THE EFFECT OF INQUIRY LEARNING METHOD (ILM) TOWARDS STUDENTS' READING COMPREHENSION AT GRADE X SMK S PANCA DHARMA

A THESIS

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

Written By:

WARIDAH NASUTION
Reg. Number: 15 203 00066

ENGLISH EDUCATION PROGRAM

**TARBIYAH AND TEACHER TRAINING FACULTY
STATE INSTITUTE FOR ISLAMIC STUDIES
PADANGSIDIMPUAN**

2019

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ENGLISH EDUCATION PROGRAM

TARBIYAH AND TEACHER TRAINING FACULTY
STATE INSTITUTE FOR ISLAMIC STUDIES
PADANGSIDIMPUAN
2019

Term   : Thesis

Item   : 7 (seven) examplars

Padangsidimpuan,   November2019

a.n. **Waridah Nasution**

To:**Dean**

Tarbiyah and Teacher Training Faculty

In-

          Padangsidimpuan

Assalamu 'alaikumwr.wb.

After reading, studying and giving advice for necessary revision on the thesis belongs to **Waridah Nasution**, entitled **"The Effect of Inquiry Learning Method (ILM) Towards Students' Reading at Grade X SMK S Panca Dharma Padangsidimpuan"**. We assumed that the thesis has been acceptable to complete the assignments and fulfill the requirements for graduate degree of Education (S.Pd) in English Education Department, Tarbiyah and Teacher Training Faculty in IAIN Padangsidimpuan.

Therefore, we hope that the thesis will soon be examined by the Thesis examiner team of English Education Department of Tarbiyah and Teacher Training Faculty IAIN Padangsidimpuan. Thank you.
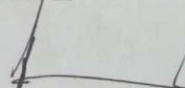
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DECLARATION LETTER OF WRITING OWN THESIS

The name who signed here:

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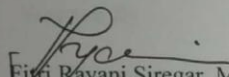
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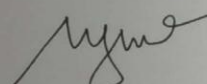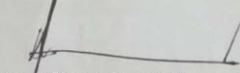
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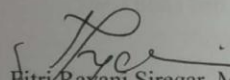
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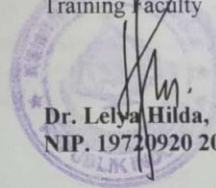|	
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Title of Thesis	: The Effect of Inquiry Learning Method (ILM) Towards Students Reading Comprehension at Grade X SMK S Panca DharmaPadangsidimpuan.
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ABSTRACT

This research describes about the effect of Inquiry Learning Method (ILM) Towards Students' Reading Comprehension at grade X SMK S Panca Dharma Padangsidimpuan. There were some problems in this research: 1) Many students are not able to comprehend the text well, 2) The students still have difficulties in interpreting words and some important aspects such as, main idea, structure and specific language features, 3) The students' less active participating in the learning process.

The kind of this research was experimental research. The population of this research was all of the tenth grade of SMK S Panca Dharma Padangsidimpuan. The total of population were 112 students. Then, the sample of the research was 2 classes, XA as experimental class that consist of 26 students and XB as control class that consist of 26 students. The data was derived from pre-test and post-test. To analyze the data, the researcher used t-test formula.

Based on the calculation of t-test, the researcher found that $t_{count} = 4.02$ and $t_{table} = 1.67591$. It means $t_{count} > t_{table}$ ($4.02 > 1.67591$). So, the researcher could concluded that Ha was accepted and Ho was rejected. There was the significant effect of using Inquiry Learning Method (ILM) Towards Students' Reading Comprehension at Grade X SMK S Panca Dharma Padangsidimpuan.

Keywords*: Reading Comprehension, Inquiry Learning Method.*

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                          Towards Students Reading Comprehension at
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Year   : **2019**

ABSTRAK

Penelitian ini mendeskripsikan tentang pengaruh metode pembelajaran inkuiri terhadap pemahaman membaca siswa pada siswa kelas X SMK S Panca Dharma Padangsidimpuan. Ada beberapa masalah dalam penelitian ini : 1). Kebanyakan siswa kesulitan dalam memahami teks, 2). Siswa masih kesulitan dalam menterjemahkan kata dan beberapa aspek yang penting seperti gagasan utama, struktur, dan unsur fitur bahasa tertentu, 3). Siswa kurang berpartisipasi dalam proses pembelajaran.

Jenis penelitian ini adalah penelitian eksperimen. Populasi dalam penelitian ini adalah seluruh siswa kelas X SMK S Panca Dharma Padangsidimpuan. Total populasi adalah 112 siswa. Lalu, sampel penelitian ini adalah dua kelas, XA sebagai kelas eksperimen yang terdiri dari 26 siswa dan XB sebagai kelas kontrol yang terdiri dari 26 siswa. Data dikumpulkan melalui pre-test dan post-test. Untuk menganalisa data, peneliti menggunakan rumus t-test.

Berdasarkan perhitungan t-test, peneliti menemukan bahwa $t_{hitung}= 4.02$ dan $t_{table}=1.67591$. Itu artinya $t_{hitung} > t_{table}$ (4.02>1.67591). Jadi, peneliti dapat menyimpulkan bahwa Ha diterima dan Ho ditolak. Ada pengaruh yang signifikan dari penggunaan metode Pembelajaran Inquiry terhadap pemahaman membaca siswa pada siswa kelas X SMK S Panca Dharma Padangsidimpuan.

Kata kunci*: Reading Comprehension, Inquiry Learning Method.*

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Padangsidimpuan, October 2019
Researcher

WARIDA NASUTION
Reg. No. 15 203 00066

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CHAPTER I

INTRODUCTION

A. Background of the Problem

English has a great role many aspect in daily life. It becomes the best instrument and the most practical medium to access new information for global communication. Learning language is divided in four basic skills. They are reading, listening, speaking and writing skills. Reading is one of four skills in learning English. It also has important plays role, because it is not only to get information, but also to help students in developing our creativity, critical thinking and our knowledge.[1] So, reading is interactive process between reader and writer to get meaning and it's also necessary in daily life or academic.

Reading is the way to get information from something that was written, obtain information and improve the science and knowledge. Reading is important requirement needed for gaining wisdom and knowledge. It helps us develop learning skill. Reading is also necessary and very important for all students or human in the word. So, reading can develops creative people, such as when they are reading, they will know what will be happen next.

Based on the explanation above, reading is very important for all students or human life. However, reading skill is problematic at SMKS Panca Dharma Padangsidimpuan either in the aspect of achievement or

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[1]Michael O'Malley, J, *Authentic Assessment for English Language Learners* (Wesley:Publishing Company, 1996).

intelligence. The actual fact is relevant in the following. Based on interview between the researcher and one of the students in SMK S Panca Dharma said that English is difficult for the students in reading text, students difficult to learn and understanding the material and they don't get meaning from the text, It's also difficult to find main idea from the text. Below the writers reveals the reason.

First, there are many students have low reading comprehension.[2] For example, when the teacher teaches in the classroom, the students don't understand the topic, content, and language. Consequently, the students are bored to read the materials and they also difficulties to know the meaning of the text.

Second, the students lack of vocabulary. The most of students get bored by raeding such as a long text. The students are also not able to comprhend the text when they read. They still have difficulties in interpretting words, rarely try to predict the meaning of unfamiliar words, some important aspects such as, main idea, structure and specific language features.

Third, many students less active in participating in the learning process. The students are noisy when following the discussion in learning, until the learning process not be affective and making the other students trouble and not focus it.

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[2]M. Rio Hasibuan *Private Interview to the Students of SMKS Panca Dharma*, (Silandit, 16th February 2019).

Based explanation above, Reading is still being a problematic in SMK S panca Dharma Padangsidimpuan. So, the problem needs solution to improve the effectiveness of student learning and improve their grades were below standard.

In this case, the researcher interested use Inquiry Learning Method. This method is one model of learning that focuss on students centre. The method of learning beginning with ask why something come be happening, after that he taught to students about procedure and how to use organization of knowledge and general principles.[3] Judi Moreillon stated Inquiry Learning Method can improve reading profeciency, enganging questioning as a reading comprehension strategy and can help readers learn about how to ask meaningful question and make students in deep comprehension about the text.[4] Chiarotto also stated inquiry engaged in the teaching and learning process builds lifelong learning skill that transcend content mastery that helps students to improve their reading comprehension.[5] So, researcher conclude this method suitable with reading comprehension and can increase students' reading comprehension.

B. Identification of the Problem

Based on background above, the researcher identifies the problem of the research like:

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[3] M. & C Joyce, B, Weil, . *Model of Teaching* (New Jersery: Prentice-Hall, 2000).

[4] Judi Moreillon, "Inquiry Learning and Reading Comprehension Strategy Instruction : Processes That Go" 43, no. 2 (2014).

[5] Lorraine Chiarotto, *"Natural Curiosity:Building Children's Understanding of the World Through Environmental Inquiry/A Resources for the teachers.* Toronto:The Laboratory School at Dr Erick Jackman Institute of Child Study

1. There are many students are not able to comprehend the text well when they read.

2. The students still have difficulties in interpreting words and some important aspects such as, main idea, structure and specific language features.

3. The students' less active participating in the learning process the students' are noisy when following the discussion.

C. Limitation of the Problem

Based on the above of the problems, there are some problems, there are some problems involving in this research. In this resesrach, the researcher only focuses on students' problem in reading comprehension and the effect of Inquiry Learning Method (ILM) Towards Students' Reading Comprehension at grade X SMK S Panca Dharma Padangsidimpuan. The research focuses on discussion text because it is appropriate material for senior high school students to improve their thingking and analysis.

D. Formulation of the Problem

Here, the researcher formulates the problem of the research as follows:

1. How is students' reading comprehension before learning using Inquiry Learning Method (ILM)?

2. How is students' reading comprehension after learning using Inquiry Learning Method (ILM)?

3. Is there significant effect of learning using Inquiry Learning Method (ILM) Towards Students' Reading Comprehension.

E. Purpose of the Research

The purpose of the research are:

1. To know how is students' reading comprehension before learning using Inquiry Learning Method (ILM)

2. To know how is students' reading comprehension after learning using Inquiry Learning Method (ILM)

3. To find out whether there is or there is not significant effect of learning using Inquiry Learning Method (ILM)

F. Significance of the Research

The significances of the research is expected to be useful for:

1. Headmaster, to encourage English teachers to be the best in teaching process.

2. English Teachers, to help students in reading comprehension and enlarge the quality of teaching and learning, and also can enrich the knowledge of teacher.

3. Researcher, to be used as a reference for the future research.

G. Defenition of the Variable

   To avoid misunderstanding of researcher and reader in the title of the problem, researcher need to clarify some terms in the title above, namely:

1. Inquiry Learning Method

   Inquiry method is a method that focuss on student centre which students take a role as active learner. In this method students develop their intellectual ptency through their own efforts to find something as the answer of certain of the problem through investigation.it is one of learning method that emphasizes on critical thinking and comprehending in reading. In conclusion, Inquiry Learning Method ais a method which focuss on students centre that can emphasizes critical and comprehending.

2. Reading Comprehension

   Reading comprehension is the act of understanding or getting information from the outside, processing in mind and try to interpreted it. Therefore, students' reading comprehension means the students ability in catching the meaning and comprehends the text.

H. The outline of the Thesis

   This research is organized in to five chapter. Every chapter is subdivided into subtopics to elaborate to given issues. Chapter one consisted of introduction, they are background of the problem, the identification of problem, the limitation of the problem,, the

formulation of the problem, the objectives of the research, the significances of the research, the identifications of operational variables, and outline of the thesis.

Chapter two consists of the theoritical description. It is divided into subchapters which consist of description of reading comprhension, Inquiry Learning Method (ILM), the related findings, the conceptual framework and the hypothesis.

Chapter three consists of methodology of the research which is diveded into sub chapter, the place and time of the research, the research methodology, the population and sample, the researh instrument, procedure of data collection, technique of analyzing data.

Chapter four consists of data description, hypothesis testing, discussion and the threats of the research.

Chapter five consists of the conclusion about the result of the research and suggestion that are given by the research.

CHAPTER II

THEORITICAL DESCRIPTION

A. The Theoritical Description

1. Inqury Learning Method

   a. Understanding Inquiry Learning Method

   Inqury Learning Method is a method which follows the concept in giving opportunity to students develop their intellectual potency through their own efforts to finds something as the answer of certain problem through investigation. It can be defined as the art of creating the students situation in which student take role as active learner. Inquiry requires identifying assumptions, use of critical and logical thinking, and consideration of alternative explanations.[1] In conclusion, inquiry method is a method that can develop intelectual potency which focuss on students centre.

   Inquiry learning includes a set of skills to be learned and practiced. These skills align with those that classroom teachers and students learn in English language arts and other content area. A method of inquiry is capable of methods followed learners to realize what has been gained during learn. Inquiry put learners as

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[1] Lisa Martin-hansen, *Defining Inquiry*, 2002, p.35, .

subjects to active.[2] The goal of inquiry is to help the students to develop the intelectual thinking skill and their skill such as asking the question and finding answer from their couriosity. There are four essential elements on which inquiry based learning depends, which are:

1) First is that patterns and meanings should not be deceptiveto the beginners.
2) Second is that the useful knowledge about field should be structured.
3) Third is that knowledge which is structured should be applicable, transferable and accessible to a vast range situation.
4) Fourth is that the structured knowledge should be easly retrieved so that new informationin that particular field could be gained without much effort.[3]

Joyce, B, Weil, M. & C stated

"Inquiry based method is one model of learning that focus on student centre. Inquiry method is the method of learning beginning with ask why something come be happening, after that he taught the students about procedure and how to use organization of knowledge and the general principles. Student do some action, to collect data and analysis data until student find answer of the question".[4]

With doing directly in the process of learning student must have life skill, that skill to know self potency, existence self, the ability to catch information, critic and to solved problems. Inquiry has also been describe as giving the students experiences, made prediction, developed conceptual

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[2] Wildhan Burhanuddin, "Using Inquiry Method to Improve the Students' Reading Comprehension (A Classroom Action Research)" 1, no. 1 (2012): 126–46, http//wildhan@unismuh.

[3] Kristi Ardiana, "A study of Inquiry Method on Teaching Reading" (IAIN Surakarta, 2017).

[4] Joyce, B, Weil, . *Model of Teaching*.

model, and expressed the "behavior of systemin their own words.[5]So the researcher concludes inquiry is one of the method in learning especially for teaching english as a foreign language. That method begin with question, be depend self in learning, search some important in matter or directly with the condition in need.

b.   Process of Inquiry Method

There are many procedures, Inquiry has many steps:

a) Immersing
Entering into the activities of social world, experiencing in the social world as a participant or observing a social world as participant, or observing social worlds.
b) Identifying
Defining concerns, issues, and dilemmas that arise in social world or conflict across multiple social worlds.
c) Contextualizing
Explaining how the activities, symbols, and texts used in one or more social world identifies, roles, relationship, expectations, norm beliefs, and values.
d) Representing
Using symbolic tools to create a text that represents a lived social world.
e) Critiquing
Analyzing how a representation of a social world privileges particular values and beliefs: analyzing how particularliteracy practices within social world promote certain meaning while marginalizing other possibilities.
f) Transforming
Revising one's meaning for component of a social world. Changing one's action and words with in a social world to contruct more deirable identities, realtionship, and values.[6]

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[5] William J Newman et al., "Dilemmas of Teaching Inquiry in Elementary Science Methods," *Journal of Science Teacher Education* 15, no. January 2002 (2004): p.259, https//doi.org/10.1023/B:JSTE.0000048330.0786.d9.

[6] Richard Beach & jamie Myers, *, Inquiry Based English Instruction* (New York: Colombia University, 2001).

In other statement an authors show many steps of Inquiry implementing in the class it base on Alberta. The steps are :

a) Planning phase
   At this phase of the inquiry process-most important phase of the whole process-inquirer often experience a sense of optimism the task ahead.

b) Retreiving phase
   the inquires next think the imformationthey have and the information they want, inquirer may need ti spend considerable time exploring and thinking about information they have found before they come to a "focus" for their inquiry.

c) Processing phase
   This phase begins when inquiry has found a "focus" for the inquiry. A focus is the aspect of topic area thatinquirer decides to investigates.

d) Creating Phase
   This phase is organizing the imformation; putting the information into one's own words and creating a presentation format are the next task in the process.

e) Sharing Phase
   If students have been enough support, they are proud of their product and eager to share it, regardless of format or audience.

f) Evaluating
   Finally, student should be able to articulate the importance of this kind of work for developing their "learning to learn" skill, they will be able to see the connection between their comprehension with useful of that metthod.[7]

Based on explanation above, researcher conclude process of inquiry method can develop their intelectual potency in which student take role as active learner.

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[7] Alberta, *Focus on Inquiry* (Canada: Alberta Learning, 2004), p.16, http://www.learning.gov.ab.ca/k_12/curriculum/bySubject/focusoninquiry.pdf.

Next, there have been popular version is 5 E are:

a) Engagement is the teacher or the curriculum task accesses the learners' prior knowledgeand helps them become enganged in a new concept through the use of short actvities, object or question used to engage students, connection facilitated between what students know and can do.

b) Exploration is focuss on student attentio n on a partical aspect of their engagement and exploration provide students with a common base of activities within which current concept. Object and phenomena are explored, hands-on activitities, with guidance.

c) Explanation is focuss students' attention students on a particular aspect of their engagement and provides opportunities to demonstrate their conceptual understanding. explain what their understanding of concept and process, new concept and skill are introduce as conceptual clarity and cohesion are sought.

d) Elaboration isfacilitates the transfer of concept to closely releted but new situation, activities allow students to apply concept in context and build or extend understanding and skill.

e) Evaluation is this is the important opportunity for student to use the skills they have aquired and evaluate their understanding.[8] Students assess their knowledge, skill anda bilities permit evaluation of students' developement and lesson effectiveness.

From all of proceses of Inquiry Method are designed to guided students to comprehend the text, the process suitable and can develop independent reading skill and make them active in the classroom.

c. **Kinds of Inquiry Method**

Sund and Trowbridge as quoted by Mulyasa in Ardianas' thesis presesnt three kinds of Inquiry based teaching, There are:

a). Guided Inquiry

The students are given guidlines from the teacher. The guidlines usually are the questions having purpose of guiding the students in the learning process. It usually applied to the beginners who start learning through inqury.

b). Free Inquiry

The students do the experiment without teacher's guide before. The students identify the problem which is going to be investigated by them,

[8] Ali Abdi, "The Effect of Inquiry-Based Learning Method on Students ' Academic Achievement in Science Course" 2, no. 1 (2014): 37–41, https://doi.org/10.13189/ujer.2014.020104.

students play an active role in defining the problems and finding the problem by themself.

c). Modified free Inquiry

The students are given a certain problem by the teacher. Then, they are asked to solve the problem through observation, exploration, and research prosedure. [9]

In this research the researcher conduct free inquiry to improve the students' reading comprehension, because the subject of the research is from level of senior high school, so the teacher does not needs to give them guide to learn vocabulary in teaching learning process.

d. Advantages and Disadvantages of Inqury Method

A method of inquiry is a learning method that is recommended by many because this startegy has several adventages, including:

a) Honoring students' questuon increases their motivation, leading to higher levels of engangement, improved improved understanding and a love learning
b) Inquiry stimulates students' curiosity, leading to progressively deeper questions and habitual critical thinking.
c) Inquiry builds lifelong learning skills that transcend content mastery.
d) Thorough inquiry, students develop skills which they can apply to all content areas across all grade levels, including reflecting on the purpose, meaning and process of accumulating various types of information. [10]

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[9] Ardiana, "A Study of Inquiry Method on Teaching Reading Comprehehension of Tenth Grade at Man Surakarta in the Academic Year 2015/2016," p.34.

[10] David Suzuki, "Natural Curiosity: A resource for teachers Building Children's Understanding of the World throught Environmental Inquiry (University of Toronto: The Laboratory School at The Dr. Eric Jackman Institute of Child Study, 2011), p.9

In adition, inquiry learning method having the disadvantages, also has weakness, including:

a) Inquiry method in use as a learning method, it will be difficult to control the activities and student succes.
b) This method is difficult to plan because it collided with learning by the student in the learning habits.
c) Sometimes in implementing it take a long time so it is often difficult to adapt to a teacher who has been determined. [11]

Based on explanation above researcher use three steps in used inquiry learning method, there are elaboration, exploration, and confirmation. This method has many cycles, but researcher consist of 3 steps. Learning cycle is effectively used with students at all levels to accomplish these purpose since this approach helps students apply knowledge gained in the classroom to new place or to new conditions.

Cycle are:

a. Exploration

Exploration phase has a similar with phase building knowledge of text. In this phase, teacher and student built cultural context, share experience, discuss vocabulary and grammatical pattern. It does to activating their background knowledge.

The first way activating their background knowledge is question. Questioning is at the heart of inquiry. Student developed researchable questions are essential to inquiry learning. Ideally,

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[11] Nurtalina, "The Effect of Using Inquiry-Based Learning Strategy in the Writing Ability of The Eighth Grade Students of SMP Negeri 1 Prambanan Klaten in the Academic Year of 2012/2013" (Language and Arts State University Of Yogyakarta, 2013), 30, http://eprints.uny.ac.id.

students' question envolve and deepen throughtout the inquiry process. Enganging in questioning as a reading comprehension strategy is one way to help learners stay focused on their questions or discover the need to change them.[12] So, researcher conclude exploration is activity that can emphasizes on critical thinking and comprehending in reading. Students carry out on activities in which they can explore the concept or skill. They grapple with the problem or phenomenon and describe it in their own word. This phase allows students to acquire a common set of experience that they can use tohelp each other make sense of new concept or skill. All of these are geared around the types of text and topic they are going to deal with the text phase . the teacher explores the students knowledge of text covering form, function and message.

b. Elaboration

Elaboration phase is similar to join contruction of text in genre based approached. This phase provide opportunities for students to apply what they have learned to new situation and so develop a depth understanding of concept or greater use of the skill. It is important for student to discuss and compare their ideas which each other during this phase. At this phase students try to develop text (spoken or written) with their peers and with the teachers' helping. They need to demonstrate their speaking or writing ability. This learning cycle in

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[12] Judi Moreillon, "Inquiry Learning and Reading Comprehension Strategy Instruction : Processes That Go" 43, no. 2 (2014): 1–4.

which students work together with other sudents and with the teacher so as to gain the language skill (speaking, reading and writing). In reading skill question about the content of the text, to identify the main idea, or detail information, in writing and speaking and speaking skill they can produce (orally and written form) text similar to the one discussed in the initial phase, all activities under teacher guideance.

c. Confirmation

The final phase provides opportunity for students to review and reflect on their own learning and new understanding skill. It is also when students provide evidence for changes to their understanding, beliefs and skill. Confirmation phase is similar to individual contruction of text in genre based approach. Here the students may work by themselves. The teachers' roles are as a facilitator giving feedback. They may analyze the error and mistake the students make in their oral as written roduction of text. The teachers are supposed to positve reinforcement so that students develop their language skill.

Exploration

Confimation ← Elaboration
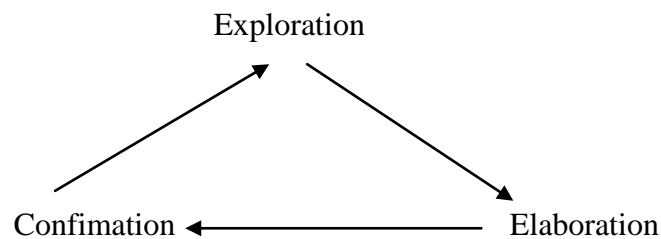
Method suitable with reading comprehension based on the principle of teaching.[13] Based on explanation above, researcher will use 3 steps which is exploration, elaboration and confirmation that can make learning effectively, develop their intelectual potency.

2. General Concept of Reading Comprehension

a. Defenition of Reading Comprehension

Reading is a process of thinking, evaluating, judging, imagining, reasoning and problem solving.[14] Actually, reading is receptive skill; it is one of reaction between reader and writer. There are many definition of reading that has been explained by the experts. According to Kathelen "reading, at first, may appear to be routine activity in which individual words are combined to produce meaning".[15] According to Tarigan, reading is a process of reader in bringing some meanings and getting meanings from printed and written material.[16] Its mean reading is certainly to get information from printed material, not only using mental or mind to think what text talks about, but in this case the readers also need physic to read; for example the readers use their eyes when they read. M. Rahmani & K. Sadeghi states that reading comprehension is an interactive mental process between readers linguistic knowledge, knowledge of the world, and knowledge

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[13] Moreillon, p.56.

[14] Dr.K.K Palani, "Promoting Reading Habits and Creating Literate Society," *International Journal* 3, no. 2 (2012): p.9.

[15] Kathelen T. McWhorter, *Efficient and Flexible Reading* (USA: Harper Collins Publisher, 1992)p.23.

[16] Henry Guntur Tarigan, *Membaca Sebagai Suatu Keterampilan Berbahasa* (Bandung: Angkasa,2005),p.8.

of the topic.[17] From explanation above, the researcher conclude reading is process getting information between readers linguistic knowledge, not only using mind to think but also need physic.

According to Nunan in Nesy Marantinas' thesis, reading is a fluent process of readers combine information from a text and their own background knowledge to build meaning. Reading is the most dominant skill in learning any subject because the ability to read is not only performance to pronounce the passage but also the understanding of the message from a passage or text.[18] Thus, reading is activity to get information, not only read but understand about the text.

According to Wayne Otto reading is not just saying the words. Reading must always be a meaning getting process.[19] So, researcher concludes reading is interactive process between of reader and the text to getting meaning.

Roebl states that, Reading Comprehension is important for the students to become effective reader. Basically, reading comprehension is an ability to understand what the readers read where word have context and text have meaning.[20]Furthermore, Eka said that reading

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[17] M.Rahmani & K. Sadeghi, "Effect of Note Taking on Reading Comprehension and Recall, International Journal of Humanities and Social Science," International Journal of Humanities and Social Science, http://wwwijhssnet.com.

[18] Nesy Marantina, "The Influence of Students ' Reading Habit and Teachers," no. 1 (n.d.): p.5.

[19] Wayne Otto, *How to Teach Reading* (United State of America: Addison-Wesley Publishing Company, 1979),p.147.

[20] Gotdon Wainwright, *Read Faster, Recall More: Use Proven Techniquesfor Speed Reading and Maximum Recal, Translated by Heru Sutrisno, Speed Reading Better Recalling: Memanfaatkan Teknik-Teknik Teruji Untuk Membaca Lebih Cepat Dan Mengingat Secara Maksimal,I* (Jakarta: PT Gramedia Pustaka, 2006), p,43.

comprehension is a mental process in which the readers try to understand the meaning in text by interpretting what have been read in order to find the idea given by writers.[21] So, Reading comprehension is important because with reading comprehension we can get any information from text that we read.

Reading comprehension is dependent on three factors. The first factor is that the reader has command of the linguistic structures of the text. The second factor is that the reader is able to exercise metacognitive control over the content being read. This means that the reader is able to monitor and reflect on his or her own level of understanding while reading the material. The third and most important criterion influencing comprehension is that the reader has aducate background in the content and vocabulary being presented.[22]So, based on statements reading comprehension is not easy as we think, there are three factors to comprehend the meaning of the text.

There are some components of reading comprehension which should be focused on comprehending a reading text, there are five components that may help the students to read carefully:

a. Finding factual information

Factual information requires readers to scan specific details. There are many types of question of factual

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[21] Eka Sustri Harida, "Students' Ability and Difficulties in Understanding English Text (A Study at English Program IAIN Padangsidimpuan" 21, no. 3 (2014): p.184, http://journal.tarbiyahiainib.ac.id/index.php/attalim/article/download/102/104.

[22] Ted Wallach, "The Threads of Reading : Strategies of Literacy Development , by Karen Tankersley" 8, no. 4 (2005): p.90.

information such as question of factual information such as question type of reason, purpose, result, comparison, mean, identity, time and amount in which most of the answer can be found in the text.

b. Main idea

Reading concerns meaning to greater extend than it with form. An efficient reader understands not only the ideas but also their relative significance, as expressed by the author. In order words, some of the ideas are super ordinate while other subordinate.

c. Reference

In English, as in other language, it would be clumsy and boring to have repeated the some word or phrase every time a reader uses it. Instead of repeating the same word or phrase several time it has been used. We usually refer to it rather than repeated it. For this purpose, we use reference words most often, reference expression will refer to a preceding word or phrase.

Recognizing reference words or phrase to which they refer will help a reader understand the reading passage. Students of English might learn many rules for the sentences.

Reference words are usually short and are very frequently pronouns, such as it, she, he, this, those and so on.

d. Inference

The important thing is needed in reading is understanding. Writers, however does not write out everything, he expects the reader to understand. The linguistic meaning ofan uttered sentence falls well short of encoding what the speakermeans: it is merely the input to the inferential processes by which thespeaker's intentions are recognised. Writers use language efficiently and recognized what can be inferred from their sentence. In orders words, an efficient reader is able to understand those implications.

e. Restatement

Restatement is the kind of question test which use to measure the reader's ability in analyzing the relationship of ideas within single sentence. It means that, the last few question of reading comprehension ask the read er to choose which of the four possibilities best restated the meaning of a given sentence. [23]

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[23] Mastina Batubara, "The Correlation Between Grammar Mastery and Reading Short Story Ability of Seventh Year Student at Mts I'aanatuth Thalibiin Tualang Siak Regency" (University of Syarif Kasim Riau, 2011), 13–14http://repository.uin suska.ac.id.

Based on the explanation above, there are five reading components that give meaningful contribution to the students in reading short story ability.

b. Types of Reading

Several types of reading performance are typically identified, and these will serve as organizers of various assesment task :

1. Perceptive

    Perceptive reading tasks involve attending of the components of larger stretches of discourse: letters, words, punctuation, and other grapheme symbols.

2. Selective

    This category is largely an artifact of assessment formats. In order to ascertain one's reading recognition of lexical, grammatical, or discourse features of language within a very short stretch of language, certain a typical tasks are used : picture-cued tasks, matching, true false,multiple-choice, etc.[24]

3. Interactive

    Included among interactive reading types are stretches of language of several paragraphs to one page or more in which the reader must, in a psycholinguistic sense interact with the text.[25]

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[24] Yudha Aprizani, "Language Assessment: Assessing Reading Comprehension on Beginning level" (Islamic Kalimantan University of MAB, 2005), p.580, http://english.stkipbjm.ac.id.

[25] H.douglas Brown, *Language Assessment Principles and Classroom Practices* (United Stated of America: Longman, 2004), p.188-189, https://www.academia.edu/29927878/Language_Assesment_Principle_and_Classroom_Practices.

c. The Models of Reading

The models of reading are divided into 2, namely : bottom-up and top-down.

1. Bottom-up models focuses on linguistic clues, builds literal comprehension of a text.[26] Thus, bottom up models happens when someone tries to understand language by looking at individual meanings or grammatical characteristic.

2. Top-Down model according to swaffer, Arans, and Byrnes, a top down model focuss on the importance of background knowledge, builds global comprehension.[27] Top down model happens when someone uses background information to predict the meaning of language they are going to listen or read.

d. Component of Reading

There are some components of reading comprehension

1. Grasping the meaning of the concept.
2. Grasping the logic of sentence construction.
3. Anticipating the meaning of the next sentence.
4. Moving very easily to the next sentence with a clear understanding.[28]

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[26] Vida Škudienė, "A Comparison of Reading Models , Their Application to the Classroom and Their Impact on Comprehension A Comparison of Reading Models , Their Application to the Classroom and Their" 2 (2016): p.94, https://www.researchgate.net/publication/265672373%0AA.

[27] Azar Hosseini Fatemi, "The effect of Top-down / Bottom-up Processing and Field – Dependent/ Field-Independent Cognitive Style on Iranian Efl Learners' Reading Comprehension" 4,no.4 (2014), https://doi.org/10.4304/tpls.4.4.686-693.

[28] K K Palani, "Promoting Reading Habits and *CreatingLiterate Society*" 2, no. 2 (n.d.): p.93.

Components of reading above are commonly use in reading comprehension. By knowing component of reading the readers cam catch the information easily.

e. The Reading Goals

The main goals of reading are to get and find information include content and meaning of the text based on the purpose.[29] Here some goals of reading such as:

a) Reading is for identifying important information.

b) Reading is for main ideas.

c) Reading is for finding the specific information.

d) Reading is for underlining the important information.

e) Reading is to classify the difficult word.

f) Reading is to evaluate.

g) Reading is to compare or contrast.

So, by knowing reading goals the readers will understand how important reading in life such as, with reading we can know information.

f. Strategies for Reading Comprehension

According to H. Douglas Brown, there are some principal strategies for reading comprehension:

a) Identify your purpose in reading a text.
b) Use efficient silent reading techniques for relatively rapid comprehension.

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[29] Guntur Tarigan, *Membaca Sebagai Suatu Keterampilan Berbahasa*, Bandung: Angkasa, 2005n, p.9.

c) Skim the text for main ideas
d) Scan the text for specific information
e) Use semantic mapping or clustering
f) Guess when you aren't certain
g) Analyze vocabulary
h) Distinguish between literal and implied meanings.
i) Capitalize on discourse markers to process relationships.[30]

Based on explanation above, the researcher conclude that reading strategy can help students to solve problem in reading comprhension that must be known by the reader.

g. Reading Assessments

Assessments require planning and organization. The key lies in identifying the purpose of reading assessment and matching instructional activities to that purpose.[31] In assessing reading comprehension, there are some indicators:

Table 1
Indicator of Reading Assessment

NO	Indicators of Reading Comprehension
1.	Identifying Topic Sentence
2.	Identifying Main Idea
3.	Identifying Specific Information
4.	Identifying Vocabulary
5.	Identifying Conclusion[32]

There are some techniques in assessing or testing, one of them is multiple choice questions. A multiple choice test item is usually set out in such a way that the candidate is required to

[30] H.douglas Brown, *Teaching by Principles an Interactive Approach to Language Pedagogy the Second Edition* (California: Longman, 2000), p.306-310.
[31] O'Malley, J, *Authentic Assessment for English Language Learners*, p.98.
[32]Brown, *Language Assessment Principles and Classroom Practices* p. 190.

select the answer from a number of given options. Only one of which is 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.[33] Thus, multiple choice is a tets which have one correct answer between four options.

Advantages and Disadvantages of multiple choice test. The advantage of multiple choice:

1. The marking, as being reliable is simple, more rapid and often more cost effective than other forms of written. The format of the multiple choice test item is such that the intention of the test compiler are clear than candidates know what is required of them.
2. The results can be evaluated quite easily even for large number of students.
3. Student can obtain certain number of points in the test purely by guessing the right answers and this fact affects reliability of the test and should be considered in interpretation of test scores.[34]
4. In multiple-choice tests there is almost complete marker reliability. Candidates' marks, unlike those in subjective formats, can not be effected by the personal judge of the marker.
5. In more open-ended formats, example short answer questions, the candidate has to deploy the skill of writing.
6. 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.

Disadvantage of multiple choice:

1. 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.

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[33] Cyril J Weir, *Communicative Language Testing* (New york, 1990), p.43.
[34] Jindrich Klufa, "Multiple Choice Question Tests – Advantages," *Advances, Recent Technologies, Educational* 1 (n.d.): p.39.

2. There are however a number of problems associated with used of this format.
3. A further objection to the use of multiple choice format is the danger of the format having an undue effect on measurement of the trait.
4. Multiple choice tests take much longer and are more expensive and difficult to prepare than essay test.
5. Students expecting a multiple- choice test (relative to an essay test) spend less time studying for the test.[35]

From explanation above, researcher concludes multiple choice is a good techniques and helpfull for testing reading comprehension because multiple choice have many advantages.

3. Descriptive Text

a. Defenition and Concept Descriptive Text

Description is text containing two components identification and description by which a writer describes a person, or an animal. The identification is to identify the object to describe. The description describes parts, qualities, and characteristics: of the parts of the object the function of description is to describe a particular person, place, or thing.[36]The researcher conclude descriptive text is a text that describes the characteristics of a particular thing, a place, or a person.

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[35] Henry L Roediger Iii and Elizabeth J Marsh, "The Positive and Negative Consequences of Multiple-Choice Testing" 31, no. 5 (2005): 1155–59, https://doi.org/10.1037/0278-7393.31.5.1155.

[36]Sanggam Siahaan Kisno Shinoda, *Generic Text Structure* (Yogyakarta : Graha Ilmu, 2008) p. 89.

b. The Generic Structures of Descriptive Text

The generic structure of decriptive text are:

1) Identification : introduction of thing, place or person to be described.

2) Description : descriptions of the parts, qualities, and characteristics of the thing, person, or place being discussed.[37]

c. Example of Descriptive Text

My idol

His full name is Afgan Syah Reza. He was born on 27 May 1989 in Jakarta. He is well known as a talented young singer.

Afgan is quite tall. His height is 170 cm. He has an oval face, short hair. He is easly known because there are dimples on his cheek when he is smiling and always wears glasses. Afgan's favorite music is pop, R& B, Soul and jazz. That music influence his way to sing. He likes eating. His favorite food is Balado potato. He loves it because it's delicious.

Table 2
Example of Descriptive Text

My idol	
Identification	His full name is Afgan Syah Reza. He was born on 27 May 1989 in Jakarta. He is well known as

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[37]Turfina Andriyani, *Teaching Writing On " Descriptive Text" For The First Grade of SMP N 03 Mojogedang Karanganyar In The Academic Year of 2014/2015* (English Education Departement Islamic Education And Teacher Training Faculty State Islamic Insitute of Surakarta, 27) p.26

	a talented young singer.
Description	Afgan is quite tall. His height is 170 cm. He has an oval face, short hair. He is easly known because there are dimples on his cheek when he is smiling and always wears glasses. Afgan's favorite music is pop, R& B, Soul and jazz. That music influence his way to sing. He likes eating. His favorite food is Balado potato. He loves it because it's delicious.

B. Review of Related Findings

In this research, the research was related to some researchers: The first, Fajriyah Kumala Sari the research finding shows that (1) inquiry based teaching is effective to improve the students' reading comprehensionin class. That can be seen from their behavior during the teaching learning process. (2) improve students' mastery of reading text. (3) rising of motivation and interest. [38] Thus, there is an effect of inqury learning method towars students' reading comprehension.

The second, Supatmi Ningsi Dwi Rahayu, it was concluded that the result of the research shows that using inquiry based learning can improve

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[38] Fajriyah kumala sari, "The Inquiry Based Teaching To Improve The Students' Reading Comprehension (A Classroom Action Research At SMP MTA Gemolong At IX Grade, , Unpublished Manuscript)" (Surakarta: Master of Language Study muhammadiyah University, 2012).

the students' reading comprehension and class situation. It shown from the mean score increases from 52.67 of pre test to 69,41 of post test in Cycle 1 and 86.23 of post test in cycle 2.[39] Thus, by using inquiry learning can increase students' reading comprehension.

The third, Meika Wahyu Ciptoharmi, it was concluded that inquiry chart strategy gives a better result in reading comprehension. The result show thet t- observed was 9,23 at the degree of freedom of 24 t- table at the level of significance of 5%. So, the nul hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was accepted. In addition, inquiry chart strategy is very significant for the students of SMAN 7 Kediri. Such as he can understand the text, improve the vocabulary, find the characteristic of news item text, identify the main idea, and a topic of a text, identify the detail information of a tex.[40] So, based on the result above, there is effect of inquiry towards reading comprehension.

The fourth, Fajri Malik found that there was significant effect of inquiry based learning towards students' reading comprehension. Where t-observed showed 3.281, t-table signifant level 5% it show 5% it shows 2.00, and at level significance of 1%, it show 2.65. thus,null hypothesis

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[39] Supatminingsih Dwi Rahayu, "Improving Students' Reading Comprehension Through Inquiry Based Learning VIII A Grade At SMP N 3 Ngargoyoso, Karanganyar, (Unpublished Thesis)"" (Surakarta: English Education Department, 2012).

[40] Meika Wahyu Ciptoh armi, "The Effect of Inquiry Chart (I-CHART) Toward the Tenth Grade Students ' Reading Comprehension at SMA Negeri 7 Kediri in Academic Year 2014 / 2015 Presented as a Partial Fulfillment of the Requirements to Obtain the Sarjana Degree of Education of English" (PGRI University, 2014), http://simki.unpkediri.

(H_0) is rejected and alternative hypothesis ($H_{a)}$is accepted which show $2.00<3.281>2.65$.[41]

The fifth, Dian Priska, the study findings indicate that there is an influence of usage Inquiry Strategies Chart (Chart)to report on the reading comprehension texts second grades MA Daarun Nahdhah Thawalib Bangkinang. She got the mean score increases from 53.4 of pre test to 73.6 of post test. The concluded there was a a significant effect of Inquiry Chart (I Chart) to students reading comprehension in grade two in MA. Daarun Nahdhah Thawalib Bangkinang.[42]

Due to the previos research, the researcher concluded that Inquiry Learning Method has an effect on students' learning. Therefore, the researcher wants in another location with different problem.

C. Conceptual Framework

When reader reads, there is a process of interaction between the r eader and text, it proceess to take knowledge from the text to people obtain information, mind, some ideas and trying to understand the written author. So reasearcher need to find a way to prove their comprehending in reading. Inquiry is a series of activitises that emphasize the process of learning to think critically and analytically to seek and find their own

[41]Fajri Malik, "The Effect of Using Inquiry Based Learning towards Students Reading Comprehension on Report Text of the Second Year Students at SMA N 10 Pekanbaru

[42] Dian Priska, "The influence of usage Inquiry Strategies Chart (Chart) to report on the reading comprehension texts second grades MA Daarun Nahdhah Thawalib Bangkinang Pekanbaru: Faculty of Education and Teacher Training State Islamic Uneversity of Sultan Syarif Kasim Riau," 2013.

answer from a problem that is questionable. The process of thinking it self is usually done through a question and answer between teacher and students. Based on the explanation above inquiry learning method suitable to the students reading comprehension.

Figure 1

Conceptual Framework

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┌──────────────────────────────────────────────────────┐
│ In fact, many students are not able to comprehend the  │
│ text well when they read, difficulties in interpreting │
│ words, less active in participating in the learning    │
│ process                                                │
└──────────────────────────────────────────────────────┘
                          │
                          ▼
              ┌──────────────────────────┐
              │ Inquiry learning method  │
              └──────────────────────────┘
                          │
                          ▼
              ┌──────────────────────────┐
              │ Pre-test                 │
              └──────────────────────────┘
                  │                    │
                  ▼                    ▼
   ┌────────────────────────┐  ┌────────────────────────┐
   │ Experiment class with  │  │ Control class with      │
   │ using inquiry          │  │ using conventional      │
   │                        │  │ method                  │
   └────────────────────────┘  └────────────────────────┘
                  │                    │
                  ▼                    ▼
              ┌──────────────────────────┐
              │ Post-test                │
              └──────────────────────────┘
                          │
                          ▼
   ┌──────────────────────────────────────────────────┐
   │ There is significant effect of inquiry learning    │
   │ method towards students' reading comprehension     │
   └──────────────────────────────────────────────────┘
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D. Hypothesis of Research

The hypothesis of this research

Ha: There is significant effect of inquiry learning method towards students' reading comprehension at grade X SMK S Panca Dharma Padangsidimpuan.

Ho: There is no significant effect of inquiry learning method towards students' reading comprehension at grade X SMK S Panca Dharma Padangsidimpuan.

CHAPTER III

RESEARCH METHODOLOGY

A. Research Methodology

1. Research Design

According to John Creswell W. random assignment of subject to treatment condition as well as quash, an experimental that use non randomized.[1] From the quotation above, researcher concludes that the experimental research is kind of research which has aim to know causal effect relationship between one variable or more to other variables. The experimental research controls the selection of participant for the study and divides the select participant in to more groups having similar characteristics at the start of experimental.

2. Location and Schedule of Research

The place of the research in SMKS Panca Dharma Padangsidimpuan, that is located Silandit Padangsidimpuan. The research start from March 2019 until finish.

3. Population and Sample

a. Population

The population is whole of the students which are used as the subject of research in the research. According to Guy and Peter, "population is the group of interest to researcher, the group to which

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[1] John Creswell, W., *Research Design* (USA: Sage Publication, 2002), p.14.

she or he would like the result of the study to be generalizable.[2]From the quotion that, the researcher takes an experiment in the grade X SMKS Panca Dharma Padangsidimpuan. Thus, the population amounted to 112 students.

For more details can be table below :

Table 3
Population of the Research

No	Class	Number of Students
1	X A	26
2	X B	26
3	X C	30
4	X D	30
	Total	112

b. Sample

In this research, the researcher uses random sampling. The basic characteristic of simple random sampling is that all members of the population have an equal and independent change of being included in the random sample. Therefore, the researcher take two classes that have smilar characteristics. The smilar characteristis means the students' score having some competence and taught by the same teacher. The researcher chooses two classes. The

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[2]L.R Gay and Peter Airasian, *Educational Research Competencies for Analysis and Application,* p.376

researcher chooses XA consist of 26 students and XB consists of 26 students. Therefore, total samples are 52 students.

Table 4
Sample of the research

Experimental Class	Control Class
X A = 26	X B = 26

4. Instrumentation

The test that used in this research is multiple choice test that consist of four option a,b,c,d. The researcher has made 30 questions of pre test and 30 questions of post test to validate. As the result, there are 21 valid questions for pre and post test. Then the researcher took 20 question for each pre-test and post-test. This test is given to experimental class and control class.

a. Validity of Instrument

Students' reading comprehension was known by their expressed thinking, telling idea and sense. So, indicators reading comprehension are:

Table 5
The Indicator Reading Comprehension on pre test

No	Indicators Pre-Test	Items	Number of items	Score	Total score
1	Topic sentence	1	7,	4	20

2	Specific Information of the Text	8	1,2,3,4,9,12, 13, 17	4	20
3	Identify main idea from the text	2	16,18	4	20
4	Understand vocabulary	7	5,6,8,10,14 15,20	4	20
5	The Conclusion of the Text	2	11,19	4	20
Total		20			100

Table 6
The Indicator Reading Comprehension on post test

No	Indicators Pre-Test	Items	Number of items	Score	Total score
1	Topic sentence	2	1,6	4	20
2	Specific Information of the Text	9	3,4,7,10,1 1,12 14,16,17, 18	4	20
3	Identify main idea from the	1	13	4	20

	text				
4	Understand vocabulary	7	2,5,8,9,6, 15,20	4	20
5	The Conclusion of the Text	1	19	4	20
Total		20			100

Anas Sudjiono stated that validity is a characteristic of the good test. To get the validity of an achievement test can be used two ways.

1. Totality of the validity
2. Item validity

In this research, the researcher uses item validity to get the validity of instrumentation. Item validity is a part of the test as a totality to measure the test by items, before validity the test consists of 60 questions of multiple choice questions that will be divided into two groups. They are 30 for pre-test and 30 for post-test.

To know the validity of each question will be refer to list r product moment with r_t in 5% significant: 0,388 and 1% significant: 0,496.

So, if $r_{count} > t_{table}$ the test is classified valid. To get the validity of the test, researcher uses the formula of product moment:

$$R_{pbi=} \frac{Mp-Mt}{SDt} \sqrt{\frac{p}{q}}$$

Where:

r_{pbi} : coefisien item validity

M_p: mean score of the total score

SD_t : Standard Derivation 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

b. Reliability of Instrument

Another requirement is also important for a researcher is reliaility. A research instrument is said to have a high reliabiity value, if the tests are made to have consistent results in a measure that would be measured.

Suharsimi Arikunto said that to obtain the reliability of the test; the writer uses formula K-R 20 :

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{St2 - \sum pq}{St2} \right)$$

Where:

R_{11} : Reliability of the instrument

N   : Total of question

St^2 : Varians total

P : Proporsi Subject who is right answer (1)

Q : Proporsi Subject who is wrong answer (0

The reliability of the characteristic of a good test refers to consistency of the measurement. In this research, test reliability was do using formulation KR-20. The test is reliable if $r_{count} > r_{table.}$

5. Technique of Data collection

To get the data from the students, the writer collected by giving test. They are pre-test, treatment and post-test.

a. Pre test

The pre-test is conducted to find out the homogeneity of the sample. The function of the pre-test is to find out the homogenity of the sample. The fuction was to know the homogenity of the student in control class and experimental classs. Resesarcher hopefully that whole students' reading comprehension are same. Researcher gives a test to experimental class and controll class.

b. Treatment

The experimental group and the control group give same material, which consist of communication aspects that take by the teacher is the different ways. The experimental class is give in treatment, it take by using Inquiry Learning Method and control class only do reading without treatment like ususally they in the classroom.

c. Post-test

   After giving treatment, the Researcher conducts a post-test which the same test with the pre-test, and has been conducted in the previous of the research. This post-test is the final test in the research, especially measuring the treatment, whether is significant or not. After conducting the post-test, the researcher analyzed the data.

6. Techniques of Data Analysis

To analyze the data, the researcher use "t" test. "T" test is one of statistic examine the difference two variable. The analysis of data is done to find out the ability of the two groups that have been divided in to experimental and control class. After, the researcher got the data; it will be enter in frequency table with the formula as follows:

The formula of test "t" is as follows:

$$Tt = \frac{M_1 - M_2}{\sqrt{\left(\frac{\Sigma X_1 + \Sigma X_2{}^2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

T   : The value which the statistical significance

M_1 : The average score of the experiment class

M_2 : The average score of the control class

$X_1{}^2$: Deviation of the experiment class

$X_2{}^2$: Deviation of the control class

n_1 : Number of experiment class

n_2 : Number of control class

if t-test is higher than t_{table}, the researcher can conclude that ha is accepted and ho is rejected . it means that there is significant effect of using Inquiry Learning Method (ILM) towards students' reading comprehension at grade X SMKS Panca Dharma Padangsidipuan. If t-$_{test}$ is lower that t_{table} the researcher can conclude that ha is rejected and ho is accepted. It means that there is no significant effect without using Inquiry Learning Method (ILM) towards students' reading comprehension at grade X SMKS Panca Dharma Padangsidimpuan. Before the researcher analysis the data using statistical parametric, the data should be tested to know homogeneity variance and the normal distribution data. The homegeny varience is analyzed by using F formula.[3]

$$F = \frac{The\ biggest\ variant}{The\ smallest\ variant}$$

The normal distribution data is analyzed by using Chi Square Formula.

$$x^2 = \sum \left(\frac{fo - fh}{fh} \right)$$

Where:

x^2 = value of chi-square

f_o = observed frequency

f_h = expected frequency

[3] Agus Irianto, *Statistik Konsep Dasar Dan Aplikasinya* (Jakarta, 2009).

CHAPTER IV

DATA ANALYSIS

As mentioned in earlier chapter, in order to find out the effect of using inquiry learning method towards students' reading comprehension, the researcher had calculated the data using pre-test and post-test. The researcher used the formulation of T-test to test the hypothesis. Next, the researcher described the data as follow:

A. The Description of Data

1. The Description of Data before Using Inquiry Learning Method

a. Score of Pre-test Experimental Class

In pre-test of experimental class, the researcher calculated the result 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 7
The Score of Experimental Class in Pre-test

Total	1430
Highest score	75
Lowest score	35
Mean	49.34
Median	52.7
Modus	52
Range	40
Interval	7
Standard deviation	12.11
Variants	158

Based on the above table the total score of experimental class in pre-test was 1430, mean was 49.34, standard deviation was 12.11, variants was 158, median was 52.7, range was 40, modus was 52, interval was 7. The researcher got the highest score was 75 and the lowest score was 35. It can be seen on appendix 16 and 17.

Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

Table 8
Frequency Distribution of Students' Score

No	Interval	Frequency	Percentages
1	35 – 41	5	19%
2	42 – 48	2	8%
3	49 – 55	10	38%
4	56 – 62	2	8%
5	63 – 69	1	4%
6	70 – 76	6	23%
$i = 7$		26	100%

From the table above, the students' score in class interval between 35 – 41 was 5 students (19%), class interval between 42 – 48 was 2 students (8%), class interval between 49 – 55   was 10 students (38%), class interval between 56 – 62 was 2 students (8%), class interval between 63 – 69 was 1 students (4%), class interval between

70 – 76 was students (18%) and the last class interval between 55 –

59 was 6 students (23%).

In order to get description of the data clearly and completely, the

researcher presents them in histogram on the following figure:
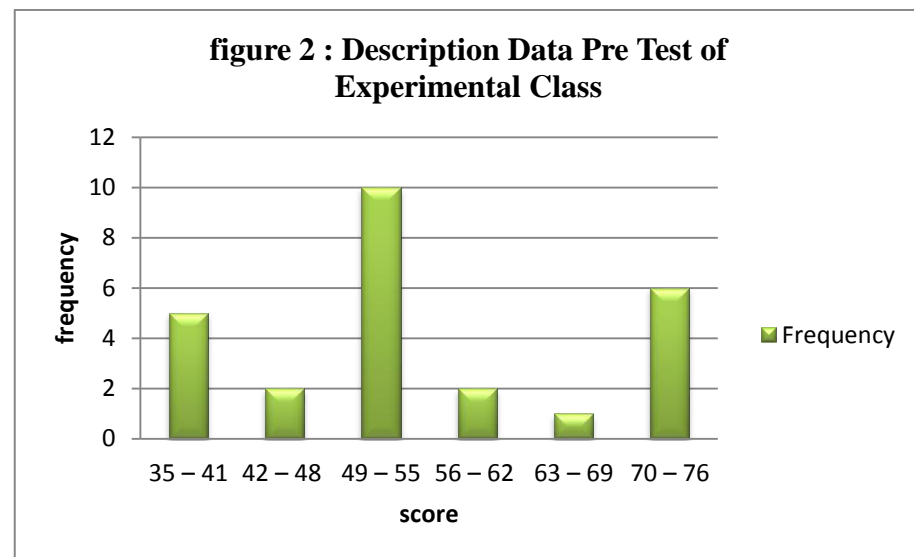
From the histogram of students' score of experimental class in

pre test shown that the lowest interval 35 – 41 was 5 students and

highest interval 70 – 76 was only 6 students. Histogram also shown

that the highest frequency in interval 49 – 55 was 10 students.

b. Score of Pre-Test Control Class

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 9
The Score of Control Class in Pre-test

Total	1010
Highest score	65
Lowest score	15
Mean	37.18
Median	41.5
Modus	43.9
Range	50
Interval	8
Standard deviation	12.32
Variants	190.61

Based on the above table the total score of control class in pre-test was 190,61 mean was 37.18, standard deviation was 12.32, variants was 190.61, median was 41.5, range was 50, modus was 43.9, interval was 8. The researcher got the highest score was 65 and the lowest score was 15. It can be seen on appendix 16 and 17.

Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

Table 10
Frequency Distribution of Students' Score

No	Interval	Frequency	Percentages
1	15 – 23	4	15%
2	24 – 31	4	15%
3	32 – 39	3	12%
4	40 – 47	8	31%
5	48 – 55	4	15%
6	56 – 63	2	8%

7	64-71	1	4%
	$i = 7$	26	100%

From the table above, the students' score in class interval between 15 – 23 was 4 students (15%), class interval between 24 – 31 was 4 students (15%), class interval between 32 – 39 was 3 students (12%), class interval between 40 – 47 was 8 students (31%), class interval between 48 – 55 was 4 students (15%), class interval between 56 – 63 was 2 students (8%) and the last class interval between 64-71 was 1 student (4%).

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

figure 3 : Description Data Pre Test of Control Class
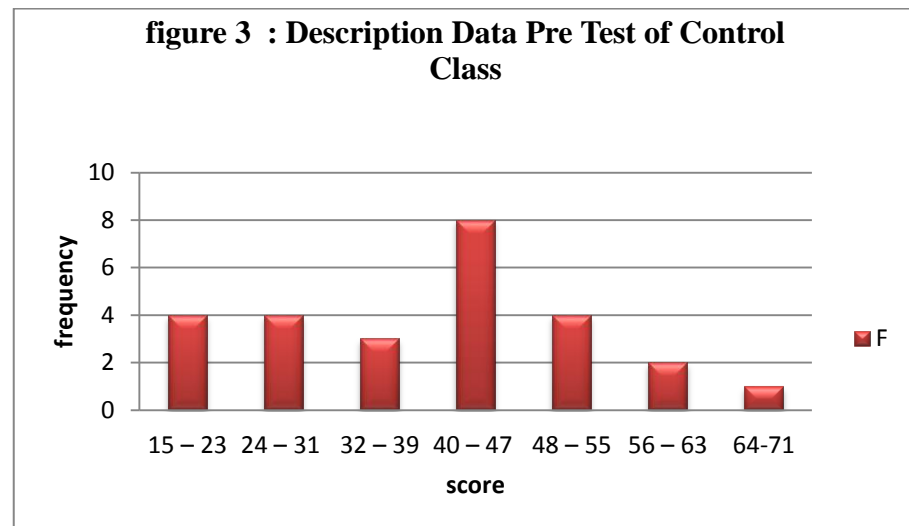
From the histogram of students' score of control class in pre test shown that the lowest interval 15 – 23 was 4 students and highest interval 64 – 71 was only 2 students. Histogram also shown that the highest frequency in interval 40 – 47 was 8 students.

2. **The Description of Data After Using Inquiry Learning Method**

   a. **Score of Post-Test Experimental Class**

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

Table 11
The Score of Experimental Class in Post-test

Total	2160
Highest score	95
Lowest score	65
Mean	88.9
Median	86.35
Modus	87.5
Range	30
Interval	5
Standard deviation	7.85
Variants	64.15

Based on the above table the total score of experiment class in post-test was 2160, mean was 88.9, standard deviation was 7.85, variants was 64.15, median was 86.35, range was 30, modus was 87.5, interval was 5. The researcher got the highest score was 95 and the lowest score was 65. It can be seen on appendix 18 and 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 12
Frequency Distribution of Students' Score

No	Interval	Frequency	Percentages
1	65 – 69	2	8%
2	70 – 74	1	4%
3	75 – 79	2	8%
4	80 – 84	5	19%
5	85 – 89	8	31%
6	90 – 94	6	23%
7	95 – 99	2	8%
$i = 5$		26	100%

From the table above, the students' score in class interval between 65 – 69 was 2 students (8%), class interval between 70 – 74 was 1 students (4%), class interval between 75 – 79 was 2 students (8%), class interval between 80 – 84 was 5 students (19%), class interval between 85 – 89 was 8 students (31%), class interval between 90-94 was 6 students (23%) and the last class interval between 95 – 99 was 2 students (18%).

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 Experimental Class
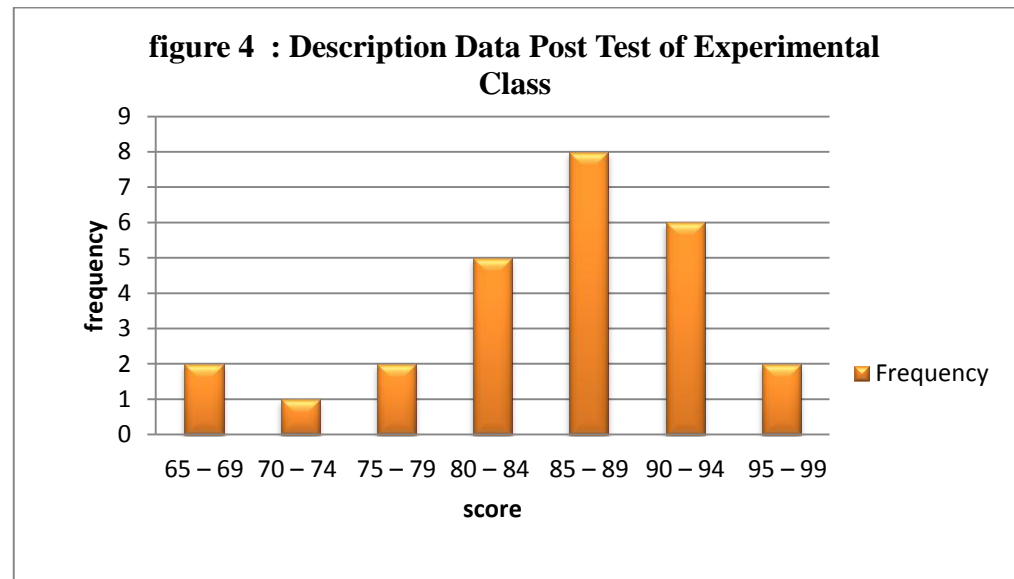
From the histogram of students' score of experimental class in post test shown that the lowest interval 65 – 69 was 2 students and highest interval 95 – 99 was only 2 students. Histogram also shown that the highest frequency in interval 85 – 89 was 8 students.

b. **Score of Post-Test Control Class**

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 taught the reading comprehension by using Conventional Technique. The score of post-test control class can be seen in the following table:

Table 13
The Score of Control class in Post-test

Total	1655
Highest score	80
Lowest score	40
Mean	77.5
Median	65.52
Modus	70.7

Range	40
Interval	7
Standard deviation	12.18
Variants	166.15

Based on the above table the total score of control class in post-test was 1655, mean was 77.5, standard deviation was 12.18, variants was 166.15, median was 65.52, range was 40, modus was 70.7, interval was 7. The researcher got the highest score was 80 and the lowest score was 40. It can be seen on appendix 18 and 19.

Then, the computed of the frequency distribution of the students' score of control class can be applied into table frequency distribution as follow:

Table 14
Frequency Distribution of Students' Score

No	Interval	Frequency	Percentages
1	40 – 46	5	19%
2	47 – 53	1	4%
3	54 – 60	4	15%
4	61 – 66	4	15%
5	67 – 73	7	27%
6	74 – 80	5	19%
	$i = 7$	26	100%

From the table above, the students' score in class interval between 40 – 46 was 5 students (19%), class interval between 47 – 53 was 1 students (4%), class interval between 54 – 60 was 4 students

(15%), class interval between 61 – 66 was 4 students (15%), class interval between 67 – 73 was 7 students (27 %), interval between, and the last class interval between 74 – 80 was 5 students (19 %).

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
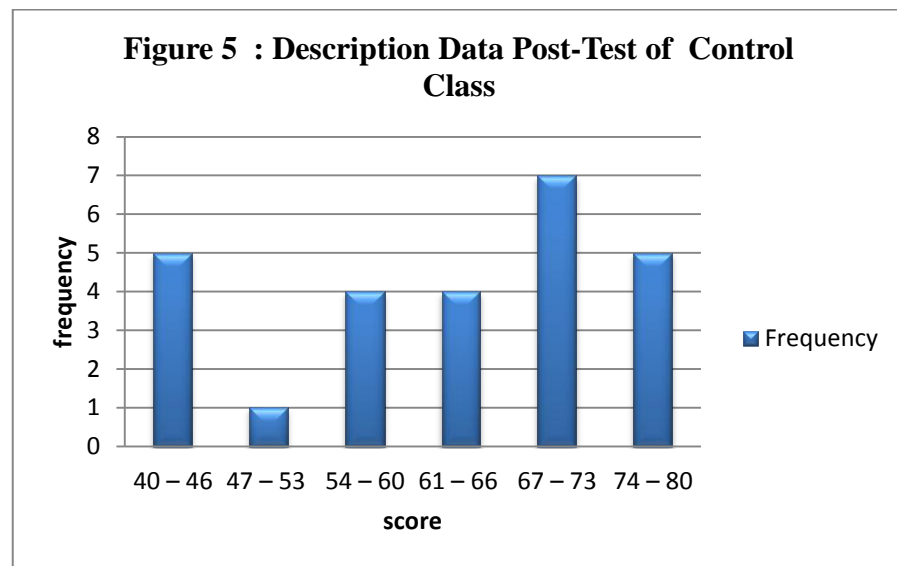
From the histogram of students' score of control class in post test shown that the lowest interval 40 – 46 was 5 students and highest interval 74 – 80 was 5 students. Histogram also shown that the highest frequency in interval 67 – 73 was 7 students.

B. Technique of Data Analysis

1. Requirement Test

a. Normality and Homogeneity Pre-Test

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

Table 15
Normality and Homogeneity in Pre-Test

Class	Normality Test		Homogeneity Test	
	x_{count}	x_{table}	f_{count}	f_{table}
Experiment Class	3.4	11.070	1.20< 2.71	
Control Class	-4.79	11.070		

Based on the above table researcher calculation, the score of experimental class $Lo = 3.4 < Lt = 11.070$ with n = 26 and control class $Lo = -4.79 < Lt = 11.070$ with n = 26, and real level α 0.05. Cause Lo< Lt in the both class. So, H_a was accepted. It means that experimental class and control class were distributed normal. It can be seen in appendix 16 and 17.

2) Homogeneity of Experimental Class and Control class in Pre-Test

The coefficient of $F_{count} = 1.20$ was compared with F_{table}. Where F_{table} was determined at real α 0.05, and the different numerator dk = n-1 = 26-1 = 25 and denominator dk n-1 = 26–1 = 25. So, by using the list of critical value at F distribution is got $F_{0.05}$ = 2.71. It showed that F_{count} 1.20< F_{table} 2.71. So, the researcher

concluded that the variant from the data of the Students' Reading comprehension at SMK S Panca Dharma Padangsidimpuan by experimental class and control class was homogenous. The calculation can be seen on the appendix 17.

b. **Normality and Homogeneity Post-Test**

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

<p align="center">**Table 16**
Normality and Homogeneity in Post-Test</p>

Class	Normality Test		Homogeneity Test	
	x_{count}	x_{table}	f_{count}	f_{table}
ExperimentalClass	-10.19	11.070	2.59< 2.71	
Control Class	-21.34	11.070		

Based on the table above researcher calculation, the score of experiment class Lo = -10.19 < Lt = 11.070 with n = 26 and control class Lo = -21.34< Lt = 11.070 with n = 26, and real level α 0.05. Cause Lo< Lt in the both class. So, H_a was accepted. It means that experimental class and Control class were distributed normal. It can be seen in appendix 18 and 19.

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

The coefficient of F_{count} = 2.59 was compared with F_{table}. Where F_{table} was determined at real α 0.05, and the different numerator dk = n-1 = 26-1 = 25 and denominator dk n-1 = 26-1 =

25. So, by using the list of critical value at F distribution is got $F_{0.05}= 2.71$. It showed that F_{count} 2.59< F_{table} 2.71. So, the researcher concluded that the variant from the data of the Students' Reading comprehension at SMK S Panca Dharma by experimental class and Control class was homogenous. The calculation can be seen on the appendix 19 .

2. **Hypothesis Test**

     After calculating the data of post-test, researcher found that post-test result of experimental class 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 the significant effect of using inquiry learning method towards students' reading comprehension at grade X students of SMK S Panca Dharma Padangsidimpuan". Hyphotesis null (Ho) of the research was "There is no significant effect of using inquiry learning method towards students' reading comprehension at grade X students of SMK S Panca Dharma Padangsidimpuan". Ha is accepted if t_{count} is higher than t_{table}. In this case, the researcher found that $t_{count}>t_{table}$ which means that there was the significant effect of using inquiry learning method towards students' reading comprehension at grade X students of SMK S Panca Dharma Padangsidimpuan. The calculation can be seen on the appendix 23.

Table 17
Result of T-test from the Both Averages

Pre-test		Post-test	
t_{count}	t_{table}	t_{count}	t_{table}
-3.48	1.67591	4.02	1.67591

$H_a : \mu_1 > \mu_2$

Where:

$H_a : \mu_1 > \mu_2$ "There was the significant effect of using inquiry learning method towards students' reading comprehension at grade X SMK S Panca Dharma Padangsidimpuan".

Based on researcher calculation, researcher found that t_{count} 4.02 while t_{table} 1.67356 with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and dk = $n_1 + n_2 - 2 = 26 + 26 - 2 = 50$. Cause $t_{count} > t_{table}$ (4.02>1.67591), it means that hypothesis H_a was accepted and H_0 was rejected. So, there was the significant effect of using inquiry learning method towards students' reading comprehension at grade X SMK S Panca Dharma Padangsidimpuan".

C. Discussion

Based on the result of this research, the researcher has proved what had been stated Judi Moreillon stated Inquiry Learning Method can improve reading profeciency, enganging questioning as a reading comprehension strategy and can help readers learn about how to ask meaningful question and

make students in deep comprehension about the text.[1] The theory stated that inquiry learning method is an appropriate technique for reading comprehension, and in this research, the researcher found that the mean score of students' reading comprehension before using inquiry learning method was 49.34 and after using in was 88.9. It meant there was the effect of using inquiry learning method on reading comprehension.

The result above supported the previous research by some researchers. First, Fajri Malik, on his thesis result show where t- observed showed 3.281, t-table signifant level 5% it show 5% it shows 2.00, and at level significance of 1%, it show 2.65. thus, (H_0) is rejected (H_a) is accepted which show 2.00<3.281>2.65.[2] Next, The second, Supatminingsi Dwi Rahayu, on her thesis got the mean score increases from 52.67 of pre test to 69,41 of post test in Cycle 1 and 86.23 of post test in cycle 2.[3] Then, Dian Priska, on her thesis the mean score increases from 53.4 of pre test to 73.6 of post test. It shows the inquiry learning method can improve students' reading comprehension.[4]

Meanwhile, the researcher got the mean score of pre-test of the experimental class was 49.34. The mean score of pre-test result was lower

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[1] Judi Moreillon, "Inquiry Learning and Reading Comprehension Strategy Instruction : Processes That Go" 43, no. 2 (2014).

[2] Fajri Malik, "The Effect of Using Inquiry Based Learning towards Students Reading Comprehension on Report Text of the Second Year Students at SMA N 10 Pekanbaru

[3] Supatminingsih Dwi Rahayu, "Improving Students' Reading Comprehension Through Inquiry Based Learning VIII A Grade At SMP N 3 Ngargoyoso, Karanganyar, (Unpublished Thesis)"" (Surakarta: English Education Department, 2012).

[4] Dian Priska, "The influence of usage Inquiry Strategies Chart (Chart) to report on the reading comprehension texts second grades MA Daarun Nahdhah Thawalib Bangkinang Pekanbaru: Faculty of Education and Teacher Training State Islamic Uneversity of Sultan Syarif Kasim Riau," 2013.

than Fajri Malik and Supatmi Ningsih Dwi Rahayus' result. From the above description, it can be seen that the highest mean score was gotten by Fajri Malik where the mean score 59.53 and the lowest mean score of pre-test of the experimental group was gotten by the researcher on this thesis where the mean score of pre-test was 49.34.

Then, for the post-test result the researcher got the mean score of post-test of the experimental class was 88.9. The mean score of post-test result was higher than Fajri Malik's result. From the above description, it can be seen that the mean score was gotten by the Fajri Malik's result where the mean score in second cycle was 72.97 and the mean score of post-test of the experimental group was gotten by Supatmi Ningsih Dwi Rahayu where the mean score of post-test was 86.23.

From the above explanation, there was the increasing from the pre-test score to post-test score after using the technique among the related findings. Fajri Malik got the increasing 13.44. Supatmi Ningsih Dwi Rahayu got the increasing 33.56, and Dian Priska got the increasing 120.2. Meanwhile the researcher got the increasing was 39.56.

Based on the result, the researcher has got the effect of Inquiry Method on students' reading comprehension. Fajri Malik found that $t_{count}= 3.281>t_{table=}$ 2.65. The researcher also found that t_{count} is higher than t_{table} where t_{count} was 4.02 and t_{table} was 1.67591 (4.02 >1.67591). It can be seen among the researches that the using of Inqury Learning gave the effect to students' reading comprehension especially at grade X SMK S Panca Dharma

Padangsidimpuan. It means the theory has been proved where the students able to comprehend the reading material. Therefore, Inquiry Learning Method has given the significant effect to the research that has been done by the researcher or the other researcher who mentioned in related finding and Inquiry Learning is highly effective to help the English teacher in teaching learning process especially in reading comprehension.

D. Threats of the Research

The researcher found the threats of the research as follows:

1. The students needed more time for answering the test.

2. The students were noisy while teaching the learning process. So it can disturb the concentration of the others.

3. There were some students were not serious to answer the test in pre-test and post-test. So, the researcher can not reach the validity of trustworthiness data.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

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

1. Students' reading comprehension at grade X SMK S Panca Dharma Padangsidimpuan before using inquiry learning method were still low. It can be seen from the students' mean score of pre-test was 49.34 in experimental class and 37.18 in control class.

2. The students' ability of the grade X SMK S Panca Dharma Padangsdimpuan in reading comprehension by using inquiry learning method had higher score. It can be seen from the students' score of post-test, the higher score of post-test using inquiry learning method (experiment class) is 95 and the lowest score is 65.

3. It is found that t_{count} was higher than t_{table} $4.02 > 1.67591$ which means H_a was accepted. Hence, there was significant effect of using inquiry learning method towards students' reading comprehension at grade X SMK S Panca Dharma Padangsidimpuan.

B. Suggestion

The researcher got much information in English teaching and learning after finishing this research. From this research, researcher saw some things need to be improved. It makes the researcher give some suggestions, as follow:

1. For the English teacher, it is hoped to use inquiry learning method in teaching reading descriptive text. This research and others proved that inquiry learning method was effective to be applied in classroom.

2. For the students, it is hoped to use inquiry learning method because it can make them to be able to comprehend the text.

3. For the next researcher, this research can help the other researcher who will conduct further research in the same topic. The other researcher can get the information from this experimental research, even do a comparison between this research and another with the similar variable.

4. For the English lecturer, it is hoped to teach this technique so that the university students who will become teachers can apply this technique while they are teaching reading descriptive text.

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CURICULUM VITAE

1. Identity

   Name   : WARIDA NASUTION

   Registration Number : 15 203 00066

   Place/Date of Birth   : Hapung, November, 08, 1996

   Sex   : Famale

   Religion   : Moslem

   Address   : Sibuhuan, Kab. PADANG LAWAS

2. Parents Name
   1. Father's name   : Abd. Rasyid Nasution
   2. Mother's name   : Siti Aminah Hasibuan

3. Educational background:
   1. Graduated from Primary School Hapung kec. Sosa in 2009
   2. Graduated from MTS s NU Sibuhuan in 2012
   3. Graduated from MAS NU Sibuhuan in 2015
   4. University student in IAIN Padangsidimpuan in 2015

Experimental Class

RENCANA PELAKSANAAN PEMBELAJARAN

(RPP)

Sekolah   : SMK SWASTA PANCA DHARMA

Mata Pelajaran   : Bahasa Inggris

Kelas/Semester   : X/Ganjil

Alokasi Waktu   : 2 x 45 Menit

A. Kompetensi Inti

- **KI 1 dan KI 2 : Menghayati dan mengamalkan** ajaran agama yang dianutnya. **Menghayati dan mengamalkan** perilaku jujur, disiplin, santun, peduli (gotong royong, kerjasama, toleran, damai), bertanggung jawab, responsif, dan pro-aktif dalam berinteraksi secara efektif sesuai dengan perkembangan anak di lingkungan, keluarga, sekolah, masyarakat dan lingkungan alam sekitar, bangsa, negara, kawasan regional, dan kawasan internasional".

- **KI 3 :** Memahami, menerapkan, dan menganalisis pengetahuan faktual, konseptual, prosedural, dan metakognitif berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya, dan humaniora dengan wawasan kemanusiaan, kebangsaan, kenegaraan, dan peradaban terkait penyebab fenomena dan kejadian, serta menerapkan pengetahuan prosedural pada bidang kajian yang spesifik sesuai dengan bakat dan minatnya untuk memecahkan masalah

- **KI 4:** Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri,

bertindak secara efektif dan kreatif, serta mampu menggunakan metode sesuai

kaidah keilmuan

B. Kompetensi Dasar dan Indikator Pencapaian Kompetensi

1. Kompetensi Dasar :   - Mampu memahami text yang sedang dipelajari dengan

       benar

       - Mampu menjawab pertanyaan terkait dengan text

2. Indikator :   - Mampu mengidentifikasi informasi yang tersimpan

       dalam text, mengidentifikasi tema atau *topic*,

       mengidentifikasi *main idea*, memahami *vocabulary* dan

       dapat memberikan kesimpulan text

C. Tujuan Pembelajaran

Setelah mengikuti proses pembelajaran, peserta didik diharapkan dapat:

- Siswa mampu memahami text dengan baik dengan bantuan metode yang diberikan

oleh guru

E. Metode Pembelajaran

1) Metode Pembelajaran : Inquiry Learning Method

F. Media Pembelajaran

1. Media

-   Worksheet atau lembar kerja (siswa)

-   Buku paket

2. Alat/Bahan

-   Spidol, papan tulis

G. Sumber Belajar : Buku yang berkaitan

H. Langkah-Langkah Pembelajaran

1	Pertemuan Ke-1 (2 x 45 Menit)
Kegiatan Pendahuluan (10 Menit)	
Guru :	
Orientasi	
●	Melakukan pembukaan dengan salam pembuka, memanjatkan *syukur* kepada Tuhan YME dan berdoa untuk memulai pembelajaran
●	Memeriksa kehadiran peserta didik sebagai sikap **disiplin**
●	Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran.
●	Memperkenalkan diri pada siswa dan menyampaikan maksud kedatangan ke dalam kelas
Motivasi	
●	Memberikan gambaran tentang manfaat mempelajari pelajaran yang akan dipelajari dalam kehidupan sehari-hari.
Pemberian Acuan	
●	Memberitahukan materi pelajaran yang akan dibahas pada pertemuan saat itu.
●	Memberitahukan tentang kompetensi inti, kompetensi dasar, indikator, pada pertemuan yang berlangsung
●	Menjelaskan mekanisme pelaksanaan pengalaman belajar sesuai dengan langkah-langkah pembelajaran.

Kegiatan Inti (70 Menit)	
No	**Kegiatan Pembelajaran**
1.	a. Kegiatan awal : i. Kesiapan kelas dalam pembelajaran (berdoa, presensi, kebersihan kelas) ii. Guru melakukan apersepsi yaitu mengaitkan materi yang akan dibahas dengan materi sebelumnya iii.Menjelaskan tujuan pembelajaran atau kompetensi yang ingin dicapai
2.	b. Kegiatan Inti 1. Orientation Proses membangun pengetahuan siswa tentang topik dengan memberikan permasalahan. 2. Conceptualization Proses pemahaman mengenai permasalahan yang telah diberikan dengan pernyataan hypotesis 3. Investigation Proses mengeksplorasi, mengumpulkan dan menganalisis data dari pernyataan hipotesis yang telah disampaikan 4. Conclusion Proses menyimpulkan dari data atau hypotesis yang diperoleh. 5. Discussion Proses menyampaikan hasil dengan melibatkan siswa yang lain untuk memberi tanggapan. .
Catatan : Selama pembelajaran, guru mengamati sikap siswa dalam pembelajaran yang meliputi sikap: nasionalisme, disiplin, rasa percaya diri,	

berperilaku jujur, tangguh menghadapi masalah tanggungjawab, rasa ingin tahu, peduli lingkungan

Kegiatan Penutup (10 Menit)

Peserta didik :

- Membuat resume (CREATIVITY) dengan bimbingan guru tentang point-point penting yang muncul dalam kegiatan pembelajaran yang baru dilakukan.
- Mengumpulkan lembar kerja yang telah dikerjakan

Guru :

- Meminta siswa untuk mengulang dan mempraktekan Inquiry Learning Method di rumah agar lebih memudahkan siswa dalam pembelajaran berikutnya
- Menutup kelas atau mengakhiri pembelajaran dengan salam

| 2 | **Pertemuan Ke-2 (2 x 45 Menit)** |

Kegiatan Pendahuluan (10 Menit)

Guru :

Orientasi

- Melakukan pembukaan dengan salam pembuka, memanjatkan *syukur* kepada Tuhan YME dan berdoa untuk memulai pembelajaran
- Memeriksa kehadiran peserta didik sebagai sikap **disiplin**
- Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran.

Aperpepsi

- Mengaitkan materi/tema/kegiatan pembelajaran yang akan dilakukan dengan pengalaman peserta didik dengan materi/tema/kegiatan sebelumnya
- Mengingatkan kembali materi prasyarat dengan bertanya.

Motivasi

●	Memberikan gambaran tentang manfaat mempelajari pelajaran yang akan dipelajari dalam kehidupan sehari-hari.
Pemberian Acuan	
●	Memberitahukan materi pelajaran yang akan dibahas pada pertemuan saat itu.
●	Memberitahukan tentang kompetensi inti, kompetensi dasar, indikator, dan KKM pada pertemuan yang berlangsung
●	Menjelaskan mekanisme pelaksanaan pengalaman belajar sesuai dengan langkah-langkah pembelajaran.

Kegiatan Inti (70 Menit)

	Kegiatan Pembelajaran
	-Kegiatan Inti 1. Orientation Proses membangun pengetahuan siswa tentang topik dengan memberikan permasalahan. 2. Conceptualization Proses pemahaman mengenai permasalahan yang telah diberikan dengan pernyataan hypotesis 3. Investigation Proses mengeksplorasi, mengumpulkan dan menganalisis data dari pernyataan hipotesis yang telah disampaikan 4. Conclusion Proses menyimpulkan dari data atau hypotesis yang diperoleh. 5. Discussion Proses menyampaikan hasil dengan melibatkan siswa yang lain untuk memberi tanggapan.

Catatan : Selama pembelajaran, guru mengamati sikap siswa dalam pembelajaran yang meliputi sikap: nasionalisme, disiplin, rasa percaya diri, berperilaku jujur, tangguh menghadapi masalah tanggungjawab, rasa ingin tahu, peduli lingkungan

Kegiatan Penutup (10 Menit)

Peserta didik :	
●	Membuat resume (CREATIVITY) dengan bimbingan guru tentang point-point penting yang muncul dalam kegiatan pembelajaran yang baru dilakukan.
Guru :	
●	Peserta didik yang selesai mengerjakan tugas projek/produk/portofolio/unjuk kerja dengan benar diberi penghargaan
●	Menyimpulkan pembelajaran dari pertemuan pertama dan kedua
●	Menutup atau mengakhiri pembelajaran dengan salam

H. Penilaian : The Amount of Correct Answer in Completion

Sub Indikator Pencapaian Kompetensi	Teknik Penilaian	Bentuk Instrument	Instrument Soal
1. Identifying Topic Sentence 2. Identifying Main Idea 3. Identifying Specific Information 4. Identifying Vocabulary 5. Identifying Conclusion	Tes Tulisan	Multiple Choice	Multiple Choice Question (choose the best answer by crossing (x) a, b, c, or d)

Mengetahui,   Padangsidimpuan,   2019

Guru Bahasa Inggris kelas X   Peneliti

Sakdiah Budi, S.Pd   **Waridah Nasution**

                                                  NIM. 1520300066

Appendix 2

Control Class

<div align="center">

RENCANA PELAKSANAAN PEMBELAJARAN

(RPP)

</div>

Sekolah   : SMK SWASTA PANCA DHARMA

Mata Pelajaran   : Bahasa Inggris

Kelas/Semester   : XI/Genap

Alokasi Waktu   : 2 x 45 Menit

A. Kompetensi Inti

- **KI 1 dan KI 2 : Menghayati dan mengamalkan** ajaran agama yang dianutnya. **Menghayati dan mengamalkan** perilaku jujur, disiplin, santun, peduli (gotong royong, kerjasama, toleran, damai), bertanggung jawab, responsif, dan pro-aktif dalam berinteraksi secara efektif sesuai dengan perkembangan anak di lingkungan, keluarga, sekolah, masyarakat dan lingkungan alam sekitar, bangsa, negara, kawasan regional, dan kawasan internasional".

- **KI 3 :** Memahami, menerapkan, dan menganalisis pengetahuan faktual, konseptual, prosedural, dan metakognitif berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya, dan humaniora dengan wawasan kemanusiaan, kebangsaan, kenegaraan, dan peradaban terkait penyebab fenomena dan kejadian, serta menerapkan pengetahuan

prosedural pada bidang kajian yang spesifik sesuai dengan bakat dan minatnya untuk memecahkan masalah

- **KI 4:** Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri, bertindak secara efektif dan kreatif, serta mampu menggunakan metode sesuai kaidah keilmuan

B. Kompetensi Dasar dan Indikator Pencapaian Kompetensi

1. Kompetensi Dasar :   - Mampu memahami text yang sedang dipelajari dengan benar

                                          - Mampu menjawab pertanyaan terkait dengan text

2. Indikator :   - Mampu mengidentifikasi informasi yang tersimpan dalam text, mengidentifikasi tema atau *topic*, mengidentifikasi *main idea*, memahami *vocabulary* dan dapat memberikan kesimpulan text

C. Tujuan Pembelajaran

Setelah mengikuti proses pembelajaran, peserta didik diharapkan dapat:

- Siswa mampu memahami text dengan baik dengan bantuan metode yang diberikan oleh guru

E. Metode Pembelajaran

1) Metode Pembelajaran : Conventional Strategy

F. Media Pembelajaran

3. Media

- Worksheet atau lembar kerja (siswa)

- Buku paket

4. **Alat/Bahan**

- Spidol, papan tulis

G. Sumber Belajar : Buku yang berkaitan

H. Langkah-Langkah Pembelajaran

1	**Pertemuan Ke-1 (2 x 45 Menit)**
Kegiatan Pendahuluan (10 Menit)	
Guru :	
Orientasi	
●	Melakukan pembukaan dengan salam pembuka, memanjatkan *syukur* kepada Tuhan YME dan berdoa untuk memulai pembelajaran
●	Memeriksa kehadiran peserta didik sebagai sikap **disiplin**
●	Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran.
●	Memperkenalkan diri pada siswa dan menyampaikan maksud kedatangan ke dalam kelas
Motivasi	
●	Memberikan gambaran tentang manfaat mempelajari pelajaran yang akan dipelajari dalam kehidupan sehari-hari.
Pemberian Acuan	
●	Memberitahukan materi pelajaran yang akan dibahas pada pertemuan saat itu.
●	Memberitahukan tentang kompetensi inti, kompetensi dasar, indikator,

	pada pertemuan yang berlangsung
●	Menjelaskan mekanisme pelaksanaan pengalaman belajar sesuai dengan langkah-langkah pembelajaran.

	Kegiatan Pembelajaran
Stimulation (stimullasi/ pemberian rangsangan)	- Peserta didik diberi motivasi atau rangsangan untuk memusatkan perhatian pada topik materi yang akan diajarkan dengan cara memberikan siswa text dan membaca text tersebut bersama-sama. - Guru meminta siswa membaca text yang telah diberikan secara bergiliran - Guru menjelaskan apa isi teks - Guru mengajukan pertanyaan dan memberikan kesempatan kepada siswa untuk bertanya kembali mengenai penjelasan pembelajaran - Siswa bekerja sendiri atau tidak berkelompok - Guru memberikan siswa lembar kerja dan meminta siswa untuk menjawab lembar kerja tersebut - Guru membantu dan memandu siswa menjawab lembar kerja

Catatan : Selama pembelajaran, guru mengamati sikap siswa dalam pembelajaran yang meliputi sikap: nasionalisme, disiplin, rasa percaya

diri, berperilaku jujur, tangguh menghadapi masalah tanggungjawab, rasa ingin tahu, peduli lingkungan	
Kegiatan Penutup (10 Menit)	
Peserta didik :	
●	Membuat resume (CREATIVITY) dengan bimbingan guru tentang point-point penting yang muncul dalam kegiatan pembelajaran yang baru dilakukan.
●	Mengumpulkan lembar kerja yang telah dikerjakan
Guru :	
●	Meminta siswa untuk mengulang kembali pembelajaran atau materi di rumah agar lebih memudahkan siswa dalam pembelajaran berikutnya
●	Menutup kelas atau mengakhiri pembelajaran dengan salam
2	**Pertemuan Ke-2 (2 x 45 Menit)**
Kegiatan Pendahuluan (10 Menit)	
Guru :	
Orientasi	
●	Melakukan pembukaan dengan salam pembuka, memanjatkan *syukur* kepada Tuhan YME dan berdoa untuk memulai pembelajaran
●	Memeriksa kehadiran peserta didik sebagai sikap **disiplin**
●	Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran.
Aperpepsi	

●	Mengaitkan materi/tema/kegiatan pembelajaran yang akan dilakukan dengan pengalaman peserta didik dengan materi/tema/kegiatan sebelumnya
●	Mengingatkan kembali materi prasyarat dengan bertanya.

Motivasi

●	Memberikan gambaran tentang manfaat mempelajari pelajaran yang akan dipelajari dalam kehidupan sehari-hari.

Pemberian Acuan

●	Memberitahukan materi pelajaran yang akan dibahas pada pertemuan saat itu.
●	Memberitahukan tentang kompetensi inti, kompetensi dasar, indikator, dan KKM pada pertemuan yang berlangsung
●	Menjelaskan mekanisme pelaksanaan pengalaman belajar sesuai dengan langkah-langkah pembelajaran.

Kegiatan Inti (70 Menit)	
	Kegiatan Pembelajaran
Stimulation (stimullasi/ pemberian rangsangan)	- Peserta didik diberi motivasi atau rangsangan untuk memusatkan perhatian pada topik materi yang akan diajarkan dengan cara memberikan siswa text dan membaca text tersebut bersama-sama. - Guru meminta siswa membaca text yang telah diberikan secara bergiliran

	- Guru menjelaskan apa isi teks
	- Guru mengajukan pertanyaan dan memberikan kesempatan kepada siswa untuk bertanya kembali mengenai penjelasan pembelajaran
	- Siswa bekerja sendiri atau tidak berkelompok
	- Guru memberikan siswa lembar kerja dan meminta siswa untuk menjawab lembar kerja tersebut
	- Guru membantu dan memandu siswa menjawab lembar kerja

Catatan : Selama pembelajaran, guru mengamati sikap siswa dalam pembelajaran yang meliputi sikap: nasionalisme, disiplin, rasa percaya diri, berperilaku jujur, tangguh menghadapi masalah tanggungjawab, rasa ingin tahu, peduli lingkungan

Kegiatan Penutup (10 Menit)

Peserta didik :

● Membuat resume (CREATIVITY) dengan bimbingan guru tentang point-point penting yang muncul dalam kegiatan pembelajaran yang baru dilakukan.

Guru :

● Peserta didik yang selesai mengerjakan tugas projek/produk/portofolio/unjuk kerja dengan benar diberi penghargaan

● Menyimpulkan pembelajaran dari pertemuan pertama dan kedua

● Menutup atau mengakhiri pembelajaran dengan salam

H. Penilaian : The Amount of Correct Answer in Completion

Sub Indikator Pencapaian Kompetensi	Teknik Penilaian	Bentuk Instrument	Instrument Soal
6. Identifying Topic Sentence 7. Identifying Main Idea 8. Identifying Specific Information 9. Identifying Vocabulary 10. Identifying Conclusion	Tes Tulisan	Multiple Choice	Multiple Choice Question (choose the best answer by crossing (x) a, b, c, or d)

Mengetahui,   Padangsidimpuan,   2019

Guru Bahasa Inggris kelas XI   Peneliti

Sakdiah Budi, S.Pd   **Waridah Nasution**

                                                                   NIM. 1520300066

Kepala SMK S Panca Dharma

Ahmad Yani Nasution

Appendix 3

<p style="text-align:center">INSTRUMENT FOR PRE TEST</p>

Name   :

Class   :

Direction: Choose the best answer by crossing (x) a, b, c, or d! This text for question number 1 to 5

Bandung Zoo

Bandung Zoo is one of natural attractions in Bandung, West Java, Indonesia. It is located at Tamansari Street. It opens from 8 am until 6 pm. Visitors must pay the ticket for 20.000 to enter the zoo. The zoo occupies a land area of 13,5 hectars. The zoo has collection of animals. There are hundreds of species. They are Indonesian's animal and imported animal, for example, camels, dragons, leopards, orangutans, bears, elephants, various species of birds, and many more. At the Zoo, visitors can not only see the collection of animals. They can interact directly with some types of animals. They can also ride a camel, horse, or elephant accompanied by the officers. Zoo also provides several facilities. There are flying fox, playground for children with a variety of games, such as swings, a seesaw and special pond where the visitors can ride duck boat.

1. Bandung Zoo is located at.........

    a. Tamansari street

    b. Kebun Binatang

    c. Dago

    d. East java

2. The zoo opens for.......hours

    a. 8

    b. 9

    c. 10

    d.11

3. "They can also interact directly with some types of animals" (line 8) The word "they" refers to …

a. animals

b. visitors

c. officers

d. species

4. How can the visitors visit the zoo?

a. before 8 a.m

b. by looking at the animals

c. after 6 p.m

d. by buying the ticket

5. What is the purpose of the text?

a. show the steps
b. entertain the readers
c. describe something
d. explain how and why

This text for question number 6-10

Paris

Paris is the capital of a European nation, France. It is also one of the most beautiful and most famous cities in the world. Paris is called the city of Light. It is also an international fashion center. What stylish women are wearing in Paris will be worn by women all over the world. Paris is also famous for its world center of education. For instance, it is the headquarters of UNESCO, the United Nations Educational, Scientific and cultural organization.

The Seine River divides the city into two parts. Thirty-two bridges cross this scenic river. The oldest and perhaps the most well-known is Pon Neuf, which was built in the sixteenth century. Sorbonne, a famous university, is located on the left bank (south side) of the river. The beautiful white church Sacre Coeur lies on the top of hill called Montmartre on the right bank (north side) of the Seine. There are many other famous places in Paris, such as the famous museum the Louvre as well the cathedral of Notre Dame. However, the most famous landmark

in this city must be the Eiffel Tower. Paris is named after a group of people called the Parisii. They built a small village on an island in the middle of the Seine River about two thousand years ago. This island is called lie de la Cite. It is where Notre Dame located. Today around eight million people live in Paris area.

6. The fourth paragraph tells......

   a. The origin of the word Paris

   b. About the Paris

   c. A village built a thousand years ago

   d. An island in the middle of the Seine River

7. What is the oldest and most well known part of the city?

   a. The Seine River

   b. The Pont Neuf

   c. The Sorbonne

   d. The right bank

8. From the text we know that Notre Dame is located....

   a. Near left Louvre

   b. On the left bank

   c. On the right bank

   d. In the middle of the Seine River

9. What is generic structure of the text above?

   a. Orientation-Complication-Resolution

   b. Classification-Description

   c. Identification-Description

   d. Introduction-Events-Reorientation

10. Paris is the capital of a European nation, France. It is also one of the most beautiful and most _famous_ cities in the world.

    What is the synonym of the underlined word?

    a. familiar

b.far

c. similar

d. nice

Raja Ampat

Raja Ampat or 'Four Kings', is the name given to some islands in West Papua and comes from a local myth. The four major islands are Waigeo, Misool (which is home to ancient rock painting), Salawati, and Batanta. Raja Ampat is located in the bird head of the island of Papua.

Underwater enthusiasts flock to this region because it offers the world's best marine sight. In the Raja Ampat islands, divers can explore vertical underwater walls. The thrill of drift diving is

another great challenge. The territory within the islands of the Four Kings is enormous, covering 9.8 million acres

of land and sea, home to 540 types of corals, more than 1,000 types of coral fish and 700 types of mollusks. This makes it the most diverse living library for world's coral reef and underwater biota. According to a report developed by The Nature Conservancy and Conservation International, around 75% of the world's species live here.

When divers first arrive here their excitement is palpable. It's common to hear people praise God as they take in the remarkable scenery. Others prefer to remain in silence taking in the overwhelming sight of so many islands with crystal clear water that softly brushes over the white sandy beaches

11. The text is about the ... of Raja Ampat.

    a. size of the islands

    b. scenery on the islands

    c. natural habitat

    d. flora and fauna

12. Where is Raja Ampat located?

    a. The Misool island.

    b. The Waigeo island.

    c. The Batanta island.

d. The Papua archipelago.

13. Others prefer to remain in silence taking in the overwhelming sight of so many islands with crystal _clear_ water that softly brushes over the white sandy beaches. What is the synonym of the underlined word?

a. beautiful

b. bad

c. distinct

d. empty

14. Why so many divers come to Raja Ampat?

a. It is home to ancient rock paintings.

b. It offers the world's best marine sights.

c. Divers can explore horizontal underwater walls.

d. It has the most diverse museum for world's coral reef and underwater biota.

15. What is the purpose of the text?

a. To explain about something wrong

b. To inform about the Raja Ampat

c. To entertain the readers about the funny story

d. To describe place

This text for question number 16-20

Doraemon is one of the characters in a Japanese manga series created by Fujiko Fujio. Doraemon is a robotic cat. He has small body and white hands and feet. Although he can hear perfectly well, Doraemon has no ears.

Doraemon possesses a large pocket that can produce many gadgets from the future. The pocket is called _yojigen-pocket,_ or fourth- dimensional pocket. Doraemon's favorite food is _dorayaki_, a Japanese treat filled with red bean paste.

This robotic cat has the tendency to panic during emergencies. In an emergency situation, he will frantically pull out every unnecessary gadget from his pocket. Nevertheless, Doraemon is a good cat. He always helps Nobita.

16. What does the text mainly talk about?

a. Doraemon

b. Fujiko Fujio

c. Robotic cats

d. Nobita

17. "… he will <u>frantically</u> pull out every unnecessary … " (paragraph 3).

The underline word can be best replaced by …

a. Happily

b. Calmly

c. Worriedly

d. Diligently

18. What is the main idea of the text above?

a. Doraemon is one of the characters in a Japanese that created by FujiokoFujio

b. Doraemon is a robotic cat

c. Doraemon is a good cat

d. Doraemon possesses a large pocket

19. What is the weakness of Doraemon?

a. He has a magic pocket

b. He gets panic easily

c. He is only a robotic cat

d. He likes eating *Dorayaki*

20. He has <u>small</u> body and white hands and feet.

What is the opposite meaning of the underlined word?

a. large

b. big

c. thin

d. clean

Padangsidimpuan,   2019

Mengetahui

Validator

<u>Sakdiah Budi, SP.d</u>

Appendix 4

INSTRUMENT FOR POST TEST

Name   :

Class   :

Directions: Choose the best answer by crossing (x) a, b, c, or d!

This text for question 1 to 5

Kediri is a name of a town. It is situated in a valley between the Kelud and Willis mountains and inhabited by about 1.3 million people. In the centre of the town there is a large hill which is called the Dathok Mountain. Because of the topography of the region, Kediri is called a chilly town by the locals. There is a big river called Brantas cutting off the centre of the town.

Beside the temples, Kediri is also famous for its products like cigarettes and a special kind of tofu or bean curd. This highly nutritious food is delicacy of Kediri and has a distinctive taste. The cigarettes factory dominates the town economy and employs the majority of the women labor force. Kediri and the cigarettes factory are inseparable and it is considered the biggest cigarette factory in Indonesia. Most of the local people work in this factory. Those who do not work here are farmers or traders.

1. What does the above text tell about?

   a. The history of Kediri

   b. The famous products of Kediri

   c. The description of Kediri

   d. The people

2. Which one has a distinctive taste?

   a. The cigarette

   b. The special food

   c. The bean curd

   d. The highly nutritious food

3. "Those who do not work here..."(last sentence). The underlined word refers to...

   a. The local people

   b. The factory workers

   c. The farmers

   d. The traders

4. What is the first pragraph called?

a. identification

b. orientation

c. events

d. description

5. There is a _big_ river called Brantas cutting off the centre of the town.

    What is the opposite meaning of the underlined word?

    a. near

    b. famous

    c. small

    d. dirty

This text for question number 6 to 10

My Unique Pets

I'm used to having pets at home because my family is pet lovers. I have kept two turtles since February 2003. I put them all in one tank in my room.

The name of the male turtle is Donatello and the female one is called Rafael It is quite easy to keep them. They can survive without food for about two months. However, they need a comfortable place to live. They have to live with imported soil and plants, good water circulation and a piece of dry trunk in the aquarium. The worst thing is they may even end in their death. Inadequate conditions can cause not only stress but also affect their growth. The weapon of an adult turtle lies in its edge of the shell. He will use this weapon when he is disturbed while he is taking a nap.

6. Why is it dangerous to touch the edge of the turtle's shell when he is having his nap?

    a. because the turtle might infect you with a certain disease

    b. because it is the location of a turtle's weapon

    c. because it can cause stress to the turtle

    d. because it will kill the turtle

7. "Inadequate conditions can cause not only stress but also affect their growth." (line 8)

    The underlined word can be best replaced by....

a. insufficient

b. indiscipline

c. ineffective

d. inedible

8. how long the turtle can survive without food?

    a. 10 days

    b. 2 months

    c. 2 years

    d. 2 weeks

9. What is the purpose of the text above?

    a. To tell the readers that the writer's family is pet lovers

    b. To describe the writer's turtles to the readers

    c. To persuade the readers to keep turtles as a pet

    d. To show the advantages of keeping turtles

10. What is the main idea of the text above?

    a. turtle is unique pet

    b. turtle can survive without food for about two months

    c. turtle is quite easy to keep

    d. turtle is dangerous pet

This text for question number 11 to 15!

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

Maudy comes from a very simple family. Her father is a pedicab driver and her mother has passed away. She has a younger brother. His name is Rama. In order to help their father, Maudy and her brother work part-time to earn some money. Maudy sells food during our class break, while her brother sells newpapers 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.

11. What does the second paragraph tell you about?

a. Maudy and her family

b. Maudy and her father

c. Maudy and her brother

d. Maudy and her friends

12. "....Maudy and her brother <u>work part-time</u> 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

13. Where did the writer sit ?

a. in front of Maudy

b. behind Maudy

c. next to Maudy

d. far from Maudy

14. Which is NOT TRUE according to the text?

a. Maudy is a quite girl

b. Maudy sells food during our class break

c. Maudy can manage her time well

d. Maudys' father is a teacher

15. The text above mainly tells us about.......

a. best friend

b. sweet friend

c. big family

d. school

This text for question number 16 to 20!

Suramadu Bridge

Madura Bridge is a bridge with three cable-stayed sections constructed between Surabaya on the island of Java and the town of Bangkalan on the island

of Madura in Indonesia. Opened on June 10, 2009, the 5.4-km bridge is the longest in Indonesia and the first bridge to cross the Madura Strait.

The cable-stayed portion has three spans with lengths 192 m, 434 m and 192 m. The bridge has two lanes in each direction plus an emergency lane and a dedicated lane for motorcycles. The first toll bridge in Indonesia, fares have been initially set at Rp. 30,000 (US$3 in 2009) for four-wheeled vehicles and Rp. 3,000 (US$0.30) for two-wheelers.

The bridge was built by a consortium of Indonesian companies PT Adhi Karya and PT Waskita Karya working with China Road and Bridge Corp. and China Harbor Engineering Co. Ltd. The total cost of the project, including connecting roads, has been estimated at 4.5 trillion rupiah (US$445 million). Construction was started on August 20, 2003. In July 2004, a girder collapsed, killing one worker and injuring nine others. Work on the bridge halted at the end of 2004 due to lack of funds, but was restarted in November 2005. The main span of the bridge was connected on March 31, 2009, and the bridge was opened to the public in June 10, 2009.Within a week of the opening, it was discovered that nuts and bolts as well as maintenance lamps had been stolen and that there was evidence of vandalism of cables supporting the main span.

16. Suramadu's bridge also known as….

    a. Longest bridge

    b. Sura and madu

    c. Surabaya-Madura bridge

    d. Toll bridge

17. Suramadu's bridge connects the island….

    a. Java and Sumatra

    b. Sumatra and Kalimantan

    c. Java and Madura

    d. Correct all

18. When the bridge was built?

    a. March 31, 2009

    b. August 20, 2003

c. July 2004

d. November 2005

19. Length of the Suramadu's bridge is….

   a. 500 meters

   b. 192 meters

   c. 516 meters

   d. nothing is true

20. What is the first pragraph called?

   a. description

   b. events

   c. identification

   d. conclussion

Padangsidimpuan,   2019

Mengetahui

Validator

Sakdiah Budi, SP.d

Appendix 5

Key Answer for Pre Test

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

Key Answer for Post Test

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

Appendix 14

Reliability of Post Test

NO	NAMA	Item																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	UMMI KHASANAH	1	1	0	1	1	0	1	0	0	0	1	0	1	1	1	0	0	1	1	0
2	MEYDA SARI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	SAMIRA	0	1	0	1	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0
4	KHOFIFAH AYU	0	0	0	1	0	0	1	0	1	0	1	0	1	1	0	1	0	0	0	1
5	JULNI HIDAYAH	0	0	0	0	0	1	0	1	1	1	0	1	0	0	0	1	1	0	0	1
6	HANIFAH	0	0	0	1	0	1	1	0	1	0	1	0	1	1	1	1	0	0	0	1
7	AISYAH	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1
8	MURNI RAMBE	1	0	0	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	1	0
9	SOPIA ZULFA	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
10	LENGGANA	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	1	1	1	0
11	NORA AYU	1	0	1	0	0	0	0	1	1	1	0	1	0	0	0	1	1	1	1	1
12	DINDA	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	NUR AINI	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	NUR	0
14	JURIAH HSB	1	1	0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
15	MAIMUNA	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	RISPA	0	1	0	1	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0
17	BETTY	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	ERNA	1	0	0	1	0	0	1	0	0	0	1	0	1	1	0	0	0	1	1	0

No	Nama																				
19	NUR AINI	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	ERNA WATI	0	0	0	1	0	1	1	0	0	0	1	0	1	1	0	0	0	0	0	0
21	AGUSTIANI	0	0	0	1	0	0	1	1	0	1	1	1	1	1	0	0	1	0	0	0
22	HANIPA	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
23	NUR JANNAH	0	0	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0
24	NUR SARI	1	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1
25	WINDA YANI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N = 25	9	10	5	12	2	10	12	9	8	9	12	9	12	12	4	8	9	9	9	8
	p	0,4	0,4	0,2	0,5	0,1	0,4	0,5	0,4	0,3	0,4	0,5	0,4	0,5	0,5	0,2	0,3	0,4	0,4	0,4	0,3
	q	0,6	0,6	0,8	0,5	0,9	0,6	0,5	0,6	0,7	0,6	0,5	0,6	0,5	0,5	0,8	0,7	0,6	0,6	0,6	0,7
	pq	0,23	0,24	0,16	0,25	0,074	0,24	0,2496	0,23	0,22	0,2304	0,25	0,23	0,25	0,25	0,134	0,22	0,23	0,23	0,23	0,22

Appendix 7

Calculation of the formulation $r_{pbi} = \dfrac{M_{p-M_t}}{SD_t}\sqrt{\dfrac{p}{q}}$ in Pre-Test

A. Calculation of Pre-Test

1. **Mean score from score total (M_t)**

$$M_t = \frac{\sum X_t}{N}$$

$$M_t = \frac{206}{25} = 8{,}24$$

2. **Standard Deviation (SD_t)**

$$SD_t = \sqrt{\frac{\sum X_{t^2}}{N} - \left(\frac{\sum X_t}{N}\right)^2}$$

$$SD_t = \sqrt{\frac{2686}{25} - \left(\frac{206}{25}\right)^2}$$

$$SD_t = \sqrt{107{,}44 - 8{,}24^2}$$

$$SD_t = \sqrt{107{,}44 - 67{,}89}$$

$$SD_t = \sqrt{39{,}55} = 6{,}28$$

3. **Mean Score (M_p)**

Item 1

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n1}$$

$$M_{pl} = \frac{14+5+11+12+11+3+16+9+3+7+2+6+22}{13}$$

$$M_{pl} = \frac{121}{13} = 9{,}30$$

Item 2

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n2}$$

$$M_{pl} = \frac{25+14+13+11+12+11+13+22}{8}$$

$$M_{pl} = \frac{121}{8} = 15{,}12$$

Item 3

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n3}$$

$$M_{pl=} \frac{25+9+16}{3}$$

$$M_{pl} = \frac{50}{22} = 16{,}67$$

Item 4

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n4}$$

$$M_{pl} = \frac{25+14+13+11+12+11+13+22}{8}$$

$$M_{pl} = \frac{121}{8} = 15{,}12$$

Item 5

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

$$M_{pl} = \frac{14+3+22}{3}$$

$$M_{pl} = \frac{39}{3} = 13$$

Item 6

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

$$M_{pl} = \frac{25+14+13+11+12+11+13+22}{8}$$

$$M_{pl} = \frac{121}{8} = 15{,}12$$

Item 7

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

$$M_{pl} = \frac{25+14+5+13+11+12+11+13+22}{9}$$

$$M_{pl} = \frac{126}{9} = 14$$

Item 8

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

$$M_{pl} = \frac{25+14+13+11+9+7+13+6+22}{9}$$

$$M_{pl} = \frac{120}{9} = 13,33$$

Item 9

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

$$M_{pl} = \frac{25+4+13+11+3+16+2+3+6+22}{10}$$

$$M_{pl} = \frac{105}{10} = 10,5$$

Item 10

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

$$M_{pl=} \frac{3+22}{2}$$

$$M_{pl} = \frac{25}{2} = 12,5$$

Item 11

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

$$M_{pl} = \frac{25+5+13+16+9+3+22}{7}$$

$$M_{pl} = \frac{103}{7} = 14,71$$

Item 12

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

$$M_{pl} = \frac{25+14+13+11+12+11+13+22}{8}$$

$$M_{pl} = \frac{121}{8} = 15,12$$

Item 13

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n13}$$

$$M_{pl=} \frac{25+4+4+12+7+6+6+22}{8}$$

$$M_{pl} = \frac{86}{8} = 10,75$$

Item 14

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n14}$$

$$M_{pl} = \frac{25+9+16}{3}$$

$$M_{pl} = \frac{50}{3} = 16,67$$

Item 15

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n15}$$

$$M_{pl=} \frac{25+9+16}{3}$$

$$M_{pl} = \frac{86}{3} = 16,67$$

Item 16

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n16}$$

$$M_{pl} = \frac{25+5+13+16+9+13+22}{7}$$

$$M_{pl} = \frac{103}{7} = 14,71$$

Item 17

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n17}$$

$$M_{pl} = \frac{14+4+11+4+12+16+2}{7}$$

$$M_{pl} = \frac{63}{7} = 9$$

Item 18

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n18}$$

$$M_{pl} = \frac{25+4+4+12+7+6+6+22}{8}$$

$$M_{pl} = \frac{86}{8} = 10,75$$

Item 19

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n19}$$

$$M_{pl} = \frac{25+5+9+3+6}{5}$$

$$M_{pl} = \frac{48}{5} = 9,6$$

Item 20

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n20}$$

$$M_{pl} = \frac{14+11+12+11+3+16+9+3+7+2+6+22}{12}$$

$$M_{pl} = \frac{116}{12} = 9,67$$

Item 21

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n21}$$

$$M_{pl} = \frac{25+14=13+11+12+11+13+22}{8}$$

$$M_{pl} = \frac{121}{8} = 15,12$$

Item 22

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n22}$$

$$M_{pl} = \frac{25+9+16+22}{4}$$

$$M_{pl} = \frac{72}{4} = 18$$

Item 23

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n23}$$

$$M_{pl=} \frac{25+14+5+11+4+4+12+16+9+1+13+6}{11}$$

$$M_{pl} = \frac{116}{11} = 10,54$$

Item 24

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n24}$$

$$M_{pl} = \frac{25+14+9+16}{4}$$

$$M_{pl} = \frac{64}{4} = 16$$

Item 25

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n25}$$

$$M_{pl} = \frac{25+5+9+16+22}{5}$$

$$M_{pl} = \frac{77}{5} = 15,4$$

Item 26

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n26}$$

$$M_{pl} = \frac{25+5+13+16+13+22}{6}$$

$$M_{pl} = \frac{94}{6} = 15,67$$

Item 27

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n27}$$

$$M_{pl} = \frac{25+9+16+22}{4}$$

$$M_{pl} = \frac{72}{4} = 18$$

Item 28

$$\text{M}_{pl} = \frac{\textit{total score of students' score that true item answer}}{n28}$$

$$\text{M}_{pl} = \frac{25+9+16}{3}$$

$$\text{M}_{pl} = \frac{50}{3} = 16{,}67$$

Item 29

$$\text{M}_{pl} = \frac{\textit{total score of students' score that true item answer}}{n29}$$

$$\text{M}_{pl} = \frac{25+14+5+13+11+9+7+13+6+22}{10}$$

$$\text{M}_{pl} = \frac{125}{10} = 12{,}5$$

Item 30

$$\text{M}_{pl} = \frac{\textit{total score of students' score that true item answer}}{n30}$$

$$\text{M}_{pl} = \frac{25+14+5+13+11+9+7+13+6+1}{10}$$

$$\text{M}_{pl} = \frac{104}{10} = 10{,}4$$

4. **Calculation of the formulation** $r_{pbi} = \dfrac{M_{p-M_t}}{SD_t}\sqrt{\dfrac{p}{q}}$

Item 1

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

$$r_{pbi} = \frac{9{,}3-8{,}24}{6{,}28}\sqrt{\frac{0.5}{0.5}}$$

$$r_{pbi} = \frac{1{,}07}{6{,}28}\sqrt{1}$$

$$r_{pbi} = 0{,}170 \text{ x } 1 = 0{,}170$$

Item 2

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

$$r_{pbi} = \frac{15,12-8,24}{6,28} \sqrt{\frac{0,3}{0.7}}$$

$$r_{pbi} = \frac{6,88}{6,28} \sqrt{0,42}$$

r_{pbi}= 1,09 x 0,64 = 0,697

Item 3

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

$$r_{pbi} = \frac{16,67-8,24}{6,28} \sqrt{\frac{0,1}{0.9}}$$

$$r_{pbi} = \frac{8,43}{6,28} \sqrt{0,11}$$

r_{pbi}= 1,34 x 0,33 = 0,442

Item 4

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

$$r_{pbi} = \frac{15,12-8,24}{6,28} \sqrt{\frac{0,3}{0.7}}$$

$$r_{pbi} = \frac{6,88}{6,28} \sqrt{0,42}$$

r_{pbi}= 1,09 x 0,64 = 0,697

Item 5

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

$$r_{pbi} = \frac{13-8,24}{6,28} \sqrt{\frac{0,1}{0.9}}$$

$$r_{pbi} = \frac{4,76}{6,28} \sqrt{0,11}$$

r_{pbi}= 0,75 x 0,33 = 0,247

Item 6

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

$$r_{pbi} = \frac{15,12-8,24}{6,28} \sqrt{\frac{0,3}{0.7}}$$

$$r_{pbi} = \frac{6,88}{6,28} \sqrt{0,42}$$

$r_{pbi} = 1,09 \times 0,64 = 0,697$

Item 7

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

$$r_{pbi} = \frac{14-8,24}{6,28} \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{5,75}{6,28} \sqrt{0,67}$$

$r_{pbi} = 0,91 \times 0,81 = 0,737$

Item 8

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

$$r_{pbi} = \frac{13,33-8,24}{6,28} \sqrt{\frac{0,4}{0.6}}$$

$$r_{pbi} = \frac{5,09}{6,28} \sqrt{0,67}$$

$r_{pbi} = 0,81 \times 0,81 = 0,656$

Item 9

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

$$r_{pbi} = \frac{10,5-8,24}{6,24} \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{2,24}{6,24} \sqrt{0,67}$$

$r_{pbi} = 0.35 \times 0,81 = 0,483$

Item 10

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

$$r_{pbi} = \frac{12,5-8,24}{6,28} \sqrt{\frac{0,1}{0.9}}$$

$$r_{pbi} = \frac{4,26}{6,28} \sqrt{0,11}$$

r_{pbi}= 0,67 x 0,33 = 0,421

Item 11

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

$$r_{pbi} = \frac{14,71-8,24}{6,28} \sqrt{\frac{0,3}{0.7}}$$

$$r_{pbi} = \frac{6,47}{6,28} \sqrt{0,42}$$

r_{pbi}= 0,71 x 0,64 = 0,454

Item 12

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

$$r_{pbi} = \frac{15,21-8,24}{6,28} \sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{6,97}{6,28} \sqrt{0,42}$$

r_{pbi}= 1,10 x 0,64 = 0,704

Item 13

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

$$r_{pbi} = \frac{10,75-8,24}{6,28} \sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{2,51}{6,28} \sqrt{0,42}$$

r_{pbi}= 0.40 x 0,64 = 0.405

Item 14

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

$$r_{\text{pbi}} = \frac{16,67-8,24}{6,28} \sqrt{\frac{0.1}{0,9}}$$

$$r_{\text{pbi}} = \frac{8,43}{6,28} \sqrt{0,11}$$

$$r_{\text{pbi}} = 0.13 \text{ x } 0,33 = 0,042$$

Item 15

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

$$r_{\text{pbi}} = \frac{16,67-8,24}{6,28} \sqrt{\frac{0.1}{0.9}}$$

$$r_{\text{pbi}} = \frac{8,43}{6,28} \sqrt{0,11}$$

$$r_{\text{pbi}} = 1,34 \text{ x } 0,33 = 0,442$$

Item 16

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

$$r_{\text{pbi}} = \frac{14,71-8,24}{6,28} \sqrt{\frac{0.3}{0.7}}$$

$$r_{\text{pbi}} = \frac{6,47}{6,28} \sqrt{0,04}$$

$$r_{\text{pbi}} = 1,03 \text{ x } 0,2 = 0.206$$

Item 17

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

$$r_{\text{pbi}} = \frac{9-8,24}{6,28} \sqrt{\frac{0.3}{0.7}}$$

$$r_{\text{pbi}} = \frac{0,76}{6,28} \sqrt{0,04}$$

$$r_{\text{pbi}} = 0,12 \text{ x } 0,2 = 0.024$$

Item 18

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

$$r_{\text{pbi}} = \frac{10,75-8,24}{6,28} \sqrt{\frac{0,3}{0.7}}$$

$$r_{\text{pbi}} = \frac{2,51}{6,28} \sqrt{0,04}$$

r_{pbi}= 0.39 x 0,2= 0.078

Item 19

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

$$r_{\text{pbi}} = \frac{9,6-8,24}{6,28} \sqrt{\frac{0,2}{0.8}}$$

$$r_{\text{pbi}} = \frac{1,36}{6,28} \sqrt{0,25}$$

r_{pbi}= 0,21 x 0,5 = 0,105

Item 20

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

$$r_{\text{pbi}} = \frac{9,67-8,24}{6,28} \sqrt{\frac{0.5}{0.5}}$$

$$r_{\text{pbi}} = \frac{1,43}{6,28} \sqrt{1}$$

r_{pbi}= 0,22 x 1 = 0,420

Item 21

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

$$r_{\text{pbi}} = \frac{15,21-8,24}{6,28} \sqrt{\frac{0.3}{0.7}}$$

$$r_{\text{pbi}} = \frac{6,97}{6,28} \sqrt{0,42}$$

r_{pbi}= 0,11 x 0,64 = 0,017

Item 22

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

$$r_{pbi} = \frac{18-8,24}{6,28} \sqrt{\frac{0.6}{0.4}}$$

$$r_{pbi} = \frac{9,76}{6,28} \sqrt{1,5}$$

$r_{pbi}= 0,55 \text{ x } 1,22 = 0,607$

Item 23

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

$$r_{pbi} = \frac{10,54-8,24}{6,28} \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{2,3}{6,28} 0,67$$

$r_{pbi}= 0,37 \text{ x } 0,81 = 0.401$

Item 24

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

$$r_{pbi} = \frac{16-8,24}{6,28} \sqrt{\frac{0,4}{0,6}}$$

$$r_{pbi} = \frac{7,76}{6,28} \sqrt{0,67}$$

$r_{pbi}= 1,23 \text{ x } 0,81 = 0.996$

Item 25

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

$$r_{pbi} = \frac{15,4-8,24}{6,28} \sqrt{\frac{0.1}{0.9}}$$

$$r_{pbi} = \frac{7,16}{6,28} \sqrt{0,11}$$

$r_{pbi}= 1,14 \text{ x } 0,33 = 0,406$

Item 26

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

$$r_{pbi} = \frac{15,67-8,24}{6,28} \sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{7,43}{6,28} \sqrt{0,42}$$

$r_{pbi} = 1,18 \times 0,64 = 0,755$

Item 27

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

$$r_{pbi} = \frac{18-8,24}{6,28} \sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{9,76}{6,28} \sqrt{0,42}$$

$r_{pbi} = 1,55 \times 0,64 = 0,992$

Item 28

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

$$r_{pbi} = \frac{16,67-8,24}{6,28} \sqrt{\frac{0.1}{0.9}}$$

$$r_{pbi} = \frac{1,55}{6,28} \sqrt{0,11}$$

$r_{pbi} = 0,24 \times 0,33 = 0,079$

Item 29

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

$$r_{pbi} = \frac{12,5-8,24}{6,28} \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{4,26}{6,28} \sqrt{0,67}$$

$r_{pbi} = 0,67 \times 0,81 = 0,542$

Item 30

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

$$r_{\text{pbi}} = \frac{10,4-8,24}{6,28}\sqrt{\frac{0.4}{0.6}}$$

$$r_{\text{pbi}} = \frac{2,16}{6,28}\sqrt{0,67}$$

$r_{\text{pbi}} = 0,34 \times 0,81 = 0,401$

Appendix 8

Table Validity of Pre-test

No	M_p	M_t	SD_t	P	Q	$r_{pbi=\frac{M_p-M_t}{SD_t}\sqrt{\frac{p}{q}}}$	r_t on 5% significant	Interpretation
1.	9,30	8,24	6,28	0.5	0.5	0,170	0.396	Invalid
2.	15,12	8,24	6,28	0.3	0.7	0,697	0.396	Valid
3.	16,67	8,24	6,28	0.1	0.9	0,442	0.396	Valid
4.	15,12	8,24	6,28	0.3	0.7	0,697	0.396	Valid
5.	13	8,24	6,28	0.1	0.9	0,247	0.396	Invalid
6.	15,12	8,24	6,28	0.3	0.7	0,697	0.396	Valid
7.	14	8,24	6,28	0.4	0.6	0,737	0.396	Invalid
8.	13,33	8,24	6,28	0.4	0.6	0,656	0.396	Valid
9.	10,5	8,24	6,28	0.4	0.6	0,483	0.396	Valid
10.	12,5	8,24	6,28	0.1	0.9	0,421	0.396	Valid
11.	14,71	8,24	6,28	0.3	0.7	0,454	0.396	Valid
12.	15,21	8,24	6,28	0.3	0.7	0,704	0.396	Valid
13.	10,75	8,24	6,28	0.3	0.7	0,405	0.396	Valid
14.	16,67	8,24	6,28	0.1	0.9	0,042	0.396	Valid
15.	16,67	8,24	6,28	0.1	0.9	0,442	0.396	Valid
16.	14,71	8,24	6,28	0.3	0.7	0,206	0.396	Invalid
17.	9	8,24	6,28	0.3	0.7	0,024	0.396	Invalid
18.	10,75	8,24	6,28	0.3	0.7	0,078	0.396	Invalid
19.	9,6	8,24	6,28	0.2	0.8	0,105	0.396	Invalid
20.	9,67	8,24	6,28	0.5	0.5	0,420	0.396	Valid

21.	15,21	8,24	6,28	0.3	0.7	0,017	0.396	Invalid
22.	18	8,24	6,28	0.6	0.4	0,607	0.396	Valid
23.	10,54	8,24	6,28	0.4	0.6	0,401	0.396	Valid
24.	16	8,24	6,28	0.1	0.9	0,996	0.396	Valid
25.	15,4	8,24	6,28	0.2	0.8	0,406	0.396	Valid
26.	15,67	8,24	6,28	0,3	0.7	0,755	0,396	Valid
27.	18	8,24	6,28	0,2	0.8	0,992	0,396	Valid
28.	16,67	8,24	6,28	0,1	0,9	0,079	0,396	Invalid
29.	12,5	8,24	6,28	0,4	0.6	0,542	0,396	Valid
30.	10,4	8,24	6,28	0,4	0,6	0,461	0,396	Valid

Appendix 10

Reliability of Pre Test

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

$$R_{11} = \left(\frac{n}{n-1}\right)\left(\frac{S_{t^2}-\Sigma pq}{S_{t^2}}\right)$$

N= 25

$\Sigma Xt = 206$

$\Sigma Xt^2 = 2686$

$\Sigma pq = 5.16$

$$S_t^2 = \Sigma Xt^2 - \left(\frac{\Sigma xt}{N}\right)^2$$

$$= 206 - \left(\frac{206}{25}\right)^2 = 206 - 8{,}24^2 = 206 - 67{,}896 = 138{,}104$$

$$S_t^2 = \frac{\Sigma Xt2}{N} = \frac{138{,}104}{25}$$

$$S_t^2 = 5{,}52416$$

$$R_{11} = \left(\frac{n}{n-1}\right)\left(\frac{S_{t^2}-\Sigma pq}{S_{t^2}}\right)$$

$$R_{11} = \left(\frac{25}{25-1}\right)\left(\frac{5{,}5241-5{,}16}{5.52416}\right) = \left(\frac{25}{24}\right)\left(\frac{0{,}3641}{5.5241}\right)$$

$$= (1.04)\,(0.\,06)$$

$$= 1.03\ (r_{11} > 0.70 = reliable)$$

Appendix 12

Calculation of the formulation $r_{pbi} = \dfrac{M_{p-M_t}}{SD_t} \sqrt{\dfrac{p}{q}}$ **in Post-Test**

B. Calculation of Post-Test

1. **Mean score from score total (M_t)**

$$M_t = \frac{\sum X_t}{N}$$

$$M_t = \frac{262}{25} = 10{,}48$$

2. **Standard Deviation (SD_t)**

$$SD_t = \sqrt{\frac{\sum X_{t^2}}{N} - \left(\frac{\sum X_t}{N}\right)^2}$$

$$SD_t = \sqrt{\frac{3686}{25} - \left(\frac{262}{25}\right)^2}$$

$$SD_t = \sqrt{147{,}44 - 10{,}48}$$

$$SD_t = \sqrt{136{,}96} = 11{,}70$$

3. **Mean Score (M_p)**

Item 1

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n1}$$

$$M_{pl} = \frac{13+15+23+10+18+23+11+5+24}{9}$$

$$M_{pl} = \frac{142}{9} = 15{,}78$$

Item 2

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n2}$$

$$M_{pl} = \frac{13+11+9+4+4+23+3+9+4+5}{10}$$

$$M_{pl} = \frac{85}{10} = 8{,}5$$

Item 3

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n3}$$

$$M_{pl} = \frac{23+18+1+10+24}{5}$$

$$M_{pl} = \frac{76}{5} = 15,2$$

Item 4

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n4}$$

$$M_{pl} = \frac{13+11+13+14+15+23+23+9+11+10+11+24}{12}$$

$$M_{pl} = \frac{177}{12} = 14,75$$

Item 5

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

$$M_{pl} = \frac{13+24}{2}$$

$$M_{pl} = \frac{37}{2} = 18,5$$

Item 6

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

$$M_{pl} = \frac{14+14+9+23+4+4+23+3+10+10}{10}$$

$$M_{pl} = \frac{114}{10} = 11,4$$

Item 7

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

$$M_{pl} = \frac{13+11+13+14+15+23+23+9+11+10+11+24}{12}$$

$$M_{pl} = \frac{177}{12} = 14,75$$

Item 8

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

$$M_{pl} = \frac{14+15+23+10+18+23+11+10+24}{9}$$

$$M_{pl} = \frac{148}{9} = 16,44$$

Item 9

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

$$M_{pl} = \frac{13+14+14+9+23+18+23+24}{8}$$

$$M_{pl} = \frac{138}{8} = 17,25$$

Item 10

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

$$M_{pl} = \frac{14+15+23+10+18+23+11+10+24}{9}$$

$$M_{pl} = \frac{148}{9} = 16,44$$

Item 11

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

$$M_{pl} = \frac{13+11+13+14+15+23+23+9+11+10+11+24}{12}$$

$$M_{pl} = \frac{177}{12} = 14,75$$

Item 12

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

$$M_{pl} = \frac{14+15+23+10+18+23+11+10+24}{9}$$

$$M_{pl} = \frac{148}{9} = 16,44$$

Item 13

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n13}$$

$$M_{pl} = \frac{13+11+13+14+15+23+23+9+11+10+11+24}{12}$$

$$M_{pl} = \frac{177}{12} = 14{,}75$$

Item 14

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n14}$$

$$M_{pl} = \frac{13+11+13+14+15+23+23+9+11+10+11+24}{12}$$

$$M_{pl} = \frac{177}{12} = 14{,}75$$

Item 15

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n15}$$

$$M_{pl} = \frac{13+14+15+10}{4}$$

$$M_{pl} = \frac{52}{4} = 13$$

Item 16

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n16}$$

$$M_{pl} = \frac{13+14+14+9+23+18+23+24}{8}$$

$$M_{pl} = \frac{138}{8} = 17{,}25$$

Item 17

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n17}$$

$$M_{pl} = \frac{14+15+23+10+18+23+11+10+24}{9}$$

$$M_{pl} = \frac{148}{9} = 16{,}44$$

Item 18

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n18}$$

$$M_{pl} = \frac{13+15+23+10+18+23+11+5+24}{9}$$

$$M_{pl} = \frac{142}{9} = 15,78$$

Item 19

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n19}$$

$$M_{pl} = \frac{13+15+23+10+18+23+11+5+24}{9}$$

$$M_{pl} = \frac{142}{9} = 15,78$$

Item 20

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n20}$$

$$M_{pl} = \frac{13+14+14+9+23+18+23+24}{8}$$

$$M_{pl} = \frac{138}{8} = 17,25$$

Item 21

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n21}$$

$$M_{pl} = \frac{1+11+13+14+9+10+18+4+4+3+9+4+10+10+24}{15}$$

$$M_{pl} = \frac{144}{15} = 9,6$$

Item 22

$$M_{pl} = \frac{total\ score\ of\ students'\ score\ that\ true\ item\ answer}{n22}$$

$$M_{pl} = \frac{13+15+23+10+18+23+11+5+24}{9}$$

$$M_{pl} = \frac{142}{9} = 15,78$$

Item 23

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n23}$$

$$M_{pl} = \frac{11+9+23+18+9+11}{6}$$

$$M_{pl} = \frac{81}{6} = 13,5$$

Item 24

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n24}$$

$$M_{pl} = \frac{11+13+23+10+18+23+4+11+5+10+24+2}{12}$$

$$M_{pl} = \frac{154}{12} = 12,83$$

Item 25

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n25}$$

$$M_{pl} = \frac{14+15+23+10+18+23+11+10+24}{9}$$

$$M_{pl} = \frac{148}{9} = 16,44$$

Item 26

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n26}$$

$$M_{pl} = \frac{13+11+14+18+4+4+4+10+24}{9}$$

$$M_{pl} = \frac{102}{9} = 11,33$$

Item 27

$$M_{pl} = \frac{total\,score\,of\,students'\,score\,that\,true\,item\,answer}{n27}$$

$$M_{pl} = \frac{13+11+13+14+14+15+23+23+9+11+10+11+24}{13}$$

$$M_{pl} = \frac{191}{13} = 14,69$$

Item 28

$$M_{pl} = \frac{totalscoreofstudents'scorethattrueitemanswer}{n28}$$

$$M_{pl} = \frac{13+14+14+9+23+18+23+24}{8}$$

$$M_{pl} = \frac{138}{8} = 17,25$$

Item 29

$$M_{pl} = \frac{totalscoreofstudents'scorethattrueitemanswer}{n29}$$

$$M_{pl} = \frac{14+14+23+10+2}{5}$$

$$M_{pl} = \frac{63}{5} = 12,6$$

Item 30

$$M_{pl} = \frac{totalscoreofstudents'scorethattrueitemanswer}{n30}$$

$$M_{pl} = \frac{13+14+9+23+18+23+23+24}{8}$$

$$M_{pl} = \frac{138}{8} = 17,25$$

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

Item 1

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

$$r_{pbi} = \frac{15,78-10,48}{11,70}\sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{5,3}{11,70}\sqrt{0,67}$$

$r_{pbi} = 0,45 \text{ x } 0,81 = 0,464$

Item 2

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

$$r_{pbi} = \frac{14,75-10,48}{11,70} \sqrt{\frac{0,4}{0.6}}$$

$$r_{pbi} = \frac{4,27}{11,70} \sqrt{0,67}$$

$r_{pbi} = 0,36 \text{ x } 0,81 = 0,291$

Item 3

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

$$r_{pbi} = \frac{15,2-10,48}{11,70} \sqrt{\frac{0,2}{0.8}}$$

$$r_{pbi} = \frac{4,72}{11,70} \sqrt{0,25}$$

$r_{pbi} = 0,403 \text{ x } 0,5 = 0,201$

Item 4

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

$$r_{pbi} = \frac{14,75-10,48}{11,70} \sqrt{\frac{0,5}{0.5}}$$

$$r_{pbi} = \frac{4,27}{11,70} \sqrt{1}$$

$r_{pbi} = 0,364 \text{ x } 1 = 0,454$

Item 5

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

$$r_{pbi} = \frac{18,5-10,48}{11,70} \sqrt{\frac{0,1}{0.9}}$$

$$r_{pbi} = \frac{802}{6,28} \sqrt{0,11}$$

$r_{pbi} = 0,68 \text{ x } 0,33 = 0,525$

Item 6

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

$$r_{\text{pbi}} = \frac{11,4-10,48}{11,70} \sqrt{\frac{0,4}{0.6}}$$

$$r_{\text{pbi}} = \frac{0,92}{6,28} \sqrt{0,66}$$

$r_{\text{pbi}} = 0,14 \text{ x } 0,81 = 0,113$

Item 7

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

$$r_{\text{pbi}} = \frac{14,75-10,48}{11,70} \sqrt{\frac{0.5}{0.5}}$$

$$r_{\text{pbi}} = \frac{4,27}{11,70} \sqrt{1}$$

$r_{\text{pbi}} = 0,364 \text{ x } 1 = 0,401$

Item 8

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

$$r_{\text{pbi}} = \frac{16,44-10,48}{11,70} \sqrt{\frac{0,4}{0.6}}$$

$$r_{\text{pbi}} = \frac{5,96}{11,70} \sqrt{0,67}$$

$r_{\text{pbi}} = 0,50 \text{ x } 0,81 = 0,405$

Item 9

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

$$r_{\text{pbi}} = \frac{17,25-10,48}{11,70} \sqrt{\frac{0.3}{0.7}}$$

$$r_{\text{pbi}} = \frac{6,77}{11,70} \sqrt{0,42}$$

$r_{\text{pbi}} = 0,57 \text{ x } 0,64 = 0,420$

Item 10

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

$$r_{pbi} = \frac{16,44-10,48}{11,70} \sqrt{\frac{0,4}{0.6}}$$

$$r_{pbi} = \frac{1,39}{11,70} \sqrt{0,67}$$

$r_{pbi} = 0,11 \text{ x } 0,81 = 0,089$

Item 11

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

$$r_{pbi} = \frac{14,75-10,48}{11,70} \sqrt{\frac{0,5}{0.5}}$$

$$r_{pbi} = \frac{4,27}{11,70} \sqrt{1}$$

$r_{pbi} = 0,364 \text{ x } 1 = 0.420$

Item 12

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

$$r_{pbi} = \frac{16,44-10,48}{11,70} \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{6,97}{11,70} \sqrt{0,67}$$

$r_{pbi} = 0,59 \text{ x } 0,81 = 0,477$

Item 13

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

$$r_{pbi} = \frac{14,75-10,48}{11,70} \sqrt{\frac{0.5}{0.5}}$$

$$r_{pbi} = \frac{4,27}{11,70} \sqrt{1}$$

$r_{pbi} = 0.440 \text{ x } 1 = 0.440$

Item 14

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

$$r_{pbi} = \frac{16,67-10,48}{11,70} \sqrt{\frac{0.1}{0.9}}$$

$$r_{pbi} = \frac{6,19}{6,28} \sqrt{0,1}$$

$r_{pbi}= 0,98 \text{ x } 0,31 = 0,403$

Item 15

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

$$r_{pbi} = \frac{13-10,48}{11,70} \sqrt{\frac{0.2}{0.8}}$$

$$r_{pbi} = \frac{8,43}{6,28} \sqrt{0,25}$$

$r_{pbi}= 1,34 \text{ x } 0,5 = 0,670$

Item 16

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

$$r_{pbi} = \frac{17,25-10,48}{11,70} \sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{6,77}{6,28} \sqrt{0,04}$$

$r_{pbi}= 1,07 \text{ x } 0,2 = 0.214$

Item 17

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

$$r_{pbi} = \frac{15,78-10,48}{11,70} \sqrt{\frac{0.4}{0.6}}$$

$$r_{pbi} = \frac{5,3}{6,28} \sqrt{0,67}$$

$r_{pbi}= 0,843 \text{ x } 0,81 = 0.680$

Item 18

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

$$r_{pbi} = \frac{15,78-10,48}{11,70}\sqrt{\frac{0,4}{0.6}}$$

$$r_{pbi} = \frac{5,3}{11,70}\sqrt{0,67}$$

$r_{pbi} = 0.45 \times 0,81 = 0.404$

Item 19

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

$$r_{pbi} = \frac{15,78-10,48}{11,78}\sqrt{\frac{0,4}{0.6}}$$

$$r_{pbi} = \frac{5,3}{11,78}\sqrt{0,67}$$

$r_{pbi} = 0,44 \times 0,81 = 0,356$

Item 20

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

$$r_{pbi} = \frac{17,25-10,48}{11,70}\sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{6,77}{11,70}\sqrt{0,42}$$

$r_{pbi} = 0,57 \times 0,64 = 0, 505$

Item 21

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

$$r_{pbi} = \frac{15,78-10,48}{11,70}\sqrt{\frac{0.6}{0.4}}$$

$$r_{pbi} = \frac{5,3}{11,70}\sqrt{1,5}$$

$r_{pbi} = 0,45 \times 1,22 = 0,549$

Item 22

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

$$r_{\text{pbi}} = \frac{15,78-10,48}{11,70} \sqrt{\frac{0.2}{0.8}}$$

$$r_{\text{pbi}} = \frac{5,3}{11,70} \sqrt{0,25}$$

$r_{\text{pbi}}= 0,45 \times 0,5 = 0,225$

Item 23

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

$$r_{\text{pbi}} = \frac{13,5-10,48}{11,70} \sqrt{\frac{0.5}{0.5}}$$

$$r_{\text{pbi}} = \frac{3,02}{11,70} \sqrt{1}$$

$r_{\text{pbi}}= 0,258 \times 1 = 0.398$

Item 24

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

$$r_{\text{pbi}} = \frac{12,83-10,48}{11,70} \sqrt{\frac{0,4}{0,6}}$$

$$r_{\text{pbi}} = \frac{2,34}{11,70} \sqrt{0,67}$$

$r_{\text{pbi}}= 0,20 \times 0,81 = 0.162$

Item 25

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

$$r_{\text{pbi}} = \frac{16,44-10,48}{11,78} \sqrt{\frac{0.4}{0.6}}$$

$$r_{\text{pbi}} = \frac{5,98}{11,78} \sqrt{0,67}$$

$r_{\text{pbi}}= 0,50 \times 0,81 = 0,405$

Item 26

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

$$r_{pbi} = \frac{11,33-10,48}{11,70}\sqrt{\frac{0.4}{0.5}}$$

$$r_{pbi} = \frac{0,85}{11,70}\sqrt{0,67}$$

$$r_{pbi} = 0,07 \text{ x } 0,81 = 0,056$$

Item 27

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

$$r_{pbi} = \frac{17,25-10,48}{11,70}\sqrt{\frac{0.3}{0.7}}$$

$$r_{pbi} = \frac{6,77}{11,70}\sqrt{0,42}$$

$$r_{pbi} = 0,57 \text{ x } 0,64 = 0,502$$

Item 28

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

$$r_{pbi} = \frac{17,25-10,48}{11,70}\sqrt{\frac{0.2}{0.8}}$$

$$r_{pbi} = \frac{6,77}{11,70}\sqrt{0,25}$$

$$r_{pbi} = 0,57 \text{ x } 0,5 = 0,285$$

Item 29

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

$$r_{pbi} = \frac{12,6-10,48}{11,70}\sqrt{\frac{0.2}{0.8}}$$

$$r_{pbi} = \frac{1,07}{11,70}\sqrt{0,25}$$

$$r_{pbi} = 0,091 \text{ x } 0,5 = 0,045$$

Item 30

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

$$r_{\text{pbi}} = \frac{17,25-10,48}{11,70} \sqrt{\frac{0.3}{0.7}}$$

$$r_{\text{pbi}} = \frac{6,77}{11,70} \sqrt{0,42}$$

$r_{\text{pbi}} = 0,57 \times 0,64 = 0,450$

Appendix 13

Table Validity of Post-test

No	M_p	M_t	SD_t	p	Q	$r_{pbi=\frac{M_p-M_t}{SD_t}}\sqrt{}$	$r_t$on 5% significant	Interpretation
1.	15,78	10,48	11,70	0,4	0,6	0,464	0.396	Valid
2.	8,5	10,48	11,70	0,4	0,6	0,291	0.396	Invalid
3.	15,2	10,48	11,70	0,2	0,8	0,201	0.396	Invalid
4.	14,75	10,48	11,70	0,5	0,5	0,454	0.396	Valid
5.	18,5	10,48	11,70	0,1	0,9	0,525	0.396	Valid
6.	11,4	10,48	11,70	0,4	0,6	0,113	0.396	Invalid
7.	14,75	10,48	11,70	0,5	0,5	0,401	0.396	Valid
8.	16,44	10,48	11,70	0,4	0,6	0,405	0.396	Valid
9.	17,25	10,48	11,70	0,3	0,7	0,420	0.396	Valid
10.	16,44	10,48	11,70	0,4	0,6	0,089	0.396	Invalid
11.	14,75	10,48	11,70	0,5	0,5	0,420	0.396	Valid
12.	16,44	10,48	11,70	0,4	0,6	0,477	0.396	Valid
13.	14,75	10,48	11,70	0,5	0,5	0,440	0.396	Valid
14.	14,75	10,48	11,70	0,5	0,5	0,403	0.396	Valid
15.	13	10,48	11,70	0,2	0,8	0,670	0.396	Valid
16.	17,25	10,48	11,70	0,3	0,7	0,214	0.396	Invalid
17.	16,44	10,48	11,70	0,4	0,6	0,680	0.396	Valid
18.	1578	10,48	11,70	0,4	0,6	0,404	0.396	Valid
19.	15,78	10,48	11,70	0,4	0,6	0,398	0.396	Valid
20.	17,25	10,48	11,70	0,3	0,7	0,505	0.396	Valid

21.	9,6	10,48	11,70	0,6	0,4	0,549	0.396	Valid
22.	15,78	10,48	11,70	0,4	0,6	0,225	0.396	Invalid
23.	13,5	10,48	11,70	0,2	0,8	0,398	0.396	Valid
24.	12,83	10,48	11,70	0,5	0,5	0,162	0.396	Invalid
25.	16,44	10,48	11,70	0,6	0,4	0,405	0.396	Valid
26.	11,33	10,48	11,70	0,6	0,4	0,056	0.396	Valid
27.	14,69	10,48	11,70	0,5	0,5	0,502	0.396	Valid
28.	17,25	10,48	11,70	0,3	0,7	0,285	0.396	Invalid
29.	12,6	10,48	11,70	0,2	0,8	0,045	0.396	Invalid
30.	17,25	10,48	11,70	0,3	0,7	0,450	0.396	Valid

Appendix 15

Reliability of Post Test

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

$$R_{11} = \left(\frac{n}{n-1}\right)\left(\frac{S_{t^2} - \Sigma pq}{S_{t^2}}\right)$$

N= 25

$\Sigma Xt = 262$

$\Sigma Xt^2 = 3826$

$\Sigma pq = 6{,}5696$

$$S_t^2 = \Sigma Xt^2 - \left(\frac{\Sigma xt}{N}\right)^2$$

$$= 3826 - \left(\frac{262}{25}\right)^2 = 3826 - 10{,}48^2 = 3826 - 109{,}8304 = 3716{,}1696$$

$$S_t^2 = \frac{\Sigma Xt2}{N} = \frac{3716{,}1696}{25}$$

$$S_t^2 = 148{,}6467$$

$$R_{11} = \left(\frac{n}{n-1}\right)\left(\frac{S_{t^2} - \Sigma pq}{S_{t^2}}\right)$$

$$R_{11} = \left(\frac{25}{25-1}\right)\left(\frac{148{,}6467 - 6{,}5696}{148{,}6467}\right) = \left(\frac{25}{24}\right)\left(\frac{142{,}0771}{148{,}6467}\right)$$

$$= (1.04)\,(0.\,95)$$

$$= 1.03 \ (r_{11} > 0.70 = \text{reliable})$$

Appendix 16

RESULT OF NORMALITY TEST IN PRE TEST

RESULT OF THE NORMALITY TEST OF XA IN PRE-TEST

1. The score of XA class in pre test from low score to high score:

35	35	35	40	40	45	45	50	50	50
55	55	55	55	55	55	55	60	60	65
70	70	70	75	75	75				

2. High   = 75

    Low   = 35

    Range   = High – Low

              = 75 - 35

              = 40

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

                      = 1 + 3,3 log (26)

                      = 1 + 3,3 (1,41)

                      = 1 + 4,65

                      = 5.65

                      = 6

4. Length of Classes $=\dfrac{range}{total\,of\,class}$ $=\dfrac{40}{6} = 7$

5. Mean

Interval Class	F	X	x'	fx'	x'^2	fx'^2
35 – 41	5	38	+2	10	4	20
42 – 48	2	45	+1	2	1	2
49 – 55	10	**52**	0	0	0	0
56 – 62	2	59	-1	-2	1	2
63 – 69	1	66	-2	-2	4	4
70 – 76	6	73	-3	-18	9	54
$i = 7$	26	-	-	-10	-	82

$$Mx = M^1 + i\frac{\Sigma fx^1}{N}$$

     $= 52 + 7\,(\frac{-10}{26})$

     $= 52 + 7\,(-0.38)$

     $= 52 + (-2,66)$

= 49.34

$$SD_t = i\sqrt{\frac{\sum fx'^2}{n} - \left(\frac{\sum fx'}{n}\right)^2}$$

$$= 7\sqrt{\frac{82}{26} - \left(\frac{-10}{26}\right)^2}$$

$$= 7\sqrt{3.15 - (-0,38)^2}$$

$$= 7\sqrt{3.15 - 0.14}$$

$$= 7\sqrt{3.01}$$

$$= 7 \times 1,73 = 12.11$$

Table of Normality Data Test with Chi Kuadrad Formula

Interval of Score	Real Upper Limit	$Z - Score$	Limit of Large of the Area	Large of area	f_h	f_0	$\frac{(f_0-f_h)}{f_h}$
70 – 76	76.5	2.24	0,4875				
				0.03	0,78	6	6,69
63 – 69	69.5	1.66	0.4515				
				0.09	2.34	1	-0.57
56 – 62	62.5	1,08	0.3599				
				0.16	4.16	2	-0.51
49 – 55	55.5	0,50	0.1915				
				0.16	4.16	10	1.16
42 – 48	48.5	-0.06	0.0239				
				-0.21	-546	2	-1,00
35 – 41	41.5	-0.64	0.2389				
				-0,14	-3.64	5	-2.37
	34.5	-1.22	0.3888				
						X^2	3,4

Based on the table above, the reseracher found that $x^2_{count} = 3,4$ while $x^2_{table} = $, cause $x^2_{count} <$ x^2_{table} (3,4<11.070) with degree of freedom (dk) = 6–1 = 5 and significant level $\alpha = 5\%$. So distribution of XA class (pre-test) is normal.

6. Median

No	Interval	F	Fk
1	35 – 41	5	5
2	42 – 48	2	7
3	**49 – 55**	10	17
4	56 – 62	2	19

5	63 – 69	1	20
6	70 – 76	6	26

Position of Me in the interval of classes is number 3, that:

Bb $\quad$ = 48.5

F $\quad$ = 7

fm $\quad$ = 10

i $\quad$ = 7

n $\quad$ = 26

1/2n $\quad$ = 13

So :

$$Me = Bb + i \left(\dfrac{n/_2 - F}{fm} \right)$$

$$= 48.5 + 7\left(\dfrac{13-7}{10}\right)$$

= 48.5 + 7 (0,6)

= 48.5 + 4.2

= 52.7

7. Modus

No	Interval	F	Fk
1	35 – 41	5	5
2	42 – 48	2	7
3	**49 – 55**	10	17
4	56 – 62	2	19
5	63 – 69	1	20
6	70 – 76	6	26

$M_o \quad =L + \dfrac{d_1}{d_1+ d_2} i$

L $\quad$ = 48.5

d_1 $\quad$ = 8

d_2 $\quad$ = 8

i $\quad$ = 7

So,

$M_o \quad = 48.5 + \dfrac{8}{8+8} \, 7$

$\quad = 48.5 + 0.5 \, (7)$

$= 48.5 + 3.5$

$= 52$

RESULT OF THE NORMALITY TEST OF XB IN PRE-TEST

1. The score of XB class in pre test from low score to high score:

15	15	15	20	25	30	30	30	35	35
35	40	40	40	40	45	45	45	45	50
50	50	50	60	60	65				

2. High $= 65$

   Low $= 15$

   Range $=$ High – Low

   $= 65 - 15$
   $= 50$

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

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

   $= 1 + 3,3 (1,41)$

   $= 1 + 4.65$

   $= 5.65$

   $= 6$

4. Length of Classes $= \dfrac{range}{total\,of\,class}$ $= \dfrac{50}{6} = 8,33 = 8$

5. Mean

Interval Class	F	X	x'	fx'	x'^2	fx'^2
15 – 23	4	19	+3	12	9	36
24 – 31	4	27.5	+2	8	4	8
32 – 39	3	35.5	+1	3	1	3
40 – 47	8	**43.5**	0	0	0	0
48 – 55	4	51.5	-1	-4	1	4
56 – 63	2	59.5	-2	-4	4	8
64-71	1	67.5	-3	-3	9	9
$i = 8$	26	-	-	12	-	68

$$Mx = M^1 + i \frac{\Sigma fx^1}{N}$$

$= 43.5 + 8 \left(\frac{12}{26}\right)$

$= 43.5 + 8 (0.46)$

$= 43.5 + (3.68)$

$= 37.18$

$$SD_t = i\sqrt{\frac{\sum fx'^2}{n} - \left(\frac{\sum fx'}{n}\right)^2}$$

$$= 8\sqrt{\frac{68}{26} - \left(\frac{12}{26}\right)^2}$$

$$= 8\sqrt{2.61 - (0.46)^2}$$

$$= 8\sqrt{2.61 - 0.21}$$

$$= 8\sqrt{2.4}$$

$$= 8 \times 1.54 = 12.32$$

Table of Normality Data Test with Chi Kuadrad Formula

Interval of Score	Real Upper Limit	Z – Score	Limit of Large of the Area	Large of area	f_h	f_0	$\frac{(f_0-f_h)}{f_h}$
56 – 63	63.5	2.13	0.4834				
				0.05	1.3	1	-0.23
48 – 55	55.5	1.48	0.4306				
				0.13	3.38	2	-0.40
40 – 47	47.5	0.83	0.2967				
				0.22	5.72	4	-0.30
32 – 39	39.5	0.18	0.0714				
				-0.42	-10.92	8	-1.73
24 – 31	31.5	-2.76	0.4971				
				0.45	11.7	3	-0.74
15 – 23	23.5	--1.11	0.0438				
				-0.39	-10.14	4	-1.39
	14.5	-1.84	0.4671				
						4	
						X^2	-4.79

Based on the table above, the reseracher found that $x^2_{count} = -4.79$ while $x^2_{table} = $, cause $x^2_{count} < x^2_{table}$ (-4.79<11.070) with degree of freedom (dk) = 6–1 = 5 and significant level $\alpha = 5\%$.

So distribution of XB class (pre-test) is normal.

6. Median

No	Interval	F	Fk
1	15 – 23	4	4
2	24 – 31	4	8
3	32 – 39	3	11
4	**40 – 47**	8	19
5	48 – 55	4	23
6	56 – 63	2	25
7	64-71	1	26

Position of Me in the interval of classes is number 4, that:

Bb   = 39.5

F   = 11

fm   = 8

i   = 8

n   = 26

1/2n   = 13

So :

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

$$= 39.5 + 8\left(\frac{13-11}{8}\right)$$

= 39.5 + 8 (0.25)

= 39.5 + 2

= 41.5

7. Modus

No	Interval	F	Fk
1	15 – 23	4	4
2	24 – 31	4	8
3	32 – 39	3	11
4	**40 – 47**	8	19
5	48 – 55	4	23
6	56 – 63	2	25
7	64-71	1	26

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

L   = 39.5

d_1 = 5

d_2 = 4

i = 8

So,

M_o $= 39.5 + \dfrac{5}{5+4}\ 8$

   $= 39.5 + 0.55\ (8)$

   $= 39.5 + 4.4$

   $= 43.9$

Appendix 17

HOMOGENEITY TEST (PRE-TEST)

Calculation of parameter to get variant of the first class as experimental class sample and variant of the second class as experimental class sample are used homogeneity test by using formula:

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

Hypotheses:

H$_0$: $\delta_1^2 = \delta_2^2$

H$_1$: $\delta_1^2 \neq \delta_2^2$

A. Variant of the XA class is:

NO	Xi	Xi^2
1.	35	1225
2.	35	1225
3.	35	1225
4.	40	1600
5.	40	1600
6.	45	2025
7.	45	2025
8.	50	2500
9.	50	2500
10.	50	2500
11.	55	3025
12.	55	3025
13.	55	3025
14.	55	3025
15.	55	3025
16.	55	3025
17.	55	3025
18.	60	3600
19.	60	3600
20.	65	4225
21.	70	4900
22.	70	4900
23.	70	4900
24.	75	5625
25.	75	5625
26.	75	5625
Total	1430	82600

n   = 26

$\sum xi = 1430$

$\sum_{Xi} 2 = 82600$

So:

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

$$= \frac{26(82600)-(1430)^2}{26(26-1)}$$

$$= \frac{2147600-2044900}{26(25)}$$

$$= \frac{102700}{650}$$

$$= 158$$

B. Variant of the XB class is:

NO	Xi	Xi^2
1.	15	225
2.	15	225
3.	15	225
4.	20	400
5.	25	625
6.	30	900
7.	30	900
8.	30	900
9.	35	1225
10.	35	1225
11.	35	1225
12.	40	1600
13.	40	1600
14.	40	1600
15.	40	1600
16.	45	2025
17.	45	2025
18.	45	2025
19.	45	2025
20.	50	2500
21.	50	2500
22.	50	2500
23.	50	2500
24.	60	3600
25.	60	3600
26.	65	4225
Total	1010	44000

N = 26

$\sum xi = 1010$

$\sum_{xi} 2 = 44000$

So:

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

$$= \frac{26\,(44000) - (1010)^2}{26(26-1)}$$

$$= \frac{1144000 - 1020100}{26(25)}$$

$$= \frac{123900}{650}$$

$$= 190.61$$

The Formula was used to test the hypothesis was:

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

XA and XB :

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

So:

$$F = \frac{190.61}{I58}$$

$$= 1.20$$

After doing the calculation, researcher found that $F_{count} = 1.20$. It had been compared to F_{table} with α 5% and dk numerator and deminator were same (n_1 and $n_2 = 26$; dk = 26-1 = 25). From the distribution list F, researcher found that $F_{table} = 2.71$, so $F_{count} < F_{table}$ (1.20< 2.71). It could be concluded that there is no difference variant between the XA class and XB class. It means that the variant is homogenous.

Appendix 18

RESULT OF NORMALITY TEST IN POST TEST

RESULT OF THE NORMALITY TEST OF XA IN POST-TEST

8. The score of XA class in post test from low score to high score:

65	65	70	75	75	80	80	80	80	80
85	85	85	85	85	85	85	85	90	90
90	90	90	90	95	95				

9. High   = 95

   Low   = 65

   Range   = High – Low

             = 95 - 65
             = 30

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

                        = 1 + 3,3 log (26)

                        = 1 + 3,3 (1,41)

                        = 1 + 4,65

                        = 5.65

                        = 6

11.   Length of Classes $=\frac{range}{total of class}$ $=\frac{30}{6}= 5$

12.   Mean

Interval Class	F	X	$x^{'}$	$fx^{'}$	$x^{'2}$	$fx^{'2}$
65 – 69	2	67	+4	8	16	32
70 – 74	1	72	+3	3	9	9
75 – 79	2	77	+2	4	4	8
80 – 84	5	82	+1	5	1	5
85 – 89	8	**87**	0	0	0	0
90 – 94	6	92	-1	-6	1	6
95 – 99	2	97	-2	-4	4	8
$i = 5$	26	-	-	10	-	68

$$Mx = M^{1} + i\frac{\Sigma fx^{1}}{N}$$

$$= 87 + 5 \left(\frac{10}{26}\right)$$

$$= 87 + 5 \ (0.38)$$

$= 87 + (1.9)$

$= 88.9$

$$SD_t = i\sqrt{\frac{\sum fx'^2}{n} - \left(\frac{\sum fx'}{n}\right)^2}$$

$$= 5\sqrt{\frac{68}{26} - \left(\frac{10}{26}\right)^2}$$

$$= 5\sqrt{2.61 - (0.38)^2}$$

$$= 5\sqrt{2.61 - 0.14}$$

$$= 5\sqrt{2.47}$$

$$= 5 \times 1.57 = 7.85$$

Table of Normality Data Test with Chi Kuadrad Formula

Interval of Score	Real Upper Limit	Z – Score	Limit of Large of the Area	Large of area	f_h	f_0	$\frac{(f_0 - f_h)}{f_h}$
95 – 99	99.5	1.35	0.4115				
				0.15	3.9	2	-0.48
90 – 94	94.5	0.71	0.2612				
				0.23	5.98	6	0.00
85 – 89	89.5	0.07	0.0279				
				-0.18	-4.68	8	-2.70
80 – 84	84.5	-0.56	0.2123				
				-0.17	-4.42	5	-2.13
75 – 79	79.5	-1.19	0.3830				
				-0.08	-2.08	2	-1.96
70 – 74	74.5	-1.83	0.4664				
				-0.02	-0.52	1	-2.92
65 - 69	69.5	-2.47	0.4932				
						2	
						X^2	-10.19

Based on the table above, the reseracher found that $x^2_{count} = -10.19$ while $x^2_{table} =$, cause $x^2_{count} < x^2_{table}$ (-10.19<11.070) with degree of freedom (dk) = 6–1 = 5 and significant level $\alpha = 5\%$. So distribution of XA class (post-test) is normal.

13.   Median

No	Interval	F	Fk
1	65 – 69	2	2
2	70 – 74	1	3

3	75 – 79	2	5
4	80 – 84	5	10
5	**85 – 89**	8	18
6	90 – 94	6	24
7	95 – 99	2	26

Position of Me in the interval of classes is number 5, that:

Bb　　= 84.5

F　　= 10

fm　　= 8

i　　= 5

n　　= 26

1/2n　= 13

So :

Me　　$= Bb + i \left(\dfrac{n/2 - F}{fm} \right)$

$= 84.5 + 5 \left(\dfrac{13-10}{8} \right)$

$= 84.5 + 5 \, (0.37)$

$= 84.5 + 1.85$

$= 86.35$

14.　　Modus

No	Interval	F	Fk
1	65 – 69	2	2
2	70 – 74	1	3
3	75 – 79	2	5
4	80 – 84	5	10
5	**85 – 89**	8	18
6	90 – 94	6	24
	95 – 99	2	26

M_o　　$= L + \dfrac{d_1}{d_1 + d_2} i$

L　　= 84.5

d_1　　= 3

d_2　　= 2

i　　= 5

So,

$$M_o = 84.5 + \frac{3}{3+2}\ 5$$

$$= 84.5 + 0.6\ (5)$$

$$= 84.5 + 3$$

$$= 87.5$$

RESULT OF THE NORMALITY TEST OF XB IN POST -TEST

8. The score of XB class in pre test from low score to high score:

40	40	40	40	40	50	60	60	60	60
65	65	65	65	70	70	70	70	70	70
70	75	75	75	80	80				

9. High   = 80

   Low   = 40

   Range   = High – Low

   $$= 80 - 40$$
   $$= 40$$

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

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

    $$= 1 + 3,3\ (1,41)$$

    $$= 1 + 4.65$$

    $$= 5.65$$

    $$= 6$$

11.   Length of Classes $= \dfrac{range}{total of class}$ $= \dfrac{40}{6} = 6.66 = 7$

12.   Mean

Interval Class	F	X	x'	fx'	x'^2	fx'^2
40 – 46	5	43	+4	20	16	80
47 – 53	1	50	+3	3	9	9
54 – 60	4	57	+2	8	4	16
61 – 66	4	63.5	+1	4	1	4
67 – 73	7	**70**	0	0	0	0
74 – 80	5	77	-1	-5	1	5
$i = 7$	26	-	-	30	-	114

$$Mx = M^1 + i\frac{\Sigma fx^1}{N}$$

$$= 69.5 + 7\ (\frac{30}{26})$$

$$= 69.5 + 7\ (1.15)$$

$$= 69.5 + (8.05)$$

$$= 77.55$$

$$SD_t = i\sqrt{\frac{\sum fx'^2}{n} - \left(\frac{\sum fx'}{n}\right)^2}$$

$$= 7\sqrt{\frac{114}{26} - \left(\frac{30}{26}\right)^2}$$

$$= 7\sqrt{4.38 - (1.15)^2}$$

$$= 7\sqrt{4.38 - 1.32}$$

$$= 7\sqrt{3.06}$$

$$= 7x\ 1.74 = 12.18$$

Table of Normality Data Test with Chi Kuadrad Formula

Interval of Score	Real Upper Limit	Z – Score	Limit of Large of the Area	Large of area	f_h	f_0	$\frac{(f_0-f_h)}{f_h}$
74– 80	80.5	0.24	0.0948				
				-0.03	-0.78	5	-7.41
67 – 73	73.5	-0.33	0.1293				
				-0.18	-4.68	7	-2.49
61 – 66	66.5	-0.90	0.3159				
				-0.10	-2.6	4	-2.53
54 – 60	60.5	-1.39	0.4177				
				-0.05	-1.3	4	-4.07
47 – 53	53.5	-1.97	0.4756				
				-0.01	-0.26	1	-4.84
40 – 46	46.5	-2.54	0.4945				
				-0.00	0	5	0
	39.5	-3.12	0.4991				
						X^2	-21.34

Based on the table above, the reseracher found that $x^2_{count} = -21.34$ while $x^2_{table} = $, cause $x^2_{count} < x^2_{table}$ (-21.34<11.070) with degree of freedom (dk) = 6–1 = 5 and significant level $\alpha = 5\%$. So distribution of XB class (post-test) is normal.

13.   Median

No	Interval	F	Fk
1	40 – 46	5	5
2	47 – 53	1	6
3	54 – 60	4	10
4	61 – 66	4	14
5	**67 – 73**	7	21
6	74 – 80	5	26

Position of Me in the interval of classes is number 5, that:

Bb   = 66.5

F   = 14

fm   = 7

i   = 7

n   = 26

1/2n   = 13

So :

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

$$= 66.5 + 7\left(\frac{13-14}{7}\right)$$

$= 66.5 + 7 \, (-0.14)$

$= 66.5 + -0.98$

$= 65.52$

14.   Modus

No	Interval	F	Fk
1	40 – 46	5	5
2	47 – 53	1	6
3	54 – 60	4	10
4	61 – 66	4	14
5	**67 – 73**	7	21
6	74 – 80	5	26

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

L   = 66.5

d_1 = 3

d_2 = 2

i   = 7

So,

$$M_o = 66.5 + \frac{3}{3+2} \; 7$$

$$= 66.5 + 0.6\,(7)$$

$$= 66.5 + 4.2$$

$$= 70.7$$

Appendix 19

<div align="center">

HOMOGENEITY TEST (POST-TEST)

</div>

Calculation of parameter to get variant of the first class as experimental class sample and variant of the second class as experimental class sample are used homogeneity test by using formula:

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

Hypotheses:

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

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

C. Variant of the XA class is:

NO	Xi	Xi^2
27.	65	4225
28.	65	4225
29.	70	4900
30.	75	5625
31.	75	5625
32.	80	6400
33.	80	6400
34.	80	6400
35.	80	6400
36.	80	6400
37.	85	7225
38.	85	7225
39.	85	7225
40.	85	7225
41.	85	7225
42.	85	7225
43.	85	7225
44.	85	7225
45.	90	8100
46.	90	8100
47.	90	8100
48.	90	8100
49.	90	8100
50.	90	8100
51.	95	9025
52.	95	9025
Total	2160	181050

n   = 26

$\sum xi = 2160$

$\sum_{Xi} 2 = 181050$

So:

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

$$= \frac{26(181050) - (2160)^2}{26(26-1)}$$

$$= \frac{4707300 - 4665600}{26(25)}$$

$$= \frac{41700}{650}$$

$$= 64.15$$

D. Variant of the XB class is:

NO	Xi	Xi^2
27.	40	225
28.	40	900
29.	40	900
30.	40	1600
31.	40	1600
32.	60	2500
33.	60	3025
34.	60	3025
35.	60	3600
36.	60	3600
37.	65	3600
38.	65	4225
39.	65	4225
40.	65	4225
41.	70	4225
42.	70	4225
43.	70	4225
44.	70	4225
45.	70	5625
46.	70	5625
47.	75	5625
48.	75	5625
49.	75	5625
50.	75	5625
51.	80	6400
52.	80	6400
Total	1640	107600

N = 26

$\sum xi = 1640$

$\sum_{xi} 2 = 107600$

So:

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

$$= \frac{26\,(107600) - (1640)^2}{26(26-1)}$$

$$= \frac{2797600 - 2689600}{26(25)}$$

$$= \frac{108000}{650}$$

$$= 166.15$$

The Formula was used to test the hypothesis was:

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

XA and XB :

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

So:

$$F = \frac{166.15}{64.15}$$

$$= 2.59$$

After doing the calculation, researcher found that $F_{count} = 2.59$. It had been compared to F_{table} with α 5% and dk numerator and deminator were same (n_1 and $n_2 =$ 26; dk = 26-1 = 25). From the distribution list F, researcher found that $F_{table} = 2.71$, so $F_{count} < F_{table}$ (2.59< 2.71). It could be concluded that there is no difference variant between the XA class and XB class. It means that the variant is homogenous.

Appendix 20

Score of Experimental Class and Control Class Pre Test

a. **Pre Test Score of Experimental Class**

No	The Name Of Students (N)	Pre Test
1	Hatnima Siregar	35
2	Saiman Harahap	35
3	Romadhon	35
4	Ryan Juansyah	40
5	Aulia Amanda	40
6	Risky Muniroh	45
7	Risna Dewi Sahrini	45
8	Nurfadilah Simatupang	50
9	Amina Hulu	50
10	Paskalias Waruwu	50
11	Miratul Amelia	55
12	Putra Ardiansyah	55
13	Muhammad Haris	55
14	Ramadhan Hutagalung	55
15	Yennova Nasution	55
16	Khoria	55
17	Roma Sari Manungkalit	55
18	Rina	60
19	Silvana Ulia Ningsih	60
20	Dimas Aditiya	65
21	Ivan	70
22	Prahara Lubis	70
23	Melda Lubis	70
24	Putri Yanti Harefa	75
25	Saimah Harahap	75
26	Syahrani Meha	75
Total		**2160**

b. Pre Test Score of Control Class

No	The Name Of Students (N)	Pre-Test
1	Adil Ardiansyah	15
2	Makmur Ansoli Siregar	15
3	Irma Suryani Siregar	15
4	Adanan Hasibuan	20
5	Putri Muktia Koto	25
6	Mona	30
7	Meisha Anjelina Harahap	30
8	Putra Jaya Zebua	30
9	Nur Arya Simamora	35
10	Nikma Aprilia Nasution	35
11	Widya Fanrian	35
12	Dermia Indani Nasution	40
13	Risky Ainun Mardia	40
14	Ahmad Farid	40
15	Asnida	40
16	Juwita Tanjung	45
17	Yurasita Yana Simanungkalit	45
18	Vanya Monica Anastacia	45
19	Riska Sapitri	45
20	Fronita Hutagalung	50
21	Aulia Azizul Jabbar	50
22	Indri Ismawati	50
23	Rhyco Frendi	50
24	Elmi malinda harhap	60
25	Dea Saputra	60
26	Hanifah Widya	65
Total		1010

Appendix 21

Score of Experimental Class and Control Class
Post Test

a. Score of Experimental Class Post Test (after Using Inquiry Learning Method)

No	The Name Of Students (N)	Post Test
1	Miratul Amelia	65
2	Syahrani Meha	65
3	Hatnima Siregar	70
4	Prahara Lubis	75
5	Putra Ardiansyah	75
6	Ryan Juansyah	80
7	Roma Sari Manungkalit	80
8	Risky Muniroh	80
9	Nur Fadilah Simatupang	80
10	Muhammad Haris	80
11	Amina Hulu	85
12	Khoria	85
13	Saiman Harahap	85
14	Melda Lubis	85
15	Paskalias Waruwu	85
16	Saimah Harahap	85
17	Putri Yanti	85
18	Ramdan Hutagalung	85
19	Risna Dewi Sahraini	90
20	Dimas Aditiya	90
21	Aulia Amanda Lubis	90
22	Silvia Ulia Ningsih	90
23	Yennova Apriani Nasution	90
24	Romadon	90
25	Rina	95
26	Ivan	95
Total		**2160**

b. Post Test Score of Control Class

No	The Name Of Students (N)	Post-Test
1	Aulia Azizul Jabbar	40
2	Putra Jaya Zebua	40
3	Adil Ardiansyah	40
4	Yurasita Yana Simanungkalit	40
5	Dermia Indani Nasution	40
6	Elmi Malinda Harahap	60
7	Rizky Ainun Mardia	60
8	Juwita Tanjung	60
9	Widya Fanrian	60
10	Adanan Hasibuan	60
11	Riski Sapitri	65
12	Hanifah Widya	65
13	Nur Arya Simamora	65
14	Nikmah Aprilia Nasution	65
15	Mona	70
16	Indri Ismawati	70
17	Meisha Anjelina Harahap	70
18	Asnida	70
19	Putri Muktia Koto	70
20	Rhyco Frendi	70
21	Fronita Hutagalung	75
22	Irma Suryani	75
23	Dea Syaputra	75
24	Makmur Ansoli Siregar	75
25	Vanya Monica Anastacia	80
26	Ahmad Farid	80
Total		**1640**

Appendix 22

T-test of the Both Averages in Pre-Test

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

$$Tt = \frac{X_1 - X_2}{\sqrt{\left(\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$Tt = \frac{37.18 - 49.34}{\sqrt{\left(\frac{(26 - 1)158 + (26 - 1)190.61}{26 + 26 - 2}\right)\left(\frac{1}{26} + \frac{1}{26}\right)}}$$

$$Tt = \frac{-12.16}{\sqrt{\left(\frac{25(158) + 25(190.61)}{50}\right)\left(\frac{2}{26}\right)}}$$

$$Tt = \frac{-12.16}{\sqrt{\left(\frac{3950 + 4765.25}{50}\right)(0.07)}}$$

$$Tt = \frac{-12.16}{\sqrt{(174.30)(0.07)}}$$

$$Tt = \frac{-12.16}{\sqrt{12.20}}$$

$$Tt = \frac{-12.16}{3.49}$$

$$Tt = \text{-3.48}$$

Based on researcher calculation result of homogeneity test of the both averages, researcher found that $t_{count} = -3.48$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and dk $= n_1 + n_2 - 2 = 26 + 26 - 2 = 50$, $t_{table} = 1.67591$. So, $t_{count} < t_{table}$(-3.48 <1.67591) 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 23

T-test of the Both Averages in Post-Test

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

$$Tt = \frac{X_1 - X_2}{\sqrt{\left(\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$Tt = \frac{88.9 - 77.5}{\sqrt{\left(\frac{(26 - 1)64.15 + (26 - 1)166.15}{26 + 26 - 2}\right)\left(\frac{1}{26} + \frac{1}{26}\right)}}$$

$$Tt = \frac{11.4}{\sqrt{\left(\frac{25(64.15) + 25(166.15)}{50}\right)\left(\frac{2}{26}\right)}}$$

$$Tt = \frac{11.4}{\sqrt{\left(\frac{1603.75 + 4153.75}{50}\right)(0.07)}}$$

$$Tt = \frac{11.4}{\sqrt{(115.15)(0.07)}}$$

$$Tt = \frac{11.4}{\sqrt{8.06}}$$

$$Tt = \frac{11.4}{2.83}$$

$$Tt = 4.02$$

Based on researcher calculation result of homogeneity test of the both averages, researcher found that t_{count}= 4.02 with opportunity (1-α) = 1 − 5% = 95% and dk = $n_1 + n_2 -$ 2 = 26 + 26 − 2 = 50, t_{table} = 1.67591. So, t_{count}>t_{table}(4.02 >1.67591) and H_a is accepted, it means there was the difference average between the first class as experimental class and the second class as control class in this research.

Appendix 24

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 25

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
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974

2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3,1	0,4990	0,4991	0,4991	0.4991	0,4992	0,4992	0,4992	0,4992	0,4993	0,4993
3,2	0,4993	0,4993	0,4994	0,4994	0,4994	0,4994	0,4994	0,4995	0,4995	0,4995
3,3	0,4995	0,4995	0,4995	0,4996	0,4996	0,4996	0,4996	0,4996	0,4997	0,4997
3,4	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4998
3,5	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998
3,6	0,4998	0,4998	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999
3,7	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999
3,8	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999
3,9	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000

Appendix 26

Percentage Points of the t Distribution

Pr df	0.25 0.50	0.10 0.20	0.05 0.10	0.025 0.050	0.01 0.02	0.005 0.010	0.001 0.002
1	1.00000	3.07768	6.31375	12.70620	31.82052	63.65674	318.30884
2	0.81650	1.88562	2.91999	4.30265	6.96456	9.92484	22.32712
3	0.76489	1.63774	2.35336	3.18245	4.54070	5.84091	10.21453
4	0.74070	1.53321	2.13185	2.77645	3.74695	4.60409	7.17318
5	0.72669	1.47588	2.01505	2.57058	3.36493	4.03214	5.89343
6	0.71756	1.43976	1.94318	2.44691	3.14267	3.70743	5.20763
7	0.71114	1.41492	1.89458	2.36462	2.99795	3.49948	4.78529
8	0.70639	1.39682	1.85955	2.30600	2.89646	3.35539	4.50079
9	0.70272	1.38303	1.83311	2.26216	2.82144	3.24984	4.29681
10	0.69981	1.37218	1.81246	2.22814	2.76377	3.16927	4.14370
11	0.69745	1.36343	1.79588	2.20099	2.71808	3.10581	4.02470
12	0.69548	1.35622	1.78229	2.17881	2.68100	3.05454	3.92963
13	0.69383	1.35017	1.77093	2.16037	2.65031	3.01228	3.85198
14	0.69242	1.34503	1.76131	2.14479	2.62449	2.97684	3.78739
15	0.69120	1.34061	1.75305	2.13145	2.60248	2.94671	3.73283
16	0.69013	1.33676	1.74588	2.11991	2.58349	2.92078	3.68615
17	0.68920	1.33338	1.73961	2.10982	2.56693	2.89823	3.64577
18	0.68836	1.33039	1.73406	2.10092	2.55238	2.87844	3.61048
19	0.68762	1.32773	1.72913	2.09302	2.53948	2.86093	3.57940
20	0.68695	1.32534	1.72472	2.08596	2.52798	2.84534	3.55181
21	0.68635	1.32319	1.72074	2.07961	2.51765	2.83136	3.52715
22	0.68581	1.32124	1.71714	2.07387	2.50832	2.81876	3.50499
23	0.68531	1.31946	1.71387	2.06866	2.49987	2.80734	3.48496
24	0.68485	1.31784	1.71088	2.06390	2.49216	2.79694	3.46678
25	0.68443	1.31635	1.70814	2.05954	2.48511	2.78744	3.45019
26	0.68404	1.31497	1.70562	2.05553	2.47863	2.77871	3.43500
27	0.68368	1.31370	1.70329	2.05183	2.47266	2.77068	3.42103
28	0.68335	1.31253	1.70113	2.04841	2.46714	2.76326	3.40816
29	0.68304	1.31143	1.69913	2.04523	2.46202	2.75639	3.39624
30	0.68276	1.31042	1.69726	2.04227	2.45726	2.75000	3.38518
31	0.68249	1.30946	1.69552	2.03951	2.45282	2.74404	3.37490
32	0.68223	1.30857	1.69389	2.03693	2.44868	2.73848	3.36531
33	0.68200	1.30774	1.69236	2.03452	2.44479	2.73328	3.35634
34	0.68177	1.30695	1.69092	2.03224	2.44115	2.72839	3.34793
35	0.68156	1.30621	1.68957	2.03011	2.43772	2.72381	3.34005
36	0.68137	1.30551	1.68830	2.02809	2.43449	2.71948	3.33262
37	0.68118	1.30485	1.68709	2.02619	2.43145	2.71541	3.32563
38	0.68100	1.30423	1.68595	2.02439	2.42857	2.71156	3.31903
39	0.68083	1.30364	1.68488	2.02269	2.42584	2.70791	3.31279
40	0.68067	1.30308	1.68385	2.02108	2.42326	2.70446	3.30688

Appendix 27

RESEARCH DOCUMENTATION

SURAT KETERANGAN
Nomor :4393/I05.20/SMK.PD.07/PL/2019

ng bertanda tangan dibawah ini Kepala SMK SWASTA PANCA DHARMA Padangsidimpuan

enerangkan :

N a m a	: WARIDA NASUTION
N I M	: 1520300066
Jurusan	: Tadris / Pendidikan Bahasa Inggris
Jenjang	: SI

dalah benar nama tersebut diatas telah melaksanakan Penelitian di SMK
wasta Panca Dharma Padangsidimpuan untuk Penyusunan Skripsi dengan
dul
**The Effect of Inquiry Learning Method Towards Students' Reading
omprehension at Grade X SMK Swasta Panca Dharma
adangsidimpuan".**

esuai dengan surat Institut Agama Islam Negeri Padangsidimpuan Nomor:
-/267/In.14/E.1/TL.00/08/2019.
emikian surat keterangan ini diberikan untuk dapat dipergunakan sebagai
ana mestinya atas perhatiannya diucapkan terimakasih.

Padangsidimpuan, 18 September 2019
Kepala Sekolah

ANI NASUTION

Nomor : B - 1267   /In.14/E.1/TL.00/08/2019   3 September 2019
Hal   : Izin Penelitian
         Penyelesaian Skripsi.

Yth. Kepala SMKS Panca Dharma Padangsidimpuan
Kota Padangsidimpuan

Dengan hormat, bersama ini kami sampaikan bahwa :

Nama   : Warida Nasution
NIM   : 1520300066
Program Studi   : Tadris/Pendidikan Bahasa Inggris
Fakultas   : Tarbiyah dan Ilmu Keguruan
Alamat   : Sibuhuan

adalah Mahasiswa Fakultas Tarbiyah dan Ilmu Keguruan IAIN Padangsidimpuan yang
sedang menyelesaikan Skripsi dengan Judul "The Effect of Inquiry Learning Method
Towards Students' Reading Comprehension at Grade SMKS Panca Dharma
Padangsidimpuan".

Sehubungan dengan itu, kami mohon bantuan Bapak/Ibu untuk memberikan izin penelitian
sesuai dengan maksud judul diatas.

Demikian disampaikan, atas kerja sama yang baik diucapkan terimakasih.

                                              a.n. Dekan,
                                     Wakil Dekan Bidang Akademik

                                        Muhammad Yusuf Pulungan Rangkuti, S.Si., M.Pd.
                                     NIP. 19800413 200604 1 002

16 November 2018

Nomor : 277 /In.14/E.6a/PP.00.9/11/2018
Lamp : -
Perihal : **Pengesahan Judul dan Pembimbing Skripsi**

Kepada Yth:
1. **Eka Sustri Harida, M.Pd**   **(Pembimbing I)**
2. **Zainuddin, S. S., M. Hum**   **(Pembimbing II)**

di –Padangsidimpuan

Assalamu'alaikum Wr. Wb.

Dengan hormat, sehubungan dengan hasil sidang bersama tim pengkaji judul skripsi jurusan Tadris Bahasa Inggris (TBI) Fakultas Tarbiyah dan Ilmu Keguruan IAIN Padangsidimpuan. Maka dengan ini kami mohon kepada Bapak/Ibu agar dapat menjadi pembimbing skripsi dan melakukan penyempurnaan judul bilamana perlu untuk mahasiswa dibawah ini dengan data sebagai berikut:

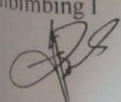|		
Nama	:	Waridah Nasution
NIM	:	1520300066
Fak/Jurusan	:	Tarbiyah dan Ilmu Keguruan/ Tadris Bahasa Inggris
Judul Skripsi	:	**The Effect of Inquiry Learning Method (ILM) Towards Students' Reading Comprehension At Grade X SMKS Panca Dharma Padangsidimpuan**

Demikian disampaikan, atas kesediaan dan kerjasama yang baik dari Bapak/Ibu kami ucapkan terima kasih.
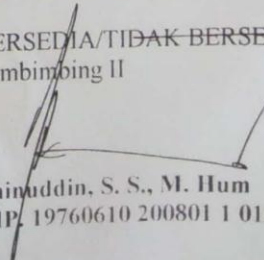
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