

# THE EFFECT OF PREDICT, ORGANIZE, REHEARSE, PRACTICE, EVALUATE (PORPE) STRATEGY ON STUDENTS' READING COMPREHENSION <br> AT GRADE VIII SMP NEGERI 2 <br> BATANG ANGKOLA-TAPSEL 

## 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:
TUTI ALAWIYAH TANJUNG
Reg. Number: 1520300065

ENGLISH EDUCATION PROGRAM

TARBIYAH AND TEACHER TRAINING FACULTY STATE INSTITUTE FOR ISLAMIC STUDIES PADANGSIDIMPUAN


Term | : Munaqosyah |
| :--- |
|  |
| a.n. Tuti Alawiyah Tanjung |

Item :7 (seven) exemplars

Padangsidimpuan, Desember 2019
To:
Dean Tarbiyah and
Teacher Training Faculty
In-
Padangsidimpuan

Assalamu'alaikum Wr.Wb.
After reading, studying and giving advice for necessary revision on thesis belongs to Tuti Alawiyah Tanjung, entitled "The Effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy on Students' Reading Comprehension at Grade VIII SMP Negeri 2 Batang Angkola-Tapsel", we approved that the thesis has been acceptable to complete the requirement to fulfill for the degree of Graduate of Education (S.Pd.) in English.

Therefore, we hope that the thesis will soon be examined in front of the Thesis Examiner Team of E. Dept. of Tarbiyah and. Teacher Training Faculty LAIN Padangsidimpuan. Thank you.

Wassalamu'alaikum Wr.Wb.

## Advisor I



Eka Sustri Harida, M. Pd NIP. 197509172003122002


The name who signed here:
Name
Tuti Alawiyah Tanjung
Registration Number
Faculty/Department
The Tittle of Thesis
: 1520300065
: Tarbiyah and Teacher Training Faculty/ TBI-2
: The Effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy on Students' Reading Comprehension at Grade VIII SMP Negeri 2 Batang Angkola-Tapsel

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As Academic Civity of the State Institute for Islamic Studies Padangsidimpuan, the name who signed here:

Name
: TUTI ALAWIYAH TANJUNG
Registration Number
Faculty/Departmen
1520300065

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TUTI ALAWIYAH TANJUNG Reg. No. 1520300065



The Thesis had been accepted as a partial fulfillment of the requirement for the pe of graduate of Education (S.Pd.) in English
 Dean of Tapoiyah and Teacher Training Fzulty

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Padangsidimpuan, Desember 2019
Researcher

TUTI ALAWIYAH TANJUNG
Reg. No. 1520300065

| Name | $:$ | TUTI ALAWIYAH TANJUNG |
| :--- | :--- | :--- |
| Reg. no | $:$ | 1520300065 |
| Faculty | $:$ | Tarbiyah and Teacher Training |
| Department | $:$ | English Education (TBI-2) |
| Title of Thesis | $:$ | The Effect of Predict, Organize, Rehearse, |
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#### Abstract

This research describes about the effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy on Students' Reading Comprehension at Grade VIII SMP N 2 Batang Angkola-Tapsel. There were some problems in this research: 1) The students reading comprehension is low, 2) The students cannot combine the information that they have already read with their background knowledge, 3) The teacher uses inappropriate Strategy in teaching reading comprehension.

The kind of this research was experimental research. The population of this research was all of the eight grade of SMP N 2 Batang Angkola-Tapsel. The total of population were 125 students. Then, the sample of the research was 2 classes, VIII B as experimental class that consist of 25 students and VIII D as control class that consist of 25 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 $\mathrm{t}_{\text {count }}=10.17$ and $t_{\text {table }}=1.67155$. It means $t_{\text {count }}>t_{\text {table }}(10.17>1.67155)$. So, the researcher could concluded that Ha was accepted and Ho was rejected. There was the significant effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy on Students’ Reading Comprehension at Grade VIII SMP N 2 Batang Angkola-Tapsel


Keywords: Reading Comprehension, Predict, Organize, Rehearse, Practice, Evaluate (PORPE).

| Name | $:$ | TUTI ALAWIYAH TANJUNG |
| :--- | :--- | :--- |
| Reg. no | $:$ | 1520300065 |
| Faculty | $:$ | Tarbiyah and Teacher Training |
| Department | $:$ | English Education (TBI-2) |
| Title of Thesis | $:$ | The Effect of Predict, Organize, Rehearse, |
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: 1520300065
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#### Abstract

ABSTRAK Penelitian ini mendeskripsikan tentang pengaruh strategi Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategi terhadap pemahaman membaca siswa di kelas VIII SMP N 2 Batang Angkola-Tapsel. Ada beberapa masalah dalam penelitian ini : 1). Pemahaman membaca siswa rendah, 2). Siswa tidak dapat menyatukan informasi yang telah dibaca dengan pengetahuan mereka sebelumnya, 3). Guru menggunakan Strategy yang kurang tepat dalam mengajar pemahaman membaca.

Jenis penelitian ini adalah penelitian eksperimen. Populasi dalam penelitian ini adalah seluruh siswa kelas VIII SMP N 2 Batang Angkola-Tapsel. Total populasi adalah 125 siswa. Lalu, sampel penelitian ini adalah dua kelas, VIII B sebagai kelas eksperimen yang terdiri dari 25 siswa dan VIII D sebagai kelas kontrol yang terdiri dari 25 siswa. Data dikumpulkan melalui pre-test dan post-test. Untuk menganalisa data, peneliti menggunakan rumus t-test.

Berdasarkan perhitungan $t$-test, peneliti menemukan bahwa $t_{\text {hitung }}=10.17$ dan $\mathrm{t}_{\text {table }}=1.67155$. Itu artinya $\mathrm{t}_{\text {hitung }}>\mathrm{t}_{\text {table }}(10.13>1.67155)$. Jadi, peneliti dapat menyimpulkan bahwa Ha diterima dan Ho ditolak. Ada pengaruh yang signifikan dari penggunaan strategi Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategi untuk pemahaman membaca pada siswa kelas VIII SMP N 2 Batang Angkola-Tapsel.


Kata kunci: Reading Comprehension, Predict, Organize, Rehearse, Practice, Evaluate (PORPE).

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## CHAPTER I INTRODUCTION

## A. Background of the Problem

Language is the most important development in human history. The art, science laws, economic system and religions of world could not exist without language. Language is recognized as the most perfect instrument of communication. It is one of the tools of accumulate information of science, technology and others. Trough the language people learn everything about what they want to know. Language is a result of the culture. Since language become a part of human culture it is necessary to maintain and develop it.

English is one of the most language in the world. It was also as a popular language and as an international language. Actually, there a lot of people use it in their daily communication. In Indonesia, English was a foreign language learn at beginning from elementary school until university level and being a compulsory subject in our educational system.

Reading is the language skill beside speaking, listening, and writing. Reading is an activity which can not be separated from human life especially for students, because reading is an activity to take information, ideas and summarizing from the text. The students of course needed information to support their lesson. There is so much knowledge that students can get from reading, by reading they will not be trouble in studying.

In educational institutions, reading is frequently used in all levels such as in primary school, secondary schools and even in university. When someone read a text, she or he would try to understand what the text about. Reading also makes people understand the circumstances around them even themselves. Therefore, reading can be very useful in most of life dimensions. But it not be easy to do, especially for the reader who reads a text in foreign language.

The purpose of reading is not only to say out words, but also the important thing is to comprehend the meaning of the massage from the written text. If a reader reads but does not comprehend the material, he or she only make the word calling. Readers should know the meaning of the words if he or she wants to be successes in reading. It means that the main point of reading process is understanding the meaning by comprehending it.

Comprehension is an important aspect of reading. Reading for comprehension is the essence of reading process. Students' success in reading were evaluated by their ability to understand the content being read. Students could infer information from the text and make integration with the writer.

Reading is very important, moreover for students. They must read for success their study. But so many students have problem in reading. Those problems happened because of many reason. The first, they are lack of vocabulary and seldom to practice in reading. Then, reading activity is so bored and make them lazy if the lesson is reading. Next, the students' reading comprehension is low. With this case, it will effect to their result of reading comprehension.

Reading comprehension is highest process from reading activity. According to H . Douglas Brown reading comprehension is primarily matter of developing appropriate, efficient comprehension strategies. ${ }^{1}$ So, reading comprehension is highest process from reading activity and efficient comprehension strategies.

Next, Kasihani said the goal of reading comprehension is to get information from the text or content of reading. Because of that, the students' really to be train to read with the aim get information about content of reading text. Usually to know if the students' have understood content of reading, the teacher will give question about reading text. ${ }^{2}$ So, the goal of reading comprehension is to get information from the text of reading.

Nowadays in teaching reading usually the teacher orients to the students' English book. Teachers teach the students by asking the students only read the text and answer the question. These activities do not give contribution to the students' reading comprehension. Therefore students cannot comprehend their reading text and be passive in the teaching learning process, and less of motivation from the students in reading text. In this case, most of the students still find difficult to comprehend a reading text. This situation must be overcome by the teacher, teacher should make variations and choose a suitable strategy in the teaching reading in order to make the students interest.

[^0]A strategy will help the students learn and remember information for a long period of time. In reading, people are suggested not only to have their one strategy, which can be different depend on the text genre but also to increase their comprehension that enables them to read a variety of the text. There are some strategies in teaching reading comprehension. They are activating background knowledge, questioning, searching for information, summarizing, organizing graphically.

To help students solve the problems, it needs another strategy more interesting in teaching reading. There are many strategies in teaching reading that can be used to overcome the problem, such as: first P2R (Preview Read Review) is one of strategy that can help the students gain understanding and remember the content of the text, second SQ3R (Survey, Question, Read, Recite, and Review) is one of strategy that can help the students to think about the text what they have read so the students get comprehension when the first time they read the text, and the last PORPE (Predict, Organize, Rehearse, Practice, Evaluate) is one of strategy which is most effective in teaching reading process. According to Simpson in Pajriah's paper, states that PORPE is a study to assist students in learning content material. ${ }^{3}$ PORPE can help students in the process constructing the meaning and build their knowledge . Based on explanation above the researcher interest to choose PORPE as a suitable strategy in teaching reading.

[^1]
## B. Identification of the Problem

Here, the researcher identifies the problem of the research like:

1. The students are lack of vocabulary
2. The students feel the reading activity is so bored and make them lazy
3. The students' reading comprehension is low
4. The teacher should make variations and choose a suitable strategy in the teaching reading in order to make the students interest in reading text.

## C. Limitation of the Problem

Based on the above identifications of the problems, there are some problems involving in this research. In this research, the researcher only focuses on students' reading comprehension and the effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy to students at grade VIII SMP N 2 Batang Angkola-Tapsel. The researcher focuses on narrative text because it is appropriate material for junior high school students to improve their thinking and analysis.

## D. Formulation of the Problem

The problem of the research is formulated as follows:

1. How is students' reading comprehension before learning using Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy at grade VIII SMP N 2 Batang Angkola-Tapsel?
2. How is students' reading comprehension after learning using Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy at grade VIII SMP N 2 Batang Angkola-Tapsel?
3. Is there significant effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy on srudents' reading comprehension at grade VIII SMP N 2 Batang Angkola-Tapsel?

## E. Purpose of the Research

The purpose of the research are :

1. To describe the students' reading comprehension before using Predict, Organize, Rehearse, Practice, Evaluate (PORPE) at grade VIII SMP N 2 Batang Angkola-Tapsel
2. To describe the students' reading comprehension after using Predict, Organize, Rehearse, Practice, Evaluate (PORPE) at grade VIII SMP N 2 Batang Angkola-Tapsel
3. To examine whether the effect whether the effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) to students' reading comprehension is significant or not.

## F. Significances of the Research

The significances of the research are:

1. Headmaster, to develop an encourage English teachers to do the best in teaching English.
2. English Teacher, to overcome the problems in teaching and to add the reference in teaching and learning reading comprehension.
3. Students, to give contribution about the way how to improve their reading comprehension.
4. Researcher, to do related topic of the research.

## G. Definition of Operational Variables

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. 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.
2. PORPE (Predict, Organize, Rehearse, Practice, Evaluate)

PORPE (Predict, Organize, Rehearse, Practice, Evaluation) is a study to assist students in learning content material. Help students in the process constructing the meaning and build their knowledge.

## H. Outline of the Thesis

The research is organize into five chapter. Every chapter is subdivided into subtopics to elaborate to given issues. Chapter one consist 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 identification 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 comprehension, Predict, Organize, Rehearse, Practice, Evaluate (PORPE), the related findings, the conceptual framework and the hypothesis.

Chapter three consists of methodology of the research which is divided into sub chapter, the place and time of the research, the research methodology, the population and sample, the research 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 <br> LITERATUR REVIEW 

## A. Theoretical Description

## 1. PORPE (Predict, Organize, Rehearse, Practice, Evaluation)

a. Definition of PORPE (Predict, Organize, Rehearse, Practice, Evaluation)

PORPE (Predict, Organize, Rehearse, Practice, Evaluation) is one of strategy which is most effective in teaching reading process. This strategy can make students active in learning to get knowledge into application especially reading. PORPE is also one of the most basic ways to facilitate students to get understanding and comprehending in reading activity.

According to Simpson in Pajriah's paper, states that PORPE is a study to assist students in learning content material. ${ }^{1}$ PORPE can help students in the process constructing the meaning and build their knowledge. The students more active in learning process, those automatically train students more active and creative to understand reading material. So, PORPE is a strategy that can help students in the process constructing the meaning and build their knowledge.

[^2]Next, according to Abidin in Efa's paper, states that PORPE is a strategy which operates the cognitive and metacognitive processes that make effective readers engage in understanding material. ${ }^{2}$ By using PORPE strategy, the students are expected to be an effective reader who clarify the purpose of reading, identify the important aspect of massage, focus attention on the major content, monitoring ongoing activities, engage in self-questioning to determine whether goals are being achieved, and take corrective action in understanding.

According to Yosi, PORPE is a strategy active in independent learning for comprehending and studying a text. ${ }^{3}$ These strategies are said to be included in the active learning strategies because in the process of learning, PORPE consist of the active strategies such as an exercise that can be done by students.

Then, according to Sejnest in Harmal's paper, PORPE is a comprehensive strategy system for studying and learning content areas. ${ }^{4}$ In this strategy students encourages to be active readers who can identify the information for a series written passage into a good comprehension. In brief, this strategy makes students active and have motivation in reading

[^3]activity. So, PORPE is a strategy which operates the cognitive and metacognitive processes that make effective readers engage in understanding material.

## b. Procedure of Predict, Organize, Rehearse, Practice, Evaluation (PORPE)

In teaching reading comprehension by using PORPE strategy there are divided to five steps, the five steps of PORPE operationalize the cognitive and metacognitive processes that effective readers engage in to understand and learn content area material.

The steps for PORPE strategy are :
1). The first step is to predict the possible essay questions from the reading. These question should be higher level questions that begin with words like : Explain, Discuss, Criticize, Compare, Contrast. This step is for pair work as to motivate students develop their initial knowledge.
2). The second step is to organize, summarize, and synthesize key points from the chapter into students' words. In this step, it can be for individual or small group discussion. The role of teacher is as a facilitator whenever students need help related to the completion of the work. Teacher is not anymore to be tutor in this step.
3). The third step is to rehearse by reciting aloud information to quiz students memory. This helps students to put this information into
student's long term memory. They can perform in front of the class so the other students can listen to the reciting.
4). The fourth step is students practice by answering the question from step one. With the information students have tried to put into their long term memory through rehearsal.
5). The last step students evaluate by asking students question such as :
a. Do I have enough concrete examples?
b. Is my answer complete, accurate, and appropriate?
c. Is there anything I should study before taking the exam?

This final step helps students to determine students level of confidence in students' knowledge of the information and helps students to asses if students need more time to study of it students have learned the information from the text. ${ }^{5}$

So, the step for PORPE strategy are: First, Predict the possible essay questions from the reading. Second, organize, summarize, and synthesize key points from the chapter into students' words. Third, rehearse by reciting aloud information to quiz students memory. Fourth, practice by answering the question from step one. Fifth, evaluate by asking students question.

[^4]
## c. The advantages of Predict, Organize, Rehearse, Practice, Evaluation (PORPE)

PORPE strategy has many advantages for the students and the teacher in reading process. According to Sejnest in Harmal's paper, PORPE is a comprehensive strategy system for studying and learning content areas. ${ }^{6}$ In this strategy students encourages to be active readers who can identify the information for a series written passage into a good comprehension. In brief, this strategy makes students active and have motivation in reading activity. In addition, according to Vaughn in Harmal's paper, defines that PORPE is an effective strategy to lead students extracting passage, code or symbol into a comprehending meaning. ${ }^{7}$ In brief, the strategy will lead students get the comprehension meaning from what they read from the text.

From the explanation above the researcher concludes PORPE is one of strategy to motivate students in learning reading which is designed effectively to reduce students difficulties in reading. So, by applying this strategy the students can get information and can comprehend the text.

[^5]
## d. Conventional Strategy

Generally, there are two kinds of teaching strategy that can be used in teaching reading comprehension. They the conventional strategy, which refers to strategy that is usually used by teacher at school in which the teacher asks and the students answer, and the alternative technique develop by experts that are considered better than the conventional strategy since they emphasize on students' active participation, so they can increase their learning motivation. ${ }^{8}$ So, conventional strategy is a strategy that is usually used by teacher at school in which the teacher asks and the students answer.

Conventional strategy is the strategy or the way that usually used by teachers to teach the text to students. Then, conventional strategy is the strategy used by the teachers based on mutual agreement in a school. In addition, it uses the traditional way in teaching and learning process. The researcher concluded that conventional strategy is the way that is used by the teachers in teaching a material based on the agreement of the teacher at school.

[^6]There are some procedures of conventional strategy, they are:
1). Every student is given a passage consist of some paragraph
2). Teacher assign the students to read the paragraph
3). Students search the main idea, supporting, orientation, climax and resolution
4). Teachers ask any of students to present and example the main idea, supporting, orientation, climax and resolution.
5). To measure students' comprehension toward the paragraph, at the end of the session, teacher give a quiz on material give. ${ }^{9}$

So, some procedures of conventional strategy are: Every student is given a passage, teacher assign the students to read the paragraph, students search the main idea, teacher ask any students to present, and measure students' comprehension toward the paragraph.

## 2. Reading Comprehension

## a. Definition of Reading

Reading is a fluent process of readers combining information from a text and their own background knowledge to build meaning ${ }^{10}$.

[^7]It is starting step of many things, which build more solid stairs to climb up achieving something big out there. The reader must read with thinking or purpose, because the goal of reading is comprehension.

Reading is regarded as one of English skills that need reader is interpretation from text ${ }^{11}$. It means that, the reading activity builds thinking collaboratively among the reader, the writer, and the text. According to Douglas Brown that Reading is a process negotiating meaning; the reader brings to the text a set of schemata for understanding it, and it is take the product of that interaction ${ }^{12}$. So, reading is activity builds thinking collaboratively among the reader.

Furthermore David Nunan states that Reading is a fluent process of readers combining information from a text and their own background knowledge to build meaning. The goal of reading is comprehension. The reader background knowledge integrates with the text to create the meaning. The text, the reader, fluency, and strategies combined together define the act of reading. ${ }^{13}$ So, reading is the process of readers combining information from a text and their own background knowledge to build meaning

[^8]So, reading is an activity of meaning getting process, in reading the readers must be able to combining their own background knowledge and information from the text to build meaning and readers also must be able be understand ideas, recognizing the relationship and structure among ideas.

## b. Definition Comprehension

Richard states that comprehension is the process by which a person understanding the meaning of written or spoken language clearly. ${ }^{14}$ In addition, comprehension is the ability to understand the meaning from the writer of spoken language. While, according to Oxford's Dictionary comprehension is the power of understand. ${ }^{15}$ So, comprehension understands of written or spoken.

Further David says, comprehension is essential to succeed the reading, for succeeding the comprehending, the reader must use cognitive and Meta cognitive skills. ${ }^{16}$ Thus, can be concluded that comprehension is improving or testing to understand of language (written and spoken) and comprehension is needed on reading and listening. So, comprehension is the ability to understand the meaning from the writer of spoken language.

[^9]
## c. Reading Comprehension

Reading comprehension is the understanding, evaluating, and utilizing and ideas gained through and interaction between reader and author. ${ }^{17}$ Here, the reading comprehension involves mental operations applied by the reader. In other word, reading comprehension is ability of the reader to understand the text and comprehend the meant of the text.

In addition, Jeremy Harmer states : reading comprehension is not stopping for every word, not analyzing everything that the reader or speaker includes in the text. ${ }^{18}$ It means the readers are able to take in a stream of discourse and understand the gist of it without worrying too much about the details, so reading comprehension is the power of understand about reading text.

Next, reading is one of the important skills in learning language besides listening, writing and speaking. The main goal of reading is comprehension. ${ }^{19}$ People can define reading comprehension as the process of simultaneously extracting and constructing meaning through interaction and involvement with written language.

[^10]So, in fact reading without comprehension or understanding is not reading. Many readers can pronounce words fluently but what they have high score in terms reading rate or fluently, but they are not really good readers.

## d. Types of Reading

In reading activity we must understand the types of reading in the world of language as things we know. Because with the increase in our ability to read we will be given the oppurtinity to increase our insight into science.

There are some types of reading, they are:

## 1) Choral Reading

Eventhough choral reading is relatively uncommon in modern language class. This type of reading is still important in improving learner's pronunciation. Working in groups will make language learners feel confident to pronounce words in foreign language accent and practice is really recommends in this method.

## 2) Silent Reading

Silent reading can begin with reading aloud by the teacher. The teacher's reading is a model in accuracy and expressiveness. It is thought that the great amount of interest in reading is secured by a happy combination of reading
aloud by learners, reading aloud by the teacher and silent reading by learners. To check whether the learner understand what they have read, the teacher can test them by giving questions based on the text, by translation or by summarizing the text.
3) Intensive Reading

Intensive reading lesson may proceed as follows:
a) While the books are closed, the students listen to the teacher
b) The new word, phrases, and idiom are written on the board. They are pronounced and used in original sentence
c) The students open their books and the teacher reads the first part of the selection aloud
d) The selection is now read by the class, alternating silent and oral reading
e) The selection may now be summary in their mother tongue or in the foreign language.
4) Extensive Reading

Extensive reading is silent reading but done outside of class. In order for language learners to have fewer
problem in extensive reading, the teacher should explain first difficult passage or new words.

## 5) Supplementary Reading

Supplementary reading is also done out of class. Language learners are free to choosing reading material. Reading material may consist of newspaper, bulletins or magazines in the target language. ${ }^{20}$

So, some types of reading are : Choral reading, silent reading, intensive reading, extensive reading and supplementary reading.

## e. 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. ${ }^{21}$ 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 focus on the importance of background knowledge,

[^11]builds global comprehension. ${ }^{22}$ Top down model happens when someone uses background information to predict the meaning of language they are going to listen or read.

## f. 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. ${ }^{23}$ 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.

[^12]
## g. Assessment of Reading

Assessments require planning and organization. The key lies in identifying the purpose of reading assessment and matching instructional activities to that purpose. ${ }^{24}$ 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 |

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 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

[^13]permitted to exercise judgment when marking the candidate's answer, agreement has already been reached as to the correct answer to each item. ${ }^{26}$ Thus, multiple choice is a test which have one correct answer between four options.

## 3. Narrative Text

a. Definition of Narrative Text

Narrative is any written English next in which the research wants to amuse, entertain people, and to deal with actual or vicarious experience in different way. ${ }^{27}$ It is made to separate an experience past time that problematic, entertain and give moral value to the readers. ${ }^{28}$ A.S Hornby in Oxford Advanced Learner's Dictionary defines: Narrative text is a description of events. ${ }^{29}$ Then, according to David Butt Narrative is to construct a pattern of events with a problematic or unexpected outcome that entertain and instructs the reader or listener. ${ }^{30}$ So, narrative text is an event or moment that has occurred in the past time.

[^14]The basic purpose of narrative is to entertain, i.e. to gain and hold the reader's interest in a story. But narrative may also seek to teach or inform, to embody the writer's reflections on experience, and perhaps most important to nourish and extend the reader's imagination. Similarly Pardiyono says that narrative text has purpose to amuse of entertain and gives good lesson to us and the other people who listen about narrative. ${ }^{31}$ So, the purpose of narrative text is to entertain, i.e. to gain and hold the reader's interest in a story.

There are many types of narrative text. They are typically imaginary but can be factual. They include fairy stories, mysteries, science fiction, choose-your-own-adventure, romance, horror stories, parables, fables and moral tales, myths and legend, and historical narratives. ${ }^{32}$ According to Otong Setiawan Djuharie, the language elements used in writing narrative text are noun, individual participant, past tense, conjunction, action verb and saying verb. ${ }^{33}$ Based on the explanation above, the researcher concludes that narrative text is a text which is aimed to entertain or amuse the reader.

So, narrative text is an event or moment that has occurred in the past time.

[^15]
## 4. Generic Structure of Narrative Text

Narrative text has schematic structure. It such a rule text to gain the writing goal. The structure will be explain in this table.

Table. 1
Generic Structure of Narrative Text

| Text Elements | Content |
| :---: | :---: |
| Orientation | An introduction to the characters and setting of the events/story. |
| Complication (events that lead to climax) | The event each lead to the climax. It explores the conflict in the story and will show the crisis, rising crisis, and climax of the story. The sequences of events may include: <br> - A description of events as they occur: <br> First . . ., Next . . ., Later . . ., After. <br> - Sequences of events particular to each character: <br> While ..., As...,Meanwhile..., When..., <br> One day. |
| Resolution | It shows the situation in which the problems have been resolved: fail or success, and describes the |


|  | ending relating to the main character, e.g. what <br> they look like, sad or happy? |
| :--- | :--- |

## 5. Language Features

There are some language features in narrative text, they are:
1). Certain nouns, pronouns, animals, and certain things in the story, such as maid, stepsisters, housework, etc.
2). Adjectives extending noun phrases, such as long black hair, two read apples, etc.
3).Time connective sand conjunction to make event sequence, such as then, before that, soon, next, etc.
4). Adverbs and adverbial phrases to show location and time of events, such as here, in the mountain, happily ever after, etc.
5). Action verb in past tense : stayed, climbed, jumped, etc
6). Saying verbs indicating utterance such as said, told, promised, and thinking verbs identifying the thought, perception or feeling of the characters in the story, such as thought, understood, felt, seemed, etc.
7). The use of past tense. ${ }^{34}$

[^16]So, researcher concludes the language features of narrative text are to get or find the adjectives extending noun phrases, action verbs in past tense, time connective and conjunctions. It has talked about that comprehension to construct the language to take the information from the text.

## 6. Example of Narrative Text

## The Smartest Parrot

Once upon a time, a man had a wonderful parrot. There was no other parrot like it. The parrot could say every word. The parrot would not say the name of the place where it was born. The name of the place is Catano.

The man felt excited having the smartest parrot but he could not understand why the parrot would not say Catano. The man tried to teach the bird to say Catano however the bird kept not saying the word. At the first, the man was very nice to the bird but then he got very angry. " your stupid bird!" pointed the man to the parrot. " why can't you say the word ? say Catano! Or I will kill you " the man said angrily. Although he tried hard to teach, the parrot would not say it. Then the man got so angry and shouted to the bird over and over;" Say Catano or I'll kill you ". The bird kept not to say the word of Catano. One day, after he had been trying so many times to make the bird say Catano, the man really got very angry. He could not bear it. He picked the parrot and threw it into the chicken house. There were four old chickens for next dinner " you are as stupid as the chickens. Just stay with them" said the man angrily. Then he continued to humble; " you know, I will cut the chicken
for my meal. Next it will be your turn, I will eat you too, stupid parrot". After that he left the chicken house.

The next day, the man came back to the chicken house. He opened the door and he was very surprised. He could not believe what he saw at the chicken house. There were three death chickens on the floor. At the moment, the parrot was standing proudly and screaming at the last old chicken;" Say Catano or I'll hit you".

| The Smartest Parrot |  |
| :--- | :--- |
| Orientation | $\begin{array}{l}\text { Once upon a time, a man had a wonderful } \\ \text { parrot. There was no other parrot like it. The } \\ \text { parrot could say every word. The parrot } \\ \text { would not say the name of the place where it }\end{array}$ |
| climax | $\begin{array}{l}\text { was born. The name of the place is Catano. } \\ \text { parrot but he could not understand why the } \\ \text { parrot would not say Catano. The man tried } \\ \text { to teach the bird to say Catano however the } \\ \text { bird kept not saying the word. At the first, } \\ \text { the man was very nice to the bird but then he }\end{array}$ |
| got very angry. " your stupid bird!" pointed |  |$\}$

$\left.\begin{array}{|l|l|}\hline & \begin{array}{l}\text { the man to the parrot." why can't you say } \\ \text { the word ? say Catano! Or I will kill you " } \\ \text { the man said angrily. Although he tried hard } \\ \text { to teach, the parrot would not say it. Then } \\ \text { the man got so angry and shouted to the bird } \\ \text { over and over," Say Catano or I'll kill you ". } \\ \text { The bird kept not to say the word of Catano. } \\ \text { One day, after he had been trying so many } \\ \text { times to make the bird say Catano, the man } \\ \text { really got very angry. He could not bear it. } \\ \text { He picked the parrot and threw it into the } \\ \text { chicken house. There were four old chickens } \\ \text { for next dinner" you are as stupid as the } \\ \text { chickens. Just stay with them" said the man } \\ \text { angrily. Then he continued to humble; " you } \\ \text { know, I will cut the chicken for my meal. } \\ \text { Next it will be your turn, I will eat you too, } \\ \text { stupid parrot". After that he left the chicken } \\ \text { house. }\end{array} \\ \text { Resolution } \\ \text { chicken house. He opened the door and he }\end{array}\right\}$

| was very surprised. He could not believe |
| :--- | :--- |
| what he saw at the chicken house. There |
| were three death chickens on the floor. At |
| the moment, the parrot was standing proudly |
| and screaming at the last old chicken;" Say |
| Catano or I'll hit you". ${ }^{35}$ |

## 7. Review of Related Findings

There are some related finding in this research ; the first script of Dian Kurniawan, he concluded that had found that PORPE strategy used had significant influence to students' reading comprehension, it was found that for the students who hold positive beliefs, PORPE gave better contribution to reading comprehension than conventional reading technique. There was significant interaction between PORPE strategy and beliefs about language learning in improving the students' reading comprehension. Students beliefs about language learning had contribution

[^17]to the PORPE strategy. ${ }^{36}$ So, PORPE gave better contribution to reading comprehension than conventional reading technique.

The second is Duvis Nava Yunensia, she had done research in SMP 2 Bululawang, Malang. ${ }^{37}$ The research design was experiment. She said that SQ3R (Survey, Question, Read, Recite, and Review) strategy gave effect and hypothesis testing showed that both these variable have the effect and hypothesis alternative was accepted.

The third is Alfan Hadi script, he said students technique did not only give the students an opportunity to work individually, but also work in group with other students. The result of the treatment was students reading comprehension in narrative text increase. It mean PORPE suitable to improve students reading comprehension, especially in narrative text for eleventh grade students. ${ }^{38}$

The fourth, Muhammad Romli, he had done research in State Islamic University of Syarif Hidayatullah Jakarta. He also said that story mapping is good that has been applied in the classroom. Based on the data, the category of summarizing in English text in teaching reading

[^18]comprehension through story mapping to the second grade of MTs Tarbiyah Falah Bogor is good category. It can be ported by the mean score result of the best. That is $82.57 \%$. $^{39}$

The fifth, Khoirma Aliyanti, the concluding of her research, where the mean score of experimental class is 82.71 and control class is 65.61 with $\mathrm{t}_{\text {count }}$ higher that $\mathrm{t}_{\text {table }}(11.376>2.04227)$. So, the implication of PORPE is better achievement in teaching reading comprehension than conventional strategy. ${ }^{40}$ So, the implication of PORPE is better achievement in teaching reading comprehension than conventional strategy.

Due to the previous research, the researcher concluded that reading strategies help the students in reading comprehension and Predict, Organize, Rehearse, Practice, Evaluate (PORPE) has an effect on students' learning. Therefore, the researcher wants in another location with different problem.

[^19]
## H. Conceptual Framework

Predict, Organize, Rehearse, Practice, Evaluation (PORPE) is one of strategy which is most effective in teaching reading process. . This strategy can make students active in learning to get knowledge into application especially reading. PORPE is also one of the most basic ways to facilitate students to get understanding and comprehending in reading activity.

According to Simpson in Pajriah's paper, states that PORPE is a study to assist students in learning content material. ${ }^{41}$ Help students in the process constructing the meaning and build their knowledge. The students more active in learning process, those automatically train students more active and creative to understand reading.

The successful of Reading Comprehension depend on many factors. One of them is how the teacher reading to the students. The suitable method is very important to teach reading. reading comprehension is the understanding, evaluating, and utilizing and ideas gained through and interaction between reader and author. The reading can enrich their knowledge and take the knowledge from text to their mind directly. The research describes the conceptual framework as follow:

[^20]

## I. Hypothesis

The hypothesis of this research are:

Ha : There is significant effect of PORPE Strategy to students' reading comprehension at grade VIII SMPN 2 Batang Angkola.

Ho : There is not significant effect of PORPE Strategy to students' reading comprehension at grade VIII SMPN 2 Batang Angkola.

## CHAPTER III

## RESEARCH METHODOLOGY

## A. Place and Time of the Research

The location of the research is SMP Negeri 2 Batang Angkola-Tapsel. It is located at Jl. Mandailing Km 17,3. This subject of research is at VIII grade students of SMP Negeri 2 Batang Angkola-Tapsel. The time of the research have done from $09^{\text {th }}$ April 2019 up to $15^{\text {th }}$ November 2019

## B. Research Design

Researcher choose experimental research. 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.

## C. Population and Sample

## 1. Population

In this research, all of students of SMP Negeri 2 Batang Angkola-Tapsel at grade VIII grade is population. Population of research is the at VIII grade students of SMP Negeri 2 Batang Angkola-Tapsel and total population are 125 students. The total of the VIII grade can be considered as follow:

## Table 5

The Population of the VIII grade students

| No | Class | Number of Students |
| :--- | :---: | :---: |
| 1 | VIII A | 25 |
| 2 | VIII B | 25 |
| 3 | VIII C | 25 |
| 4 | VIII D | 25 |
| 5 | VIII E | 25 |

## 2. Sample

Sample is the part of population that is chosen as respondent of the research. The researcher needed two of classes to act the research sample. They are experimental class and control class. So, the researcher takes two classes as sample.

The population in this research is VIII grade. So, the researcher choose two classes as sample. The researcher chose VIII B consist of 25 students and VIII D consist of 25 students. So, the total samples of the research are 50 students. They are experimental class and control class.

## Table 6

The Sample of Students SMP Negeri 2 Batang Angkola-Tapsel

| No | Class | Number |
| :--- | :--- | :--- |
| 1 | Experimental Class VIII B | 25 |
| 2 | Control Class VIII D | 25 |
| Total |  | 50 |

## D. Instrumentation

Instrument of the research is a tool of facility is used by the Researcher in collecting data. So, the process is easier and better with the more careful, complete and systematic. This research used test. So, in this research, the Researcher give the pre test and post test to experimental and control class.

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 7

## Indicator of Reading Comprehension Test (pre-test)

| Indicator | Items | No. Items | Score | $\begin{array}{l}\text { Total } \\ \text { score }\end{array}$ |
| :--- | :--- | :--- | :--- | :--- |
| Identifying topic sentence | 1 | 2 | 5 | 20 |
| $\begin{array}{l}\text { Identifying specific information } \\ \text { of the text }\end{array}$ | 10 | $3,4,7,8,11,12$, | 5 | 20 |
| $\begin{array}{l}\text { Identifying main idea of the } \\ \text { text }\end{array}$ | 1 | 6 | $13,14,15,17$ |  |$]$| (he |
| :--- |

## Table 8

Indicator of Reading Comprehension Test (post-test)

| Indicator | Items | No. Items | Score | Total |
| :--- | :--- | :--- | :--- | :--- |
| score |  |  |  |  |$|$| Identifying topic sentence | 1 | 1 | 5 | 20 |
| :--- | :--- | :--- | :--- | :--- |
| Identifying specific information <br> of the text | 8 | $2,3,7,8,11,13$, | 5 | 20 |
| Identifying main idea of the <br> text | 1 | 16 | 5 | 20 |
| Identifying meaning of word | 8 | $4,9,10,12,6$, | 5 | 20 |
| Identifying conclusion of the | 2 | 5,20 | $5,15,18$ |  |
| text |  |  | 20 |  |
| Total | 20 |  |  | 100 |

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. Where 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 $r_{\mathrm{t}}$ in $5 \%$ significant: 0,388 and $1 \%$ significant: 0,496 .

So, if $\mathrm{r}_{\text {count }}>\mathrm{t}_{\text {table }}$ the test is classified valid. To get the validity of the test, researcher uses the formula of product moment:

$$
\mathrm{R}_{\mathrm{pbi}}=\frac{M p-M t}{S D t} \sqrt{\underline{p q}}
$$

Where:
$\mathrm{r}_{\mathrm{pbi}}$ : coefisien item validity
$\mathrm{M}_{\mathrm{p}}$ : mean score of the total score
$\mathrm{SD}_{\mathrm{t}}$ : 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. To obtain the reliability of the test; the writer uses formula K-R 20:

$$
\mathrm{R}_{11}=\left(\frac{n}{n-1}\right)\left(\frac{s t 2-\sum p q}{s t 2}\right)
$$

Where:
$\mathrm{R}_{11}$ : Reliability of the instrument
N : Total of question
$\mathrm{St}^{2} \quad$ : 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 $r_{\text {count }}>r_{\text {table }}$.

## E. Procedures of The Research

In completing the data, the next step of this research was collecting the data. The function of data collecting was to determine the result of the researcher. In collecting data the researcher used some steps. They are:
a. Pre test

1) The researcher prepared the test 20 items
2) The researcher distributed the paper to the students in experimental class and control class.
3) The researcher explained what students to do
4) Giving time
5) The students answer the questions
6) The researcher collected the paper from the students
7) The researcher checked the answer of students and found mean score of control class and experimental class.
b. Treatment

The experimental group and the control group were given same material, which consist of communication aspects that take by the teacher is the different ways. The experimental class are given in treatment by using Predict, Organize ,Rehearse, Practice, Evaluate (PORPE) and control class learn reading without treatment like usually 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. The researcher has some procedures:

1) The researcher prepared the test 20 items
2) The researcher distributed the paper to the students in experimental class and control class.
3) The researcher explained what students to do
4) Giving time
5) The students answer the questions
6) The researcher collected the paper from the students
7) The researcher checked the answer of students and found mean score of control class and experimental class.

## F. 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:

$$
T t=\frac{M_{1}-M_{2}}{\sqrt{\left(\frac{\Sigma X_{1}+\Sigma X_{2}^{2}}{n_{1}+n_{2}-2}\right)\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}}
$$

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
$\mathrm{X}_{2}{ }^{2}$ : Deviation of the control class
$\mathrm{n}_{1} \quad$ : Number of experiment class
$\mathrm{n}_{2} \quad$ :Number of control class
if $t$-test is higher than $t_{\text {table }}$, the researcher can conclude that ha is accepted and ho is rejected . it means that there is significant effect of using Predict, Organize ,Rehearse, Practice, Evaluate (PORPE) strategy on students' reading comprehension. If $\mathrm{t}_{\text {-test }}$ is lower that $\mathrm{t}_{\text {table }}$ the writer can conclude that ha is rejected and ho is accepted. It means that there is no significant effect without using Predict, Organize ,Rehearse, Practice, Evaluate (PORPE) strategy on students' reading comprehension in narrative text at grade VIII SMP N 2 BATANG ANGKOLA- TAPSEL.

Before the researcher analysis the data using statistical parametric, the data should be tested to know homogeneity variance and the normal distribution data. The homogeny varience is analyzed by using F formula.
$\mathrm{F}=\frac{\text { The biggest variant }}{\text { The smallest variant }}$
The normal distribution data is analyzed by using Chi Square Formula.

$$
\mathrm{x}^{2}=\sum\left(\frac{f o-f h}{f h}\right)
$$

Where:

$$
\begin{aligned}
& x^{2}=\text { value of chi-square } \\
& f_{0}=\text { observed frequency } \\
& f_{h}=\text { expected frequency }
\end{aligned}
$$

## CHAPTER IV

## DATA ANALYSIS

As mentioned in earlier chapter, in order to find out the effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy on students' reading comprehension, the researcher had calculated the data using pre-test and posttest. 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 Predict, Organize, Rehearse, Practice, Evaluate (PORPE)
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 6
The Score of Experimental Classin Pre-test

| Total | 1255 |
| :---: | :---: |
| Highest score | 75 |
| Lowest score | 30 |
| Mean | 43.64 |
| Median | 47.83 |
| Modus | 43.73 |
| Range | 45 |
| Interval | 7 |
| Standard deviation | 13.65 |
| Variants | 20.30 |

Based on the above table the total score of experimental class in pre-test was 1255 , mean was 43.64 , standard deviation was 13.65 , variants was20.30, median was 47.83 , range was 45 , modus was 43.73, interval was 7. The researcher got the highest score was 75 and the lowest score was 30 . 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 7
Frequency Distribution of Students' Score

| No | Interval | Frequency | Percentages |
| :---: | :---: | :---: | :---: |
| 1 | $30-36$ | 5 | $20 \%$ |
| 2 | $37-43$ | 4 | $18 \%$ |
| 3 | $44-50$ | 6 | $21 \%$ |
| 4 | $51-57$ | 2 | $7 \%$ |
| 5 | $58-64$ | 2 | $7 \%$ |
| 6 | $65-71$ | 4 | $18 \%$ |
| 7 | $72-78$ | 2 | $7 \%$ |
| $i=7$ |  |  | 25 |

From the table above, the students' score in class interval between 30 - 36was 5 students ( $20 \%$ ), class interval between 37 43was 4 students ( $18 \%$ ), class interval between $44-50$ was 6 students (21\%), class interval between $51-57$ was 2 students (7\%), class interval between $58-64$ was 2 students (7\%), class interval between $58-64$ was 2 students (7\%) ,class interval between $65-71$ was 4 students ( $18 \%$ ).and the last class interval between $72-78$ was 2 students (7\%).

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 30-36was 5 students and highest interval $72-78$ was only 2 students. Histogram also shown that the highest frequency in interval $44-50$ was 6 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 8
The Score of Control Classin Pre-test

| Total | 905 |
| :---: | :---: |
| Highest score | 65 |
| Lowest score | 15 |
| Mean | 46.34 |
| Median | 40.5 |
| Modus | 44.9 |
| Range | 50 |


| Interval | 8 |
| :---: | :---: |
| Standard deviation | 13.76 |
| Variants | 24.64 |

Based on the above table the total score of control class in pretest was 905 , mean was 46.34 , standard deviation was 13.76 , variants was24.64, median was 40.5 , range was 50 , modus was 44.9 , 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 9
Frequency Distribution of Students' Score

| No | Interval | Frequency | Percentages |
| :---: | :---: | :---: | :---: |
| 1 | $15-22$ | 4 | $14 \%$ |
| 2 | $23-30$ | 5 | $18 \%$ |
| 3 | $31-38$ | 2 | $7 \%$ |
| 4 | $39-46$ | 6 | $21 \%$ |
| 5 | $47-54$ | 5 | $18 \%$ |
| 6 | $55-62$ | 2 | $7 \%$ |
| 7 | $63-70$ | 1 | $4 \%$ |
|  | $i=8$ | 25 | $100 \%$ |

From the table above, the students' score in class interval between 15 - 22 was 4 students ( $14 \%$ ), class interval between $23-30$ was 5 students ( $18 \%$ ), class interval between $31-38$ was 2 students ( $7 \%$ ), class interval between $39-46$ was 6 students $21 \%$ ), class interval between 47 - 54 was 5 students (18\%), class interval between
$55-62$ was 2 students ( $7 \%$ ). and the last class interval between $63-$ 70 was 1 students (4\%).

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

Figure 4: Data Description Pre test of Control Class


Score

From the histogram of students' score of control class in pre test shown that the lowest interval $15-22$ was 4students and highest interval $63-70$ was only 1 student. Histogram also shown that the highest frequency in interval 39 - 46 was 6 students.

## 2. The Description of Data After Using PORPE

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

Table 10 The Score of Experimental Class in Post-test

| Total | 2025 |
| :---: | :---: |
| Highest score | 95 |
| Lowest score | 65 |
| Mean | 91.8 |
| Median | 84.81 |
| Modus | 86.7 |
| Range | 30 |
| Interval | 5 |
| Standard deviation | 10.02 |
| Variants | 71.87 |

Based on the above table the total score of experiment class in post-test was 2025 mean was 91.8 standard deviation was 10.02 , variants was 71.87 , median was 84.81 , range was 30 , modus was 867 , interval was 5 . The researcher got the highest score was 95 and the lowest score was 65 . It can be seen on appendix 20 and 21.

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

Table 11
Frequency Distribution of Students' Score

| No | Interval | Frequency | Percentages |
| :---: | :---: | :---: | :---: |
| 1 | $65-69$ | 2 | $7 \%$ |
| 2 | $70-74$ | 3 | $11 \%$ |
| 3 | $75-79$ | 3 | $11 \%$ |
| 4 | $80-84$ | 4 | $14 \%$ |
| 5 | $85-89$ | 8 | $28 \%$ |
| 6 | $90-94$ | 3 | $11 \%$ |


| 7 | $95-99$ | 2 | $7 \%$ |
| :---: | :---: | :---: | :---: |
| $i=5$ |  | 25 | $100 \%$ |

From the table above, the students' score in class interval between $65-69$ was 2 students ( $7 \%$ ), class interval between $70-74$ was 3 students (9\%), class interval between $75-79$ was 3 students ( $11 \%$ ), class interval between $80-84$ was 4 students ( $14 \%$ ), class interval between $85-89$ was 8 students ( $28 \%$ ), class interval between $90-$ 94was 3 students ( $9 \%$ ), and the last class interval between $95-99$ was 2 students (7\%)

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

Table 12
The Score of Control class in Post-test

| Total | 1545 |
| :--- | :---: |
| Highest score | 80 |
| Lowest score | 40 |
| Mean | 69.84 |
| Median | 64.76 |
| Modus | 66.5 |
| Range | 35 |
| Interval | 6 |
| Standard deviation | 26.76 |
| Variants | 26.83 |

Based on the above table the total score of control class in posttest was 1545 , mean was 69.84 , standard deviation was 26.76 , variants was 26.83 , median was 64.76 , range was 35 , modus was 66.5 , interval was 6 . The researcher got the highest score was 80 and the lowest score was 40 . It can be seen on appendix 20 and 21.

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

Table 13

## Frequency Distribution of Students' Score

| No | Interval | Frequency | Percentages |
| :---: | :---: | :---: | :---: |
| 1 | $40-45$ | 3 | $11 \%$ |
| 2 | $46-51$ | 2 | $7 \%$ |
| 3 | $52-57$ | 3 | $11 \%$ |
| 4 | $58-63$ | 3 | $11 \%$ |
| 5 | $64-69$ | 7 | $28 \%$ |
| 6 | $70-74$ | 3 | $11 \%$ |
| 7 | $75-80$ | 4 | $14 \%$ |
| $i=6$ |  | 25 | $100 \%$ |

From the table above, the students' score in class interval between $40-45$ was 3 students ( $11 \%$ ), class interval between 46 51was 2students (7\%), class interval between52-57was 3 students (7\%), class interval between 58 - 63was 3 students (7\%), class interval between $64-69$ was 7 students ( $28 \%$ ), interval between $70-$ 74 was 3 students ( $11 \%$ ), and the last class interval between 75 80was 4 students ( $14 \%$ ).

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 control class in post test shown that the lowest interval $40-45$ was 3 students and highest interval 75 - 80 was 4 students. Histogram also shown that the highest frequency in interval $64-69$ was 7 students.

## 3. The Comparative Result Between Pre Test and Post Test

## a. Comparative Score of Pre-Test and Post-Test in Experimental

## Class

The comparative score between pre test and post test of experimental class can be seen in the following table:

Table 14
The comparative Data of Experimental Class in pre test and
post test

| Description | Pre-Test | Post-Test |
| :---: | :---: | :---: |
| Total | 1255 | 2025 |
| Highest Score | 75 | 95 |
| Lowest Score | 30 | 65 |
| Mean | 43.64 | 91.8 |
| Median | 47.48 | 84.81 |
| Modus | 43.73 | 86.7 |
| Range | 45 | 30 |
| Interval | 7 | 5 |
| Standard Deviation | 13.65 | 10.02 |
| Variants | 20.30 | 71.87 |

Based on students' answers in experimental pre test and post test, the researcher has calculated the students' score and most of students both of classes were low in reading. Experimental class consisted of 25 students (VIII B). The lowest score in pre test was 30 whereas the highest score was 70 and the lowest score in post test was 65 whereas the highest score was 95 .

## b. Comparative Score of Pre-Test and Post-Test in Control Class

The comparative score between pre test and post test of control class can be seen in the following table:

## Table 15

The comparative Data of Control Class in pre test and post test

| Description | Pre-Test | Post-Test |
| :---: | :---: | :---: |
| Total | 905 | 1545 |
| Highest Score | 65 | 80 |
| Lowest Score | 15 | 40 |
| Mean | 46.34 | 69.84 |
| Median | 40.5 | 64.76 |
| Modus | 44.9 | 66.5 |
| Range | 50 | 35 |
| Interval | 8 | 6 |
| Standard Deviation | 13.76 | 26.76 |
| Variants | 24.64 | 26.83 |

Based on students' answers in control class pre test and post test, the researcher has calculated the students' score and most of students both of classes were low in reading. Experimental class consisted of 25 students (VIII D). The lowest score in pre test was 15 whereas the highest score was 65 and the lowest score in post test was 40 whereas the highest score was 80 .

## B. Data Analysis

## 1. Requirement Test

## a. Normality and Homogeneity Pre-Test

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

## Test

Table 14
Normality and Homogeneity in Pre-Test

| Class | Normality <br> Test |  | Homogeneity <br> Test |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\mathrm{x}_{\text {count }}$ | $\mathrm{x}_{\text {table }}$ | $\mathrm{f}_{\text {count }}$ | $\mathrm{f}_{\text {table }}$ |
| Experiment Class | 9.93 | 11.070 |  | $1.21<4.26$ |
| Control Class | 3.73 | 11.070 |  |  |

Based on the above table researcher calculation, the score of experimental class $\mathrm{Lo}=9.93<\mathrm{Lt}=11.070$ with $\mathrm{n}=25$ and control class $\mathrm{Lo}=3.73<\mathrm{Lt}=11.070$ with $\mathrm{n}=25$, and real level $\alpha 0.05$. Cause $\mathrm{Lo}<\mathrm{Lt}$ in the both class. $\mathrm{So}, \mathrm{H}_{\mathrm{a}}$ was accepted. It means that experimental class andcontrol class were distributed normal. It can be seen in appendix 16 and 17.

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

 TestThe coefficient of $\mathrm{F}_{\text {count }}=1.21$ was compared with $\mathrm{F}_{\text {table }}$. Where $\mathrm{F}_{\text {table }}$ was determined at real $\alpha 0.05$, and the different numerator $\mathrm{dk}=\mathrm{n}-1=25-1=24$ and denominator $\mathrm{dk} \mathrm{n}-1=25-1=$ 24. So, by using the list of critical value at F distribution is got $\mathrm{F}_{0.05}$ $=4.26$. It showed that $\mathrm{F}_{\text {count }} 1.21<\mathrm{F}_{\text {table }} 4.26$. So, the researcher concluded that the variant from the data of the Students' Reading comprehension at SMP Negeri 2BatangAngkola - Tapselby 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-

 TestTable 15
Normality and Homogeneity in Post-Test

| Class | Normality <br> Test |  | Homogeneity <br> Test |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\mathrm{x}_{\text {count }}$ | $\mathrm{x}_{\text {table }}$ | $\mathrm{f}_{\text {count }}$ | $\mathrm{f}_{\text {table }}$ |
| ExperimentalClass | -14.8 | 11.070 | $2.67<4.26$ |  |
| Control Class | 5.05 | 11.070 |  |  |

Based on the table above researcher calculation, the score of experiment class Lo $=-14.8<\mathrm{Lt}=11.070$ with $\mathrm{n}=25$ and control class $\mathrm{Lo}=5.05<\mathrm{Lt}=11.070$ with $\mathrm{n}=25$, and real level
$\alpha 0.05$. Cause $\mathrm{Lo}<\mathrm{Lt}$ in the both class. So, $\mathrm{H}_{\mathrm{a}}$ was accepted. Itmeans that experimental class and Control class were distributed normal. It can be seen in appendix 20 and 21.
2) Homogeneity of Experimental Class and Control class in Posttest

The coefficient of $\mathrm{F}_{\text {count }}=2.67$ was compared with $\mathrm{F}_{\text {table }}$. Where $\mathrm{F}_{\text {table }}$ was determined at real $\alpha 0.05$, and the different numerator $\mathrm{dk}=\mathrm{n}-1=25-1=24$ and denominator $\mathrm{dk} \mathrm{n}-1=25-1=$ 24. So, by using the list of critical value at F distribution is got $\mathrm{F}_{0.05}=4.26$. It showed that $\mathrm{F}_{\text {count }} 2.67<\mathrm{F}_{\text {table }} 4.26$. So, the researcher concluded that the variant from the data of the Students' Reading comprehension at SMP Negeri 2BatangAngkola- Tapselby experimental class and Control class was homogenous. The calculation can be seen on the appendix 21 .

## 2. Hypothesis Test

After calculating the data of post-test, researcher found that posttest 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 $\left(\mathrm{H}_{\mathrm{a}}\right)$ of the research was "There isthe significant effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategyon students' reading comprehensionat grade VIII students of SMP Negeri 2 BatangAngkolaTapsel". Hyphotesis null (Ho) of the research was "There is no
significant effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategyon students' reading comprehensionat grade VIII students of SMP Negeri 2 BatangAngkola- Tapsel". Ha is accepted if $\mathrm{t}_{\text {count }}$ is higher than $\mathrm{t}_{\text {table }}$. In this case, the researcher found that $\mathrm{t}_{\text {count }}>\mathrm{t}_{\text {table }}$ which means that there was the significant effect ofPredict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategyon students' reading comprehensionat grade VIII students of SMP Negeri 2 BatangAngkolaTapsel. The calculation can be seen on the appendix 23.

## Table16

Result of T-test from the Both Averages

| Pre-test | Post-test |  |  |
| :--- | :--- | :--- | :--- |
| $\mathrm{t}_{\text {count }}$ | $\mathrm{t}_{\text {table }}$ | $\mathrm{t}_{\text {count }}$ | $\mathrm{t}_{\text {table }}$ |
| -8.16 | 1.67155 | 10.17 | 1.67155 |

$\mathrm{H}_{\mathrm{a}}: \mu_{1}>\mu_{2}$
Where:
$\mathrm{H}_{\mathrm{a}}: \mu_{1}>\mu_{2}$ "There was the significant effectofPredict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategyon students' reading comprehensionat grade VIII students of SMP Negeri 2 BatangAngkolaTapsel".

Based on researcher calculation, researcher found that $t_{\text {count }} 10.17$ while $\mathrm{t}_{\text {table }} 1.67155$ with opportunity $(1-\alpha)=1-5 \%=95 \%$ anddk $=n_{1}+n_{2}-2=$ $25+25-2=48$. Cause $\mathrm{t}_{\text {count }}>\mathrm{t}_{\text {table }}(10.17>1.67155)$, it means that hypothesis $\mathrm{H}_{\mathrm{a}}$ was accepted and $\mathrm{H}_{0}$ was rejected. So, there was the significant effect ofPredict, Organize, Rehearse, Practice, Evaluate
(PORPE) Strategy on students' reading comprehensionat grade VIII students of SMP Negeri 2 BatangAngkola- Tapsel".

## C. Discussion

Based on related findings, the researcher discussed the result of this research and compared with other research result. The related findings were the description about the effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) strategy on students' reading comprehensionat grade VIII students of SMP Negeri 2 Batang Angkola- Tapsel. The researcher discussed the result of this research and compared with the related findings. From the review of related findings, the researcher also found the similar result as the previous research.

First, a research by Dian Kurniawan, he concluded that there is the effect of using PORPE strategy toward reading comprehension with $t_{\text {count }}$ was higher than $\mathrm{t}_{\text {table }}(9.461>2.02) .{ }^{1}$ this research has found proven previous studies and support the theory from Simpson that PORPE strategy can help students in reading comprehension.

Second, Alfan Hadi said in his research that the use of PORPE strategy shows a significant difference on students' reading achievement with the result shows that students' reading ability in the post test is 10.18 higher

[^21]than 3.01 is the post test. ${ }^{2}$ This research also support the previous research and support the theory.

Third, Dwi Feriwijayanti, concluded the result of her research shows that there is an improvement of the students' reading comprehension using PORPE method. This research also has found proven previous studies and support the theory from Simpson that PORPE strategy is one of strategy which is most effective in teaching reading and can improve students' reading comprehension.

From the above explanation, there was the increasing from the pre-test score to post-test score after using thete strategy among the related findings. Dian Kurniawan 9.461, Alfan Hadi 10.18, and Dwi Feriwijayanti got the increasing 6.48. Meanwhile the researcher got the increasing was 91.8.

Based on the result, the researcher has got the effect of PORPE strategy on students' reading comprehension.,Dian Kurniawan found that $\mathrm{t}_{\text {count }}=9.461>\mathrm{t}_{\text {table }}=2.02$. The researcher also found that $\mathrm{t}_{\text {count }}$ is higher than $\mathrm{t}_{\text {table }}$ where $\mathrm{t}_{\text {count }}$ was 10.17 and $\mathrm{t}_{\text {table }}$ was $1.67155(10.17>1.67155)$.It can be seen among the researches that the using of PORPE strategy gave the effect to students' reading comprehension especially at grade VIII Students of SMP Negeri 2BatangAngkola-Tapsel. It means the theory has been proved where the students able to comprehend the reading material. Therefore, PORPE strategy 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

[^22]PORPE strategy 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 were not serious in answering the pre-test and post-test. Some of them still were cheating. It made the answer of the test was not pure because they did not do it by themselves.
2. The students were noisy while the learning process. They were not concentrating in following the learning process. Some of them talked to their friends and some of them did something outside the teacher's rule.
3. The learning implementation is not effective because of the limited time.

## 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 VIII SMP Negeri 2 Batang Angkola- Tapsel before using Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy were still low. It can be seen from the students' mean score of pre-test was 43.64 in experimental class and 46.34 in control class.
2. The students' ability of the grade VIII students at SMP Negeri 2 Batang Angkola- Tapsel in reading comprehension by using Predict, Organize, Rehearse, Practice, Evaluate (PORPE) Strategy had higher score. It can be seen from the students' score of post-test, the higher score of post-test using Predict, Organize, Rehearse, Practice, Evaluate (PORPE) (experiment class) is 95 and the lowest score is 65 .
3. It is found that $\mathrm{t}_{\text {count }}$ was higher than $\mathrm{t}_{\text {table }} 10.17>1.671$ which means $\mathrm{H}_{\mathrm{a}}$ was accepted. Hence, there was significant effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) on students reading comprehension at grade VIII SMP Negeri 2 Batang Angkola- Tapsel

## 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 Predict, Organize, Rehearse, Practice, Evaluate (PORPE) strategy in teaching reading especially in narrative text. This research and others proved that Predict, Organize, Rehearse, Practice, Evaluate (PORPE) strategy was effective to be applied in classroom.
2. For the students, it is hoped to use Predict, Organize, Rehearse, Practice, Evaluate (PORPE) strategy 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 strategy so that the university students who will become teachers can apply this strategy while they are teaching reading narrative text.

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## CURRICULUM VITAE

## A. Identity

| Name | $:$ Tuti Alawiyah Tanjung |
| :--- | :--- |
| NIM | $: 15$ 203 00065 |
| Place and Birthday | $:$ Mampang, September 27 |
| th, 1997 |  |
| Gender | $:$ Female |
| Religion | : Islam |
| Address | $:$ Kotapinang, Kab. Labuhanbatu Selatan |

## B. Parent

1. Father's name : Lukman Tanjung
2. Mother's name : Siti Raham Hasibuan

## C. Educational Background

1. Elementary School : SD N 118273 Mampang
2. Junior High School : SMP N 1 Kotapinang
3. Senior High School : SMA N 2 Mampang
4. College : IAIN Padangsidimpuan

## Appendix 1

## Experimental Class

RENCANA PELAKSANAAN PEMBELAJARAN
(RPP)
Sekolah
: SMP NEGERI 2 BATANG ANGKOLA

Mata Pelajaran : Bahasa Inggris
Kelas/Semester : VIII/Genap
Alokasi Waktu : $2 \times 45$ Menit

## A. Kompetensi Inti

- KI 1 dan KI 2 : Menghayati dan mengamalkan ajaran agama yang dianutnya. Menghayati dan mengamalkan disiplin, tanggungjawab, peduli (toleransi, gotong royong), santun, percaya diri, dalam berinteraksi secara efektif dengan lingkungan sosial dan alam dalam jangkauan pergaulan dan keberadaannya.
- KI 3 : Memahami pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata.
- KI 4: Mencoba, mengolah, dan menyaji dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori.


## B. Kompetensi Dasar dan Indikator Pencapaian Kompetensi

1. Kompetensi Dasar: - Mampu memahami text yang sedang dipelajari dengan benar
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 : Predict, Organize, Rehearse, Practice, Evaluate (PORPE)

## F. Media Pembelajaran

1. Media

- Worksheet atau lembar kerja (siswa)
- Buku paket


## 2. Alat/Bahan

- Spidol, papan tulis
G. Sumber Belajar : Buku yang berkaitan, Internet


## H. Langkah-Langkah Pembelajaran

| 1 | Pertemuan Ke-1 (2 x 45 Menit) |
| :---: | :---: |
| Kegiatan Pendahuluan (10 Menit) |  |
| Guru : |  |
| Orientasi |  |
| $\bullet$ | Melakukan pembukaan dengan salam pembuka, memanjatkan syukur kepada Tuhan YME dan berdoa untuk memulai pembelajaran |
| $\bullet$ | Memeriksa kehadiran peserta didik sebagai sikap disiplin |
| $\bullet$ | Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran. |
| $\bullet$ | Memperkenalkan diri pada siswa dan menyampaikan maksud kedatangan ke dalam kelas |
| Motivasi |  |
| $\bullet$ | Memberikan gambaran tentang manfaat mempelajari pelajaran yang akan dipelajari dalam kehidupan sehari-hari. |
| Pemberian Acuan |  |
| $\bullet$ | Memberitahukan materi pelajaran yang akan dibahas pada pertemuan saat itu. |
| $\bullet$ | Memberitahukan tentang kompetensi inti, kompetensi dasar, indikator, pada pertemuan yang berlangsung |
| $\bullet$ | 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. <br> - Guru menjelaskan apa isi yang terkandung dalam text <br> - Guru menulis komponen dari PORPE pada papan tulis <br> - Siswa bekerja sendiri atau tidak berkelompok <br> - Guru memberikan siswa lembar kerja dan meminta siswa untuk menjawab lembar kerja tersebut <br> - Guru membantu dan memandu siswa menjawab lembar kerja dengan menggunakan PORPE satu per satu |
| 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. |  |
| - Mengum | ulkan lembar kerja yang telah dikerjakan |


| Guru : |  |
| :---: | :---: |
| $\bullet$ | Meminta siswa untuk mengulang dan mempraktekan PORPE di rumah agar lebih memudahkan siswa dalam pembelajaran berikutnya |
| $\bullet$ | Menutup kelas atau mengakhiri pembelajaran dengan salam |
| 2 | Pertemuan Ke-2 (2 x 45 Menit) |
| Kegiatan Pendahuluan (10 Menit) |  |
| Guru : |  |
| Orientasi |  |
| $\bullet$ | Melakukan pembukaan dengan salam pembuka, memanjatkan syukur kepada Tuhan YME dan berdoa untuk memulai pembelajaran |
| $\bullet$ | Memeriksa kehadiran peserta didik sebagai sikap disiplin |
| $\bullet$ | Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran. |
| Aperpepsi |  |
| $\bullet$ | Mengaitkan materi/tema/kegiatan pembelajaran yang akan dilakukan dengan pengalaman peserta didik dengan materi/tema/kegiatan sebelumnya |
| $\bullet$ | Mengingatkan kembali materi prasyarat dengan bertanya. |
| Motivasi |  |
| $\bullet$ | Memberikan gambaran tentang manfaat mempelajari pelajaran yang akan dipelajari dalam kehidupan sehari-hari. |
| Pem | berian Acuan |


| $\bullet$ | 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 |  |  |
|  | imulation <br> timullasi/ <br> mberian <br> ngsangan) | - 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. <br> - Guru menjelaskan apa isi yang terkandung dalam text <br> - Guru menulis komponen dari PORPE pada papan tulis <br> - Siswa bekerja sendiri atau tidak berkelompok <br> - Guru memberikan siswa lembar kerja dan meminta siswa untuk menjawab lembar kerja tersebut <br> - Guru membantu dan memandu siswa menjawab lembar kerja dengan menggunakan PORPE satu per satu |
| 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 |  |  |


|  | atan Penutup (10 Menit) |
| :---: | :---: |
| Peserta didik : |  |
| $\bullet$ | Membuat resume (CREATIVITY) dengan bimbingan guru tentang point-point penting yang muncul dalam kegiatan pembelajaran yang baru dilakukan. |
| Guru : |  |
| $\bullet$ | Peserta didik yang selesai mengerjakan tugas <br> projek/produk/portofolio/unjuk kerja dengan benar diberi penghargaan |
| $\bullet$ | Menyimpulkan pembelajaran dari pertemuan pertama dan kedua |
| $\bullet$ | 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 <br> 2. Identifying Main Idea <br> 3. Identifying Specific Information <br> 4. Identifying Vocabulary <br> 5. Identifying Conclusion | Tes Tulisan | Multiple Choice | Multiple Choice Question (choose the best answer by crossing (x) a, b, c, or d) |Mengetahui,Padangsidimpuan,

Guru Bahasa Inggris kelas VIII ..... Peneliti
Ida Suryani, S.Pd Tuti Alawiyah Tanjung
NIM. 1520300065
Kepala SMP N 2 Batang Angkola2019
Abdul Kamil M.Pd

## Appendix 2

## Control Class

RENCANA PELAKSANAAN PEMBELAJARAN
(RPP)
Sekolah
: SMP NEGERI 2 BATANG ANGKOLA

Mata Pelajaran : Bahasa Inggris
Kelas/Semester : VIII/Genap
Alokasi Waktu : $2 \times 45$ Menit

## A. Kompetensi Inti

- KI 1 dan KI 2 : Menghayati dan mengamalkan ajaran agama yang dianutnya. Menghayati dan mengamalkan disiplin, tanggungjawab, peduli (toleransi, gotong royong), santun, percaya diri, dalam berinteraksi secara efektif dengan lingkungan sosial dan alam dalam jangkauan pergaulan dan keberadaannya.
- KI 3 : Memahami pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata.
- KI 4: Mencoba, mengolah, dan menyaji dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori.


## 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, Internet


## H. Langkah-Langkah Pembelajaran

## 1 Pertemuan Ke-1 (2 x 45 Menit)

|  | iatan Pendahuluan (10 Menit) |
| :---: | :---: |
|  |  |
|  | ntasi |
| $\bullet$ | Melakukan pembukaan dengan salam pembuka, memanjatkan syukur kepada Tuhan YME dan berdoa untuk memulai pembelajaran |
| $\bullet$ | Memeriksa kehadiran peserta didik sebagai sikap disiplin |
| - | Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran. |
| $\bullet$ | Memperkenalkan diri pada siswa dan menyampaikan maksud kedatangan ke dalam kelas |
|  | ivasi |
| $\bullet$ | Memberikan gambaran tentang manfaat mempelajari pelajaran yang akan dipelajari dalam kehidupan sehari-hari. |
|  | berian Acuan |
| $\bullet$ | Memberitahukan materi pelajaran yang akan dibahas pada pertemuan saat itu. |
| $\bullet$ | Memberitahukan tentang kompetensi inti, kompetensi dasar, indikator, pada pertemuan yang berlangsung |
| $\bullet$ | Menjelaskan mekanisme pelaksanaan pengalaman belajar sesuai dengan langkah-langkah pembelajaran. |
| Kegiatan Inti ( 70 Menit) |  |
|  | Kegiatan Pembelajaran |


| (stimullasi/ <br> pemberian <br> 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. <br> - Guru meminta siswa membaca text yang telah diberikan secara bergiliran <br> - Guru menjelaskan apa isi teks <br> - Guru mengajukan pertanyaan dan memberikan kesempatan kepada siswa untuk bertanya kembali mengenai penjelasan pembelajaran <br> - Siswa bekerja sendiri atau tidak berkelompok <br> - Guru memberikan siswa lembar kerja dan meminta siswa untuk menjawab lembar kerja tersebut <br> - 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 : |  |
| $\bullet$$\bullet$ Membuat <br>  point-po | resume (CREATIVITY) dengan bimbingan guru tentang <br> penting yang muncul dalam kegiatan pembelajaran yang |


|  | baru dilakukan. |
| :---: | :---: |
| $\bullet$ | Mengumpulkan lembar kerja yang telah dikerjakan |
| Guru : |  |
| $\bullet$ | Meminta siswa untuk mengulang kembali pembelajaran atau materi di rumah agar lebih memudahkan siswa dalam pembelajaran berikutnya |
| $\bullet$ | Menutup kelas atau mengakhiri pembelajaran dengan salam |
| 2 | Pertemuan Ke-2 (2 x 45 Menit) |
| Kegiatan Pendahuluan (10 Menit) |  |
| Guru : |  |
| Orientasi |  |
| $\bullet$ | Melakukan pembukaan dengan salam pembuka, memanjatkan syukur kepada Tuhan YME dan berdoa untuk memulai pembelajaran |
| $\bullet$ | Memeriksa kehadiran peserta didik sebagai sikap disiplin |
| $\bullet$ | Menyiapkan fisik dan psikis peserta didik dalam mengawali kegiatan pembelajaran. |
| Aperpepsi |  |
| $\bullet$ | Mengaitkan materi/tema/kegiatan pembelajaran yang akan dilakukan dengan pengalaman peserta didik dengan materi/tema/kegiatan sebelumnya |
| $\bullet$ | Mengingatkan kembali materi prasyarat dengan bertanya. |
| Motivasi |  |
| $\bullet$ | 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, <br> dan KKM pada pertemuan yang berlangsung |  |
| -Menjel <br> langkah | an mekanisme pelaksanaan pengalaman belajar sesuai dengan ngkah 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. <br> - Guru meminta siswa membaca text yang telah diberikan secara bergiliran <br> - Guru menjelaskan apa isi teks <br> - Guru mengajukan pertanyaan dan memberikan kesempatan kepada siswa untuk bertanya kembali mengenai penjelasan pembelajaran <br> - Siswa bekerja sendiri atau tidak berkelompok <br> - Guru memberikan siswa lembar kerja dan meminta |


|  |  | siswa untuk menjawab lembar kerja tersebut <br> Guru membantu dan memandu siswa menjawab lembar <br> 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 : |  |  |
| $\bullet$ | Membuat <br> point-poin <br> baru dilak | resume (CREATIVITY) dengan bimbingan guru tentang penting yang muncul dalam kegiatan pembelajaran yang akan. |
| Guru : |  |  |
| $\bullet$ | Peserta projek/pro | didik yang selesai mengerjakan tugas <br> duk/portofolio/unjuk kerja dengan benar diberi penghargaan |
| $\bullet$ | Menyimp | lkan pembelajaran dari pertemuan pertama dan kedua |
| $\bullet$ | Menutup | tau mengakhiri pembelajaran dengan salam |

H. Penilaian : The Amount of Correct Answer in Completion

| Sub Indikator Pencapaian <br> Kompetensi | Teknik <br> Penilaian | Bentuk <br> Instrument | Instrument <br> Soal |
| :--- | :--- | :--- | :--- |


| 6. Identifying Topic Sentence <br> 7. Identifying Main Idea <br> 8. Identifying Specific Information <br> 9. Identifying Vocabulary <br> 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 VIII

Ida Suryani, S.Pd

Tuti Alawiyah Tanjung
NIM. 1520300065

Kepala SMP N Batang Angkola

Abdul Kamil, M.Pd

## Appendix 3

## INSTRUMENT FOR PRE TEST

Name :

Class:

This text below is for question number 1 until 5. Answer the questions carefully!

## A Wolf and a Dog

Once there was a wolf that was nearly dead with hunger. He was very thin, so that the outline of his bones could be seen clearly beneath his thinning coat of hair. With hardly enough energy to walk, the wolf had little hope of finding food. As he lay beneath a large tree, a dog out for a walk noticed him. Seeing hoe thin and hungry looking the wolf was, the dog felt sorry for him and said, "you are in terrible shape! You look as if you haven't eaten for many days." "you're right" said the wolf". "I haven't eaten because of you and your friends are doing such a good job of guarding the sheep. Now I am so weak that I have little hope of finding food. I think I will surely die." Then why not join us? Asked the dog. " I work regularly and I eat regularly. You could do the same. I will arrange it. You can help me and the other dogs guard the sheep. In that way, we won't have to worry about your stealing the sheep anymore and you won't have to worry about going hungry anymore. It's a good deal for both of us."

The wolf thought it over for a few minutes and then decided that the dog was right. So they went off together toward the ranch house where the dog lived. But, as they were walking, the wolf noticed that the hair on a certain part of the dog's neck was very thin. He was curious about this, for the dog had such a beautiful coat everywhere else.

Finally, he asked the dog about it. "oh, don't worry about that," said the dog. "It's the place where the collar rubs on my neck when my master chains me up at night." "Chained up!" cried the wolf. " Do you mean that you are chained
up at night? If I come to live with you, will I be chained up at night too?" that's right ", answered the dog . "But, you'll get used to it soon enough . I hardly think about it anymore ". But if I am chained up, then I won't be able to walk when I want to take a walk or to run where I want to run," the wolf said. " if I come to live with you, I won't be free anymore." After saying this, the wolf turned and run away.

1. What is the topic sentence of the first paragraph!
A. A wolf was nearly dead with hunger
B. A wolf had little hope finding food
C. A wolf had terrible shape
D. A wolf help dogs guard the sheep
E. It is a good deal between the dog and wolf
2. Why the wolf so weak and have a little hope of finding food?
A. Because the wolf so lazy
B. Because the wolf haven't eaten because of the dog and his friends are doing such a good job of guarding the sheep
C. Because the wolf crazy
D. Because the dog so lazy
E. Because the dog hungry
3. What was the deal between the dog and wolf?
A. They were deal to hungry together
B. They were deal guard the sheep
C. They were deal to won't have to worry about your stealing the sheep
D. They arranged the planning
E. They were deal to work and eat together
4. What was the wolf to do when the dog said he will chained up too at night?
A. The wolf turned and run away
B. The wolf follow the dog
C. The wolf smiling
D. The dog turned and run away
E. The wolf and the dog turned and run away
5. What is the meaning of "dead" in Indonesia language of the first paragraph?
A. Hidup
B. Mati
C. Malas
D. Rajin
E. Sakit

## Question !

Question 6-10: this text below is for question number 6 until 10 and then answer the questions below!

## The Legend of Rawa Pening

Once upon a time, there was a little poor boy came into a little village. He was very hungry and weak. He knocked at every door and asked for some food, but nobody cared about him. Nobody wanted to help the little boy.

Finally, a generous woman helped him. She gave him shelter and a meal. When the boy wanted to leave, this old woman gave him a "lesung", a big wooden mortar for pounding rice. She reminded him, "please remember, if there is a flood you must safe your self. Use this "lesung" as a boat". The boy was happy and thanked the old woman. The little boy continued his journey. While he was passing through the village, he saw many people gathering on the field. The boy came closer and saw a stick stuck in the ground. People challenged each other to pull out that stick. Everybody tried, but nobody success. " can I try? Asked the little boy. The crowd laughed mockingly. the boy wanted to try his luck so he
stepped forward and pulled out the stick. He could do it very easily. Everybody was dumbfounded.

Suddenly, from the hole left by stick, water spouted out. It did not stop until it flooded the village. And no one was saved from the water except the little boy and the generous old woman who gave him shelter and meal. As she told him, he used the "lesung" as a boat and picked up the old woman. The whole village became a hug lake . It is now known as Rawa Pening lake in Salatiga, Central Java, Indonesia.
6. What is the topic sentence of the third paragraph?
A. Water spouted
B. Water did not flooded the village
C. A huge lake
D. Shelter and meal
E. Rawa Pening lake in Salatiga, Central Java, Indonesia
7. What is the old woman gave for a little boy when the boy wanted to leave her?
A. Lesung
B. Stick
C. Shelter
D. Meal
E. Boat
8. Who has helped a little boy and gave him shelter and a meal?
A. Generous woman
B. A Man
C. Young woman
D. Yong man
E. Poor boy
9. The crowd laughed mockingly (paragraph 2 , line 8 ). The underline word mean?
A. Hardly
B. Speed
C. Slowly
D. Noise
E. Calm
10. How did the end of story?
A. The village comes be river
B. The boat and picked up old woman
C. Water spouted out
D. The village become a huge lake
E. A woman gave shelter

Question 11-15: this text below is for question number 11 until 15 . answer the questions carefully!

## A Fox and a Cat

One day a cat and a fox were having a conversation. The fox, who was a conceited creature, boasted how cleaver she was . "why, I know at least a hundred tricks to get away from our mutual enemies the dogs, said the cat. "you should teach me some of yours!" well, maybe someday, when I have the time, I may teach you a few of the simpler ones, replied the fox airily.

Just then they heard the barking of a pack of dogs in the distance. The barking grew louder and louder the dog were coming in their direction! At once the cat run to the nearest tree and climbed into its branches, well out of reach of any dog. "this is the trick I told you about, the only one I know. 'said the cat. 'which one of your hundred tricks are you going to use? ' the fox sat silently under the tree, wondering which trick she should use. Before she could make up her mind, the dogs arrived. They fell upon the fox and tore her to pieces.
11. The fox, who was a conceited creature, boasted how cleaver she was. (paragraph 1) the underline words mean?
A. Cleaver
B. Honest
C. Lazy
D. Smart
E. Liar
12. What the topic sentence of second paragraph?
A. The trick I told you
B. They heard the barking of pack of dogs in the distance
C. At once the cat ran to the nearest tree
D. The fox sat silently under the tree
E. They fell upon the fore and tore her to pieces
13. How was the character of the fox?
A. A conceited, creature, lazy, cleaver
B. A conceited, creature, goodness, cleaver
C. A conceited, creature, liar, cleaver
D. A conceited, creature, boasted, stupid
E. A conceited, arrogant, boasted, cleaver
14. Who is run to the nearest tree and climbed into branches?
A. The cat
B. The dog
C. The fox
D. The cat and fox
E. The ant

15 . What can we learn from the story above?
A. A hundred planning is important
B. There is one of hundred plans is better than speech more
C. An important planning
D. One of trick is most important than speech more
E. An important of liar

Question 15-20 : this text below is for question number 15 until 20 . answer the questions carefully!

## The Goose and the Golden Eggs

Once a farmer went to the nest of his goose and found there an egg, all yellow and shiny. When he picked it up, it was heavy as a rock. He was about to throw it away because he thought that someone was playing a trick of him. But on second thought, he took it home, and discovered to his delight that it was an egg of pure gold!. He sold the egg for a lot of money. Every morning the goose laid another golden egg, and the farmer soon became rich by selling the eggs.

As he grew rich, he also grew greedy, " Why should I have to wait to get only one egg a day?" he thought. "I will cut open the goose and take all the eggs out of her at once. " when the goose heard the farmer's plan, she flew away to a nearby farm. So when the farmer came out the next day, do you know what he found in the goose's nest? Nothing.
16. What is the main idea of the first paragraph?
A. A farmer went to the nest of his goose and found there an egg, all yellow and shiny
B. He picked it up, it was heavy as a rock
C. He was about to throw it away because he thought that someone was playing a trick of him
D. He sold the egg for a lot of money
E. He sold the egg for a lot of rice
17. What is the text talking about?
A. A farmer
B. Grew rich
C. Golden eggs
D. Pure gold
E. The goose and the Golden Eggs
18. What did the farmer find see in the second paragraph?
A. A goose
B. A pure gold
C. A lot of money
D. Golden egg
E. Money
19. When he picked it up, it was heavy as a rock. (paragraph 1) the underline words mean?
A. Throwing
B. Making
C. Taking
D. Dropping
E. Seeing
20. What can we learn from the story above?
A. Don't be greedy
B. Taking all when you found much
C. Use the opportunity to be greedy
D. Rich is one of goal
E. Be diligent

Question 21-25 : this text below is for question number 21 until 25 . answer the questions carefully!

## Eliza and Athena

Once there was a young girl name Eliza. She was a daughter of the king and she never had to work. She became very lazy. She had her servants do everything for her. "I am so very thirsty, and my glass is on the table. Please get it for me", she called immediately a servant picked the glass up from the table next to Eliza and held it up to her lips until Eliza was no longer thirsty .

The next day, was walking to dinner when her hat fell off, she called for a servant and a young man ran over, picked up the hat, dusted it off, and placed it back on Eliza's head. She continually called for her servants to do simple tasks for her. Her father noticed her laziness and decided to punish her. He set in her in a room with only a loom and some yarn. No servants were allowed in the room. "you will stay in this room, not eating or drinking until you have woven a blanket for me. You have to do all of the work by yourself. Call for me when you are done" the king left Eliza all alone in her room.

Eliza called for her servants, but none appeared. Then she remembered her father telling about Athena, the goodness of wisdom and handicrafts. She called for Athena over and over until finally, she fell sleep. While she was sleeping, she had a dream. Herms spoke to her in her dream . he said " Athena has heard you pleas for help. She is very angry with you. She will come to you of your punishment." Eliza woke very frightened. she then saw that there was an owl on the edge of her window. The owl spoke to her.'I am Athena. You have called upon me to do your work. You must be punishment for your laziness. You are a mortal of high importance, therefore you have no work to do. I am going to make you a lowly animal". "you will have to work constantly just to stay alive. People will look down at you in disgust. You will be killed just because you are insignificant. All of your children and their children and so on will have the same fate. " Eliza worked for the rest of her life. All of her children have the same fate. They are doomed to be ants for the rest of their lives.
21. What is the conclusion about the text above?
A. Eliza awoke very frightened
B. Eliza work for the rest of her life. All of her children have the same fate. They are doomed to be ants for the rest of their lives
C. She will come to you and will inform you of your punishment
D. She remembered her father telling about Athena, the goodness of wisdom and handicrafts
E. He set in her in a room with only a loom and some yarn. No servants were allowed in the room.
22. You will stay in this room, not eating or drinking until you have woven a blanket for me (paragraph 2) who is the mean of underline word?
A. Eliza
B. King
C. Servant
D. Athena
E. Owl
23. Who is the goodness of wisdom and handicrafts?
A. Athena
B. Eliza
C. King
D. Owl
E. Servants
24. Who is a daughter of the king?
A. Athena
B. Eliza
C. King
D. Owl
E. Servants
25. What did the king give punishment for his child?
A. The king killed his daughter
B. The king did not give eating
C. The king did not give money
D. His daughter set in her in a room with only a loom and some yarn.

No servants were allowed in the room
E. The king noticed his daughter did not his child

Question 25-30- : this text below is for question number 25 until 30 . answer the questions carefully!

The Rabbit and the Turtle

One day a rabbit has boasting about how fast he could run. He was laughing at the turtle for being so slow. Much to the rabbit's surprise, the turtle challenge him to a race. The rabbit thought this was a good joke and accepted the challenge. The fox was to be the umpire of the race. As the race began, the rabbit raced way ahead of the turtle, just like everyone thought.

The rabbit go to the halfway point and could not see the turtle anywhere. He was hot and tired and decided to stop and take a short nap. All this time the turtle keep walking step by step. He never quite no matter how hot and tired he got. He just keep going.

However, the rabbit slept longer than he had thought and woke up. He could not see the turtle anywhere! He went at full-speed to the finish line but found the turtle there waiting for him.
26. What is the main idea of the first paragraph?
A. A rabbit has boasting about how fast he could run
B. He was laughing at the turtle for being so slow
C. The turtle challenge him to a race
D. The rabbit thought this was a good joke and accepted the challenge
E. The fox was to be the umpire of the race.
27. What is the text talking about?
A. A farmer
B. The Rabbit and the Turtle
C. Golden eggs
D. The fox
E. The dog
28. What did the rabbit decided in the second paragraph?
A. Stop and take a short nap
B. Run
C. Walk
D. Jump
E. Sleep
29. The rabbit thought this was a good joke and accepted the challenge. (paragraph 2) the underline words in Indonesia language mean?
A. Jahat
B. Kejam
C. Baik
D. Malas
E. Pintar
30. Who waiting the rabbit in the finish line?
A. A turtle
B. A rabbit
C. A fox
D. A mouse
E. A cat

## Appendix 4

## INSTRUMENT FOR PRE TEST

Name :

Class:

This text below is for question number 1 until 5 . Answer the questions carefully!

## A Fox and a Cat

One day a cat and a fox were having a conversation. The fox, who was a conceited creature, boasted how cleaver she was . "why, I know at least a hundred tricks to get away from our mutual enemies the dogs, said the cat. "you should teach me some of yours!" well, maybe someday, when I have the time, I may teach you a few of the simpler ones, replied the fox airily.

Just then they heard the barking of a pack of dogs in the distance. The barking grew louder and louder the dog were coming in their direction! At once the cat run to the nearest tree and climbed into its branches, well out of reach of any dog. "this is the trick I told you about, the only one I know. 'said the cat. 'which one of your hundred tricks are you going to use? ' the fox sat silently under the tree, wondering which trick she should use. Before she could make up her mind, the dogs arrived. They fell upon the fox and tore her to pieces.
31. The fox, who was a conceited creature, boasted how cleaver she was.
(paragraph 1) the underline words mean?
F. Pintar
G. Jujur
H. Malas
I. Bohong
32. What the topic sentence of second paragraph?
F. The trick I told you
G. They heard the barking of pack of dogs in the distance
H. At once the cat ran to the nearest tree
I. The fox sat silently under the tree
J. They fell upon the fore and tore her to pieces
33. How was the character of the fox?
F. A conceited, creature, boasted, cleaver
G. A conceited, creature, goodness, cleaver
H. A conceited, creature, liar, cleaver
I. A conceited, creature, boasted, stupid
34. Who is run to the nearest tree and climbed into branches?
F. The cat
G. The dog
H. The fox
I. The cat and fox
35. What can we learn from the story above?
F. A hundred planning is important
G. There is one of hundred plans is better than speech more
H. An important planning
I. An important of liar

Question 6-10 : this text below is for question number 6 until 10 . Answer the questions carefully!

## The Goose and the Golden Eggs

Once a farmer went to the nest of his goose and found there an egg, all yellow and shiny. When he picked it up, it was heavy as a rock. He was about to throw it away because he thought that someone was playing a trick of him. But on second thought, he took it home, and discovered to his delight that it was an egg of pure gold!. He sold the egg for a lot of money. Every morning the goose laid another golden egg, and the farmer soon became rich by selling the eggs.

As he grew rich, he also grew greedy, "Why should I have to wait to get only one egg a day?" he thought. "I will cut open the goose and take all the eggs
out of her at once. " when the goose heard the farmer's plan, she flew away to a nearby farm. So when the farmer came out the next day, do you know what he found in the goose's nest? Nothing.
36. What is the main idea of the first paragraph?
F. A farmer went to the nest of his goose and found there an egg, all yellow and shiny
G. He picked it up, it was heavy as a rock
H. He was about to throw it away because he thought that someone was playing a trick of him
I. He sold the egg for a lot of money
37. What is the text talking about?
F. A farmer
G. Grew rich
H. Golden eggs
I. The goose and the Golden Eggs
38. What did the farmer find see in the first paragraph?
F. An egg
G. A pure gold
H. A lot of money
I. Golden egg
39. When he picked it up, it was heavy as a rock. (paragraph 1) the underline words mean?
F. Melempar
G. Membuat
H. Mengambil
I. Melihat
40. What can we learn from the story above?
F. Don't be greedy
G. Taking all when you found much
H. Use the opportunity to be greedy
I. Rich is one of goal

Question 11-15 : this text below is for question number 11 until 15 . answer the questions carefully!

## The Rabbit and the Turtle

One day a rabbit has boasting about how fast he could run. He was laughing at the turtle for being so slow. Much to the rabbit's surprise, the turtle challenge him to a race. The rabbit thought this was a good joke and accepted the challenge. The fox was to be the umpire of the race. As the race began, the rabbit raced way ahead of the turtle, just like everyone thought.

The rabbit go to the halfway point and could not see the turtle anywhere. He was hot and tired and decided to stop and take a short nap. All this time the turtle keep walking step by step. He never quite no matter how hot and tired he got. He just keep going.

However, the rabbit slept longer than he had thought and woke up. He could not see the turtle anywhere! He went at full-speed to the finish line but found the turtle there waiting for him.
41. What is the text talking about?
F. A farmer
G. The Rabbit and the Turtle
H. Golden eggs
I. The fox
42. What did the rabbit decided in the second paragraph?
F. Stop and take a short nap
G. Run
H. Walk
I. Jump
43. What is the meaning of Challenge in the first paragraph?
A. Tantangan
B. Kesulitan
C. Ajakan
D. Rintangan
44. The rabbit thought this was a good joke and accepted the challenge. (paragraph 2) the underline words in Indonesia language mean?
F. Jahat
G. Kejam
H. Baik
I. Malas
45. Who waiting the rabbit in the finish line?
F. A turtle
G. A rabbit
H. A fox
I. A mouse

Question 16-20 : this text below is for question number 16 until 20 . answer the questions carefully!

## The Cows and The Lion

There was a village near a jungle. The village cows used to go up to the jungle in search of food. In the forest there lived a wicked lion. He used to kill a cow and then eat them. This was happening for quite something. The cows were frightened.

One day, all the cows held a meeting. An old cow said, " listen everybody, the lion eats one of us only because we go into the jungle separately. From now on we will all be together."

From then on all the cows went into the jungle in a herd. When they heard or saw a lion a
all of them unitedly said" moo .." and chased him away.
46. What is the meaning of "jungle"?
A. Jalan
B. Hutan
C. Rumah
D. Sawah
47. Who lived in the forest ?
A. Wicked lion
B. Cows
C. Farmer
D. Mouse
48. What is the meaning of "food"?
A. Tanah
B. Minuman
C. Minyak
D. Makanan
49. What is the meaning of "wicked"?
A. Ramah
B. Baik
C. Jahat
D. Sopan
50. What is the conclusion from the text?
A. If we are together we will be stronger
B. Alone is better
C. Alone make you happy
D. Together can't make you stronger
E. Alone is the best

## Appendix 5

## INSTRUMENT FOR POST TEST

Name:

Class:

This text below is for question number 1 until 5 . Answer the questions carefully!

Snow White and Seven Dwarfs

Once upon a time there lived a little girl named Snow White. She lived with her aunt and uncle because her parents were dead. One day, she heard her uncle and aunt talking about leaving Snow white in the castle because they wanted to go to America and they didn't have enough money to take Snow White.

Snow White didn't want her uncle and aunt to do that so he decided that it would be best if she ran away. The next morning she ran away into the woods. She was very tired and hungry. Then she saw a little cottage. She knocked but no one answered so she went inside and fell asleep.

Meanwhile, the seven dwarfs were coming home from work. There they found Snow white sleeping. Then Snow White woke up. She saw the dwarfs. The dwarfs said, "what is your name?" Snow White said "my name is Snow White.". Then, Snow White told the dwarfs the whole story. The dwarfs said," if you want, you may live here with us." Snow White answered ,"oh, could I ? thank you." Finally, Snow White and the seven dwarfs lived happily ever after.

1. What is the topic sentence of the third paragraph?
A. The seven dwarfs were coming home from work
B. There they found Snow white sleeping
C. She saw the dwarfs
D. Snow White told the dwarfs the whole story
E. Snow White and the seven dwarfs lived happily ever after
2. Who lived with her aunt and uncle because her parents were dead ?
A. Snow White
B. Seven dwarfs
C. Uncle
D. Aunt
E. Farmer
3. Who has helped Snow white in the woods?
A. Snow White
B. Seven dwarfs
C. Uncle
D. Aunt
E. Farmer
4. The seven dwarfs were coming home from work (paragraph 2 , line 1 ). The underline word in Indonesia language mean?
A. Kurcaci
B. Peri
C. Pelayan
D. Petani
E. Pemburu
5. How did the end of story?
A. Snow White and the Seven dwarfs lived happily ever after
B. Snow white back to her uncle and aunt
C. Snow white dead
D. The seven dwarfs dead
E. Snow White and the Seven dwarfs are dead

Question 6-10-: this text below is for question number 6 until 10 . answer the questions carefully!

One afternoon there was a fox that was walking through the forest and spotted a bunch of grapes hanging from over a lofty branch. " just the thing to quench my thirst," quoted the fox. Taking a few step backward, the fox jumped but unfortunately he missed the hanging grapes. Again the fox took a few paces backward, ran, and tried to reach them but he still failed.

Finally, giving up, the fox turned up his nose and said," they're probably sour anyway," and proceeded to walk.
6. What is the conclusion about the text above?
A. The fox giving up and said they're probably sour anyway and proceeded to walk.
B. The fox run away
C. The fox failed to eat the grapes
D. The fox eat the grapes
E. The fox sleep under the branch of grapes
7. Who is walking through the forest and spotted a bunch of grapes?
A. The dog
B. The fox
C. The cat
D. The mouse
E. The snake
8. What the fox to do to get the grapes?
A. The fox jumped
B. The fox run
C. The fox danced
D. The fox smile
E. The fox cry
9. The fox jumped but unfortunately he missed the hanging grapes (paragraph 1) underline word in Indonesia language mean?
A. Anggur
B. Apel
C. Jeruk
D. Mangga
E. Papaya
F. Salak

10 . What is the fox turned up his nose and said?
A. They're probably sour anyway
B. They're delicious
C. They're fresh
D. They're sweet
E. They're bitter

Question 11-15- : this text below is for question number 11 until 15 . answer the questions carefully!

## The Little Mouse

Once upon a time there was a baby mouse and mother mouse. They lived in a hole in a big warm house with lots of cheese to eat.

Then, one day, mother mouse decided to take baby mouse outside of their home. Waiting outside for them was a huge ginger tomcat, licking it's lips and waiting to eat both of them up. " mother, mother! What should we do? "cried baby mouse, clinging to his mother's tail. Mother mouse paused, staring up into the beady eyes of the hungry cat. But she wasn't scared, because she knew exactly how to deal with big scary cats. She opened her mouth and took un a deep breath. " Guk! Guk! Woog! Woog! she shouted, and the cat ran away as fast as he could. "wow, mother! That was amazing!" baby mouse said to his mother, smiling happy. " and that , my child , is why it is always best to have a second language.
11. What is the topic sentence of the second paragraph!
A. Mother mouse decided to take baby mouse outside of their home
B. Ginger tomcat
C. Ginger tomcat, licking it's lips and waiting to eat both of them up
D. Mother mouse paused, staring up into the beady eyes of the hungry cat
E. The cat ran away as fast as he could
12. Who lived in a hole in a big warm house with lots of cheese ?
A. Baby mouse and mother mouse
B. Ginger Tomcat
C. Dog
D. Fox
E. Snake
13. What is the mother's mouse do to make exactly how to deal with big scary cats?
A. She opened her mouth and took un a deep breath. " Guk! Guk! Woog!Woog! she shouted
B. She run with her baby mouse
C. Mother mouse fight with the ginger tomcat
D. Mother mouse fight with the ginger tomcat
E. Baby mouse fight with the ginger tomcat

14 . What was the cat to do when he heard the mother mouse shouted?
A. The cat ran away as fast as he could
B. The cat walked away
C. The cat smile
D. The cat jumped
E. The cat sleep
15. But she wasn't scared, because she knew exactly how to deal with big scary cats
(paragraph 2) who is the mean of underline word?
A. Mother mouse
B. Baby mouse
C. Tomcat
D. Fox
E. Snake

Question 16-20 : this text below is for question number 16 until 20 . answer the questions carefully!

## The Cows and The Lion

There was a village near a jungle. The village cows used to go up to the jungle in search of food. In the forest there lived a wicked lion. He used to kill a cow and then eat them. This was happening for quite something. The cows were frightened.

One day, all the cows held a meeting. An old cow said, " listen everybody, the lion eats one of us only because we go into the jungle separately. From now on we will all be together."

From then on all the cows went into the jungle in a herd. When they heard or saw a lion a
all of them unitedly said" moo .." and chased him away.
16. What is the topic sentence of the first paragraph!
E. There was a village near a jungle
F. The village cows used to go up to the jungle in search of food
G. In the forest there lived a wicked lion
H. He used to kill a cow and then eat them
I. The cows were frightened.
17. Who lived in the forest?
E. Wicked lion
F. Cows
G. Farmer
H. Mouse
I. Rabbit
J. Cat
18. " listen everybody, the lion eats one of us only because we go into the jungle separately. From now on we will all be together." Who said that words?
E. An Old cows
F. Fox
G. Wicked lion
H. Rabbit
I. Dog
19. What was an old cows said in a held meeting?
E. We will all be together
F. We will all be alone
G. We will all be couple
H. We will all be dancing
I. We will all be focus

20 . What is the conclusion from the text?
F. If we are together we will be stronger
G. Alone is better
H. Alone make you happy
I. Together can't make you stronger
J. Alone is the best

Question 21-25 : this text below is for question number 21 until 25 . answer the questions carefully!

## The Bear and The Two Friends

Once two friends were walking through the forest. They knew that anything dangerous can happen to them at any time in the forest. So they promised each other that they would remain united in any case of danger.

Suddenly, they saw a large bear approaching them. One of the friends at once climbed nearby tree. But the other one did not know how to climb. So being
led by his common sense, he lay down on the ground breathless, pretending to be a dead man. The bear came near the man lying on the ground. It smelt in his ears, and slowly left the place. Because the bears do not down and asked his friend on the ground. " friend, what did the bear tell you into your ears?" the other friend replied, "the bear advised me not to believe a false friend."
21. What is the main idea of the first paragraph?
A. Two friends were walking through the forest He was laughing at the turtle for being so slow
B. They knew that anything dangerous can happen to them at any time in the forest
C. they promised each other that they would remain united in any case of danger.
D. Two friends
E. The forest
22. What is the text talking about?
A. A farmer
B. The Bear and The Two Friends
C. Golden eggs
D. The fox
E. The dog
23. One of the friends at once climbed nearby tree. (paragraph 2 ) the underline words in Indonesia language mean ??
A. Memanjat
B. Berjalan
C. Tidur
D. Makan
E. Minum
24. Who were walking through the forest?
A. Two friends
B. Bear
C. Horse
D. Fox
E. Farmer
25. What did the bear tell to his friend on the ground?
A. The bear advised me not to believe a false friend
B. The bear tell to eat him
C. The bear want to eat him
D. The bear afraid
E. The bear hate him

Question 26-30 : this text below is for question number 26 until 30 . answer the questions carefully!

## The Legend of Rawa Pening

Once upon a time, there was a little poor boy came into a little village. He was very hungry and weak. He knocked at every door and asked for some food, but nobody cared about him. Nobody wanted to help the little boy.

Finally, a generous woman helped him. She gave him shelter and a meal. When the boy wanted to leave, this old woman gave him a "lesung", a big wooden mortar for pounding rice. She reminded him, "please remember, if there is a flood you must safe your self. Use this "lesung" as a boat". The boy was happy and thanked the old woman. The little boy continued his journey. While he was passing through the village, he saw many people gathering on the field. The boy came closer and saw a stick stuck in the ground. People challenged each other to pull out that stick. Everybody tried, but nobody success. " can I try? Asked the little boy. The crowd laughed mockingly . the boy wanted to try his luck so he stepped forward and pulled out the stick. He could do it very easily. Everybody was dumbfounded.

Suddenly, from the hole left by stick, water spouted out. It did not stop until it flooded the village. And no one was saved from the water except the little boy and the generous old woman who gave him shelter and meal. As she told him,
he used the "lesung" as a boat and picked up the old woman. The whole village became a hug lake . It is now known as Rawa Pening lake in Salatiga, Central Java, Indonesia.
26. What is the topic sentence of the third paragraph?
A. Water spouted
B. Water did not flooded the village
C. A huge lake
D. Shelter and meal
E. Rawa Pening lake in Salatiga, Central Java, Indonesia
27. What is the old woman gave for a little boy when the boy wanted to leave her?
A. Lesung
B. Stick
C. Shelter
D. Meal
E. Boat
28. Who has helped a little boy and gave him shelter and a meal?
A. Generous woman
B. A Man
C. Young woman
D. Yong man
E. Poor boy
29. The crowd laughed mockingly (paragraph 2 , line 8 ). The underline word mean?
A. Hardly
B. Speed
C. Slowly
D. Noise
E. Calm
30. How did the end of story?
A. The village comes be river
B. The boat and picked up old woman
C. Water spouted out
D. The village become a huge lake
E. A woman gave shelter

## Appendix 6

## INSTRUMENT FOR POST TEST

Name:

Class:

This text below is for question number 1 until 5 . Answer the questions carefully! Snow White and Seven Dwarfs

Once upon a time there lived a little girl named Snow White. She lived with her aunt and uncle because her parents were dead. One day, she heard her uncle and aunt talking about leaving Snow white in the castle because they wanted to go to America and they didn't have enough money to take Snow White.

Snow White didn't want her uncle and aunt to do that so he decided that it would be best if she ran away. The next morning she ran away into the woods. She was very tired and hungry. Then she saw a little cottage. She knocked but no one answered so she went inside and fell asleep.

Meanwhile, the seven dwarfs were coming home from work. There they found Snow white sleeping. Then Snow White woke up. She saw the dwarfs. The dwarfs said, "what is your name?" Snow White said "my name is Snow White.". Then, Snow White told the dwarfs the whole story. The dwarfs said," if you want, you may live here with us." Snow White answered ,"oh, could I ? thank you." Finally, Snow White and the seven dwarfs lived happily ever after.

1. What is the topic sentence of the third paragraph?
F. The seven dwarfs were coming home from work
G. There they found Snow white sleeping
H. She saw the dwarfs
I. Snow White told the dwarfs the whole story
2. Who lived with her aunt and uncle because her parents were dead ?
F. Snow White
G. Seven dwarfs
H. Uncle
I. Aunt
3. Who has helped Snow white in the woods?
F. Snow White
G. Seven dwarfs
H. Uncle
I. Aunt
4. The seven dwarfs were coming home from work (paragraph 2 , line 1 ).

The underline word in Indonesia language mean?
F. Kurcaci
G. Peri
H. Pelayan
I. Petani
J. Pemburu
5. How did the end of story?
F. Snow white dead
G. Snow White and the Seven dwarfs lived happily ever after
H. Snow white back to her uncle and aunt
I. The seven dwarfs dead

Question 6-10- : this text below is for question number 6 until 10 . answer the questions carefully!

## The Fox and The Grapes

One afternoon there was a fox that was walking through the forest and spotted a bunch of grapes hanging from over a lofty branch. " just the thing to quench my thirst," quoted the fox. Taking a few step backward, the fox jumped but unfortunately he missed the hanging grapes. Again the fox took a few paces backward, ran, and tried to reach them but he still failed.

Finally, giving up, the fox turned up his nose and said," they're probably sour anyway," and proceeded to walk.
6. What is the meaning of "walking"?
F. Berjalan
G. Berlari
H. Bernyanyi
I. Berbisik
7. Who is walking through the forest and spotted a bunch of grapes?
F. The dog
G. The fox
H. The cat
I. The mouse
8. What the fox to do to get the grapes?
F. The fox jumped
G. The fox run
H. The fox danced
I. The fox smile
9. The fox jumped but unfortunately he missed the hanging grapes (paragraph 1) underline word in Indonesia language mean?
G. Anggur
H. Apel
I. Jeruk
J. Mangga
K. Papaya
10. What is the meaning of "jumped"?
F. Menangis
G. Melompat
H. Menari
I. Berlari

Question 11-15- : this text below is for question number 11 until 15 . answer the questions carefully!

## The Little Mouse

Once upon a time there was a baby mouse and mother mouse. They lived in a hole in a big warm house with lots of cheese to eat.

Then, one day, mother mouse decided to take baby mouse outside of their home. Waiting outside for them was a huge ginger tomcat, licking it's lips and waiting to eat both of them up. " mother, mother! What should we do? "cried baby mouse, clinging to his mother's tail. Mother mouse paused, staring up into the beady eyes of the hungry cat. But she wasn't scared, because she knew exactly how to deal with big scary cats. She opened her mouth and took un a deep breath. " Guk! Guk! Woog! Woog! she shouted, and the cat ran away as fast as he could. "wow, mother! That was amazing!" baby mouse said to his mother, smiling happy. " and that , my child, is why it is always best to have a second language.
11. Who lived in a hole in a big warm house with lots of cheese ?
F. Baby mouse and mother mouse
G. Ginger Tomcat
H. Dog
I. Fox
J. Snake
12. What is the meaning of "warm"?
F. Dingin
G. Panas
H. Sejuk
I. Hangat
13. What was the mother mouse decided in the second paragraph ?
F. To take baby mouse outside of their home
G. To eat a baby mouse
H. To hit the cat
I. To kill a cat
14. What is the meaning of "hungry"?
F. Haus
G. Sedih
H. Gelisah
I. Lapar

15 . What is the meaning of "cheese"?
A. Roti
B. Keju
C. Coklat
D. Susu

Question 16-20 : this text below is for question number 16 until 20 . answer the questions carefully!

## The Bear and The Two Friends

Once two friends were walking through the forest. They knew that anything dangerous can happen to them at any time in the forest. So they promised each other that they would remain united in any case of danger.

Suddenly, they saw a large bear approaching them. One of the friends at once climbed nearby tree. But the other one did not know how to climb. So being led by his common sense, he lay down on the ground breathless, pretending to be a dead man. The bear came near the man lying on the ground. It smelt in his ears, and slowly left the place. Because the bears do not down and asked his friend on the ground. " friend, what did the bear tell you into your ears?" the other friend replied, "the bear advised me not to believe a false friend."
16. What is the main idea of the first paragraph?
F. Two friends were walking through the forest
G. They knew that anything dangerous can happen to them at any time in the forest
H. they promised each other that they would remain united in any case of danger.
I. Two friends
17. What is the text talking about?
F. A farmer
G. The Bear and The Two Friends
H. Golden eggs
I. The fox
18. One of the friends at once climbed nearby tree. (paragraph 2 ) the underline words in Indonesia language mean ??
F. Memanjat
G. Berjalan
H. Tidur
I. Makan
19. Who were walking through the forest?
F. Two friends
G. Bear
H. Horse
I. Fox
20. What is the conclusion from the text?
F. Don't believe a false friend
G. Don't hate your friend
H. Don't hit your friend
I. Don't afraid to your friend

## Appendix 7

Key Answer for Pre Test

| 1. | D | $11 . \mathrm{B}$ |
| :--- | :--- | :--- |
| 2. | B | $12 . \mathrm{A}$ |
| 3. | A | $13 . \mathrm{A}$ |
| 4. | A | $14 . \mathrm{C}$ |
| 5. | C | $15 . \mathrm{A}$ |
| 6. | A | $16 . \mathrm{B}$ |
| 7. | D | $17 . \mathrm{A}$ |
| 8. | A | $18 . \mathrm{D}$ |
| 9. | C | $19 . \mathrm{C}$ |
| 10. | A | $20 . \mathrm{A}$ |

Key Answer for Post Test

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

## Appendix 8

Calculation of the formulation $\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$ in Pre-Test

## A. Calculation of Pre-Test

1. Mean score from score total $\left(\mathbf{M}_{\mathrm{t}}\right)$

$$
\begin{aligned}
& \mathrm{M}_{\mathrm{t}}=\frac{\sum x_{t}}{N} \\
& \mathrm{M}_{\mathrm{t}}=\frac{458}{25}=18.52
\end{aligned}
$$

2. Standard Deviation $\left(\mathbf{S D}_{\mathbf{t}}\right)$

$$
\begin{aligned}
& \mathrm{SD}_{\mathrm{t}}=\sqrt{\frac{\sum X_{t^{2}}}{N}-\left(\frac{\sum x_{\mathrm{t}}}{N}\right)^{2}} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{\frac{9666}{25}-\left(\frac{458}{25}\right)^{2}} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{386.64-18.32^{2}} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{386.64-335.6224} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{51.0176}=5
\end{aligned}
$$

## 3. Mean Score $\left(\mathbf{M}_{\mathrm{p}}\right)$

## Item 1

$\mathrm{M}_{\mathrm{pl}=} \frac{\text { total score of students' } \text { score that true item answer }}{n 1}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06$

## Item 2

$\mathrm{M}_{\mathrm{pl}=} \frac{\text { total score of students' } \text { score that true item answer }}{n 2}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+18+20+15+27+27+26+25+19+21+28+22+24+23+13+9+25+26}{18}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{382}{18}=21.22
$$

## Item 3

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students' } \text { score that true item answer }}{n 3}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+18+20+15+27+27+26+25+19+21+28+22+24+23+13+9+25+26}{18}$
$\mathrm{M}_{\mathrm{pl}}=\frac{382}{18}=21.22$

## Item 4

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 4}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+18+20+15+27+27+26+25+19+21+28+22+24+23+13+9+25+26}{18}$
$\mathrm{M}_{\mathrm{pl}}=\frac{382}{18}=21.22$

## Item 5

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 5}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06$

## Item 6

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students' } \text { score that true item answer }}{n 6}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06$

## Item 7

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 7}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06
$$

## Item 8

$\mathrm{M}_{\mathrm{pl}=} \frac{\text { total score of students'score that true item answer }}{n 8}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06$

## Item 9

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 9}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06$

## Item 10

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 10}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+15+27+10+27+26+25+28+22+24+23+13+9+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{335}{16}=20.93$

## Item 11

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 11}$
$\mathrm{M}_{\mathrm{pl}=} \frac{14+15+27+10+27+26+25+28+22+24+23+13+9+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{335}{16}=20.93$

## Item 12

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 12}$

$\mathrm{M}_{\mathrm{pl}}=\frac{$| $14+17+20+6+15+27+10+27+26+25+19+21+28+22+24+23+13$ |
| :---: |
| $+9+21+5+25+8+26$ |}{23}

$$
\mathrm{M}_{\mathrm{pl}}=\frac{404}{23}=17.56
$$

## Item 13

$\mathrm{M}_{\mathrm{pl}=}=\frac{\text { total score of students'score that true item answer }}{n 13}$

$\mathrm{M}_{\mathrm{pl}}=\frac{405}{21}=19.28$

## Item 14

$\mathrm{M}_{\mathrm{pl}=}=\frac{\text { total score of students'score that true item answer }}{n 14}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+17+15+27+26+25+19+21+28+24+9+21+8}{14}$
$\mathrm{M}_{\mathrm{pl}}=\frac{254}{14}=18.14$

## Item 15

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 15}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+17+10+27+26+25+28+24+21+8+26}{11}$
$\mathrm{M}_{\mathrm{pl}}=\frac{226}{11}=20.54$

## Item 16

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 16}$
$\mathrm{M}_{\mathrm{pl}=} \frac{14+15+27+10+27+26+25+28+22+24+23+13+9+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{335}{16}=20.93$

## Item 17

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 17}$
$\mathrm{M}_{\mathrm{pl}}=\frac{20+27+21+28+25}{5}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{121}{5}=24.2
$$

## Item 18

$\mathrm{M}_{\mathrm{pl}=}=\frac{\text { total score of students'score that true item answer }}{n 18}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+20+6+15+27+27+26+25+21+28+22+23+13+21+25+8+26}{17}$
$\mathrm{M}_{\mathrm{pl}}=\frac{3507}{17}=20.58$

## Item 19

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 19}$
$\mathrm{M}_{\mathrm{pl}}=\frac{18+27+24+5}{4}$
$\mathrm{M}_{\mathrm{pl}}=\frac{74}{4}=18.5$

## Item 20

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 20}$
$\mathrm{M}_{\mathrm{pl}}$
$\frac{14+17+18+6+15+27+10+27+26+25+19+28+22+24+23+13+9+9+21+5+25+8+26}{23}$
$\mathrm{M}_{\mathrm{pl}}=\frac{390}{23}=16.95$

## Item 21

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 21}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+6+27+27+26+21+28+13+21+25+26}{13}$
$\mathrm{M}_{\mathrm{pl}}=\frac{275}{13}=21.15$

## Item 22

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 22}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+20+27+27+26+19+21+28+22+23+9+5+25+8+26}{16}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{303}{16}=18.93
$$

## Item 23

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 23}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+15+27+10+27+26+25+28+22+24+23+13+9+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{335}{16}=20.93$

## Item 24

$\mathrm{M}_{\mathrm{pl}=} \frac{\text { total score of students' } \text { score that true item answer }}{n 24}$
$\mathrm{M}_{\mathrm{pl}}=\frac{14+18+20+15+27+27+26+25+19+21+28+22+24+23+13+9+25+26}{18}$
$\mathrm{M}_{\mathrm{pl}}=\frac{382}{18}=21.22$

## Item 25

$\mathrm{M}_{\mathrm{pl}=} \frac{\text { total score of students'score that true item answer }}{n 25}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06$

## Item 26

$\mathrm{M}_{\mathrm{pl}=} \frac{\text { total score of students'score that true itemanswer }}{n 26}$
$\mathrm{M}_{\mathrm{pl}}$
$\underline{14+17+18+20+6+15+10+27+26+25+19+21+28+22+24+23+19+9+9+21+5+25+8+26}$
$\mathrm{M}_{\mathrm{pl}}=\frac{437}{24}=18.20$

## Item 27

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 27}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06
$$

## Item 28

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 28}$
$\mathrm{M}_{\mathrm{pl}}=\frac{27+10+25+28+26}{5}$
$\mathrm{M}_{\mathrm{pl}}=\frac{116}{5}=23.2$

## Item 29

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 29}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+27+9}{3}$
$\mathrm{M}_{\mathrm{pl}}=\frac{51}{3}=17$

## Item 30

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { total score of students'score that true item answer }}{n 25}$
$\mathrm{M}_{\mathrm{pl}}=\frac{17+18+20+27+27+26+25+19+21+28+22+24+23+21+25+26}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{369}{16}=23.06$
4. Calculation of the formulation $\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$

## Item 1

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.22=1.10776$

## Item 2

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{21.22-18.52}{5} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.7}{5} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.54 \times 1.52=0.82$

## Item 3

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{21.22-18.52}{5} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.7}{5} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.54 \times 01.52=0.82$

## Item 4

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{21.22-18.52}{5} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.7}{5} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.54 \times 1.52=0.82$

## Item 5

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.6}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.22=1.107$

## Item 6

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.6}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.22=1.107$

## Item 7

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.6}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.22=1.107$

## Item 8

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.6}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.22=1.107$

## Item 9

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.6}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.22=1.107$

## Item 10

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20.93-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.41}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.482 \times 1.22=0.588$

## Item 11

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20.93-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.41}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.482 \times 1.22=0.588$

## Item 12

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{17.56-18.52}{5} \sqrt{\frac{0.9}{0.1}}$
$r_{p b i}=\frac{-0.96}{5} \sqrt{9}$
$r_{p b i}=-0.192 \times 3=-0.576$

## Item 13

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{19.28-18.52}{5} \sqrt{\frac{0.8}{0.2}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{0.76}{5} \sqrt{4}$
$\mathrm{r}_{\mathrm{pbi}}=0.152 \times 2=0.304$

## Item 14

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{18.14-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{-0.38}{5} \sqrt{1.5}$
$r_{p b i}=-0.076 \times 1.22=-0.09272$

## Item 15

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20.54-18.52}{5} \sqrt{\frac{0.4}{0.6}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.02}{5} \sqrt{0.6}$
$\mathrm{r}_{\mathrm{pbi}}=0.404 \times 0.816=0.329$

## Item 16

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{20.93-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.41}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.482 \times 1.2=0.5784$

## Item 17

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{24.2-18.52}{5} \sqrt{\frac{0.2}{0.8}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{5.68}{5} \sqrt{0.25}$
$r_{p b i}=1.136 \times 0.5=0.568$

## Item 18

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20.58-18.52}{5} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.06}{5} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.412 \times 1.5=0.618$

## Item 19

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{\mathrm{pbi}}=\frac{18.5-18.52}{5} \sqrt{\frac{0.2}{0.8}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{-0.02}{5} \sqrt{0.25}$
$r_{p b i}=-0.004 \times 0.5=-0.002$

## Item 20

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{16.95-18.52}{5} \sqrt{\frac{0.9}{0.1}}$
$r_{p b i}=\frac{-1.57}{5} \sqrt{9}$
$\mathrm{r}_{\mathrm{pbi}}=-0.314 \times 3=-0.942$

## Item 21

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{21.15-18.52}{5} \sqrt{\frac{0.5}{0.5}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.63}{5} \sqrt{1}$
$\mathrm{r}_{\mathrm{pbi}}=0.526 \times 1=0.526$

## Item 22

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{18.93-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{0.41}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.082 \times 1.22=0.10004$

## Item 23

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20.93-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.41}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.482 \times 1.22=0.588$

## Item 24

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{21.22-18.52}{5} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.7}{5} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.54 \times 1.5=0.81$

## Item 25

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.2=1.0896$

## Item 26

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{18.20-18.52}{5} \sqrt{\frac{1.0}{0.0}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{-0.32}{5} \sqrt{10}$
$\mathrm{r}_{\mathrm{pbi}}=-0.064 \times 2=0.304$

## Item 27

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.908 \times 1.22=1.107$

## Item 28

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23.2-18.52}{5} \sqrt{\frac{0.2}{0.8}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.68}{5} \sqrt{0.25}$
$\mathrm{r}_{\mathrm{pbi}}=0.936 \times 0.5=0.468$

## Item 29

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{17-18.52}{5} \sqrt{\frac{0.1}{0.9}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{-1.52}{5} \sqrt{0.11}$
$r_{p b i}=-0.304 \times 0.3=-0.0912$

## Item 30

$$
\begin{aligned}
& \mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}} \\
& \mathrm{r}_{\mathrm{pbi}}=\frac{23.06-18.52}{5} \sqrt{\frac{0.6}{0.4}} \\
& \mathrm{r}_{\mathrm{pbi}}=\frac{4.54}{5} \sqrt{1.5} \\
& \mathrm{r}_{\mathrm{pbi}}=0.98 \times 1.2=1.0896
\end{aligned}
$$

## Appendix 9

Table Validity of Pre-test

| No | $\mathrm{M}_{\mathrm{p}}$ | $\mathrm{M}_{\mathrm{t}}$ | $\mathrm{SD}_{\mathrm{t}}$ | P | Q | $\mathrm{r}_{\mathrm{pbi}=\frac{\mathrm{M}_{\mathrm{p}-\mathrm{M}_{\mathrm{t}}}}{\mathrm{SD}_{\mathrm{t}}} \sqrt{\frac{\mathrm{p}}{\mathrm{q}}}}$$r_{t} \mathrm{on} 5 \%$ <br> significant | Interpretation |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.1077 | 0.396 | Valid |
| 2. | 21.22 | 18.52 | 5 | 0.7 | 0.3 | 0.82 | 0.396 | Valid |
| 3. | 21.22 | 18.52 | 5 | 0.7 | 0.3 | 0.82 | 0.396 | Valid |
| 4. | 21.22 | 18.52 | 5 | 0.7 | 0.3 | 0.82 | 0.396 | Valid |
| 5. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.107 | 0.396 | Valid |
| 6. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.107 | 0.396 | Valid |
| 7. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.107 | 0.396 | Valid |
| 8. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.107 | 0.396 | Valid |
| 9. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.107 | 0.396 | Valid |
| 10. | 20.93 | 18.52 | 5 | 0.6 | 0.4 | 0.588 | 0.396 | Valid |
| 11. | 20.93 | 18.52 | 5 | 0.6 | 0.4 | 0.588 | 0.396 | Valid |
| 12. | 17.56 | 18.52 | 5 | 0.9 | 0.1 | -0.576 | 0.396 | Invalid |
| 13. | 19.28 | 18.52 | 5 | 0.8 | 0.2 | 0.304 | 0.396 | Invalid |
| 14. | 18.14 | 18.52 | 5 | 0.6 | 0.4 | -0.092 | 0.396 | Invalid |
| 15. | 20.54 | 18.52 | 5 | 0.6 | 0.4 | 0.329 | 0.396 | Invalid |
| 16. | 20.93 | 18.52 | 5 | 0.6 | 0.4 | 0.5784 | 0.396 | Valid |
| 17. | 24.2 | 18.52 | 5 | 0.2 | 0.8 | 0.568 | 0.396 | Valid |
| 18. | 20.58 | 18.52 | 5 | 0.7 | 0.3 | 0.618 | 0.396 | Valid |
| 19. | 18.5 | 18.52 | 5 | 0.2 | 0.8 | -0.002 | 0.396 | Invalid |
| 20. | 16.95 | 18.52 | 5 | 0.9 | 0.1 | -0.0942 | 0.396 | Invalid |


| 21. | 21.15 | 18.52 | 5 | 0.5 | 0.5 | 0.526 | 0.396 | Valid |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22. | 18.93 | 18.52 | 5 | 0.6 | 0.4 | 0.10004 | 0.396 | Invalid |
| 23. | 20.93 | 18.52 | 5 | 0.6 | 0.4 | 0.588 | 0.396 | Valid |
| 24. | 21.22 | 18.52 | 5 | 0.7 | 0.3 | 0.81 | 0.396 | Valid |
| 25. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.0896 | 0.396 | Valid |
| 26. | 18.20 | 18.52 | 5 | 1.0 | 0.0 | 0.304 | 0.396 | Invalid |
| 27. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.107 | 0.396 | Valid |
| 28. | 23.2 | 18.52 | 5 | 0.2 | 0.8 | 0.468 | 0.396 | Valid |
| 29. | 17 | 18.52 | 5 | 0.1 | 0.9 | -0.0912 | 0.396 | Invalid |
| 30. | 23.06 | 18.52 | 5 | 0.6 | 0.4 | 1.0896 | 0.396 | Valid |

## Appendix 10

## Reliability of Pre Test

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

$$
\mathrm{R}_{11}=\left(\frac{n}{n-1}\right)\left(\frac{s_{t^{2}}-\sum p q}{s_{t^{2}}}\right)
$$

$$
\mathrm{N}=25
$$

$$
\sum \mathrm{Xt}=458
$$

$$
\sum \mathrm{Xt}^{2}=9666
$$

$$
\Sigma \mathrm{pq}=5.16
$$

$$
\mathrm{S}_{\mathrm{t}}^{2}=\sum \mathrm{Xt}^{2}-\left(\frac{\sum \mathrm{xt}}{N}\right)^{2}
$$

$$
=9666-\left(\frac{458}{25}\right)^{2}=9666-18.32^{2}=9666-335.6224=9330.3776
$$

$$
\mathrm{S}_{\mathrm{t}}^{2}=\frac{\sum \mathrm{Xt} 2}{N}=\frac{9330.3776}{25}
$$

$$
\mathrm{S}_{\mathrm{t}}^{2}=373.215
$$

$$
\mathrm{R}_{11}=\left(\frac{n}{n-1}\right)\left(\frac{s_{t^{2}}-\sum p q}{s_{t^{2}}}\right)
$$

$$
\mathrm{R}_{11}=\left(\frac{25}{25-1}\right)\left(\frac{373.215-5.16}{373.215}\right)=\left(\frac{25}{24}\right)\left(\frac{368.055}{373.215}\right)
$$

$$
=(1.04)(0.99)
$$

$$
=1.03\left(\mathrm{r}_{11}>0.70=\text { reliable }\right)
$$

## Appendix 12

Calculation of the formulation $\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$ in Post-Test
B. Calculation of Post-Test

1. Mean score from score total $\left(M_{t}\right)$

$$
\begin{aligned}
& \mathrm{M}_{\mathrm{t}}=\frac{\sum x_{\mathrm{t}}}{N} \\
& \mathrm{M}_{\mathrm{t}}=\frac{393}{25}=15.72
\end{aligned}
$$

2. Standard Deviation $\left(\mathbf{S D}_{\mathbf{t}}\right)$

$$
\begin{aligned}
& \mathrm{SD}_{\mathrm{t}}=\sqrt{\frac{\sum X_{\mathrm{t}^{2}}}{N}-\left(\frac{\sum x_{\mathrm{t}}}{N}\right)^{2}} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{\frac{7413}{25}-\left(\frac{393}{25}\right)^{2}} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{296.52-15.72^{2}} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{296.52-247.11} \\
& \mathrm{SD}_{\mathrm{t}}=\sqrt{49.40}=7
\end{aligned}
$$

## 3. Mean Score $\left(M_{p}\right)$

## Item 1

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 1}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+19+25+10+24+23+20+26+20+20+13+18+6+23+24}{15}$
$\mathrm{M}_{\mathrm{pl}}=\frac{286}{15}=19.06$

## Item 2

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 2}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+19+25+10+24+23+20+26+20+20+13+18+6+23+2}{15}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{286}{15}=19.06
$$

## Item 3

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 3}$
$\mathrm{M}_{\mathrm{pl}=} \frac{15+19+25+23+24+23+20+26+24+23+20}{11}$
$\mathrm{M}_{\mathrm{pl}}=\frac{242}{11}=22$

## Item 4

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 4}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+19+25+23+24+23+20+26+24+23+20}{11}$
$\mathrm{M}_{\mathrm{pl}}=\frac{242}{11}=22$

## Item 5

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 5}$
$\mathrm{M}_{\mathrm{pl}}=\frac{13+19+25+10+23+24+20+26+6+23+24}{11}$
$\mathrm{M}_{\mathrm{pl}}=\frac{213}{11}=19.36$

## Item 6

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 6}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+13+19+25+23+24+23+14+20+26+17+20+20+18+23+24}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{320}{16}=20$

## Item 7

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 7}$
$\mathrm{M}_{\mathrm{pl}}=\frac{10+23+24+17+7+6+24}{7}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{111}{7}=15.85
$$

## Item 8

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 8}$
$\mathrm{M}_{\mathrm{pl}}=\frac{26+17+7+18+24}{5}$
$\mathrm{M}_{\mathrm{pl}}=\frac{82}{5}=16.4$

## Item 9

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 9}$
$\mathrm{M}_{\mathrm{pl}}=\frac{12+23+14+23}{4}$
$\mathrm{M}_{\mathrm{pl}}=\frac{72}{4}=18$

## Item 10

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 10}$
$\mathrm{M}_{\mathrm{pl}=} \frac{15+12+25+23+26}{5}$
$\mathrm{M}_{\mathrm{pl}}=\frac{101}{5}=20.2$

## Item 11

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 11}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+13+19+25+23+24+23+14+20+26+17+20+20+18+23+24}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{320}{16}=20$

## Item 12

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 12}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+13+19+12+25+23+24+23+24+20+20+10+7+23+24+20+26+17}{18}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{345}{18}=19.16
$$

## Item 13

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 13}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+13+19+12+25+23+24+23+24+20+20+10+7+23+24+20+26+17}{18}$
$\mathrm{M}_{\mathrm{pl}}=\frac{345}{18}=19.16$

## Item 14

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 14}$
$\mathrm{M}_{\mathrm{pl}=} \frac{5+13+19+12+25+23+24+23+24+20+20+10+7+23+24+20+26+17}{18}$
$\mathrm{M}_{\mathrm{pl}}=\frac{345}{18}=19.16$

## Item 15

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 15}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+13+19+25+23+24+23+14+20+26+17+20+20+18+23+24}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{320}{16}=20$

## Item 16

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+13+19+25+23+24+23+14+20+26+17+20+20+18+23+24}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{320}{16}=20$

## Item 17

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 17}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+13+19+25+23+24+23+14+20+26+17+20+20+18+23+24}{16}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{320}{16}=20
$$

## Item 18

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 18}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+13+19+25+23+24+23+14+20+26+17+20+20+18+23+24}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{320}{16}=20$

## Item 19

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 19}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+13+19+25+23+24+23+14+20+26+17+20+20+18+23+24}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{320}{16}=20$

## Item 20

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 20}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+12+25+10+23+26+17+20+20+10+5+18+23+24+24+23}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{295}{16}=18.43$

## Item 21

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 21}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+12+25+10+23+26+17+20+20+10+5+18+23+24+24+23}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{295}{16}=18.43$

## Item 22

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents' scorethattrueitemanswer }}{n 22}$
$\mathrm{M}_{\mathrm{pl}}$
$\underline{15+11+19+3+12+25+10+24+23+14+23+20+26+17+20+20+10+5+18+6+23+5+24}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{363}{23}=15.78
$$

## Item 23

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 23}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+11+19+3+12+25+10+24+23+14+20+26+20+20+10+5+18+7+23+5+24}{21}$
$\mathrm{M}_{\mathrm{pl}}=\frac{331}{21}=15.76$

## Item 24

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 24}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+11+3+12+24+23+14+20+26+20+7+18+25+5}{14}$
$\mathrm{M}_{\mathrm{pl}}=\frac{246}{14}=17.57$

## Item 25

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 25}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+25+10+23+24+23+26+20+18+5+24}{11}$
$\mathrm{M}_{\mathrm{pl}}=\frac{190}{11}=17.27$

## Item 26

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 26}$
$\mathrm{M}_{\mathrm{pl}=} \frac{15+12+25+10+23+24+23+26+17+20+20+10+5+18+23+24}{16}$
$\mathrm{M}_{\mathrm{pl}}=\frac{295}{16}=18.43$

## Item 27

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 27}$
$\mathrm{M}_{\mathrm{pl}=} \frac{19+25+20+26+23}{5}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{113}{5}=22.6
$$

## Item 28

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 28}$
$\mathrm{M}_{\mathrm{pl}}=\frac{11+19+3+12+25+23+24+23+20+26+17+20+10+18+23+5+24}{17}$
$\mathrm{M}_{\mathrm{pl}}=\frac{303}{17}=17.82$

## Item 29

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 29}$
$\mathrm{M}_{\mathrm{pl}}=\frac{13+23+20+36}{4}$
$\mathrm{M}_{\mathrm{pl}}=\frac{92}{4}=23$

## Item 30

$\mathrm{M}_{\mathrm{pl}}=\frac{\text { totalscoreofstudents'scorethattrueitemanswer }}{n 30}$
$\mathrm{M}_{\mathrm{pl}}=\frac{15+19+25+10+24+23+20+26+20+20+13+18+6+23+24}{15}$

$$
\mathrm{M}_{\mathrm{pl}}=\frac{286}{15}=19.06
$$

4. Calculation of the formulation $\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$

## Item 2

## Item 1

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{19.06-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{3.34}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.477 \times 1.22=0.5819$

$$
\begin{aligned}
& \mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}} \\
& \mathrm{r}_{\mathrm{pbi}}=\frac{19.06-15.72}{7} \sqrt{\frac{0.6}{0.4}} \\
& \mathrm{r}_{\mathrm{pbi}}=\frac{3.34}{7} \sqrt{1.5} \\
& \mathrm{r}_{\mathrm{pbi}}=0.477 \times 1.22=0.5819
\end{aligned}
$$

## Item 3

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{22-15.72}{7} \sqrt{\frac{0.4}{0.6}}$
$r_{\mathrm{pbi}}=\frac{6.28}{7} \sqrt{0.6}$
$r_{p b i}=0.897 \times 0.81=0.726$

## Item 4

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{22-15.72}{7} \sqrt{\frac{0.4}{0.6}}$
$r_{p b i}=\frac{6.23}{7} \sqrt{0.6}$
$r_{\mathrm{pbi}}=0.897 \times 0.81=0.726$

## Item 5

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{\mathrm{pbi}}=\frac{19.36-15.72}{7} \sqrt{\frac{0.4}{0.6}}$
$r_{\mathrm{pbi}}=\frac{3.64}{7} \sqrt{0.6}$
$\mathrm{r}_{\mathrm{pbi}}=0.52 \times 0.81=0.4212$

## Item 6

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$r_{p b i}=\frac{4.28}{7} \sqrt{1.5}$
$r_{p b i}=0.611 \times 1.22=0.745$

## Item 7

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{15.85-15.72}{7} \sqrt{\frac{0.3}{0.7}}$
$r_{p b i}=\frac{0.13}{7} \sqrt{0.42}$
$\mathrm{r}_{\mathrm{pbi}}=0.0185 \times 0.65=0.0120$

## Item 8

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{\mathrm{pbi}}=\frac{16.4-15.72}{7} \sqrt{\frac{0.2}{0.8}}$
$r_{p b i}=\frac{0.68}{7} \sqrt{0.25}$
$\mathrm{r}_{\mathrm{pbi}}=0.097 \times 0.5=0.0485$

## Item 9

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{18-15.72}{7} \sqrt{\frac{0.2}{0.8}}$
$r_{\mathrm{pbi}}=\frac{2.28}{7} \sqrt{0.25}$
$\mathrm{r}_{\mathrm{pbi}}=0.32 \times 0.5=0.16$

## Item 10

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20.2-15.72}{7} \sqrt{\frac{0.2}{0.8}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.48}{2} \sqrt{0.25}$
$r_{\mathrm{pbi}}=0.64 \times 0.5=0.32$

## Item 11

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20-15.72}{7} \sqrt{\frac{06}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.28}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.611 \times 1.22=0.745$

## Item 12

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{19.16-15.72}{7} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{3.44}{7} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.491 \times 1.5=0.7365$

## Item 13

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{19.16-15.72}{7} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{3.44}{7} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.491 \times 1.5=0.7365$

## Item 14

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{19.16-15.72}{7} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{3.44}{7} \sqrt{2.33}$
$\mathrm{r}_{\mathrm{pbi}}=0.491 \times 1.5=0.7365$

## Item 15

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.28}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.611 \times 1.22=0.745$

## Item 16

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$r_{p b i}=\frac{20-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.28}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.611 \times 1.22=0.745$

## Item 17

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20-15.724}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.28}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.611 \times 1.22=0.745$

## Item 18

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.28}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.611 \times 1.22=0.745$

## Item 19

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{20-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{4.28}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.611 \times 1.22=0.745$

## Item 20

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{18.43-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.71}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.38 \times 1.22=0.4636$

## Item 21

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{18.43-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.71}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.38 \times 1.22=0.4636$

## Item 22

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{15.78-15.72}{7} \sqrt{\frac{0.9}{0.1}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{0.06}{7} \sqrt{9}$

## Item 23

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{15.76-15.72}{7} \sqrt{\frac{0.8}{0.2}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{0.04}{7} \sqrt{4}$
$\mathrm{r}_{\mathrm{pbi}}=0.005 \times 2=0.01$

## Item 24

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{17.57-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{1.85}{7} \sqrt{1.5}$
$\mathrm{r}_{\mathrm{pbi}}=0.264 \times 1.22=0.322$

## Item 25

$\mathrm{r}_{\mathrm{pbi}}=\frac{\mathrm{M}_{\mathrm{p}-\mathrm{M}_{\mathrm{t}}}}{\mathrm{SD}_{\mathrm{t}}} \sqrt{\frac{\mathrm{p}}{\mathrm{q}}}$
$r_{p b i}=\frac{17.27-15.72}{7} \sqrt{\frac{0.4}{0.6}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{1.55}{7} \sqrt{0.6}$
$r_{p b i}=0.221 \times 0.816=0.180$

## Item 26

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{18.43-15.72}{7} \sqrt{\frac{0.6}{0.4}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.71}{7} \sqrt{1.5}$

## Item 27

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{22.6-15.72}{7} \sqrt{\frac{0.2}{0.8}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{6.88}{7} \sqrt{0.25}$
$\mathrm{r}_{\mathrm{pbi}}=0.98 \times 0.5=0.49$

## Item 28

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{17.82-15.72}{7} \sqrt{\frac{0.7}{0.3}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{2.1}{7} \sqrt{2.32}$
$\mathrm{r}_{\mathrm{pbi}}=0.3 \times 1.5=0.45$

## Item 29

$\mathrm{r}_{\mathrm{pbi}}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{23-15.72}{7} \sqrt{\frac{0.2}{0.8}}$
$\mathrm{r}_{\mathrm{pbi}}=\frac{7.28}{7} \sqrt{0.25}$
$\mathrm{r}_{\mathrm{pbi}}=1.04 \times 0.5=0.52$

## Item 30

$$
\begin{aligned}
& r_{p b i}=\frac{M_{p-M_{t}}}{S D_{t}} \sqrt{\frac{p}{q}} \\
& r_{p b i}=\frac{19.06-15.72}{7} \sqrt{\frac{0.6}{0.4}} \\
& r_{\mathrm{pbi}}=\frac{3.34}{7} \sqrt{0.6}
\end{aligned}
$$

## Appendix 13

Table Validity of Post-test

| No | $\mathrm{M}_{\mathrm{p}}$ | $\mathrm{M}_{\mathrm{t}}$ | $\mathrm{SD}_{\mathrm{t}}$ | p | Q | $\mathrm{r}_{\mathrm{pbi}}=\frac{\mathrm{M}_{\mathrm{p}-\mathrm{M}_{\mathrm{t}}}}{\mathrm{SD}_{\mathrm{t}}} \sqrt{\frac{\mathrm{p}}{\mathrm{q}}}$ | $r_{t} \text { on } 5 \%$ <br> significant | Interpretation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 19.06 | 15.72 | 7 | 0.6 | 0.4 | 0.5819 | 0.396 | Valid |
| 2. | 19.06 | 15.72 | 7 | 0.6 | 0.4 | 0.5819 | 0.396 | Valid |
| 3. | 22 | 15.72 | 7 | 0.4 | 0.6 | 0.726 | 0.396 | Valid |
| 4. | 22 | 15.72 | 7 | 0.4 | 0.6 | 0.726 | 0.396 | Valid |
| 5. | 19.36 | 15.72 | 7 | 0.4 | 0.6 | 0.412 | 0.396 | Valid |
| 6. | 20 | 15.72 | 7 | 0.6 | 0.4 | 0.745 | 0.396 | Valid |
| 7. | 15.85 | 15.72 | 7 | 0.3 | 0.7 | 0.0120 | 0.396 | Invalid |
| 8. | 16.4 | 15.72 | 7 | 0.2 | 0.8 | 0.045 | 0.396 | Invalid |
| 9. | 18 | 15.72 | 7 | 0.2 | 0.8 | 0.16 | 0.396 | Invalid |
| 10. | 20.2 | 15.72 | 7 | 0.2 | 0.8 | 0.32 | 0.396 | Invalid |
| 11. | 20 | 15.72 | 7 | 0.6 | 0.4 | 0.745 | 0.396 | Valid |
| 12. | 19.16 | 15.72 | 7 | 0.7 | 0.3 | 0.7365 | 0.396 | Valid |
| 13. | 19.16 | 15.72 | 7 | 0.7 | 0.3 | 0.7365 | 0.396 | Valid |
| 14. | 19.16 | 15.72 | 7 | 0.7 | 0.3 | 0.7365 | 0.396 | Valid |
| 15. | 20 | 15.72 | 7 | 0.6 | 0.4 | 0.745 | 0.396 | Valid |
| 16. | 20 | 15.72 | 7 | 0.6 | 0.4 | 0.745 | 0.396 | Valid |
| 17. | 20 | 15.72 | 7 | 0.6 | 0.4 | 0.745 | 0.396 | Valid |
| 18. | 20 | 15.72 | 7 | 0.6 | 0.4 | 0.745 | 0.396 | Valid |
| 19. | 20 | 15.72 | 7 | 0.6 | 0.4 | 0.745 | 0.396 | Valid |
| 20. | 18.43 | 15.72 | 7 | 0.6 | 0.4 | 0.4636 | 0.396 | Valid |


| 21. | 18.43 | 15.72 | 7 | 0.6 | 0.4 | 0.4636 | 0.396 | Valid |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22. | 15.78 | 15.72 | 7 | 0.9 | 0.1 | 0.0255 | 0.396 | Invalid |
| 23. | 15.76 | 15.72 | 7 | 0.8 | 0.2 | 0.01 | 0.396 | Invalid |
| 24. | 17.57 | 15.72 | 7 | 0.6 | 0.4 | 0.322 | 0.396 | Invalid |
| 25. | 17.27 | 15.72 | 7 | 0.4 | 0.6 | 0.180 | 0.396 | Invalid |
| 26. | 18.43 | 15.72 | 7 | 0.6 | 0.4 | 0.4636 | 0.396 | Valid |
| 27. | 22.6 | 15.72 | 7 | 0.2 | 0.8 | 0.49 | 0.396 | Valid |
| 28. | 17.82 | 15.72 | 7 | 0.7 | 0.3 | 0.45 | 0.396 | Valid |
| 29. | 23 | 15.72 | 7 | 0.2 | 0.8 | 0.52 | 0.396 | Valid |
| 30. | 19.06 | 15.72 | 7 | 0.6 | 0.4 | 0.389 | 0.396 | Invalid |

## Appendix 15

## Reliability of Post Test

To get reliability of the test, the researcher uses formula KR-20:
$\mathrm{R}_{11}=\left(\frac{n}{n-1}\right)\left(\frac{s_{t^{2}}-\sum p q}{s_{t^{2}}}\right)$
$\mathrm{N}=25$
$\sum \mathrm{Xt}=393$
$\sum \mathrm{Xt}^{2}=7413$
$\sum \mathrm{pq}=6.23$

$$
\begin{aligned}
\mathrm{S}_{\mathrm{t}}^{2} & =\sum \mathrm{Xt}^{2}-\left(\frac{\sum \mathrm{xt}}{N}\right)^{2} \\
& =7413-\left(\frac{393}{25}\right)^{2}=7413-15.72^{2}=7413-247.11=7165.89
\end{aligned}
$$

$$
\mathrm{S}_{\mathrm{t}}^{2}=\frac{\sum \mathrm{Xt} 2}{N}=\frac{7165.89}{25}
$$

$$
\mathrm{S}_{\mathrm{t}}^{2}=286.6356
$$

$$
\mathrm{R}_{11}=\left(\frac{n}{n-1}\right)\left(\frac{s_{t^{2}}-\sum p q}{s_{t^{2}}}\right)
$$

$$
\mathrm{R}_{11}=\left(\frac{25}{25-1}\right)\left(\frac{286.6356-6.23}{286.6356}\right)=\left(\frac{25}{24}\right)\left(\frac{280.4}{286.6356}\right)
$$

$$
=(1.04)(0.99)
$$

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

## Appendix 16

## RESULT OF NORMALITY TEST IN PRE TEST

RESULT OF THE NORMALITY TEST OF VIII D IN PRE-TEST

1. The score of VIII D class in pre test from low score to high score:

| 15 | 15 | 15 | 20 | 25 | 25 | 30 | 30 | 30 | 35 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 35 | 40 | 40 | 40 | 45 | 45 | 45 | 50 | 50 | 50 |
| 50 | 50 | 60 | 60 | 65 |  |  |  |  |  |

2. High $=65$

Low $=15$
Range = High - Low
$=65-15$
$=50$
3. Total of Classes $=1+3,3 \log (\mathrm{n})$

$$
\begin{aligned}
& =1+3,3 \log (25) \\
& =1+3,3(1,40) \\
& =1+4,62 \\
& =5.62 \\
& =6
\end{aligned}
$$

4. Length of Classes $=\frac{\text { range }}{\text { totalofclass }}=\frac{50}{6}=8$
5. Mean

| Interval Class | F | X | x | fx | $\mathrm{x}^{2}$ | $\mathrm{fx}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $15-22$ | 4 | 18 | +3 | 12 | 9 | 36 |
| $23-30$ | 5 | 26 | +2 | 10 | 4 | 20 |
| $31-38$ | 2 | 34 | +1 | 2 | 1 | 2 |
| $39-46$ | $\mathbf{6}$ | $\mathbf{4 2}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| $47-54$ | 5 | 50 | -1 | -5 | 1 | 5 |
| $55-62$ | 2 | 58 | -2 | -4 | 4 | 8 |
| $63-70$ | 1 | 66 | -3 | -3 | 9 | 9 |
| $i=8$ | 25 | - | - | 12 | - | 80 |

$$
\begin{aligned}
M x= & M^{1} \\
& +i \frac{\sum f x^{1}}{N} \\
& =42+8\left(\frac{12}{25}\right) \\
& =42+8(0,48) \\
& =42+3,84 \\
& =46.34 \\
\mathrm{SD}_{\mathrm{t}} & =i \sqrt{\frac{\sum f x^{2}}{n}-\left(\frac{\sum f x \prime}{n}\right)^{2}} \\
& =8 \sqrt{\frac{80}{25}-\left(\frac{12}{25}\right)^{2}} \\
& =8 \sqrt{3,2-(0,48)^{2}} \\
& =8 \sqrt{3.2-0,2304} \\
& =8 \sqrt{2,96} \\
& =8 \times 1,72=13.76
\end{aligned}
$$

Table of Normality Data Test with Chi Kuadrad Formula

| Interval <br> of Score | Real <br> Upper <br> Limit | Z-Score | Limit of <br> Large of the <br> Area | Large of <br> area | $\mathrm{f}_{\mathrm{h}}$ | $\mathrm{f}_{0}$ | $\left(\mathrm{f}_{0}-\mathrm{f}_{\mathrm{h}}\right)$ <br> $\mathrm{f}_{\mathrm{h}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $63-70$ | 70.5 | 1.75 | 0,4599 | 0.08 | 2 | 4 | 1 |
| $55-62$ | 62.5 | 1.17 | 0.3790 | 0.15 | 3.7 | 5 | 0.26 |
| $47-54$ | 54.5 | 0.59 | 0.2224 | 0.21 | 5.2 | 2 | -1.6 |
| $39-46$ | 46.5 | 0,01 | 0.0040 | 0.20 | 5 | 6 | 0.2 |
| $31-38$ | 38.5 | -0.56 | 0.2123 | 0.16 | 4 | 5 | 0.25 |
| $32-30$ | 30.5 | -1.15 | 0.3749 | 0,08 | 2 | 2 | 0 |
| $15-22$ | 22.5 | -1.73 | 0.4582 | 0,03 | 0.7 | 1 | 0.42 |
|  | 14.5 | -2.31 | 0.4896 |  |  |  |  |

Based on the table above, the reseracher found that $\mathrm{x}^{2}$ count $=3,73$ while $x^{2}{ }_{\text {table }}=$, cause $\mathrm{x}^{2}$ count $<\mathrm{x}^{2}$ table $(3,73<11.070)$ with degree of freedom $(\mathrm{dk})=6-1$ $=5$ and significant level $\alpha=5 \%$. So distribution of VIII D class (pre-test) is normal.
6. Median

| No | Interval | F | Fk |
| :---: | :---: | :---: | :---: |
| 1 | $15-22$ | 4 | 4 |
| 2 | $23-30$ | 5 | 9 |
| 3 | $31-38$ | 2 | $\mathbf{1 1}$ |
| 4 | $\mathbf{3 9}-\mathbf{4 6}$ | $\mathbf{6}$ | 17 |
| 5 | $47-54$ | 5 | 22 |
| 6 | $55-62$ | 2 | 24 |
| 7 | $63-70$ | 1 | 25 |

Position of Me in the interval of classes is number 3, that:
$\mathrm{Bb}=38.5$
$\mathrm{F}=11$
$\mathrm{fm}=6$
i $=8$
$\mathrm{n}=25$
$1 / 2 n=12.5$
So :

$$
\begin{aligned}
\mathrm{Me} & =\mathrm{Bb}+\mathrm{i}\left(\frac{n / 2-F}{f m}\right) \\
& =38.5+8\left(\frac{12.5-11}{6}\right) \\
& =38.5+8(0.25) \\
& =38.5+2 \\
& =40.5
\end{aligned}
$$

7. Modus

| No | Interval | F | Fk |
| :---: | :---: | :---: | :---: |
| 1 | $15-22$ | 4 | 4 |
| 2 | $23-30$ | 5 | 9 |
| 3 | $31-38$ | 2 | $\mathbf{1 1}$ |
| 4 | $\mathbf{3 9}-\mathbf{4 6}$ | $\mathbf{6}$ | 17 |
| 5 | $47-54$ | 5 | 22 |
| 6 | $55-62$ | 2 | 24 |
| 7 | $63-70$ | 1 | 25 |

$\mathrm{M}_{\mathrm{o}}=L+\frac{d_{1}}{d_{1}+d_{2}} i$
$\mathrm{L}=38.5$
$\mathrm{d}_{1}=4$
$\mathrm{d}_{2}=1$
i $=8$
So,

$$
\begin{aligned}
\mathrm{M}_{\mathrm{o}} & =38.5+\frac{4}{4+1} 8 \\
& =38.5+0.8(8) \\
& =38.5+6.4 \\
& =44.9
\end{aligned}
$$

## RESULT OF THE NORMALITY TEST OF VIII B IN PRE-TEST

1. The score of VIII B class in pre test from low score to high score:

| 30 | 30 | 30 | 35 | 35 | 40 | 40 | 40 | 40 | 45 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 45 | 45 | 50 | 50 | 50 | 55 | 55 | 60 | 60 | 65 |
| 65 | 70 | 70 | 75 | 75 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

2. High $=75$

Low $=30$
Range = High - Low
$=75-30$
$=45$
3. Total of Classes $=1+3,3 \log (n)$

$$
=1+3,3 \log (25)
$$

$$
\begin{aligned}
& =1+3,3(1,40) \\
& =1+4.62 \\
& =5.62 \\
& =6
\end{aligned}
$$

4. Length of Classes $=\frac{\text { range }}{\text { totalofclass }}=\frac{45}{6}=7$
5. Mean

| Interval Class | F | X | x | fx | $\mathrm{x}^{2}$ | $\mathrm{fx}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $30-36$ | 5 | 33 | +2 | 10 | 4 | 20 |
| $37-43$ | 4 | 40 | +1 | 4 | 1 | 4 |
| $44-50$ | $\mathbf{6}$ | $\mathbf{4 7}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| $51-57$ | 2 | 54 | -1 | -2 | 1 | 2 |
| $58-64$ | 2 | 61 | -2 | -4 | 4 | 8 |
| $65-71$ | 4 | 68 | -3 | -12 | 9 | 36 |
| $72-78$ | 2 | 75 | -4 | -8 | 16 | 32 |
| $i=7$ | 25 | - | - | -12 | - | 102 |

$$
\begin{aligned}
M x= & M^{1}+i \frac{\Sigma f x^{1}}{N} \\
& =47+7\left(\frac{-12}{25}\right) \\
& =47+7(-0.48) \\
& =47+-3.36 \\
& =43.64
\end{aligned}
$$

$$
\begin{aligned}
\mathrm{SD}_{\mathrm{t}} & =i \sqrt{\frac{\sum f x^{2}}{n}-\left(\frac{\sum f x \prime}{n}\right)^{2}} \\
& =7 \sqrt{\frac{102}{25}-\left(\frac{-12}{25}\right)^{2}} \\
& =7 \sqrt{4.08-(-0.48)^{2}} \\
& =7 \sqrt{4.08-0.2304} \\
& =7 \sqrt{3.84} \\
& =7 \times 1.95=13.65
\end{aligned}
$$

Table of Normality Data Test with Chi Kuadrad Formula

| Interval | Real | $Z$ - Score | Limit of | Large of | $\mathrm{f}_{\mathrm{h}}$ | $\mathrm{f}_{0}$ | $\left(\mathrm{f}_{0}-\mathrm{f}_{\mathrm{h}}\right)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| of Score | Upper <br> Limit |  | Large of the <br> Area | area |  |  | $\mathrm{f}_{\mathrm{h}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $72-78$ | 78.5 | 2.55 | 0.4945 | 0.01 | 0.25 | 5 | 0.95 |
| $65-71$ | 71.5 | 2.04 | 0.4793 | 0.04 | 1 | 4 | 3 |
| $58-64$ | 64.5 | 1.52 | 0.4357 | 0.09 | 2.25 | 6 | 1.6 |
| $51-57$ | 57.5 | 1.01 | 0.3438 | 0.15 | 3.75 | 2 | -0.46 |
| $44-50$ | 50.5 | 0.50 | 0.1915 | 0.18 | 4.5 | 2 | -0.55 |
| $37-43$ | 43.5 | -0.01 | 0.0040 | -0.19 | -4.75 | 4 | -1.84 |
| $30-36$ | 36.5 | -0.52 | 0.1985 | -0.15 | -3.75 | 2 | -1.53 |
|  | 29.5 | -1.03 | 0.3485 |  |  |  |  |

Based on the table above, the reseracher found that $\mathrm{x}^{2}$ count $=9.93$ while $x^{2}{ }_{\text {table }}=$, cause $\mathrm{x}^{2}{ }_{\text {count }}<\mathrm{x}_{\text {table }}^{2}(9.93<11.070)$ with degree of freedom $(\mathrm{dk})=6-1$ $=5$ and significant level $\alpha=5 \%$. So distribution of VIII B class (pre-test) is normal.
6. Median

| No | Interval | F | Fk |
| :---: | :---: | :---: | :---: |
| 1 | $30-36$ | 5 | 5 |
| 2 | $37-43$ | 4 | $\mathbf{9}$ |
| 3 | $44-50$ | $\mathbf{6}$ | 15 |
| 4 | $51-57$ | 2 | 17 |
| 5 | $58-64$ | 2 | 19 |
| 6 | $65-71$ | 4 | 23 |
| 7 | $72-78$ | 2 | 25 |

Position of Me in the interval of classes is number 4, that:
$\mathrm{Bb}=43.5$
F $=9$
$\mathrm{fm}=6$
i $=7$

$$
\mathrm{n} \quad=25
$$

$1 / 2 n=12.5$
So :

$$
\begin{aligned}
\mathrm{Me} & =\mathrm{Bb}+\mathrm{i}\left(\frac{n / 2-F}{f m}\right) \\
& =43.5+7\left(\frac{12.5-9}{6}\right) \\
& =43.5+7(0.59) \\
& =43.5+4.13 \\
& =47.83
\end{aligned}
$$

## 7. Modus

| No | Interval | F | Fk |
| :---: | :---: | :---: | :---: |
| 1 | $30-36$ | 5 | 5 |
| 2 | $37-43$ | 4 | $\mathbf{9}$ |
| 3 | $44-50$ | $\mathbf{6}$ | 15 |
| 4 | $51-57$ | 2 | 17 |
| 5 | $58-64$ | 2 | 19 |
| 6 | $65-71$ | 4 | 23 |
| 7 | $72-78$ | 2 | 25 |

$\mathrm{M}_{\mathrm{o}}=L+\frac{d_{1}}{d_{1}+d_{2}} i$
$\mathrm{L}=43.5$
$\mathrm{d}_{1}=2$
$\mathrm{d}_{2}=4$
i $=7$
So,

$$
\begin{aligned}
\mathrm{M}_{\mathrm{o}} & =43.5+\frac{2}{2+4} 7 \\
& =43.5+0.33(7) \\
& =43.5+0.23 \\
& =43.73
\end{aligned}
$$

## 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:
$S^{2}=\frac{n \Sigma x i^{2}-(\Sigma x i)}{n(n-1)}$
Hypotheses:
$\mathrm{H}_{0} \quad: \delta_{1}^{2}=\delta_{2}^{2}$
$\mathrm{H}_{1} \quad: \delta_{1}^{2} \neq \delta_{2}^{2}$
A. Variant of the VIII B class is:

| $\mathbf{N O}$ | $\mathbf{X i}$ | $\mathbf{X i}^{\mathbf{2}}$ |
| :---: | :---: | :---: |
| 1. | 30 | 1225 |
| 2. | 30 | 1225 |
| 3. | 30 | 1225 |
| 4. | 35 | 1600 |
| 5. | 35 | 1600 |
| 6. | 40 | 2025 |
| 7. | 40 | 2025 |
| 8. | 40 | 2500 |
| 9. | 40 | 2500 |
| 10. | 45 | 2500 |
| 11. | 45 | 3025 |
| 12. | 45 | 3025 |
| 13. | 50 | 3025 |
| 14. | 50 | 3025 |
| 15. | 50 | 3025 |
| 16. | 55 | 3025 |
| 17. | 55 | 3025 |
| 18. | 60 | 3600 |
| 19. | 60 | 3600 |
| 20. | 65 | 4225 |
| 21. | 65 | 4900 |
| 22. | 70 | 4900 |
| 23. | 70 | 4900 |
| 24. | 75 | 5625 |


| 25. | 75 | 5625 |
| :---: | :---: | :---: |
| Total | 1255 | 67875 |

n $=25$
$\sum x i=1255$
$\sum_{x i} 2=67875$
So:

$$
\begin{aligned}
S^{2} & =\frac{n \sum x i^{2}-\left(\sum x i\right)}{n(n-1)} \\
& =\frac{25(67875)-(1255)^{2}}{25(25-1)} \\
& =\frac{1696875-1575025}{25(24)} \\
& =\frac{12185}{600} \\
& =20.30
\end{aligned}
$$

B. Variant of the VIII D class is:

| NO | $\mathbf{X i}$ | $\mathbf{X i}^{2}$ |
| :---: | :---: | :---: |
| 1. | 15 | 225 |
| 2. | 15 | 225 |
| 3. | 15 | 225 |
| 4. | 20 | 400 |
| 5. | 20 | 400 |
| 6. | 25 | 625 |
| 7. | 25 | 625 |
| 8. | 30 | 900 |
| 9. | 30 | 900 |
| 10. | 30 | 900 |
| 11. | 35 | 1225 |
| 12. | 35 | 1225 |
| 13. | 40 | 1600 |
| 14. | 40 | 1600 |
| 15. | 40 | 1600 |
| 16. | 45 | 2025 |
| 17. | 45 | 2025 |
| 18. | 45 | 2025 |
| 19. | 50 | 2500 |
| 20. | 50 | 2500 |
| 21. | 50 | 2500 |
| 22. | 50 | 2500 |


| 23. | 50 | 2500 |
| :---: | :---: | :---: |
| 24. | 60 | 3600 |
| 25. | 65 | 4225 |
| Total | 905 | 38675 |

$\mathrm{N}=25$
$\sum x i=905$
$\sum_{x i} 2=38675$
So:

$$
\begin{aligned}
S^{2} & =\frac{n \sum x i^{2}-\left(\sum x i\right)}{n(n-1)} \\
& =\frac{25(38675)-(905)^{2}}{25(25-1)} \\
& =\frac{966875-819025}{25(24)} \\
& =\frac{14785}{600} \\
& =24.64
\end{aligned}
$$

The Formula was used to test the hypothesis was:

$$
\mathrm{F}=\frac{\text { The Biggest Variant }}{\text { The Smallest Variant }}
$$

## VIII B and VIII D :

$$
\mathrm{F}=\frac{\text { The Biggest Variant }}{\text { The Smallest Variant }}
$$

So:

$$
\begin{aligned}
\mathrm{F} & =\frac{24.64}{20.30} \\
& =1.21
\end{aligned}
$$

After doing the calculation, researcher found that $\mathrm{F}_{\text {count }}=1.21$. It had been compared to $\mathrm{F}_{\text {table }}$ with $\alpha 5 \%$ and dk numerator and deminator were same ( $\mathrm{n}_{1}$ and $\mathrm{n}_{2}=25 ; \mathrm{dk}=25-1=24$ ). From the distribution list F , researcher found that $\mathrm{F}_{\text {table }}=4.26$, so $\mathrm{F}_{\text {count }}<\mathrm{F}_{\text {table }}(1.21<4.26)$. It could be concluded
that there is no difference variant between the VIII B class and VIII D class.

It means that the variant is homogenous.

## Appendix 18

## Score of Experimental Class and Control Class Pre Test

a. Pre Test Score of Experimental Class

| No | The Name <br> Of Students (N) | Pre Test |  |  |
| :---: | :--- | :---: | :---: | :---: |
| 1 | Adi Pilihan | 50 |  |  |
| 2 | Ahmad Fuadi | 30 |  |  |
| 3 | Dela Salfa Azhara | 65 |  |  |
| 4 | Firman | 70 |  |  |
| 5 | Fazry Aidul azhari | 60 |  |  |
| 6 | Hermansyah Nasution | 30 |  |  |
| 7 | Muhammar Sandi | 45 |  |  |
| 8 | Natasya Harahap | 70 |  |  |
| 9 | Nur Hadizah | 60 |  |  |
| 10 | Nur Hayani | 65 |  |  |
| 11 | Risma Ayu | 40 |  |  |
| 12 | Rohima Siregar | 40 |  |  |
| 13 | Rifki Ananda Syahputra | 40 |  |  |
| 14 | Randi Hermanto | 55 |  |  |
| 15 | Susanti Sikumbang | 45 |  |  |
| 16 | Suci Windia Hasibuan | 35 |  |  |
| 17 | Saripa Aini | 55 |  |  |
| 18 | Siti Nur Khadizah | 75 |  |  |
| 19 | Sahrul Afandi | 35 |  |  |
| 20 | Suryani | 30 |  |  |
| 21 | Wilda Sari | 45 |  |  |
| 22 | Wandiro | 50 |  |  |
| 23 | Yulia Oktavia Siregar | 50 |  |  |
| 24 | Yusri Andi | 75 |  |  |
| 25 | Zahra Ramadani Hasibuan | $\mathbf{1 2 5 5}$ |  |  |
|  | Total |  |  |  |

b. Pre Test Score of Control Class

| No | The Name <br> Of Students (N) | Pre-Test |  |  |
| :---: | :--- | :---: | :---: | :---: |
| 1 | Anni | 65 |  |  |
| 2 | Andra | 15 |  |  |
| 3 | Andreas | 20 |  |  |
| 4 | Dhea Purba | 15 |  |  |
| 5 | Ediso | 30 |  |  |
| 6 | Fardin | 50 |  |  |
| 7 | Fitrah Ramadani | 15 |  |  |
| 8 | Khoirul anwar | 50 |  |  |
| 9 | Monika Apriani | 30 |  |  |
| 10 | Muhammad Saip | 25 |  |  |
| 11 | Muhammad Jumadi | 40 |  |  |
| 12 | Mey Pane | 45 |  |  |
| 13 | Noni Adila Hasibuan | 30 |  |  |
| 14 | Nurdayanti Hasibuan | 35 |  |  |
| 15 | Nurhamida Siregar | 50 |  |  |
| 16 | Natasya situmorang | 45 |  |  |
| 17 | Nelis Dea | 50 |  |  |
| 18 | Nurhazizah | 60 |  |  |
| 19 | Pardamean | 40 |  |  |
| 20 | Perningotan | 15 |  |  |
| 21 | Piterman | 50 |  |  |
| 22 | Rahmat syahputra Pane | 40 |  |  |
| 23 | Rika Rahmadani | 50 |  |  |
| 24 | Sahnun | 45 |  |  |
| 25 | Zahra Sikumbang | $\mathbf{9 0 5}$ |  |  |
|  | Total |  |  |  |

## Appendix 19

## Score of Experimental Class and Control Class Post Test

a. Score of Experimental Class Post Test (after Using PORPE)

| No | The Name <br> Of Students (N) | Post Test |  |  |
| :---: | :--- | :---: | :---: | :---: |
| 1 | Adi Pilihan | 70 |  |  |
| 2 | Ahmad Fuadi | 75 |  |  |
| 3 | Dela Salfa Azhara | 65 |  |  |
| 4 | Firman | 85 |  |  |
| 5 | Fazry Aidul azhari | 85 |  |  |
| 6 | Hermansyah Nasution | 65 |  |  |
| 7 | Muhammar Sandi | 80 |  |  |
| 8 | Natasya Harahap | 85 |  |  |
| 9 | Nur Hadizah | 70 |  |  |
| 10 | Nur Hayani | 85 |  |  |
| 11 | Risma Ayu | 90 |  |  |
| 12 | Rohima Siregar | 70 |  |  |
| 13 | Rifki Ananda Syahputra | 95 |  |  |
| 14 | Randi Hermanto | 85 |  |  |
| 15 | Susanti Sikumbang | 85 |  |  |
| 16 | Suci Windia Hasibuan | 75 |  |  |
| 17 | Saripa Aini | 80 |  |  |
| 18 | Siti Nur Khadizah | 90 |  |  |
| 19 | Sahrul Afandi | 85 |  |  |
| 20 | Suryani | 95 |  |  |
| 21 | Wilda Sari | 75 |  |  |
| 22 | Wandiro | 80 |  |  |
| 23 | Yulia Oktavia Siregar | 90 |  |  |
| 24 | Yusri Andi | 85 |  |  |
| 25 | Zahra Ramadani Hasibuan | 80 |  |  |
|  | Total |  |  | $\mathbf{2 0 2 5}$ |
|  |  |  |  |  |

## b. Post Test Score of Control Class

| No | The Name <br> Of Students (N) | Post-Test |  |  |  |
| :---: | :--- | :---: | :---: | :---: | :---: |
| 1 | Anni | 45 |  |  |  |
| 2 | Andra | 60 |  |  |  |
| 3 | Andreas | 55 |  |  |  |
| 4 | Dhea Purba | 60 |  |  |  |
| 5 | Ediso | 40 |  |  |  |
| 6 | Fardin | 50 |  |  |  |
| 7 | Fitrah Ramadani | 65 |  |  |  |
| 8 | Khoirul anwar | 55 |  |  |  |
| 9 | Monika Apriani | 65 |  |  |  |
| 10 | Muhammad Saip | 40 |  |  |  |
| 11 | Muhammad Jumadi | 70 |  |  |  |
| 12 | Mey Pane | 60 |  |  |  |
| 13 | Noni Adila Hasibuan | 75 |  |  |  |
| 14 | Nurdayanti Hasibuan | 65 |  |  |  |
| 15 | Nurhamida Siregar | 50 |  |  |  |
| 16 | Natasya situmorang | 55 |  |  |  |
| 17 | Nelis Dea | 65 |  |  |  |
| 18 | Nurhazizah | 80 |  |  |  |
| 19 | Pardamean | 65 |  |  |  |
| 20 | Perningotan | 75 |  |  |  |
| 21 | Piterman | 70 |  |  |  |
| 22 | Rahmat syahputra Pane | 80 |  |  |  |
| 23 | Rika Rahmadani | 65 |  |  |  |
| 24 | Sahnun | 65 |  |  |  |
| 25 | Zahra Sikumbang | 70 |  |  |  |
|  | Total |  |  |  | $\mathbf{1 5 4 5}$ |

## Appendix 20

## RESULT OF NORMALITY TEST IN POST TEST

 RESULT OF THE NORMALITY TEST OF VIII B IN POST-TEST8. The score of VIII B class in post test from low score to high score:

| 65 | 65 | 70 | 70 | 70 | 75 | 75 | 75 | 80 | 80 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 80 | 80 | 85 | 85 | 85 | 85 | 85 | 85 | 85 | 85 |
| 90 | 90 | 90 | 95 | 95 |  |  |  |  |  |

9. High $=95$

Low $=65$
Range = High - Low
= 95-65
$=30$
10. Total of Classes $=1+3,3 \log (\mathrm{n})$

$$
\begin{aligned}
& =1+3,3 \log (25) \\
& =1+3,3(1,40) \\
& =1+4,62 \\
& =5.62 \\
& =6
\end{aligned}
$$

11. Length of Classes $=\frac{\text { range }}{\text { totalofclass }}=\frac{30}{6}=5$
12. Mean

| Interval Class | F | X | x | fx | $\mathrm{x}^{\prime 2}$ | $\mathrm{fx}^{\prime 2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $65-69$ | 2 | 67 | +4 | 8 | 16 | 32 |
| $70-74$ | 3 | 72 | +3 | 9 | 9 | 27 |
| $75-79$ | 3 | 77 | +2 | 6 | 4 | 12 |
| $80-84$ | 4 | 82 | +1 | 4 | 1 | 4 |
| $85-89$ | $\mathbf{8}$ | $\mathbf{8 7}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| $90-94$ | 3 | 92 | -1 | -3 | 1 | 3 |
| $95-99$ | 2 | 97 | -2 | -4 | 4 | 8 |
| $i=5$ | 25 | - | - | 20 | - | 86 |

$$
\begin{aligned}
M x= & M^{1}+i \frac{\sum f x^{1}}{N} \\
& =87+5\left(\frac{20}{25}\right) \\
& =87+5(0.8) \\
& =87+4 \\
& =91 \\
\mathrm{SD}_{\mathrm{t}} & =i \sqrt{\frac{\sum f x^{2}}{n}-\left(\frac{\sum f x \prime}{n}\right)^{2}} \\
& =5 \sqrt{\frac{86}{25}-\left(\frac{20}{25}\right)^{2}} \\
& =5 \sqrt{3.44-(0,8)^{2}} \\
& =5 \sqrt{3.44-0.64} \\
& =5 \sqrt{2.6} \\
& =5 \times 1,61=8.05
\end{aligned}
$$

Table of Normality Data Test with Chi Kuadrad Formula

| Interval <br> of Score | Real <br> Upper <br> Limit | Z - Score | Limit of <br> Large of the <br> Area | Large of <br> area | $\mathrm{f}_{\mathrm{h}}$ | $\mathrm{f}_{0}$ | $\left(\mathrm{f}_{0}-\mathrm{f}_{\mathrm{h}}\right)$ <br> $\mathrm{f}_{\mathrm{h}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $95-99$ | 99.5 | 1.05 | 0,3531 | 0.18 | 4.5 | 2 | -0.52 |
| $90-94$ | 94.5 | 0.43 | 0.1664 | 0.09 | 0.2 | 3 | 14 |
| $85-89$ | 89.5 | -0.18 | 0.0714 | -0.23 | -5.75 | 3 | -1.71 |
| $80-84$ | 84.5 | -0.80 | 0.3106 | -0.11 | -2.75 | 4 | -2.33 |
| $75-79$ | 79.5 | -1.42 | 0.4222 | -0.05 | -1.25 | 8 | -6.3 |
| $70-74$ | 74.5 | -2.04 | 0.4793 | $-0,02$ | -0.5 | 3 | -7 |
| $65-69$ | 69.5 | -2.67 | 0.4962 | -0.01 | -0.25 | 2 | -11 |
|  | 64.5 | -3.29 | 0.4995 |  |  |  |  |
|  |  |  |  |  |  |  |  |

Based on the table above, the reseracher found that $\mathrm{x}^{2}{ }_{\text {count }}=-14.8$ while $\mathrm{x}^{2}$ table $=$, cause $\mathrm{x}^{2}$ count $<\mathrm{x}_{\text {table }}^{2}(-14.8<11.070)$ with degree of freedom $(\mathrm{dk})=6-1=5$ and significant level $\alpha=5 \%$. So distribution of VIII B class (post-test) is normal.
13.

| Median |  |  |  |
| :---: | :---: | :---: | :---: |
| No | Interval | F | Fk |
| 1 | $65-69$ | 2 | 2 |
| 2 | $70-74$ | 3 | 5 |
| 3 | $75-79$ | 3 | 8 |
| 4 | $80-84$ | 4 | $\mathbf{1 2}$ |
| 5 | $\mathbf{8 5}-\mathbf{8 9}$ | $\mathbf{8}$ | 20 |
| 6 | $90-94$ | 3 | 23 |
| 7 | $95-99$ | 2 | 25 |

Position of Me in the interval of classes is number 3, that:
$\mathrm{Bb}=84.5$
$\mathrm{F}=12$
fm $=8$
i $=5$
$\mathrm{n}=25$
$1 / 2 n=12.5$
So :

$$
\begin{aligned}
\mathrm{Me} & =\mathrm{Bb}+\mathrm{i}\left(\frac{n / 2-F}{f m}\right) \\
& =84.5+5\left(\frac{12.5-12}{8}\right) \\
& =84.5+5(0,06) \\
& =84.5+0.31 \\
& =84.81
\end{aligned}
$$

14. Modus

| No | Interval | F | Fk |
| :---: | :---: | :---: | :---: |
| 1 | $65-69$ | 2 | 2 |
| 2 | $70-74$ | 3 | 5 |
| 3 | $75-79$ | 3 | 8 |
| 4 | $80-84$ | 4 | $\mathbf{1 2}$ |
| 5 | $\mathbf{8 5}-\mathbf{8 9}$ | $\mathbf{8}$ | 20 |
| 6 | $90-94$ | 3 | 23 |
| 7 | $95-99$ | 2 | 25 |

$\mathrm{M}_{\mathrm{o}}=L+\frac{d_{1}}{d_{1}+d_{2}} i$
$\mathrm{L}=84.5$
$\mathrm{d}_{1}=4$
$\mathrm{d}_{2}=5$
i $=5$
So,

$$
\begin{aligned}
\mathrm{M}_{\mathrm{o}} & =84.5+\frac{4}{4+5} 5 \\
& =84.5+0.44(5) \\
& =84.5+2.2 \\
& =86.7
\end{aligned}
$$

## RESULT OF THE NORMALITY TEST OF VIII D IN POST-TEST

8. The score of VIII D class in post test from low score to high score:

| 40 | 40 | 45 | 50 | 50 | 55 | 55 | 55 | 60 | 60 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 60 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 70 | 70 |
| 70 | 75 | 75 | 80 | 80 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

9. High $=80$

Low $=40$
Range = High - Low
$=80-40$
$=40$
10. Total of Classes $=1+3,3 \log (\mathrm{n})$

$$
=1+3,3 \log (25)
$$

$$
\begin{aligned}
& =1+3,3(1,40) \\
& =1+4.62 \\
& =5.62 \\
& =6
\end{aligned}
$$

11. Length of Classes $=\frac{\text { range }}{\text { totalofclass }}=\frac{40}{6}=6$
12. Mean

$$
\begin{aligned}
\begin{array}{|c|c|c|c|c|c|c|}
\hline \text { Interval Class } & \mathrm{F} & \mathrm{X} & \mathrm{x} & \mathrm{fx} & \mathrm{x}^{2} & \mathrm{fx}^{2} \\
\hline 40-45 & 3 & 42 & +4 & 12 & 16 & 48 \\
\hline 46-51 & 2 & 48 & +3 & 6 & 9 & 18 \\
\hline 52-57 & 3 & 54 & +2 & 6 & 4 & 12 \\
\hline 58-63 & 3 & 60 & +1 & 3 & 1 & 3 \\
\hline 64-69 & \mathbf{7} & \mathbf{6 6} & \mathbf{0} & \mathbf{0} & \mathbf{0} & \mathbf{0} \\
\hline 70-74 & 3 & 72 & -1 & -3 & 1 & 3 \\
\hline 75-80 & 4 & 77 & -2 & -8 & 4 & 16 \\
\hline i=6 & 25 & - & - & 16 & - & 100 \\
\hline M x=M^{1} & +i \frac{\Sigma f x^{1}}{N} \\
& =66+6\left(\frac{16}{25}\right) \\
& =66+6(0.64) \\
& =66+(3.84) \\
& =69.84 \\
\mathrm{SD}_{\mathrm{t}} & =i \sqrt{\frac{\Sigma f x^{2} x^{2}}{n}-\left(\frac{\sum f x^{\prime}}{n}\right)^{2}} \\
& =6 \sqrt{\frac{100}{25}-\left(\frac{16}{25}\right)^{2}} \\
& =6 \sqrt{20-(0.16)^{2}} \\
& =6 \sqrt{20-0.0256} \\
& =6 \sqrt{19.9} \\
& =6 \mathrm{x} 4.46=26.76
\end{array}
\end{aligned}
$$

Table of Normality Data Test with Chi Kuadrad Formula

| Interval | Real | $Z$ Z Score | Limit of | Large of | $\mathrm{f}_{\mathrm{h}}$ | $\mathrm{f}_{0}$ | $\left(\mathbf{f}_{0}-\mathrm{f}_{\mathrm{h}}\right)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| of Score | Upper <br> Limit |  | Large of the <br> Area | area |  |  | $\mathrm{f}_{\mathrm{h}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $75-80$ | 80.5 | 0.39 | 0.1517 | 0.08 | 2 | 3 | -0.5 |
| $70-74$ | 74.5 | 0.17 | 0.0675 | 0.06 | 1.5 | 2 | 0.33 |
| $64-69$ | 69.5 | -0.01 | 0.0040 | -0.90 | -22 | 3 | 1.13 |
| $58-63$ | 63.5 | -0.23 | 0.0910 | -0.29 | -7.2 | 3 | 1.41 |
| $52-57$ | 57.5 | -1.20 | 0.3849 | -0.10 | -2.5 | 7 | -1.8 |
| $46-51$ | 51.5 | -2.40 | 0.4918 | 0.17 | 4.2 | 3 | 0.28 |
| $40-45$ | 45.5 | -0.90 | 0.3159 | -0.05 | -1.25 | 4 | 4.2 |
|  | 39.5 | -1.13 | 0.3708 |  |  |  |  |

Based on the table above, the reseracher found that $\mathrm{x}^{2}$ count $=5.05$ while $\mathrm{x}_{\text {table }}^{2}=$, cause $\mathrm{x}_{\text {count }}^{2}<\mathrm{x}_{\text {table }}^{2}(5.05<11.070)$ with degree of freedom (dk) $=6-1$ $=5$ and significant level $\alpha=5 \%$. So distribution of VIII D class (post-test) is normal.
13. Median

| No | Interval | F | Fk |
| :---: | :---: | :---: | :---: |
| 1 | $40-45$ | 3 | 3 |
| 2 | $46-51$ | 2 | 5 |
| 3 | $52-57$ | 3 | 8 |
| 4 | $58-63$ | 3 | $\mathbf{1 1}$ |
| 5 | $\mathbf{6 4 - 6 9}$ | $\mathbf{7}$ | 18 |
| 6 | $70-74$ | 3 | 21 |
| 7 | $75-80$ | 4 | 25 |

Position of Me in the interval of classes is number 4, that:

$$
\begin{aligned}
\mathrm{Bb} & =63.5 \\
\mathrm{~F} & =11 \\
\mathrm{fm} & =7
\end{aligned}
$$

i $=6$
$\mathrm{n}=25$
$1 / 2 \mathrm{n}=12.5$
So :

$$
\begin{aligned}
\mathrm{Me} & =\mathrm{Bb}+\mathrm{i}\left(\frac{n / 2-F}{f m}\right) \\
& =63.5+6\left(\frac{12.5-11}{7}\right) \\
& =63.5+6(0.21) \\
& =63.5+1.26 \\
& =64.76
\end{aligned}
$$

14. Modus

| No | Interval | F | Fk |
| :---: | :---: | :---: | :---: |
| 1 | $40-45$ | 3 | 3 |
| 2 | $46-51$ | 2 | 5 |
| 3 | $52-57$ | 3 | 8 |
| 4 | $58-63$ | 3 | $\mathbf{1 1}$ |
| 5 | $\mathbf{6 4 - 6 9}$ | $\mathbf{7}$ | 18 |
| 6 | $70-74$ | 3 | 21 |
| 7 | $75-80$ | 4 | 25 |

$\mathrm{M}_{\mathrm{o}}=L+\frac{d_{1}}{d_{1}+d_{2}} i$
$\mathrm{L}=63.5$
$\mathrm{d}_{1}=4$
$\mathrm{d}_{2}=4$
i $=6$
So,

$$
\begin{aligned}
\mathrm{M}_{\mathrm{o}} & =63.5+\frac{4}{4+4} 8 \\
& =63.5+0.5(6) \\
& =63.5+3 \\
& =66.5
\end{aligned}
$$

## Appendix 21

## HOMOGENEITY TEST (POST-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:
$S^{2}=\frac{n \Sigma x i^{2}-(\Sigma x i)}{n(n-1)}$
Hypotheses:
$\mathrm{H}_{0} \quad: \delta_{1}^{2}=\delta_{2}^{2}$
$\mathrm{H}_{1} \quad: \delta_{1}^{2} \neq \delta_{2}^{2}$
C. Variant of the VIII B class is:

| $\mathbf{N O}$ | $\mathbf{X i}$ | $\mathbf{X i}^{\mathbf{2}}$ |
| :---: | :---: | :---: |
| 26. | 65 | 4225 |
| 27. | 65 | 4225 |
| 28. | 70 | 4900 |
| 29. | 70 | 4900 |
| 30. | 70 | 4900 |
| 31. | 75 | 5625 |
| 32. | 75 | 5625 |
| 33. | 75 | 5625 |
| 34. | 80 | 6400 |
| 35. | 80 | 6400 |
| 36. | 80 | 6400 |
| 37. | 80 | 6400 |
| 38. | 85 | 7225 |
| 39. | 85 | 7225 |
| 40. | 85 | 7225 |
| 41. | 85 | 7225 |
| 42. | 85 | 7225 |
| 43. | 85 | 7225 |
| 44. | 85 | 7225 |
| 45. | 85 | 7225 |
| 46. | 90 | 8100 |
| 47. | 90 | 8100 |
| 48. | 90 | 8100 |
| 49. | 95 | 9025 |


| 50. | 95 | 9025 |
| :---: | :---: | :---: |
| Total | 2025 | 159375 |

n $=25$
$\sum x i=2025$
$\sum_{x i} 2=159375$
So:

$$
\begin{aligned}
S^{2} & =\frac{n \Sigma x i^{2}-\left(\sum x i\right)}{n(n-1)} \\
& =\frac{25(159375)-(2025)^{2}}{25(25-1)} \\
& =\frac{4143750-4100625}{25(24)} \\
& =\frac{43125}{600} \\
& =71.87
\end{aligned}
$$

D. Variant of the VIII D class is:

| $\mathbf{N O}$ | $\mathbf{X i}$ | $\mathbf{X i}^{\mathbf{2}}$ |
| :---: | :---: | :---: |
| 26. | 40 | 1600 |
| 27. | 40 | 1600 |
| 28. | 45 | 2025 |
| 29. | 50 | 2500 |
| 30. | 50 | 2500 |
| 31. | 55 | 3025 |
| 32. | 55 | 3025 |
| 33. | 55 | 3025 |
| 34. | 60 | 3600 |
| 35. | 60 | 3600 |
| 36. | 60 | 3600 |
| 37. | 65 | 4225 |
| 38. | 65 | 4225 |
| 39. | 65 | 4225 |
| 40. | 65 | 4225 |
| 41. | 65 | 4225 |
| 42. | 65 | 4225 |
| 43. | 65 | 4225 |
| 44. | 70 | 4900 |
| 45. | 70 | 4900 |
| 46. | 70 | 4900 |
| 47. | 75 | 5625 |


| 48. | 75 | 5625 |
| :---: | :---: | :---: |
| 49. | 80 | 6400 |
| 50. | 80 | 6400 |
| Total | 1545 | 96125 |

$$
\begin{aligned}
& \mathrm{N}=25 \\
& \sum_{\sum_{x i}} x i=1545 \\
& 2=96125
\end{aligned}
$$

So:

$$
\begin{aligned}
S^{2} & =\frac{n \Sigma x i^{2}-(\Sigma x i)}{n(n-1)} \\
& =\frac{25(96125)-(1545)^{2}}{25(25-1)} \\
& =\frac{2403125-2387025}{25(24)} \\
& =\frac{16100}{600} \\
& =26.83
\end{aligned}
$$

The Formula was used to test the hypothesis was:

$$
\mathrm{F}=\frac{\text { The Biggest Variant }}{\text { The Smallest Variant }}
$$

## VIII B and VIII D :

$$
\mathrm{F}=\frac{\text { The Biggest Variant }}{\text { The Smallest Variant }}
$$

So:

$$
F=\frac{71.87}{26.83}
$$

$$
=2.67
$$

After doing the calculation, researcher found that $\mathrm{F}_{\text {count }}=2.67$. It had been compared to $\mathrm{F}_{\text {table }}$ with $\alpha 5 \%$ and dk numerator and deminator were same ( $\mathrm{n}_{1}$ and $\mathrm{n}_{2}=25 ; \mathrm{dk}=25-1=24$ ). From the distribution list F , researcher found that $\mathrm{F}_{\text {table }}=4.26$, so $\mathrm{F}_{\text {count }}<\mathrm{F}_{\text {table }}(2.67<4.26)$. It could be concluded
that there is no difference variant between the VIII B class and VIII D class.

It means that the variant is homogenous.

## 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:
$T t=\frac{X_{1}-X_{2}}{\sqrt{\left(\frac{\left(n_{1}-1\right) s_{1}^{2}+\left(n_{2}-1\right) s_{2}^{2}}{n_{1}+n_{2}-2}\right)\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}}$
$T t=\frac{40.5-47.83}{\sqrt{\left(\frac{(25-1) 24.64+(25-1) 20.30}{25+25-2}\right)\left(\frac{1}{25}+\frac{1}{25}\right)}}$
$T t=\frac{-7.35}{\sqrt{\left(\frac{24(24.64)+24(20.30)}{48}\right)\left(\frac{2}{0.04+0.04}\right)}}$
$T t=\frac{-7.35}{\sqrt{\left(\frac{616+48712}{48}\right)(0.08)}}$
$t=\frac{-7.35}{\sqrt{\left(\frac{49328}{48}\right)(0.08)}}$
$T t=\frac{-7.35}{\sqrt{1.027}}(0.08)$
$T t=\frac{-7.35}{0.90}$
$T t=-8.16$
Based on researcher calculation result of homogeneity test of the both averages, researcher found that $\mathrm{t}_{\text {count }}=-8.16$ with opportunity $(1-\alpha)=1-5 \%=$ $95 \%$ and $\mathrm{dk}=\mathrm{n}_{1}+\mathrm{n}_{2}-2=25+25-2=48, \mathrm{t}_{\text {table }}=1.671$. So, $\mathrm{t}_{\text {count }}<\mathrm{t}_{\text {table }}(-8.16$ <1.671) and $\mathrm{H}_{0}$ 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:
$T t=\frac{X_{1}-X_{2}}{\sqrt{\left(\frac{\left(n_{1}-1\right) s_{1}^{2}+\left(n_{2}-1\right) s_{2}^{2}}{n_{1}+n_{2}-2}\right)\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}}$
$T t=\frac{84.81-64.76}{\sqrt{\left(\frac{(25-1) 71.87+(25-1) 26.83}{25+25-2}\right)\left(\frac{1}{25}+\frac{1}{25}\right)}}$
$T t=\frac{20.05}{\sqrt{\left(\frac{24(71.87)+24(26.83)}{48}\right)\left(\frac{2}{48}\right)}}$
$T t=\frac{20.05}{\sqrt{\left(\frac{172488+64392}{48}\right)(0.08)}}$
$T t=\frac{20.05}{\sqrt{(49.35)(0.08)}}$
$T t=\frac{20.05}{\sqrt{3.9}}$
$T t=\frac{20.05}{1.97}$
$T t=10.17$
Based on researcher calculation result of homogeneity test of the both averages, researcher found that $\mathrm{t}_{\text {count }}=10.17$ with opportunity $(1-\alpha)=1-5 \%=$ $95 \%$ and $\mathrm{dk}=\mathrm{n}_{1}+\mathrm{n}_{2}-2=25+25-2=48, \quad \mathrm{t}_{\text {table }}=1.671$. So, $\mathrm{t}_{\text {count }}>\mathrm{t}_{\text {table }}(10.17$ $>1.671)$ and $\mathrm{H}_{\mathrm{a}}$ 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

| $\mathbf{d k}$ | Significant level |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{5 0 \%}$ | $\mathbf{3 0 \%}$ | $\mathbf{2 0 \%}$ | $\mathbf{1 0 \%}$ | $\mathbf{5 \%}$ | $\mathbf{1 \%}$ |
| $\mathbf{1}$ | 0,455 | 1,074 | 1,642 | 2,706 | 3,841 | 6,635 |
| $\mathbf{2}$ | 1,386 | 2,408 | 3,219 | 4,605 | 5,991 | 9,210 |
| $\mathbf{3}$ | 2,366 | 3,665 | 4,642 | 6,251 | 7,815 | 11,341 |
| $\mathbf{4}$ | 3,357 | 4,878 | 5,989 | 7,779 | 9,488 | 13,277 |
| $\mathbf{5}$ | 4,351 | 6,064 | 7,289 | 9,236 | 11,070 | 15,086 |
| $\mathbf{6}$ | 5,348 | 7,231 | 8,558 | 10,645 | 12,592 | 16,812 |
| $\mathbf{7}$ | 6,346 | 8,383 | 9,803 | 12,017 | 14,067 | 18,475 |
| $\mathbf{8}$ | 7,344 | 9,524 | 11,030 | 13,362 | 15,507 | 20,090 |
| $\mathbf{9}$ | 8,343 | 10,656 | 12,242 | 14,684 | 16,919 | 21,666 |
| $\mathbf{1 0}$ | 9,342 | 11,781 | 13,442 | 15,987 | 18,307 | 23,209 |
| $\mathbf{1 1}$ | 10,341 | 12,899 | 14,631 | 17,275 | 19,675 | 24,725 |
| $\mathbf{1 2}$ | 11,340 | 14,011 | 15,812 | 18,549 | 21,026 | 26,217 |
| $\mathbf{1 3}$ | 12,340 | 15,119 | 16,985 | 19,812 | 22,362 | 27,688 |
| $\mathbf{1 4}$ | 13,339 | 16,222 | 18,151 | 21,064 | 23,685 | 29,141 |
| $\mathbf{1 5}$ | 14,339 | 17,222 | 19,311 | 22,307 | 24,996 | 30,578 |
| $\mathbf{1 6}$ | 15,338 | 18,418 | 20,465 | 23,542 | 26,296 | 32,000 |
| $\mathbf{1 7}$ | 16,338 | 19,511 | 21,615 | 24,769 | 27,587 | 33,409 |
| $\mathbf{1 8}$ | 17,338 | 20,601 | 22,760 | 25,989 | 28,869 | 34,805 |
| $\mathbf{1 9}$ | 18,338 | 21,689 | 23,900 | 27,204 | 30,144 | 36,191 |
| $\mathbf{2 0}$ | 19,337 | 22,775 | 25,038 | 28,412 | 31,410 | 37,566 |
| $\mathbf{2 1}$ | 20,337 | 23,858 | 26,171 | 29,615 | 32,671 | 38,932 |
| $\mathbf{2 2}$ | 21,337 | 24,939 | 27,301 | 30,813 | 33,924 | 40,289 |
| $\mathbf{2 3}$ | 22,337 | 26.018 | 28,429 | 32,007 | 35,172 | 41,638 |
| $\mathbf{2 4}$ | 23,337 | 27,096 | 29,553 | 33,196 | 35,415 | 42,980 |
| $\mathbf{2 5}$ | 24,337 | 28,172 | 30,675 | 34,382 | 37,652 | 44,314 |
| $\mathbf{2 6}$ | 25,336 | 29,246 | 31,795 | 35,563 | 38,885 | 45,642 |
| $\mathbf{2 7}$ | 26,336 | 30,319 | 32,912 | 36,741 | 40,113 | 46,963 |
| $\mathbf{2 8}$ | 27,336 | 31,391 | 34,027 | 37,916 | 41,337 | 48,278 |
| $\mathbf{2 9}$ | 28,336 | 32,461 | 35,139 | 39,087 | 42,557 | 49,588 |
| $\mathbf{3 0}$ | 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 | 0.258 | 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 | 0.394 | 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 27

Percentage Points of the $t$ Distribution

| Pr | 0.25 | 0.10 | 0.05 | 0.025 | 0.01 | 0.005 | 0.001 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| df | 0.50 | 0.20 | 0.10 | 0.050 | 0.02 | 0.010 | 0.002 |
| 1 | 1.00000 | 3.07768 | 6.31375 | 12.70620 | 31.82052 | 63.65674 | 318.30884 |
| 2 | 0.81650 | 1.88562 | 2.91999 | 4.30265 | 6.96456 | 9.92484 | 22.32712 |
| 3 | 0.76489 | 1.63774 | 2.35336 | 3.18245 | 4.54070 | 5.84091 | 10.21453 |
| 4 | 0.74070 | 1.53321 | 2.13185 | 2.77645 | 3.74695 | 4.60409 | 7.17318 |
| 5 | 0.72669 | 1.47588 | 2.01505 | 2.57058 | 3.36493 | 4.03214 | 5.89343 |
| 6 | 0.71756 | 1.43976 | 1.94318 | 2.44691 | 3.14267 | 3.70743 | 5.20763 |
| 7 | 0.71114 | 1.41492 | 1.89458 | 2.36462 | 2.99795 | 3.49948 | 4.78529 |
| 8 | 0.70639 | 1.39682 | 1.85955 | 2.30600 | 2.89646 | 3.35539 | 4.50079 |
| 9 | 0.70272 | 1.38303 | 1.83311 | 2.26216 | 2.82144 | 3.24984 | 4.29681 |
| 10 | 0.69981 | 1.37218 | 1.81246 | 2.22814 | 2.76377 | 3.16927 | 4.14370 |
| 11 | 0.69745 | 1.36343 | 1.79588 | 2.20099 | 2.71808 | 3.10581 | 4.02470 |
| 12 | 0.69548 | 1.35622 | 1.78229 | 2.17881 | 2.68100 | 3.05454 | 3.92963 |
| 13 | 0.69383 | 1.35017 | 1.77093 | 2.16037 | 2.65031 | 3.01228 | 3.85198 |
| 14 | 0.69242 | 1.34503 | 1.76131 | 2.14479 | 2.62449 | 2.97684 | 3.78739 |
| 15 | 0.69120 | 1.34061 | 1.75305 | 2.13145 | 2.60248 | 2.94671 | 3.73283 |
| 16 | 0.69013 | 1.33676 | 1.74588 | 2.11991 | 2.58349 | 2.92078 | 3.68615 |
| 17 | 0.68920 | 1.33338 | 1.73961 | 2.10982 | 2.56693 | 2.89823 | 3.64577 |
| 18 | 0.68836 | 1.33039 | 1.73406 | 2.10092 | 2.55238 | 2.87844 | 3.61048 |
| 19 | 0.68762 | 1.32773 | 1.72913 | 2.09302 | 2.53948 | 2.86093 | 3.57940 |
| 20 | 0.68695 | 1.32534 | 1.72472 | 2.08596 | 2.52798 | 2.84534 | 3.55181 |
| 21 | 0.68635 | 1.32319 | 1.72074 | 2.07961 | 2.51765 | 2.83136 | 3.52715 |
| 22 | 0.68581 | 1.32124 | 1.71714 | 2.07387 | 2.50832 | 2.81876 | 3.50499 |
| 23 | 0.68531 | 1.31946 | 1.71387 | 2.06866 | 2.49987 | 2.80734 | 3.48496 |
| 24 | 0.68485 | 1.31784 | 1.71088 | 2.06390 | 2.49216 | 2.79694 | 3.46678 |
| 25 | 0.68443 | 1.31635 | 1.70814 | 2.05954 | 2.48511 | 2.78744 | 3.45019 |
| 26 | 0.68404 | 1.31497 | 1.70562 | 2.05553 | 2.47863 | 2.77871 | 3.43500 |
| 27 | 0.68368 | 1.31370 | 1.70329 | 2.05183 | 2.47266 | 2.77068 | 3.42103 |
| 28 | 0.68335 | 1.31253 | 1.70113 | 2.04841 | 2.46714 | 2.76326 | 3.40816 |
| 29 | 0.68304 | 1.31143 | 1.69913 | 2.04523 | 2.46202 | 2.75639 | 3.39624 |
| 30 | 0.68276 | 1.31042 | 1.69726 | 2.04227 | 2.45726 | 2.75000 | 3.38518 |
| 31 | 0.68249 | 1.30946 | 1.69552 | 2.03951 | 2.45282 | 2.74404 | 3.37490 |
| 32 | 0.68223 | 1.30857 | 1.69389 | 2.03693 | 2.44868 | 2.73848 | 3.36531 |
| 33 | 0.68200 | 1.30774 | 1.69236 | 2.03452 | 2.44479 | 2.73328 | 3.35634 |
| 34 | 0.68177 | 1.30695 | 1.69092 | 2.03224 | 2.44115 | 2.72839 | 3.34793 |
| 35 | 0.68156 | 1.30621 | 1.68957 | 2.03011 | 2.43772 | 2.72381 | 3.34005 |
| 36 | 0.68137 | 1.30551 | 1.68830 | 2.02809 | 2.43449 | 2.71948 | 3.33262 |
| 37 | 0.68118 | 1.30485 | 1.68709 | 2.02619 | 2.43145 | 2.71541 | 3.32563 |
| 38 | 0.68100 | 1.30423 | 1.68595 | 2.02439 | 2.42857 | 2.71156 | 3.31903 |
| 39 | 0.68083 | 1.30364 | 1.68488 | 2.02269 | 2.42584 | 2.70791 | 3.31279 |


| 40 | 0.68067 | 1.30308 | 1.68385 | 2.02108 | 2.42326 | 2.70446 | 3.30688 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Appendix 26
RESEARCH DOCUMENTATION



# KEMENTERIAN AGAMA REPUBLIK INDONESIA INSTITUT AGAMA ISLAM NEGERI PADANGSIDIMPUAN <br> FAKULTAS TARBIYAH DAN ILMU KEGURUAN <br> Jalan T. Rizal Nurdin Km. 4,5 Sihitang 22733 <br> Telepon (0634) 22080 Faximile (0634) 24022 

/In. 14/E. 1/TL.00/11/2019
00 November 2019
Nomor: $B$ izin Penelitian
penyelesaian Skripsi.

In. Kepala SMP Negeri 2 Batang Angkola-Tapsei
xabupaten Tapanuli Selatan
(pangan homat, bersama ini kami sampaikan bahwa
vamia
NH
program Studi : Tadris/Pendidikan Bahasa Inggris
Fakuitas
Alamat

Gdah Mahasiswa Fakultas Tarbiyah dan Ilmu Keguruan IAIN Padangsidimpuan yang sedang menyelesaikan Skripsi dengan Judul "The Effect of Predict, Organize, Rehearse, Practice, Evaluate (PORPE) on Students' Reading Comprehension at Grade VIII SMP Negeri 2 Batang Angkola-Tapsel".

Sehubungan dengan itu, kami mohon bantuan Bapaklbu untuk memberikan izin penelitian sesuai dengan maksud judul diatas

Denkian disampaikan, atas kerja sama yang baik diucapkan terimakasih.


# PEMERINTAH KABUPATEN TAPANULI SELATAN DINAS PENDIDIKAN DAERAH SMIP NEGERI 2 BATANG ANGKOLA 

15. MANDALL NG KM 20 BENTENG HURABA Kode Pss 22773

SURAT KETERANGAN MENGADAKAN PENELITIAN No. $420 / 140 /$ SMPN $2 / 2019$
yas lertunde tangen ditawah ini

| Nama | ABDUL. KAMIL. HASIBUAN.M.Pd |
| :--- | :--- |
| NiP | 19600612 1986021005 |
| Pangkat Gol | Pembina TK. I IV b |
| Jabatan | Kepala Sekolah |
| Unit Kerja | SMP Negen 2 Batang Angkola. |
|  | Kec.Batang Angkola Kab. Tapanali Selatan |

Nenersnglan dergan sexungguhnya bahwa

| Nama | TUTI ALAWTYAH TANJUNG |
| :--- | :--- |
| NIM | 1520300065 |
| Program Study | : TadrisPendidikan Bahasa Ingeris |
| Fakultas | Tarbiyah dan Imu Kegurnan |
| Alamat | : Kota Pinang |

(ahb benar telah melakukan penclition di SMP Negeri 2 Batang Angtolo pade ungal Il sid Wrember 2019 Semester Ganjil Tahun Ajaran $2019 / 2020$

Hpur maksud penelitian dilakukan adalah untuk memperoleh date dan Informasi yang diperio. [3 menyusun Skripsi dengan judul : -THE EFFECT OF PREDICT, ORGANI WHEARSE PRACIICE EVALTATE (PORPRE) ON STUDENTS READI COUPREHENSIONAT GRADE VIII SMP NEGERI 2 BATANG ANGKOLA-TAPE

Deakian Surat Keterangan ini diberikan, untuk dapat dipergunakan seperlumyt Abas pertaxiur Crama yang baik kami ucaplan terima kasih



[^0]:    ${ }^{1}$ H. Douglas Brown, Teaching by Principles an Interactive Approach to Language Pedagogy (New Jersey: Prantice Hall, 2000), p. 291.
    ${ }^{2}$ Kasihani K. E Suyanto, English for Young Learners (Jakarta: Bumi Aksara, 2008), p. 65.

[^1]:    ${ }^{3}$ Pajriahasrikandi, The Use of PORPE (Predict Organize Reherse Practice Evaluate) Strategy in Teaching Reading Comprehension, Voices of English Language Education Society (VELES) 1, no. 2 (2017): p.26, http://e-jornal.hamzanwadi.ac.id, accessed on $27^{\text {th }}$ March,Wednesday, 17.25 .

[^2]:    ${ }^{1}$ Pajriahasrikandi, The Use of PORPE (Predict Organize Reherse Practice Evaluate) Strategy in Teaching Reading Comprehension, Voices of English Language Education Society (VELES) 1, no. 2 (2017): p.26, http://e-jornal.hamzanwadi.ac.id, accessed on $27^{\text {th }}$ March,Wednesday, 17.25 .

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