head, a short neck and thick short legs. He's very strong. I always take care of my dogs every day.

11. What kind of text is the text above?
- e Recount
 - f Descriptive
 - g Narrative
 - h Report
12. The generic structure of the text is
- e Description--identification
 - f Identification--description
 - g Orientation--events--Reorientation
 - h Reorientation – events – Orientation
13. "She has long and thick fur". The antonym of the underlined word is...
- e Heavy
 - f Length
 - g Short
 - h Fragrant

14. How many dogs does the writer write?

- e 1
- f 2
- g 3
- h 4

15. What does Casper look like?

- e Short with long body and strong legs
- f Brown, with long and thick fur
- g Slim body, long legs
- h Thin fur and dots

Question 16- 20: this text below is for question number 16 up 20. Choose the best answer based on text.

When I just hang out in a mall one day, I saw a very beautiful bag. I love this bag at the first sight.

This was the first time I've spent much money on a bag and I don't regret it. The bag is wonderful. It is made of thin but strong leather. The weight is light and the size keeps it from getting stuffed with junk. It has a long shoulder strap that I like because it keeps the bag hands-free. Its neutral color is fun and sporty. The design is simple and well-made.

The bag is very functional. It is the perfect size to carry a cell phone, a pocket sized wallet, a small book, a pack of gum, and pens. It also fits well into my laptop backpack for bike commuting to school. This bag also has more pockets inside so my small items don't all fall to the bottom. In overall I really satisfy with bag

16. Where does the writer usually put her small items?

- e In her pockets
- f In her laptop backpack.
- g In her pocket size wallet.
- h In the pockets of her leather bag

17. What makes the small items of the writer not falling down in the bag?

- e The satisfying bag
- f Her laptop backpack
- g A pocket-sized wallet
- h The pockets inside the bag

18. "I've spent much money on a bag and I don't regret it". The underlined word refers to ...the bag.
- e Having
 - f Seeing
 - g Buying
 - h Loving
19. What is the main idea of the last paragraph?
- e The writer has a new bag.
 - f The bag is very functional.
 - g The bag has many pockets.
 - h The writer is satisfied with the bag
20. What is the purpose of the text?
- e To retell the past event
 - f To entertain the readers
 - g To describe the writer's new bag
 - h To give instruction how to buy a bag

Appendix 6

Instrument for Post-Test after Validity

Name:

Class:

Instruction: choose the correct answer by crossing (X) a, b, c, or d

Question 1- 5: this text below is for question number 1 up 5. Choose the best answer based on text.

My favorite toy is a doll. I named my doll Becky. I got in my 12th birthday. My dad bought it for me when he was in England. Becky is 16 cm tall doll with plastic head, arms, and legs and a white cloth stuffed body. Her body is covered with yellow, orange, and green flower bud prints. She has a long auburn-red brush-able hair, green eyes. There are freckles on her cheek. There are also two dimples near her mouth on the left and on the right. They make her more beautiful. I put her at my side when I sleep at night. I like my doll very much. I sometimes ask my friends to come to my house and play with Becky. They like Becky too.

2. What does the text tell us about?
 - i My favorite toy.
 - j The writer's favorite doll.
 - k A birthday party.
 - l A plastic doll.
2. What are on Becky's face?
 - i White cloth.
 - j Auburn red hair.
 - k Freckles and dimples.
 - l Flower bud prints.
3. "They make her more beautiful." The underlined word refers to...
 - i Freckles.
 - j Green eyes.
 - k The left and bright cheeks.
 - l The dimples.
4. What is the first paragraph about?
 - i Name is favorite toy is doll Becky's
 - j Doll Becky's is white cloth
 - k My favorite toy is a doll
 - l My name is doll Becky
5. Where is doll Becky's put if her sleep?

- i Inside
- j On the pillow
- k On the table
- l On the foot

Question 6- 15: this text below is for question number 6 up 15. Choose the best answer based on text.

The National monument is a 132 meters tower in the center of Merdeka Square, Central Jakarta. It symbolizes the fight for Indonesia's independence. The monument consists of a 117.7 m obelisk on a 45 m square at a height of 17 m.

The towering monument symbolizes the philosophy of Lingga and Yoni. Lingga resembles, rice pestle (alu) and Yoni resembles mortar rice (lesung), two important items in Indonesian agricultural tradition.

The construction began in 1961 under the direction of President Soekarno and the monument was opened to the public in 1975. It is topped by a flame covered with gold foil. The monument and museum is opened daily from 08.00-15.00 everyday throughout the week, except for the last Monday of the month the monument is closed.

6. What is the second paragraph about?
 - e The towering monument
 - f The museum
 - g President Soekarno
 - h Merdeka square
7. What is main idea in the second paragraph?
 - e The National Monument is a 132 meters tower in the center of Merdeka Square, Central Jakarta.
 - f The National Monument is located in Central Java
 - g The towering monument symbolizes the philosophy of Lingga and Yoni
 - h The monument and museum is opened daily from 08.00-15.00 everyday
8. What day the National monument is closed?
 - e Saturday
 - f Sunday
 - g Monday
 - h In afternoon
9. How many meters the national monument of square platform?
 - e 117.7 m
 - f 117.6 m

- g 117.5 m
 - h 117.4 m
10. “The towering monument symbolizes the philosophy of *Lingga and Yoni*.”
What is the meaning of Lingga and Yoni?
- e Stick and Bowl
 - f Rice pestle (alu) and Mortar rice (lesung)
 - g Spoon and Fork
 - h Simple and Mod
11. What is the last paragraph about?
- e The construction of monument
 - f The construction of museum
 - g The construction of Lingga
 - h The construction of Yoni
12. What is main idea in the last paragraph?
- e Lingga resembles, rice pestle (alu) and Yoni resembles mortar rice (lesung), two important items in Indonesian agricultural tradition.
 - f The construction began in 1961 under the direction of President Soekarno and the monument was opened to the public in 1975.
 - g It is topped by flame covered with gold foil
 - h The monument consists of a 117.7 m obelisk on a 45 m square at a height of 17 m.
13. for the last Monday of the month the monument.....
- e Was closed
 - f Is closed
 - g Doesn't closed
 - h Were closed
14. What are the important items in Indonesian agricultural tradition?
- e Lingga and Yoni
 - f Merdeka square and central Jakarta
 - g Lingga and Merdeka square
 - h Yoni and Central Jakarta
15. “it is topped by a flame covered with gold foil.” The underline word refers to....
- e Museum
 - f Monument
 - g Lingga
 - h Yoni

Question 16- 20: this text below is for question number 16 up 20. Choose the best answer based on text.

I have a special friend. She is my classmate and sits beside me. Her name is Rohmi. Rohmi is a quite girl and very simple on the look. However, I really adore her. She is not only kind but also tough.

Rohmi comes from a very simple family. Her father is a pedicel driver and her mother has passed away. She has a younger brother. His name is Rahmat. In order to help their father, Rohmi and her brother work part-time to earn some money. Rohmi sells food during our class break, while her brother sells news papers and magazines after school.

One thing that I always admire about her is that she can manage her time well, and she always looks cheerful.

16. What does the second paragraph tell you about?

- e Rohmi and her family
- f Rohmi and her father
- g Rohmi and her brother
- h Rohmi and her friends

17. "...Rohmi and her brother work part-time to earn some money. What do the underlined words mean?

- e work for the whole of working week
- f work for only part of each day or week
- g work for the purpose of getting money as much as possible
- h work for family

18. Where did the writer sit?

- e in front of Rohmi
- f behind Rohmi
- g next to Rohmi
- h far from Rohmi

19. What is the second Paragraph about?

- e She is my classmate and sits beside me
- f Rohmi comes from a very simple family
- g Rohmi sells food during our class break, while her brother sells news papers and magazines after school.
- h I have a special friend.

20. Who is young brother Rohmi?

- e Classmate
- f Writer's
- g Author
- h Rahmat

Appendix 7

Answer Key

A. Pre Test

1. A
2. B
3. C
4. D
5. C
6. A
7. A
8. A
9. A
10. B
11. B
12. B
13. C
14. D
15. A
16. D
17. D
18. C
19. B
20. C

B. Post Test

1. A
2. A
3. D
4. A
5. A
6. C
7. C
8. A
9. B
10. A
11. B
12. B
13. A
14. B
15. A
16. A
17. D
18. B
19. B
20. D

Appendix 8

The calculation of validity instrument for Pre-test

Calculation of $r_{pbi} = \frac{M_p = M_t}{SD_t} \sqrt{\frac{p}{q}}$

A. Calculation of Pre-test

1. Mean score from score total (M_t)

$$M_t = \frac{\sum x_t}{n}$$
$$M_t = \frac{293}{25} = 11.72$$

2. Standard Deviation (SD_t)

$$SD_t = \sqrt{\frac{\sum x_t^2}{N} - \left(\frac{\sum x_t}{N}\right)^2}$$
$$SD_t = \sqrt{\frac{3671}{25} - \left(\frac{293}{25}\right)^2}$$
$$SD_t = \sqrt{146.84 - 11.72^2}$$
$$SD_t = \sqrt{146.84 - 137.35}$$
$$SD_t = \sqrt{9.49} = 3.08$$

3. Mean Score (M_p)

Item 1

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_1}$$
$$M_{pl} = \frac{9+11+13+9+13+7+14+12+7+8+15+11+14+10+16+15+18+16+13+13+11+12+7+12}{24}$$
$$M_{pl} = \frac{286}{24} = 11.91$$

Item 2

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_2}$$
$$M_{pl} = \frac{11+13+13+12+15+11+10+15+13+13+12}{11}$$
$$M_{pl} = \frac{138}{11} = 12.54$$

Item 3

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_3}$$
$$M_{pl} = \frac{9+7+8+14+15+13+12}{7}$$
$$M_{pl} = \frac{78}{7} = 11.14$$

Item 4

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_4}$$
$$M_{pl} = \frac{9+14+15+11+16+18+16+11+12}{9}$$
$$M_{pl} = \frac{122}{9} = 13.55$$

Item 5

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n5}$$

$$M_{pl} = \frac{11+13+9+13+7+8+15+11+14+10+16+15+18+16+13+13+11+12+7+12}{20}$$

$$M_{pl} = \frac{244}{20} = 12.2$$

Item 6

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n6}$$

$$M_{pl} = \frac{9+9+7+14+7+10+16+18+16+7}{10}$$

$$M_{pl} = \frac{113}{10} = 11.3$$

Item 7

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n7}$$

$$M_{pl} = \frac{9+9+7+14+10+16+18+16+7+11+12}{11}$$

$$M_{pl} = \frac{129}{11} = 11.72$$

Item 8

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n8}$$

$$M_{pl} = \frac{13+14+7+14+16+18+16+7+7}{9}$$

$$M_{pl} = \frac{112}{9} = 12.45$$

Item 9

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n9}$$

$$M_{pl} = \frac{13+14+12+11+15+11+12}{7}$$

$$M_{pl} = \frac{88}{7} = 12.57$$

Item 10

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n10}$$

$$M_{pl} = \frac{11+13+12+12+11+15+14+15+13+11+12+12}{11}$$

$$M_{pl} = \frac{151}{11} = 13.72$$

Item 11

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n11}$$

$$M_{pl} = \frac{13+13+12+14+15+15+11+14+16+15+18+16+13+13+11+12+12}{16}$$

$$M_{pl} = \frac{233}{16} = 14.56$$

Item 12

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n12}$$

$$M_{pl} = \frac{9+7+15+16+18+16+13+13+11+12}{10}$$

$$M_{pl} = \frac{130}{10} = 13$$

Item 13

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{13}}$$

$$M_{pl} = \frac{11+13+13+14+12+8+15+14+16+15+18+16+13+13+11+12+12}{17}$$

$$M_{pl} = \frac{335}{17} = 19.70$$

Item 14

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{14}}$$

$$M_{pl} = \frac{11+13+9+7+14+12+15+10+14+18+15+13+13+12}{14}$$

$$M_{pl} = \frac{176}{14} = 12.57$$

item 15

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{15}}$$

$$M_{pl} = \frac{11+13+9+13+12+14+7+15+14+10+15+18+13+7+13+12}{16}$$

$$M_{pl} = \frac{196}{16} = 12.25$$

Item 16

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{16}}$$

$$M_{pl} = \frac{9+13+9+7+8+14+11+15+16+18+16+12}{12}$$

$$M_{pl} = \frac{148}{12} = 12.33$$

Item 17

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{17}}$$

$$M_{pl} = \frac{11+13+14+7+12+7+15+14+16+15+16+18+13+7+13+12+12}{17}$$

$$M_{pl} = \frac{215}{17} = 12.64$$

Item 18

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{18}}$$

$$M_{pl} = \frac{11+13+14+7+12+11+15+14+16+15+16+18+13+7+13+12+12+7}{18}$$

$$M_{pl} = \frac{226}{18} = 12.55$$

Item 19

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{19}}$$

$$M_{pl} = \frac{13+13+9+14+12+8+15+11+16+10+15+18+13+16+13+7+12}{17}$$

$$M_{pl} = \frac{217}{17} = 12.64$$

Item 20

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{20}}$$

$$M_{pl} = \frac{11+9+12+14+15+7}{6}$$

$$M_{pl} = \frac{68}{6} = 11.33$$

Item 21

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{21}}$$

$$M_{pl} = \frac{13+9+14+11+10+16+18+16}{8}$$

$$M_{pl} = \frac{107}{8} = 13.37$$

Item 22

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{22}}$$

$$M_{pl} = \frac{11+13+13+13}{4}$$

$$M_{pl} = \frac{50}{4} = 12.5$$

Item 23

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{23}}$$

$$M_{pl} = \frac{15+16+18+16}{4}$$

$$M_{pl} = \frac{65}{4} = 16.25$$

Item 24

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{24}}$$

$$M_{pl} = \frac{9+14+8+10+7}{5}$$

$$M_{pl} = \frac{48}{5} = 19.6$$

Item 25

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{25}}$$

$$M_{pl} = \frac{13+13+15+16+18+16+13+11+7+12}{10}$$

$$M_{pl} = \frac{134}{10} = 13.4$$

4. Calculation of the formulation $r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$

Item 1

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{11.91 - 11.72}{3.08} = \sqrt{\frac{0.9}{0.0}}$$

$$r_{pbi} = \frac{0.19}{3.08} \sqrt{4.5}$$

$$r_{pbi} = 0.061 \times 2.12 = 0.129.$$

Item 2

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.54 - 11.72}{3.08} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{0.82}{3.08} \sqrt{0.8}$$

$$r_{pbi} = 2.33 \times 0.2 = 0.466.$$

Item 3

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.54 - 11.72}{3.08} = \sqrt{\frac{0.2}{0.7}}$$

$$r_{pbi} = \frac{0.82}{3.08} \sqrt{0.28}$$

$$r_{pbi} = 0.766 \times 0.529 = 0.405.$$

Item 4

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.55 - 11.72}{3.08} = \sqrt{\frac{0.3}{0.6}}$$

$$r_{pbi} = \frac{1.83}{3.08} \sqrt{0.5}$$

$$r_{pbi} = 0.594 \times 0.707 = 0.419.$$

Item 5

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.25 - 11.72}{3.08} = \sqrt{\frac{0.8}{0.1}}$$

$$r_{pbi} = \frac{0.53}{3.08} \sqrt{2.82}$$

$$r_{pbi} = 0.179 \times 2.82 = 0.504.$$

Item 6

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{11.3 - 11.72}{3.08} = \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{-0.42}{3.08} \sqrt{0.66}$$

$$r_{pbi} = -0.136 \times 0.816 = -0.110.$$

Item 7

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.79 - 11.72}{3.08} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{2.07}{3.08} \sqrt{0.8}$$

$$r_{pbi} = 0.679 \times 0.894 = 0.607.$$

Item 8

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.45 - 11.72}{3.08} = \sqrt{\frac{0.3}{0.6}}$$

$$r_{pbi} = \frac{0.73}{3.08} \sqrt{0.5}$$

$$r_{pbi} = 0.987 \times 0.707 = 0.697.$$

Item 9

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.59 - 11.72}{3.08} = \sqrt{\frac{0.7}{0.2}}$$

$$r_{pbi} = \frac{0.87}{3.08} \sqrt{3.5}$$

$$r_{pbi} = 0.282 \times 1.870 = 0.527.$$

Item 10

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.72 - 11.72}{3.08} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{2}{3.08} \sqrt{0.8}$$

$$r_{pbi} = 0.649 \times 0.894 = 0.580.$$

Item 11

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.56 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{2.84}{3.08} \sqrt{2}$$

$$r_{pbi} = 0.649 \times 1.414 = 0.917.$$

Item 12

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.6}}$$

$$r_{pbi} = \frac{1.28}{3.08} \sqrt{1}$$

$$r_{pbi} = 0.415 \times 1 = 0.415.$$

Item 13

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{19.70 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.6}}$$

$$r_{pbi} = \frac{7.98}{3.08} \sqrt{1}$$

$$r_{pbi} = 2.590 \times 1 = 2.590.$$

Item 14

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.57 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{0.85}{3.08} \sqrt{2}$$

$$r_{pbi} = 0.275 \times 1.414 = 0.398.$$

Item 15

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.25 - 11.72}{3.08} = \sqrt{\frac{0.5}{0.4}}$$

$$r_{pbi} = \frac{0.53}{3.08} \sqrt{1.25}$$

$$r_{pbi} = 0.172 \times 1.118 = 0.192.$$

Item 16

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.33 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{0.61}{3.08} \sqrt{2}$$

$$r_{pbi} = 0.198 \times 1.414 = 0.279.$$

Item 17

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.64 - 11.72}{3.08} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{1.92}{3.08} \sqrt{0.8}$$

$$r_{pbi} = 0.623 \times 0.894 = 0.556.$$

Item 18

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.55 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{1.83}{3.08} \sqrt{2}$$

$$r_{pbi} = 0.594 \times 1.414 = 0.839.$$

Item 19

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.64 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{1.92}{3.08} \sqrt{2}$$

$$r_{pbi} = 0.623 \times 1.414 = 0.710.$$

Item 20

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.33 - 11.72}{3.08} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{1.61}{3.08} \sqrt{2}$$

$$r_{pbi} = 0.522 \times 1.414 = 0.738.$$

Item 21

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.37 - 11.72}{3.08} = \sqrt{\frac{0.2}{0.7}}$$

$$r_{pbi} = \frac{1.65}{3.08} \sqrt{0.285}$$

$$r_{pbi} = 0.535 \times 0.534 = 0.285$$

Item 22

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.50 - 11.72}{3.08} = \sqrt{\frac{0.3}{0.6}}$$

$$r_{pbi} = \frac{1.78}{3.08} \sqrt{0.5}$$

$$r_{pbi} = 0.577 \times 0.707 = 0.407.$$

Item 23

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{16.25 - 11.72}{3.08} = \sqrt{\frac{0.1}{0.8}}$$

$$r_{pbi} = \frac{4.53}{3.08} \sqrt{0.125}$$

$$r_{pbi} = 1.470 \times 0.353 = 0.518.$$

Item 24

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{19.60 - 11.72}{3.08} = \sqrt{\frac{0.2}{0.8}}$$

$$r_{pbi} = \frac{7.88}{3.08} \sqrt{0.25}$$

$$r_{pbi} = 2.558 \times 0.5 = 1.279.$$

Item 25

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.45 - 11.72}{3.08} = \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{1.73}{3.08} \sqrt{0.5}$$

$$r_{pbi} = 0.568 \times 0.707 = 0.406.$$

Appendix 9

Reliability of Pre-Test

To get reliability of the test, the researcher uses formula KR-20:

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{s_{t2} - \sum pq}{s_{t2}} \right)$$

$$N = 25$$

$$\sum X_t = 293$$

$$\sum X_t^2 = 3671$$

$$\sum pq = 5.62$$

$$S_t^2 = \sum X_t^2 - \left(\frac{\sum X_t}{N} \right)^2$$

$$= 3671 - \left(\frac{293}{25} \right)^2 = 3671 - 11.72^2 = 3671 - 137.38 = 3533.62$$

$$S_t^2 = \frac{\sum X_t^2}{N} = \frac{3533.62}{25}$$

$$S_t^2 = 141.348.$$

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{s_{t2} - \sum pq}{s_{t2}} \right)$$

$$R_{11} = \left(\frac{25}{25-1} \right) \left(\frac{141.348 - 5.62}{141.348} \right) = \left(\frac{25}{24} \right) \left(\frac{135.728}{141.348} \right)$$

$$= (1.041) (0.960)$$

$$= 1.04 \quad (r_{11} > 0.361 = \text{reliable})$$

Test is reliable if $r_{count} > r_{table}$. Based on calculation above, the test has high reliability.

Appendix 10

Table Validity of Pre-test

No	M_p	M_t	SD_t	p	q	$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$	Rt on 5% Significant	Interpretation
1	11.91	11.72	3.08	0.9	0.2	0.129	0.361	Invalid
2	12.54	11.72	3.08	0.4	0.5	0.466	0.361	Valid
3	11.14	11.72	3.08	0.2	0.7	0.405	0.361	Valid
4	13.55	11.72	3.08	0.3	0.6	0.419	0.361	Valid
5	12.25	11.72	3.08	0.8	0.2	0.504	0.361	Valid
6	11.35	11.72	3.08	0.4	0.6	0.110	0.361	Invalid
7	11.72	11.72	3.08	0.4	0.5	0.607	0.361	Valid
8	12.45	11.72	3.08	0.3	0.6	0.697	0.361	Valid
9	12.57	11.72	3.08	0.2	0.7	0.527	0.361	Valid
10	13.72	11.72	3.08	0.4	0.5	0.580	0.361	Valid
11	14.56	11.72	3.08	0.6	0.3	0.917	0.361	Valid
12	13.45	11.72	3.08	0.6	0.6	0.415	0.361	Valid
13	19.70	11.72	3.08	0.6	0.6	2.590	0.361	Valid
14	12.57	11.72	3.08	0.6	0.3	0.395	0.361	Valid
15	12.25	11.72	3.08	0.5	0.4	0.192	0.361	Invalid
16	12.33	11.72	3.08	0.6	0.3	0.279	0.361	Invalid
17	13.64	11.72	3.08	0.4	0.5	0.556	0.361	Valid
18	13.55	11.72	3.08	0.6	0.3	0.839	0.361	Valid
19	13.64	11.72	3.08	0.7	0.2	0.710	0.361	Valid
20	13.331	11.72	3.08	0.6	0.3	0.738	0.361	Valid
21	13.37	11.72	3.08	0.2	0.7	0.285	0.361	Invalid
22	13.50	11.72	3.08	0.3	0.6	1.407	0.361	Valid
23	16.25	11.72	3.08	0.1	0.8	0.518	0.361	Valid
24	19.60	11.72	3.08	0.2	0.8	1.279	0.361	Valid
25	13.45	11.72	3.08	0.4	0.6	0.406	0.361	Valid

Appendix 11

The calculation of validity instrument for Post-test

Calculation of $r_{pbi} = \frac{M_p = M_t}{SD_t} \sqrt{\frac{p}{q}}$

A. Calculation of Post-test

1. Mean score from score total (M_t)

$$M_t = \frac{\sum x_t}{n}$$
$$M_t = \frac{327}{25} = 13.08.$$

2. Standard Deviation (SD_t)

$$SD_t = \sqrt{\frac{\sum x_t^2}{N} - \left(\frac{\sum x_t}{N}\right)^2}$$
$$SD_t = \sqrt{\frac{4645}{25} - \left(\frac{327}{25}\right)^2}$$
$$SD_t = \sqrt{185.8 - 13.08^2}$$
$$SD_t = \sqrt{185.8 - 171.08}$$
$$SD_t = \sqrt{14.72} = 3.83.$$

3. Mean Score (M_p)

Item 1

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_1}$$
$$M_{pl} = \frac{17+4+16+19+14+16+15+19+12+11+6+17+12+14+16+13+11+7+16+15+16+9+17}{23}$$
$$M_{pl} = \frac{312}{23} = 13.56.$$

Item 2

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_2}$$
$$M_{pl} = \frac{16+19+14+15+19+12+17+16+9+12+14+16+17+8+15}{15}$$
$$M_{pl} = \frac{219}{15} = 14.60.$$

Item 3

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_3}$$
$$M_{pl} = \frac{17+19+16+19+16+12+13+11+16}{9}$$
$$M_{pl} = \frac{139}{9} = 15.44.$$

Item 4

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_4}$$
$$M_{pl} = \frac{4+16+19+14+15+19+11+6+16+14+13+7+15}{13}$$
$$M_{pl} = \frac{169}{13} = 13.00.$$

Item 5

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_5}$$

$$M_{pl} = \frac{17+16+19+14+16+19+11+17+16+9+12+16+13+11+16+17+15}{17}$$

$$M_{pl} = \frac{254}{17} = 14.94.$$

Item 6

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_6}$$

$$M_{pl} = \frac{4+16+14+16+19+17+9+16+13+16+8}{11}$$

$$M_{pl} = \frac{148}{11} = 13.54.$$

Item 7

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_7}$$

$$M_{pl} = \frac{19+14+16+15+19+12+13+11+16+17}{11}$$

$$M_{pl} = \frac{152}{11} = 13.81.$$

Item 8

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_8}$$

$$M_{pl} = \frac{17+16+19+14+16+15+12+17+16+12+14+16+13+16+17+8+15}{17}$$

$$M_{pl} = \frac{253}{17} = 14.88.$$

Item 9

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_9}$$

$$M_{pl} = \frac{17+16+19+16+15+19+12+11+17+16+12+14+16+13+11+16+15}{17}$$

$$M_{pl} = \frac{255}{17} = 15.00.$$

Item 10

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{10}}$$

$$M_{pl} = \frac{17+19+14+16+19+12+17+16+9+14+16+13+11+7+7+16+17+15}{18}$$

$$M_{pl} = \frac{2.136}{18} = 118.6.$$

Item 11

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{11}}$$

$$M_{pl} = \frac{17+16+19+14+16+19+12+17+16+11+16+17+8}{13}$$

$$M_{pl} = \frac{198}{13} = 15.23.$$

Item 12

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{12}}$$

$$M_{pl} = \frac{17+16+16+15+9+11+15}{7}$$

$$M_{pl} = \frac{99}{7} = 14.43.$$

Item 13

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{13}}$$

$$M_{pl} = \frac{17+16+19+14+16+15+19+12+17+16+14+16+13+7+16+17+15}{17}$$

$$M_{pl} = \frac{259}{17} = 15.28.$$

Item 14

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{14}}$$

$$M_{pl} = \frac{17+16+19+16+11+17+16+9+14+16+8}{11}$$

$$M_{pl} = \frac{159}{11} = 14.54.$$

Item 15

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{15}}$$

$$M_{pl} = \frac{17+16+19+14+16+15+19+12+11+17+11+7+7+16+17+15}{16}$$

$$M_{pl} = \frac{229}{16} = 14.35.$$

Item 16

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{16}}$$

$$M_{pl} = \frac{16+15+19+6+16+14+7+17+15+8}{10}$$

$$M_{pl} = \frac{133}{10} = 13.30.$$

Item 17

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{17}}$$

$$M_{pl} = \frac{17+19+16+16+15+19+17+9+16+12+14+16+13+16+17}{15}$$

$$M_{pl} = \frac{232}{15} = 15.47.$$

Item 18

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{18}}$$

$$M_{pl} = \frac{6+17+12+16+11+7+8+16+15}{9}$$

$$M_{pl} = \frac{108}{9} = 12.00.$$

Item 19

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{19}}$$

$$M_{pl} = \frac{17+19+15+19+12+17+16+12+14+16+17+15}{12}$$

$$M_{pl} = \frac{189}{12} = 15.75.$$

Item 20

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{20}}$$

$$M_{pl} = \frac{4+19+15+19+12+11+16+14+13+11+7+16+17}{13}$$

$$M_{pl} = \frac{174}{13} = 13.85.$$

Item 21

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{21}}$$

$$M_{pl} = \frac{17+16+19+14+19+11+6+17+16+16+17}{11}$$

$$M_{pl} = \frac{168}{11} = 15.27.$$

Item 22

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{22}}$$

$$M_{pl} = \frac{17+16+19+14+19+12+11+6+17+7+16}{11}$$

$$M_{pl} = \frac{154}{11} = 14.00.$$

Item 23

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{23}}$$

$$M_{pl} = \frac{16+15+19+11+16+14+13+7+7+15+17}{11}$$

$$M_{pl} = \frac{150}{11} = 13.63.$$

Item 24

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{24}}$$

$$M_{pl} = \frac{14+15+12+16+12+14+17+15}{8}$$

$$M_{pl} = \frac{115}{8} = 14.37.$$

Item 25

$$M_{pl} = \frac{\text{total score of students' score that true item answer}}{n_{25}}$$

$$M_{pl} = \frac{17+19+16+11+17+9+12+16+7+16+17+8}{12}$$

$$M_{pl} = \frac{165}{12} = 13.75.$$

4. Calculation of the formulation $r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$

Item 1

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.56 - 13.08}{3.83} = \sqrt{\frac{0.9}{0.8}}$$

$$r_{pbi} = \frac{0.48}{3.83} \sqrt{1.125}$$

$$r_{pbi} = 0.125 \times 1.060 = 0.132.$$

Item 2

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.60 - 13.08}{3.83} = \sqrt{\frac{0.6}{0.4}}$$

$$r_{pbi} = \frac{1.52}{3.83} \sqrt{1.5}$$

$$r_{pbi} = 0.396 \times 1.224 = 0.484.$$

Item 3

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15.44 - 13.08}{3.83} = \sqrt{\frac{0.3}{0.6}}$$

$$r_{pbi} = \frac{2.36}{3.83} \sqrt{0.5}$$

$$r_{pbi} = 0.616 \times 0.707 = 0.435.$$

Item 4

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.60 - 13.08}{3.83} = \sqrt{\frac{0.5}{0.4}}$$

$$r_{pbi} = \frac{0.52}{3.83} \sqrt{1.25}$$

$$r_{pbi} = 0.135 \times 1.118 = 0.150.$$

Item 5

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.60 - 13.08}{3.83} = \sqrt{\frac{0.5}{0.4}}$$

$$r_{pbi} = \frac{0.52}{3.83} \sqrt{1.25}$$

$$r_{pbi} = 0.135 \times 1.118 = 0.150.$$

Item 6

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.54 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{0.46}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.120 \times 0.894 = 0.107.$$

Item 7

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.81 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{0.73}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.190 \times 0.894 = 0.986.$$

Item 8

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.80 - 13.08}{3.83} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{1.72}{3.83} \sqrt{2}$$

$$r_{pbi} = 0.449 \times 1.414 = 0.634.$$

Item 9

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15.00 - 13.08}{3.83} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{1.92}{3.83} \sqrt{2}$$

$$r_{pbi} = 0.501 \times 1.414 = 0.708.$$

Item 10

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{18.16 - 13.08}{3.83} = \sqrt{\frac{0.7}{0.2}}$$

$$r_{pbi} = \frac{5.08}{3.83} \sqrt{3.5}$$

$$r_{pbi} = 1.326 \times 1.807 = 2.396.$$

Item 10

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{18.16 - 13.08}{3.83} = \sqrt{\frac{0.7}{0.2}}$$

$$r_{pbi} = \frac{5.08}{3.83} \sqrt{3.5}$$

$$r_{pbi} = 1.326 \times 1.807 = 2.396.$$

Item 11

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15.23 - 13.08}{3.83} = \sqrt{\frac{0.7}{0.2}}$$

$$r_{pbi} = \frac{2.15}{3.83} \sqrt{3.5}$$

$$r_{pbi} = 0.561 \times 1.870 = 1.049.$$

Item 12

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.43 - 13.08}{3.83} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{1.35}{3.83} \sqrt{2}$$

$$r_{pbi} = 0.352 \times 1.414 = 0.497.$$

Item 13

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15.28 - 13.08}{3.83} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{2.2}{3.83} \sqrt{2}$$

$$r_{pbi} = 0.574 \times 1.414 = 0.811.$$

Item 14

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.54 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{1.46}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.381 \times 0.894 = 0.406.$$

Item 15

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.35 - 13.08}{3.83} = \sqrt{\frac{0.6}{0.3}}$$

$$r_{pbi} = \frac{1.27}{3.83} \sqrt{2}$$

$$r_{pbi} = 0.331 \times 1.414 = 0.468.$$

Item 16

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.30 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{0.22}{3.83} \sqrt{0.66}$$

$$r_{pbi} = 0.057 \times 0.816 = 0.465.$$

Item 17

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15.47 - 13.08}{3.83} = \sqrt{\frac{0.6}{0.4}}$$

$$r_{pbi} = \frac{2.39}{3.83} \sqrt{1.5}$$

$$r_{pbi} = 0.624 \times 1.224 = 0.763.$$

Item 18

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{12.00 - 13.08}{3.83} = \sqrt{\frac{0.3}{0.6}}$$

$$r_{pbi} = \frac{-1.08}{3.83} \sqrt{0.5}$$

$$r_{pbi} = -0.281 \times 0.707 = 0.198.$$

Item 18

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15.75 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{2.67}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.697 \times 0.894 = 0.623.$$

Item 20

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.85 - 13.08}{3.83} = \sqrt{\frac{0.5}{0.4}}$$

$$r_{pbi} = \frac{0.77}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.201 \times 0.894 = 0.976.$$

Item 21

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15.27 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{2.19}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.571 \times 0.894 = 0.501.$$

Item 22

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.00 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{0.92}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.240 \times 0.894 = 0.456.$$

Item 23

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13.63 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{0.55}{3.83} \sqrt{0.8}$$

$$r_{pbi} = 0.143 \times 0.894 = 0.127.$$

Item 24

$$r_{pbi} = \frac{M_p - M_t}{SDt} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14.37 - 13.08}{3.83} = \sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{1.29}{3.83} \sqrt{0.42}$$

$$r_{pbi} = 0.336 \times 0.654 = 0.974.$$

Item 25

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$
$$r_{pbi} = \frac{13.75 - 13.08}{3.83} = \sqrt{\frac{0.4}{0.5}}$$
$$r_{pbi} = \frac{0.67}{3.83} \sqrt{0.8}$$
$$r_{pbi} = 0.749 \times 0.894 = 0.669.$$

Appendix 12

Reliability of Post-Test

To get reliability of the test, the researcher uses formula KR-20:

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{s_{t2} - \Sigma pq}{s_{t2}} \right)$$

$$N = 25$$

$$\Sigma X_t = 327$$

$$\Sigma X_t^2 = 4645$$

$$\Sigma pq = 5.2$$

$$S_t^2 = \Sigma X_t^2 - \left(\frac{\Sigma X_t}{N} \right)^2$$

$$= 4645 - \left(\frac{327}{25} \right)^2 = 4645 - 13.08^2 = 4645 - 172.39 = 4472.61.$$

$$S_t^2 = \frac{\Sigma X_t^2}{N} = \frac{4472.61}{25}$$

$$S_t^2 = 178.904.$$

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{s_{t2} - \Sigma pq}{s_{t2}} \right)$$

$$R_{11} = \left(\frac{25}{25-1} \right) \left(\frac{178.904 - 5.2}{178.904} \right) = \left(\frac{25}{24} \right) \left(\frac{173.704}{178.904} \right)$$

$$= (1.041) (0.993)$$

$$= 1.041 \quad (r_{11} > 0.361 = \text{reliable})$$

Test is reliable if $r_{count} > r_{table}$. Based on calculation above, the test has high reliability.

Appendix 13

Table Validity of Post-test

No	M_p	M_t	SD_t	p	q	$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$	Rt on 5% Significant	Interpretation
1	13.56	13.08	3.83	0.8	0.9	0.132	0.361	Invalid
2	14.60	13.08	3.83	0.6	0.4	0.484	0.361	Valid
3	15.44	13.08	3.83	0.3	0.6	0.435	0.361	Valid
4	13.60	13.08	3.83	0.5	0.4	0.150	0.361	Invalid
5	14.94	13.08	3.83	0.6	0.3	0.685	0.361	Valid
6	13.54	13.08	3.83	0.4	0.5	0.107	0.361	Invalid
7	13.81	13.08	3.83	0.4	0.5	0.236	0.361	Invalid
8	14.88	13.08	3.83	0.6	0.3	0.634	0.361	Valid
9	15.00	13.08	3.83	0.6	0.3	0.708	0.361	Valid
10	18.16	13.08	3.83	0.7	0.2	2.396	0.361	Valid
11	15.23	13.08	3.83	0.7	0.2	1.049	0.361	Valid
12	14.43	13.08	3.83	0.6	0.3	0.497	0.361	Valid
13	15.28	13.08	3.83	0.6	0.3	0.811	0.361	Valid
14	14.54	13.08	3.83	0.4	0.5	0.406	0.361	Valid
15	14.35	13.08	3.83	0.6	0.3	0.468	0.361	Valid
16	13.30	13.08	3.83	0.6	0.3	0.465	0.361	Valid
17	15.47	13.08	3.83	0.6	0.4	0.763	0.361	Valid
18	12.00	13.08	3.83	0.3	0.6	0.198	0.361	Invalid
19	15.75	13.08	3.83	0.4	0.5	0.623	0.361	Valid
20	13.85	13.08	3.83	0.6	0.3	0.679	0.361	Valid
21	15.27	13.08	3.83	0.4	0.5	0.501	0.361	Valid
22	14.00	13.08	3.83	0.4	0.5	0.456	0.361	Valid
23	15.63	13.08	3.83	0.4	0.5	0.627	0.361	Valid
24	14.37	13.08	3.83	0.3	0.7	0.743	0.361	Valid
25	13.75	13.08	3.83	0.7	0.3	0.669	0.361	Valid

Appendix 14

Score of Experimental Class and Control Class on Pre-test

1. Score of Experimental Class Pre Test before using GTM

No	The Initial Name of Students (n)	Pre-Test
1.	AA	65
2.	ADL	50
3.	AH	50
4.	AIS	65
5.	AISL	50
6.	ES	65
7.	FH	45
8.	GN	65
9.	HH	50
10.	IEL	70
11.	IYS	65
12.	IYS	45
13.	KINH	70
14.	MAF	55
15.	MH	60
16.	MN	60
17.	MNS	45
18.	MPPT	75
19.	MY	60
20.	NS	40
21.	NWJ	60
22.	PWS	40
23.	RS	60
24.	RT	75
25.	SG	35
26.	SR	60
27.	SRA	75
28.	SS	60
29.	TRPH	30
30.	YIL	60
31.	YP	30
TOTAL		1735

2. Score of Control Class Pre-Test

No	The Initial Name of Students (n)	Pre-Test
1.	AFH	65
2.	AG	35
3.	AJP	70
4.	ALX	35
5.	ARH	70
6.	ARH	45
7.	AS	35
8.	AS	45
9.	ASH	60
10.	ATSN	55
11.	HH	60
12.	IMN	45
13.	IN	55
14.	KAH	55
15.	KAS	45
16.	MAS	60
17.	MLS	50
18.	MMT	70
19.	MN	50
20.	MRH	60
21.	MTK	55
22.	MY	25
23.	NAD	55
24.	NQH	60
25.	RA	30
26.	RH	55
27.	RPL	55
28.	RS	60
29.	RTH	60
30.	RWH	55
TOTAL		1545

Appendix 15

Score of Experimental Class and Control Class on Post-test

1. Score of Experimental Class Pre Test after using GTM

No	The Initial Name of Students (n)	Pre-Test
1.	AA	75
2.	ADL	85
3.	AH	80
4.	AS	75
5.	ES	85
6.	FH	80
7.	GN	85
8.	HH	80
9.	IEL	85
10.	IPIN	85
11.	IYS	80
12.	IYS	85
13.	KINH	70
14.	MAF	90
15.	MH	75
16.	MN	95
17.	MNS	80
18.	MPPT	90
19.	MY	85
20.	NS	100
21.	NWJ	85
22.	PWS	90
23.	RS	65
24.	RT	75
25.	SG	90
26.	SR	85
27.	SRA	80
28.	SS	90
29.	TRPH	80
30.	YIL	85
31.	YP	80
TOTAL		2575

2. Score of Control Class Post-Test

No	The Initial Name of Students (n)	Pre-Test
1.	AFH	75
2.	AG	70
3.	AJP	60
4.	ALX	70
5.	ARH	70
6.	ARH	70
7.	AS	65
8.	AS	75
9.	ASH	65
10.	ATSN	65
11.	HH	60
12.	IMN	70
13.	IN	70
14.	KAH	75
15.	KAS	60
16.	MAS	75
17.	MLS	70
18.	MMT	75
19.	MN	65
20.	MRH	60
21.	MTK	70
22.	MY	75
23.	NAD	80
24.	NQH	85
25.	RA	80
26.	RH	85
27.	RPL	75
28.	RS	75
29.	RTH	70
30.	RWH	65
TOTAL		2040

Appendix 16

HOMOMOGENETY TEST (PRE-TEST)

Calculation of parameter to get variant of the first class as experimental class sample by using direct method and variant of the second class as control class sample by using conventional method is 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 the VIIII-1 class is:

NO	Xi	Xi ²
1.	55	3.025
2.	60	3.600
3.	60	3.600
4.	60	3.600
5.	60	3.600
6.	60	3.600
7.	60	3.600
8.	65	4.225
9.	65	4.225
10.	65	4.225
11.	65	4.225
12.	65	4.225
13.	65	4.225
14.	65	4.225
15.	65	4.225
16.	70	4.900
17.	70	4.900
18.	70	4.900
19.	70	4.900
20.	70	4.900
21.	70	4.900
22.	70	4.900

23.	70	4.900
24.	70	4.900
25.	70	4.900
26.	70	4.900
27.	75	5.625
28.	75	5.625
29.	75	5.625
30.	75	5.625
31.	75	5.625
	1.735	101.925

$$\begin{aligned}
 N &= 31 \\
 \Sigma X^i &= 1.735 \\
 \Sigma X^{i^2} &= 101.925 \\
 \text{So:}
 \end{aligned}$$

$$\begin{aligned}
 S^2 &= \frac{n \Sigma X^{i^2} - (\Sigma X^i)^2}{n(n-1)} \\
 &= \frac{31(101.925) - (1.735)^2}{31(31-1)} \\
 &= \frac{3159.675 - 3.010225}{31(30)} \\
 &= \frac{1494.50}{930} \\
 &= 160.70
 \end{aligned}$$

B. Variant of the VIII-5 class is:

NO	Xi	Xi ²
1	55	3.025
2	60	3.600
3	60	3.600
4	60	3.600
5	60	3.600
6	60	3.600
7	60	3.600
8	65	4.225
9	65	4.225
10	65	4.225
11	65	4.225
12	65	4.225
13	65	4.225

14	65	4.225
15	65	4.225
16	70	4.900
17	70	4.900
18	70	4.900
19	70	4.900
20	70	4.900
21	70	4.900
22	70	4.900
23	70	4.900
24	70	4.900
25	70	4.900
26	70	4.900
27	75	5.625
28	75	5.625
29	75	5.625
30	75	5.625
	1545	83.925

$$N = 30$$

$$\Sigma X^i = 1545$$

$$\Sigma X^{i^2} = 83925$$

So:

$$\begin{aligned}
 S^2 &= \frac{n \Sigma x_i^2 - (\Sigma x_i)^2}{n(n-1)} \\
 &= \frac{30(83925) - (1545)^2}{30(30-1)} \\
 &= \frac{2517750 - 2387025}{30(29)} \\
 &= \frac{130725}{870} \\
 &= 150.26
 \end{aligned}$$

The Formula was used to test hypothesis was:

1. VIII-1 and VIII-5

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

So:

$$\begin{aligned}
 F &= \frac{160.70}{150.26} \\
 &= 1.07
 \end{aligned}$$

After doing the calculation, researcher found that $F_{count} = 1.07$ with a 5% and $dk = 30$ and 29 from the distribution list F, researcher found that $F_{table} = 1.85$, cause $F_{count} < F_{table}$ ($1.07 < 1.85$). So, there is no different the variant between the VIII-1 and VIII-5 class. It means that the variant is homogenous.

Appendix 17

HOMOMOGENETY TEST (POST-TEST)

Calculation of parameter to get variant of the first class as experimental class sample by using direct method and variant of the second class as control class sample by using conventional method is 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 the VIII-1 class is:

NO	Xi	Xi ²
1	65	4.225
2	70	4.900
3	75	5.625
4	75	5.625
5	75	5.625
6	75	5.625
7	80	6.400
8	80	6.400
9	80	6.400
10	80	6.400
11	80	6.400
12	80	6.400
13	80	6.400
14	80	6.400
15	85	7.225
16	85	7.225
17	85	7.225
18	85	7.225
19	85	7.225
20	85	7.225
21	85	7.225
22	85	7.225
23	85	7.225

24	85	7.225
25	90	8.100
26	90	8.100
27	90	8.100
28	90	8.100
29	95	9.025
30	95	9.025
31	100	10.000
	2575	215525

$$N = 31$$

$$\Sigma X^i = 2575$$

$$\Sigma X^{i^2} = 215525$$

So:

$$\begin{aligned}
S^2 &= \frac{n \Sigma x_i^2 - (\Sigma x_i)^2}{n(n-1)} \\
&= \frac{31(215525) - (2575)^2}{31(31-1)} \\
&= \frac{6681275 - 6630625}{31(30)} \\
&= \frac{50650}{930} \\
&= 54.46
\end{aligned}$$

B. Variant of the VIII-5 class is:

NO	X_i	X_i^2
1	50	2.500
2	55	3.025
3	60	3.600
4	60	3.600
5	60	3.600
6	60	3.600
7	65	4.225
8	65	4.225
9	65	4.225
10	65	4.225
11	65	4.225
12	65	4.225
13	65	4.225
14	65	4.225

15	70	4.900
16	70	4.900
17	70	4.900
18	70	4.900
19	70	4.900
20	70	4.900
21	70	4.900
22	70	4.900
23	70	4.900
24	75	5.625
25	75	5.625
26	75	5.625
27	75	5.625
28	80	6.400
29	80	6.400
30	85	7.225
	2040	140350

$$\begin{aligned}
N &= 30 \\
\Sigma X^i &= 2040 \\
\Sigma X^{i^2} &= 140350
\end{aligned}$$

So:

$$\begin{aligned}
S^2 &= \frac{n\Sigma xi^2 - (\Sigma xi)^2}{n(n-1)} \\
&= \frac{30(140350) - (2040)^2}{30(30 - 1)} \\
&= \frac{4210500 - 4161600}{30(29)} \\
&= \frac{48900}{870} \\
&= 56.21
\end{aligned}$$

The Formula was used to test hypothesis was:

1. VIII-1 and VIII-5

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

So:

$$\begin{aligned}
F &= \frac{56.21}{54.46} \\
&= 1.03
\end{aligned}$$

After doing the calculation, researcher found that $F_{count} = 1.03$ with a 5% and $dk = 30$ and 29 from the distribution list F, researcher found that

$F_{table} = 1.85$, cause $F_{count} < F_{table}$ ($1.03 < 1.85$). So, there is no different the variant between the VIII-1 and VIII-5 class. It means that the variant is homogenous.

Appendix 18

RESULT OF NORMALITY TEST IN PRE-TEST

RESULT OF THE NORMALITY TEST OF VIII-1 PRE-TEST

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

30 30 35 40 40 45 45 45 45 50
 50 50 55 60 60 60 60 60 60 60
 60 65 65 65 65 65 70 70 75 75
 75

2. High score = 75

Low score = 30

Range = high score – low score
 = 75 – 30
 = 45

3. The total of classes (BK) = $1 + 3.3 \log n$
 = $1 + 3.3 \log 34$
 = $1 + 3.3 (1.531)$
 = $1 + 5.052$
 = 5.92
 = 6

4. Length of Classes (i) = $\frac{\text{range}}{\text{total of class}} = \frac{45}{6} = 8$

5. Mean

Interval Class	F	X	x ¹	fx ¹	x ²	fx ²
30-37	3	33.5	+3	9	9	27
38-45	4	41.5	+2	8	4	16
46-53	5	49.5	+1	5	1	5
54-61	9	57.5	0	0	0	0
62-69	5	65.5	-1	-5	1	5
70-77	5	73.5	-2	-10	4	20
<i>i</i> = 8	31	-	-	7	-	73

$$M_x = M^1 + i \frac{\sum fx^1}{N}$$

$$\begin{aligned}
&= 57.5 + 8 \left(\frac{7}{31} \right) \\
&= 57.5 + 8 (0.23) \\
&= 57.5 + 1.84 \\
&= 59.34 \\
SD_t &= i \sqrt{\frac{\sum X_t^2}{N} - \left(\frac{\sum X_t}{N} \right)^2} \\
&= 8 \sqrt{\frac{73}{31} - \left(\frac{7}{31} \right)^2} \\
&= 8 \sqrt{2.35 - (0.23)^2} \\
&= 8 \sqrt{2.35 - 0.053} \\
&= 8 \sqrt{2.30} \\
&= 8 \times 1.52 \\
&= 12.16
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z-Score	Limit of Large of the Area	Large of area	f_h	f_0	$\left(\frac{f_h - f_0}{f_h} \right)$	
70 - 77	77.5	1.49	0.4319	0.1324	4.10	5	0.22	
62 - 69	69.5	0.84	0.2995	0.2281	7.07	5	-0.29	
54 - 61	61.5	0.18	0.0714	-0.24421	-7.57	9	-2.19	
46 - 53	53.5	-0.48	0.31561	0.18847	5.84	5	-0.14	
38 - 45	45.5	-1.14	0.12714	0.09121	2.83	4	0.49	
30 - 37	37.5	-1.80	0.03593	0.02879	0.89	3	2.37	
	29.5	-2.45	0.00714					
X^2								0.46

Based on the table above, the researcher found that $x_{count}^2 = 0.46$ while $x_{table}^2 = 11.070$ cause $x_{count}^2 < x_{table}^2$ ($0.46 < 11.070$) with degree of freedom (dk) = $6-1 = 5$ and significant level $\alpha = 5\%$. So, distribution of VIII-1 (pre-test) is normal.

6. Median

No	Interval	F	Fk
1	30 – 37	3	3
2	38 – 45	4	7
3	46 – 53	5	12
4	54 – 61	9	21
5	62 – 69	5	26
6	70 – 77	5	32

Position of Me in the Interval of classes in number 4, that:

$$Bb = 53.5$$

$$F = 5$$

$$Fm = 8$$

$$i = 8$$

$$n = 31$$

$$1/2n = 15.5$$

So:

$$\begin{aligned} \text{Me} &= Bb + I \left[\frac{n/2 - F}{fm} \right] \\ &= 53.5 + 8 \left(\frac{15.5 - 5}{9} \right) \\ &= 53.5 + 8 (1.17) \\ &= 53.5 + 9.36 \\ &= 62.86 \end{aligned}$$

7. Modus

No	Interval	F	Fk
----	----------	---	----

1	30 – 37	3	3
2	38 – 45	4	7
3	46 – 53	5	12
4	54 – 61	9	21
5	62 – 69	5	26
6	70 – 77	5	32

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

$$L = 53.5$$

$$d_1 = 5$$

$$d_2 = 5$$

$$i = 8$$

So:

$$\begin{aligned} M_o &= 53.5 + \frac{5}{5+5} 8 \\ &= 53.5 + 0.5 (8) \\ &= 53.5 + 4 \\ &= 57.5 \end{aligned}$$

RESULT OF NORMALITY TEST IN PRE-TEST

RESULT OF THE NORMALITY TEST OF VIII-5 PRE-TEST

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

25 30 30 35 35 35 45 45 45 45
50 50 55 55 55 55 55 55 55 55
60 60 60 60 60 60 65 70 70 70

2. High score = 70

Low score = 25

Range = high score – low score

$$= 70 - 25$$

$$= 45$$

3. The total of classes (BK) = $1 + 3.3 \log n$
= $1 + 3.3 \log (30)$
= $1 + 3.3 (1.477)$

$$\begin{aligned}
&= 1 + 4.874 \\
&= 5.874 \\
&= 6
\end{aligned}$$

$$4. \text{ Length of Classes (i)} = \frac{\text{range}}{\text{total of class}} = \frac{45}{6} = 8$$

5. Mean

Interval Class	F	X	x ¹	fx ¹	x ²	fx ²
25-32	3	28.5	+3	9	9	27
33-40	3	36.5	+2	6	4	12
41-48	4	44.5	+1	4	1	4
49-56	10	52.5	0	0	0	0
57-64	6	60.5	-1	-5	-6	6
65-72	4	68.5	-2	-10	-8	16
<i>i</i> = 8	30	-	-	7	-	65

$$\begin{aligned}
M_x &= M^1 + i \frac{\sum fx^1}{N} \\
&= 52.5 + 8 \left(\frac{5}{30} \right) \\
&= 52.5 + 8 (0.17) \\
&= 52.5 + 1.36 \\
&= 53.86
\end{aligned}$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum X_t^2}{N} - \left(\frac{\sum X_t}{N} \right)^2} \\
&= 8 \sqrt{\frac{65}{30} - \left(\frac{5}{30} \right)^2} \\
&= 8 \sqrt{2.17 - (0.17)^2} \\
&= 8 \sqrt{2.17 - 0.029} \\
&= 8 \sqrt{2.141} \\
&= 8 \times 1.46 = 11.68
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z-Score	Limit of Large of the Area	Large of area	f_h	f_o	$\left(\frac{f_h-f_o}{f_h}\right)$	
62 - 72	72.5	1.60	0.4452	0.1266	3.80	4	0.05	
57 - 64	64.5	0.91	0.3186	0.2276	6.83	6	-0.12	
49 - 56	56.5	0.23	0.0910	-0.23176	-6.95	10	-2.44	
41 - 48	48.5	-0.46	0.32276	0.19562	5.87	4	0.32	
33 - 40	40.5	-1.14	0.12714	0.09352	2.81	3	0.07	
25 - 32	32.5	-1.83	0.03362	0.08748	2.62	3	0.15	
	24.5	-2.51	0.00604					
X^2								-1.97

Based on the table above, the researcher found that $x_{count}^2 = -1.97$ while $x_{table}^2 = 11.070$ cause $x_{count}^2 < x_{table}^2$ ($-1.97 < 11.070$) with degree of freedom (dk) = $6-1 = 5$ and significant level $\alpha = 5\%$. So, distribution of VIII-5 (pre-test) is normal.

6. Median

No	Interval	F	Fk
1	25 – 32	3	3
2	33 – 40	3	6
3	41 – 48	4	10
4	49 – 56	10	20
5	57 – 64	6	26
6	65 – 72	4	30

Position of Me in the Interval of classes in number 4, that:

$$Bb = 48.5$$

$$F = 4$$

$$Fm = 10$$

$$i = 8$$

$$n = 30$$

$$1/2n = 15$$

So:

$$\begin{aligned} \text{Me} &= \text{Bb} + \text{I} \left[\frac{n/2 - F}{fm} \right] \\ &= 48.5 + 8 \left(\frac{15-4}{10} \right) \\ &= 48.5 + 8 (1.1) \\ &= 48.5 + 8.8 \\ &= 57.3 \end{aligned}$$

7. Modus

No	Interval	F	Fk
1	25 – 32	3	3
2	33 – 40	3	6
3	41 – 48	4	10
4	49 – 56	10	20
5	57 – 64	6	26
6	65 – 72	4	30

$$\text{Mo} = L + \frac{d_1}{d_1 + d_2} i$$

$$L = 48.5$$

$$d_1 = 4$$

$$d_2 = 6$$

$$i = 8$$

So:

$$\begin{aligned} \text{Mo} &= 48.5 + \frac{4}{4+6} 8 \\ &= 48.5 + 0.4 (8) \\ &= 48.5 + 3.2 \\ &= 51.7 \end{aligned}$$

Appendix 19

RESULT OF NORMALITY TEST IN POST-TEST

RESULT OF THE NORMALITY TEST OF VIII-1 POST-TEST

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

65 70 75 75 75 75 80 80 80 80
 80 80 80 80 85 85 85 85 85 85
 85 85 85 85 90 90 90 90 95 95
 100

2. High score = 100

Low score = 65

Range = high score – low score

$$= 100 - 65$$

$$= 35$$

3. The total of classes (BK) = $1 + 3.3 \log n$
 $= 1 + 3.3 \log (31)$
 $= 1 + 3.3 (1.49)$
 $= 1 + 4.92$
 $= 5.92$
 $= 6$

4. Length of Classes (i) = $\frac{\text{range}}{\text{total of class}} = \frac{35}{6} = 6$

5. Mean

Interval Class	F	X	x^1	fx^1	x^2	fx^2
65-70	2	67.5	+3	6	9	18
71-76	4	73.5	+2	8	4	16
77-82	8	79.5	+1	8	1	8
83-88	10	85.5	0	0	0	0
89-94	4	91.5	-1	-4	1	4
95-100	3	97.5	-2	-6	4	12
$i = 6$	31	-	-	12	-	86

$$M_x = M^1 + i \frac{\sum fx^1}{N}$$

$$= 85.5 + 6 \left(\frac{12}{31} \right)$$

$$= 85.5 + 6 (0.39)$$

$$= 85.5 + 2.34$$

$$= 87.84$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum X_t^2}{N} - \left(\frac{\sum X_t}{N}\right)^2} \\
&= 6 \sqrt{\frac{58}{31} - \left(\frac{12}{31}\right)^2} \\
&= 6 \sqrt{1.89 - (0.39)^2} \\
&= 6 \sqrt{1.89 - 0.152} \\
&= 6 \sqrt{1.74} \\
&= 6 \times 1.32 = 7.92
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z-Score	Limit of Large of the Area	Large of area	f_h	f_0	$\left(\frac{f_h - f_0}{f_h}\right)$	
95 - 100	100.5	1.45	0.4265	0.16	4.84	2	-0.59	
89 - 94	94.5	0.74	0.2704	0.26	8.01	4	-0.50	
83 - 88	88.5	0.03	0.0120	-0.24	-7.42	8	-2.08	
77 - 82	82.5	-0.67	0.25143	0.17	5.20	10	0.92	
71 - 76	76.5	-1.38	0.08379	0.07	2.03	4	0.97	
65 - 70	70.5	-2.09	0.01831	0.02	0.49	3	5.12	
	64.5	-2.80	0.00256					
X^2								3.84

Based on the table above, the researcher found that $x_{count}^2 = -3.84$ while $x_{table}^2 = 11.070$ cause $x_{count}^2 < x_{table}^2$ ($3.84 < 11.070$) with degree of freedom (dk) = $6-1 = 5$ and significant level $\alpha = 5\%$. So, distribution of VIII-1 (post-test) is normal.

6. Median

No	Interval	F	Fk
----	----------	---	----

1	65 – 70	2	2
2	71 – 76	4	6
3	77 – 82	8	14
4	83 – 88	10	24
5	89 – 94	4	28
6	95 – 100	3	31

Position of Me in the Interval of classes in number 4, that:

$$Bb = 82.5$$

$$F = 8$$

$$Fm = 10$$

$$i = 6$$

$$n = 31$$

$$1/2n = 15.5$$

So:

$$\begin{aligned} Me &= Bb + I \left[\frac{n/2 - F}{fm} \right] \\ &= 82.5 + 6 \left(\frac{15.5 - 8}{10} \right) \\ &= 82.5 + 6 (0.75) \\ &= 82.5 + 4.5 \\ &= 87 \end{aligned}$$

7. Modus

No	Interval	F	Fk
1	65 – 70	2	2
2	71 – 76	4	6
3	77 – 82	8	14
4	83 – 88	10	24
5	89 – 94	4	28
6	95 – 100	3	31

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

$$L = 82.5$$

$$d_1 = 8$$

$$d_2 = 4$$

$$i = 6$$

So:

$$Mo = 82.5 + \frac{8}{8+4} 6$$

$$= 82.5 + 0.67 (6)$$

$$= 82.5 + 4.02$$

$$= 86.52$$

RESULT OF NORMALITY TEST IN POST-TEST

RESULT OF THE NORMALITY TEST OF VIII-5 POST-TEST

1. The score of VIII-5 class in pre-test from low score to high score:

50 55 60 60 60 60 65 65 65 65
 65 65 65 65 70 70 70 70 70 70
 70 70 70 75 75 75 75 80 80 85

2. High score = 85

Low score = 50

Range = high score – low score

$$= 85 - 50 = 35$$

3. The total of classes (BK) = $1 + 3.3 \log n$
 $= 1 + 3.3 \log (30)$
 $= 1 + 3.3 (1.477)$
 $= 1 + 4.874$
 $= 5.874$
 $= 6$

4. Length of Classes (i) = $\frac{range}{total\ of\ class} = \frac{35}{6} = 5.83 = 6$

5. Mean

Interval Class	F	X	x ¹	fx ¹	x ²	fx ²
50-55	2	52.5	+3	6	9	18

56-61	4	58.5	+2	8	4	16
62-67	8	64.5	+1	8	1	8
68-73	9	70.5	0	0	0	0
74-79	4	76.5	-1	-4	-1	4
80-85	3	82.5	-2	-6	-4	12
$i = 6$	30	-	-	12	-	58

$$\begin{aligned}
 M_x &= M^1 + i \frac{\sum fx1}{N} \\
 &= 70.5 + 6 \left(\frac{12}{30} \right) \\
 &= 70.5 + 6 (0.4) \\
 &= 70.5 + 2.4 \\
 &= 72.9
 \end{aligned}$$

$$\begin{aligned}
 SD_t &= i \sqrt{\frac{\sum X_t^2}{N} - \left(\frac{\sum X_t}{N} \right)^2} \\
 &= 6 \sqrt{\frac{58}{30} - \left(\frac{12}{30} \right)^2} \\
 &= 6 \sqrt{1.93 - (0.4)^2} \\
 &= 6 \sqrt{1.93 - 0.016} \\
 &= 6 \sqrt{1.77} \\
 &= 6 \times 1.33 = 7.98
 \end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z-Score	Limit of Large of the Area	Large of area	f_h	f_o	$\left(\frac{f_h - f_o}{f_h} \right)$
80 - 85	85.5	1.58	0.4429	0.15	4.39	2	-0.54
74 - 79	79.5	0.83	0.2967	0.26	7.94	4	-0.50
68 - 73	73.5	0.08	0.0319	-0.22	-6.49	8	-2.23
62 - 67	67.5	-0.68	0.24825	0.17	5.16	9	0.74
56 - 61	61.5	-1.43	0.07636	0.06	1.85	4	1.16
50 - 55	55.5	-2.18	0.01463	0.01	0.39	3	6.69
	49.5	-2.93	0.00169				

χ^2	5.32
----------	------

Based on the table above, the researcher found that $\chi^2_{count} = 5.32$ while $\chi^2_{table} = 11.070$ cause $\chi^2_{count} < \chi^2_{table}$ ($5.32 < 11.070$) with degree of freedom (dk) = $6-1 = 5$ and significant level $\alpha = 5\%$. So, distribution of VIII-5 (pre-test) is normal.

6. Median

No	Interval	F	Fk
1	50 – 55	2	2
2	56 – 61	4	6
3	62 – 67	8	14
4	68 – 73	9	23
5	74 – 79	4	27
6	80 – 85	3	30

Position of Me in the Interval of classes in number 4, that:

$$Bb = 67.5$$

$$F = 8$$

$$Fm = 9$$

$$i = 6$$

$$n = 30$$

$$1/2n = 15$$

So:

$$\begin{aligned}
 \text{Me} &= \text{Bb} + I \left[\frac{n/2 - F}{fm} \right] \\
 &= 67.5 + 6 \left(\frac{15-8}{9} \right) \\
 &= 67.5 + 6 (0.78) \\
 &= 67.5 + 4.68 \\
 &= 72.18
 \end{aligned}$$

7. Modus

No	Interval	F	Fk
1	50 – 55	2	2
2	56 – 61	4	6
3	62 – 67	8	14
4	68 – 73	9	23
5	74 – 79	4	27
6	80 – 85	3	30

$$\text{Mo} = L + \frac{d_1}{d_1 + d_2} i$$

$$L = 67.5$$

$$d_1 = 8$$

$$d_2 = 4$$

$$i = 6$$

So:

$$\begin{aligned}
 \text{Mo} &= 67.5 + \frac{8}{8+4} 6 \\
 &= 67.5 + 0.67 (6) \\
 &= 67.5 + 4.02 \\
 &= 71.52
 \end{aligned}$$

Appendix 20

T-test of Both Averages in Pre-Test

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

$$\begin{aligned}
 T_t &= \frac{M_1 - M_2}{\sqrt{\left(\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \right) \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \\
 &= \frac{57.90 - 54.5}{\sqrt{\frac{(31 - 1)224.62 + (30 - 1)255.78}{31 + 30 - 2} \left(\frac{1}{31} + \frac{1}{30} \right)}} \\
 &= \frac{3.4}{\sqrt{\frac{30(224.62) + 29(255.78)}{59} (0.032 + 0.033)}} \\
 &= \frac{3.4}{\sqrt{\frac{6738.6 + 7417.62}{59} (0.032 + 0.033)}} \\
 &= \frac{3.4}{\sqrt{\frac{14156.22}{59} (0.065)}} \\
 &= \frac{3.4}{\sqrt{239.94 (0.065)}} \\
 &= \frac{3.4}{\sqrt{15.60}} \\
 &= \frac{3.4}{3.95} \\
 &= 0.86
 \end{aligned}$$

Based on researcher calculation result of homogeneity test of the both averages, researcher found that $t_{count} = 0.86$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dk = n_1 + n_2 - 2 = 31 + 30 - 2 = 59$, $t_{table} = 1.671$. So, $t_{count} < t_{table}$ ($0.86 < 1.671$) 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 21

T-test of Both Averages in Post-Test

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

$$\begin{aligned}
 T_t &= \frac{M_1 - M_2}{\sqrt{\left(\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \right) \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \\
 &= \frac{83.06 - 68}{\sqrt{\frac{(31 - 1)224.62 + (30 - 1)255.78}{31 + 30 - 2} \left(\frac{1}{31} + \frac{1}{30} \right)}} \\
 &= \frac{15.06}{\sqrt{\frac{30(54.46) + 29(56.21)}{59} (0.032 + 0.033)}} \\
 &= \frac{3.4}{\sqrt{\frac{1633.8 + 1630.09}{59} (0.032 + 0.033)}} \\
 &= \frac{15.06}{\sqrt{\frac{3263.89}{59} (0.065)}} \\
 &= \frac{15.06}{\sqrt{55.32 (0.065)}} \\
 &= \frac{15.06}{\sqrt{360}} \\
 &= \frac{15.06}{1.90} \\
 &= 7.926
 \end{aligned}$$

Based on researcher calculation result of homogeneity test of the both averages, researcher found that $t_{count} = 7.926$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dk = n_1 + n_2 - 2 = 31 + 30 - 2 = 59$, $t_{table} = 1.671$. So, $t_{count} > t_{table}$ ($7.926 > 1.671$) and H_a is accepted, it means there was difference the average between the first class as experimental class and the second class as control class in this research.

Appendix 22

Chi-Square Table

dk	Significant level					
	50%	30%	20%	10%	5%	1%
1	0,455	1,074	1,642	2,706	3,841	6,635
2	1,386	2,408	3,219	4,605	5,991	9,210
3	2,366	3,665	4,642	6,251	7,815	11,341
4	3,357	4,878	5,989	7,779	9,488	13,277
5	4,351	6,064	7,289	9,236	11,070	15,086
6	5,348	7,231	8,558	10,645	12,592	16,812
7	6,346	8,383	9,803	12,017	14,067	18,475
8	7,344	9,524	11,030	13,362	15,507	20,090
9	8,343	10,656	12,242	14,684	16,919	21,666
10	9,342	11,781	13,442	15,987	18,307	23,209
11	10,341	12,899	14,631	17,275	19,675	24,725
12	11,340	14,011	15,812	18,549	21,026	26,217
13	12,340	15,119	16,985	19,812	22,362	27,688
14	13,339	16,222	18,151	21,064	23,685	29,141
15	14,339	17,222	19,311	22,307	24,996	30,578
16	15,338	18,418	20,465	23,542	26,296	32,000
17	16,338	19,511	21,615	24,769	27,587	33,409
18	17,338	20,601	22,760	25,989	28,869	34,805
19	18,338	21,689	23,900	27,204	30,144	36,191
20	19,337	22,775	25,038	28,412	31,410	37,566
21	20,337	23,858	26,171	29,615	32,671	38,932
22	21,337	24,939	27,301	30,813	33,924	40,289
23	22,337	26,018	28,429	32,007	35,172	41,638
24	23,337	27,096	29,553	33,196	35,415	42,980
25	24,337	28,172	30,675	34,382	37,652	44,314
26	25,336	29,246	31,795	35,563	38,885	45,642
27	26,336	30,319	32,912	36,741	40,113	46,963
28	27,336	31,391	34,027	37,916	41,337	48,278
29	28,336	32,461	35,139	39,087	42,557	49,588
30	29,336	33,530	36,250	40,256	43,773	50,892

Appendix 23

Z-Table

Z	0 · 0	0 · 1	0 · 2	0 · 3	0 · 4	0 · 5	0 · 6	0 · 7	0 · 8	0 · 9
- 3 · 9	0 · 0 0 0 5	0 · 0 0 0 5	0 · 0 0 0 4	0 · 0 0 0 4	0 · 0 0 0 4	0 · 0 0 0 4	0 · 0 0 0 4	0 · 0 0 0 4	0 · 0 0 0 3	0 · 0 0 0 3
- 3 · 8	0 · 0 0 0 7	0 · 0 0 0 7	0 · 0 0 0 7	0 · 0 0 0 6	0 · 0 0 0 6	0 · 0 0 0 6	0 · 0 0 0 6	0 · 0 0 0 5	0 · 0 0 0 5	0 · 0 0 0 5
- 3 · 7	0 · 0 0 0 1 1	0 · 0 0 0 1 0	0 · 0 0 0 1 0	0 · 0 0 0 1 0	0 · 0 0 0 0 9	0 · 0 0 0 0 9	0 · 0 0 0 0 8	0 · 0 0 0 0 8	0 · 0 0 0 0 8	0 · 0 0 0 0 8
- 3 · 6	0 · 0 0 0 1 6	0 · 0 0 0 1 5	0 · 0 0 0 1 5	0 · 0 0 0 1 4	0 · 0 0 0 1 4	0 · 0 0 0 1 3	0 · 0 0 0 1 3	0 · 0 0 0 1 2	0 · 0 0 0 1 2	0 · 0 0 0 1 1
- 3 · 5	0 · 0 0 0 2 3	0 · 0 0 0 2 2	0 · 0 0 0 2 2	0 · 0 0 0 2 1	0 · 0 0 0 2 0	0 · 0 0 0 1 9	0 · 0 0 0 1 9	0 · 0 0 0 1 8	0 · 0 0 0 1 7	0 · 0 0 0 1 7
- 3 · 4	0 · 0 0 0 3 4	0 · 0 0 0 3 2	0 · 0 0 0 3 1	0 · 0 0 0 3 0	0 · 0 0 0 2 9	0 · 0 0 0 2 8	0 · 0 0 0 2 7	0 · 0 0 0 2 6	0 · 0 0 0 2 5	0 · 0 0 0 2 4
- 3 · 3	0 · 0 0 0 4 8	0 · 0 0 0 4 7	0 · 0 0 0 4 5	0 · 0 0 0 4 3	0 · 0 0 0 4 2	0 · 0 0 0 4 0	0 · 0 0 0 3 9	0 · 0 0 0 3 8	0 · 0 0 0 3 6	0 · 0 0 0 3 5

4	8 2 0	7 9 8	7 7 6	7 5 5	7 3 4	7 1 4	6 9 5	6 7 6	6 5 7	6 3 9
- 2 . 3	0 . 0 1 0 7 2	0 . 0 1 0 4 4	0 . 0 1 0 1 7	0 . 0 0 9 9 0	0 . 0 0 9 6 4	0 . 0 0 9 3 9	0 . 0 0 9 1 4	0 . 0 0 8 8 9	0 . 0 0 8 6 6	0 . 0 0 8 4 2
- 2 . 2	0 . 0 1 3 9 0	0 . 0 1 3 5 5	0 . 0 1 3 2 1	0 . 0 1 2 8 7	0 . 0 1 2 5 5	0 . 0 1 2 2 2	0 . 0 1 1 9 1	0 . 0 1 1 6 0	0 . 0 1 1 3 0	0 . 0 1 1 0 1
- 2 . 1	0 . 0 1 7 8 6	0 . 0 1 7 4 3	0 . 0 1 7 0 0	0 . 0 1 6 5 9	0 . 0 1 6 1 8	0 . 0 1 5 7 8	0 . 0 1 5 3 9	0 . 0 1 5 0 0	0 . 0 1 4 6 3	0 . 0 1 4 2 6
- 2 . 0	0 . 0 2 2 7 5	0 . 0 2 2 2 2	0 . 0 2 1 6 9	0 . 0 2 1 1 8	0 . 0 2 0 6 8	0 . 0 2 0 1 8	0 . 0 1 9 7 0	0 . 0 1 9 2 3	0 . 0 1 8 7 6	0 . 0 1 8 3 1
- 1 . 9	0 . 0 2 8 7 2	0 . 0 2 8 0 7	0 . 0 2 7 4 3	0 . 0 2 6 8 0	0 . 0 2 6 1 9	0 . 0 2 5 5 9	0 . 0 2 5 0 0	0 . 0 2 4 4 2	0 . 0 2 3 8 5	0 . 0 2 3 3 0
- 1 . 8	0 . 0 3 5 9 3	0 . 0 3 5 1 5	0 . 0 3 4 3 8	0 . 0 3 3 6 2	0 . 0 3 2 8 8	0 . 0 3 2 1 6	0 . 0 3 1 4 4	0 . 0 3 0 7 4	0 . 0 3 0 0 5	0 . 0 2 9 3 8
- 1 . 7	0 . 0 4 4 5 7	0 . 0 4 3 6 3	0 . 0 4 2 7 2	0 . 0 4 1 8 2	0 . 0 4 0 9 3	0 . 0 4 0 0 6	0 . 0 3 9 2 0	0 . 0 3 8 3 6	0 . 0 3 7 5 4	0 . 0 3 6 7 3
- 1 . 6	0 . 0 5 4 8 0	0 . 0 5 3 7 0	0 . 0 5 2 6 2	0 . 0 5 1 5 5	0 . 0 5 0 5 0	0 . 0 4 9 4 7	0 . 0 4 8 4 6	0 . 0 4 7 4 6	0 . 0 4 6 4 8	0 . 0 4 5 5 1

- 1 . 5	0 . 0 6 8 1	0 . 0 6 5 2	0 . 0 6 4 2 6	0 . 0 6 3 0 1	0 . 0 6 1 7 8	0 . 0 6 0 5 7	0 . 0 5 9 3 8	0 . 0 5 8 2 1	0 . 0 5 7 0 5	0 . 0 5 5 9 2
- 1 . 4	0 . 0 8 0 7 6	0 . 0 9 2 7	0 . 0 7 7 8 0	0 . 0 6 3 6	0 . 0 7 4 9 3	0 . 0 3 5 3	0 . 0 7 2 1 5	0 . 0 7 0 7 8	0 . 0 6 9 4 4	0 . 0 6 8 1 1
- 1 . 3	0 . 0 9 6 8 0	0 . 0 9 5 1 0	0 . 0 9 3 4 2	0 . 0 9 1 7 6	0 . 0 9 0 1 2	0 . 0 8 8 5 1	0 . 0 8 6 9 1	0 . 0 8 5 3 4	0 . 0 8 3 7 9	0 . 0 8 2 2 6
- 1 . 2	0 . 1 1 5 0 7	0 . 1 1 3 1 4	0 . 1 1 1 2 3	0 . 1 0 9 3 5	0 . 1 0 7 4 9	0 . 1 0 5 6 5	0 . 1 0 3 8 3	0 . 1 0 2 0 4	0 . 1 0 0 2 7	0 . 0 9 8 5 3
- 1 . 1	0 . 1 3 5 6 7	0 . 1 3 3 5 0	0 . 1 3 1 3 6	0 . 1 2 9 2 4	0 . 1 2 7 1 4	0 . 1 2 5 0 7	0 . 1 2 3 0 2	0 . 1 2 1 0 0	0 . 1 1 9 0 0	0 . 1 1 7 0 2
- 1 . 0	0 . 1 5 8 6 6	0 . 1 5 6 2 5	0 . 1 5 3 8 6	0 . 1 5 1 5 1	0 . 1 4 9 1 7	0 . 1 4 6 8 6	0 . 1 4 4 5 7	0 . 1 4 2 3 1	0 . 1 4 0 0 7	0 . 1 3 7 8 6
- 0 . 9	0 . 1 8 4 0 6	0 . 1 8 1 4 1	0 . 1 7 8 7 9	0 . 1 6 1 9	0 . 1 7 3 6 1	0 . 1 7 1 0 6	0 . 1 6 8 5 3	0 . 1 6 6 0 2	0 . 1 6 3 5 4	0 . 1 6 1 0 9
- 0 . 8	0 . 2 1 8 6	0 . 2 0 8 9 7	0 . 2 0 6 1 1	0 . 2 0 3 2 7	0 . 2 0 0 4 5	0 . 2 9 7 6 6	0 . 2 9 4 8 9	0 . 2 9 2 1 5	0 . 2 8 9 4 3	0 . 2 8 6 7 3
- 0 . .	0 . 2 4	0 . 2 3	0 . 2 3	0 . 2 3	0 . 2 2	0 . 2 2	0 . 2 2	0 . 2 2	0 . 2 1	0 . 2 1

7	1 9 6	8 8 5	5 7 6	2 7 0	9 6 5	6 6 3	3 6 3	0 6 5	7 7 0	4 7 6
- 0 . 6	0 . 2 7 4 2 5	0 . 2 7 0 9 3	0 . 2 6 7 6 3	0 . 2 6 4 3 5	0 . 2 6 1 0 9	0 . 2 5 7 8 5	0 . 2 5 4 6 3	0 . 2 5 1 4 3	0 . 2 4 8 2 5	0 . 2 4 5 1 0
- 0 . 5	0 . 3 0 8 5 4	0 . 3 0 5 0 3	0 . 3 0 1 5 3	0 . 2 9 8 0 6	0 . 2 9 4 6 0	0 . 2 9 1 1 6	0 . 2 8 7 7 4	0 . 2 8 3 4 4	0 . 2 8 0 9 6	0 . 2 7 7 6 0
- 0 . 4	0 . 3 4 4 5 8	0 . 3 4 0 9 0	0 . 3 3 7 2 4	0 . 3 3 3 6 0	0 . 3 2 9 9 7	0 . 3 2 6 3 6	0 . 3 2 2 7 6	0 . 3 1 9 1 8	0 . 3 1 5 6 1	0 . 3 1 2 0 7
- 0 . 3	0 . 3 8 2 0 9	0 . 3 7 8 2 8	0 . 3 7 4 4 8	0 . 3 7 0 7 0	0 . 3 6 6 9 3	0 . 3 6 3 1 7	0 . 3 5 9 4 2	0 . 3 5 5 6 9	0 . 3 5 1 9 7	0 . 3 4 8 2 7
- 0 . 2	0 . 4 2 0 7 4	0 . 4 1 6 8 3	0 . 4 1 2 9 4	0 . 4 0 9 0 5	0 . 4 0 5 1 7	0 . 4 0 1 2 9	0 . 3 9 7 4 3	0 . 3 9 3 5 8	0 . 3 8 9 7 4	0 . 3 8 5 9 1
- 0 . 1	0 . 4 6 0 1 7	0 . 4 5 6 2 0	0 . 4 5 2 2 4	0 . 4 4 8 2 8	0 . 4 4 4 3 3	0 . 4 4 0 3 8	0 . 4 3 6 4 4	0 . 4 3 2 5 1	0 . 4 2 8 5 8	0 . 4 2 4 6 5
- 0 . 0	0 . 5 0 0 0 0	0 . 4 9 6 0 1	0 . 4 9 2 0 2	0 . 4 8 8 0 3	0 . 4 8 4 0 5	0 . 4 8 0 0 6	0 . 4 7 6 0 8	0 . 4 7 2 1 0	0 . 4 6 8 1 2	0 . 4 6 4 1 4

Z-Table

z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952

Appendix 24

Percentage Points of the t Distribution

Two Tail Test						
	0,25	0,10	0,05	0,025	0,01	0,005
One Tail Test						
Dk	0,50	0,20	0, 10	0,050	0,02	0,010
1	1,000	3,078	6,314	12,706	31,821	63,657
2	0,816	1,886	2,920	4,303	6,965	9,925
3	0,765	1,638	2,353	3,182	4,541	5,841
4	0,741	1,533	2,132	2,776	3,747	4,604
5	0,721	1,486	2,015	2,571	3,365	4,032
6	0,718	1,440	1,943	2,447	3,143	3,707
7	0,711	1,415	1,895	2,365	2,998	3,499
8	0,706	1,397	1,860	2,306	2,896	3,355
9	0,703	1,383	1,833	2,262	2,821	3,250
10	0,700	1,372	1,812	2,228	2,764	3,165
11	0,697	1,363	1,796	2,201	2,718	3,106
12	0,695	1,356	1,782	2,178	2,681	3,055
13	0,692	1,350	1,771	2,160	2,650	3,012
14	0,691	1,345	1,761	2,145	2,624	2,977
15	0,690	1,341	1,753	2,132	2,623	2,947
16	0,689	1,337	1,746	2,120	2,583	2,921
17	0,688	1,333	1,743	2,110	2,567	2,898
18	0,688	1,330	1,740	2,101	2,552	2,878
19	0,687	1,328	1,729	2,093	2,539	2,861
20	0,687	1,325	1,725	2,086	2,528	2,845
21	0,686	1,323	1,721	2,080	2,518	2,831

22	0,686	1,321	1,717	2,074	2,508	2,819
23	0,685	1,319	1,714	2,069	2,500	2,807
24	0,685	1,318	1,711	2,064	2,492	2,797
25	0,684	1,316	1,708	2,060	2,485	2,787
26	0,684	1,315	1,706	2,056	2,479	2,779
27	0,684	1,314	1,703	2,052	2,473	2,771
28	0,683	1,313	1,701	2,048	2,467	2,763
29	0,683	1,311	1,699	2,045	2,462	2,756
30	0,683	1,310	1,697	2,042	2,457	2,750
40	0,681	1,303	1,684	2,021	2,423	2,704
60	0,679	1,296	1,671	2,000	2,390	2,660
120	0,677	1,289	1,658	1,980	2,358	2,617
∞	0,674	1,282	1,645	1,960	2,326	2,576

Appendix 25

PHOTO RESEARCHER



