



**THE EFFECT OF USING DIRECTED READING
THINKING ACTIVITY (DRTA) STRATEGY ON
STUDENTS' READING COMPREHENSION IN
NARRATIVE TEXT AT GRADE XI MA YPKS
PADANGSIDIMPUN**

A THESIS

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

By:

SARTIKA PULUNGAN

Reg. No. 10 340 0106

ENGLISH EDUCATION DEPARTMENT

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

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PADANGSIDIMPUAN
2015**

DECLARATION OF SELF THESIS COMPLETION

The name who signed here:

Name : **SARTIKA PULUNGAN**
Registration Number : 10 340 0106
Faculty/Department : Tarbiyah and Teacher Training Faculty/TBI-3
The Title of a Thesis : The Effect of Using Directed reading Thinking activity (DRTA) Strategy on Students' Reading Comprehension in Narrative Text at Grade XI MA YPKS Padangsidimpuan.

I hereby declare that I have arranged and written the thesis by myself, without asking for illegal help from others except the guidance from advisors, and without doing plagiarism as it is required in students' ethic code of IAIN Padangsidimpuan article 14. Verse 2.

I do this declaration truthfully. If there is deceitfulness and incorrectness regarding to this declaration in the future, I will be willing to get punishment as it is required in students' Ethic Code of IAIN Padangsidimpuan, article 19 verses 4, that is to cancel academic degree disrespectfully, and other punishment regarding norms and legal law.

Padangsidimpuan, 13 February 2015

Declaration Maker



SARTIKA PULUNGAN
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Term : Munasqosyah
a.n. Sartika Pulungan

Padangsidempuan, 13 February 2015

To :
Dean Tarbiyah and Teacher
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Padangsidempuan

Assalamu'alaikum Wr. Wb.

After reading, studying and giving advice for necessary revision on thesis belongs to SARTIKA PULUNGAN, entitled "*The Effect of Using Directed Reading Thinking Activity (DRTA) Strategy on Students' Reading Comprehension in Narrative Text at Grade XI MA YPKS Padangsidempuan*", we approved that the thesis has been acceptable to complete the requirement to fulfill for the degree of graduate of Islamic Education (S.Pd.I) in English.

Therefore, we hope the thesis will soon be examined in front of the thesis examiner team of English Department of Tarbiyah and Teacher Training Faculty IAIN Padangsidempuan. Thank you.

Wassalamu'alaikum Wr. Wb.

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AGGREEMENT PUBLICATION OF FINAL TASK FOR ACADEMIC CIVITY

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Made in: Padangsidempuan

Date : February 2015

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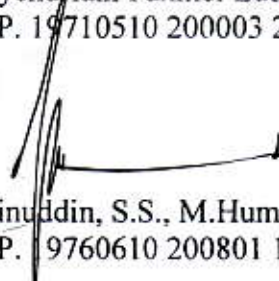
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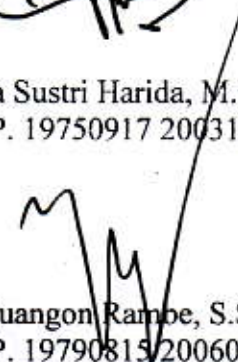
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Time : 09:00 WIB - finish
Result/Mark : 75.85 (B)
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Predicate : Very Good



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Thesis : **THE EFFECT OF USING DIRECTED READING THINKING ACTIVITY (DRTA) STRATEGY ON STUDENTS' READING COMPREHENSION IN NARRATIVE TEXT AT GRADE XI MA YPKS PADANGSIDIMPUAN**

Written By : **SARTIKA PULUNGAN**

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The Thesis had been accepted as a partial fulfillment of the requirement for the degree of graduate of Islamic education (S.Pd.I) in English

Padangsidempuan, 30 April 2015
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Firstly, the researcher would like to convey her grateful to Allah SWT. The most Creator and Merciful who has given her the health, time and chance for finishing this thesis: **“The Effect of Using Directed Reading Thinking Activity (DRTA) Strategy on Students’ Reading Comprehension in Narrative Text At Grade XI MA YPKS Padangsidimpuan ”**. This thesis written in order to fulfill one of the requirements for English Education Department of State Institute for Islamic Studies (IAIN) Padangsidimpuan. Hence, this thesis paper has been undertaken.

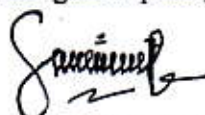
In writing this thesis, the researcher was assisted by some people and institutions. Therefore, in this opportunity the researcher would like to express her gratitude to the following people:

1. Thanks to Eka Sustri Harida M.Pd, and Sojuangon Rambe, S.S.,M.Pd, as advisor I and II who has guided the writer to complete this research.
2. Thanks to Dr. H. Ibrahim Siregar, MCL, as the Rector of State Institute for Islamic Studies (IAIN) Padangsidimpuan and Vice Rector I, II, III.
3. Thanks to Hj. Zulfhimma, S.Ag, M.Pd., as the Dean of Tarbiyah and Teacher Training Faculty.
4. Thanks to Rayendriani Fahmei Lubis M.Ag, as the Chief of English Department.
5. Thanks to Yusri Pahmi, S. Ag. M.Hum., as the Chief of Library and his staffs have borrowed the books to the writer in this research.

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7. Thanks to Headmaster, English teacher and also students of MA YPKS Pdangsidimpuan who helped me to completed my research.
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This thesis is still so far from being perfect based on the weakness of the research. Therefore, the researcher aspects the constructive criticisms and suggestions from the readers in order to improve this thesis.

Padangsidimpuan, 13 February 2015



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ABSTRACT

This research discussed about the effect of using Directed Reading Thinking Activity (DRTA) Strategy on Students' Reading Comprehension in Narrative Text at Grade XI MA YPKS Padangsidimpuan. The problems of this research were most of the student have difficulties in understanding what they have read, and most of them lack of motivation and attention about of reading activities, and also the reading comprehension of the students still get low grade with average 75; meanwhile the standard of English competency in this school is 80. So, the students' reading comprehension does not fulfill expectation. The aim of this research was to find out the effect of Directed Reading Thinking Activity (DRTA) Strategy on Students' Reading Comprehension in Narrative Text at Grade XI MA YPKS Padangsidimpuan.

This research employed experimental research. The population of this research was the eleventh grade of MA YPKS Padangsidimpuan. The total of population were three classes. Then, the sample of the research was 2 classes, experiment class (XI-1) and control class XI-2). It was taken after conducting normality and homogeneity test. To collect the data, researcher used test for measuring students' Reading Comprehension. To analysis the data, the researcher used t-test.

Based on the result of the research, researcher showed the description of the data was found that the result of experimental class was higher than control class ($82.7 > 65$), and the score of t_{count} was bigger than t_{table} ($32.35 > 2.000$). It means that the hypothesis alternative (H_a) was accepted. It was concluded that there was the effect of Directed Reading Thinking Activity (DRTA) Strategy on Students' Reading Comprehension in Narrative Text at Grade XI MA YPKS Padangsidimpuan.

CURRICULUM VITAE

A. Identity

Name : SARTIKA PULUNGAN
Nim : 10 340 0106
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Religion : Moslem
Address : Huta Bargot, Kec. Aek Nabara Barumon, Padang Lawas

B. Parent

1. Father's name : H. Parlindungan Pulungan
2. Mother's name : Nur Haini Hasibuan

3. Educational Background

1. Graduated from Elementary School SD Negeri Aek Buatun 2003.
2. Graduated from Islamic Boarding School MTs Al Furqon Aek Nabara 2007.
3. Graduated from Islamic Boarding School SMK Al Huda 2010.
4. Be University student in IAIN Padangsidempuan 2010.

Appendix 1

RENCANA PELAKSANAAN PEMBELAJARAN

EXPERIMENT CLASS

| | |
|--------------------|--|
| Nama Sekolah | : MA YPKS Padangsidempuan |
| Mata Pelajaran | : Bahasa Inggris |
| Kelas/ Semester | : XI/Ganjil |
| Alokasi Waktu | : 4 x 45 |
| Standar Kompetensi | : Memahami makna teks tulis fungsional dan esai pendek sederhana berbentuk narrative yang berkaitan dengan kehidupan sehari-hari dan lingkungan sekitar. |
| Kompetensi Dasar | : Memahami makna teks tulis fungsional pendek sederhana secara akurat, lancar, dan berterima yang berkaitan dengan lingkungan sekitar dalam teks narrative |
| Jenis Teks | : Teks Narrative |
| Tema | : Bayuwangi |
| Aspek/Skill | : Reading |

A. Indikator

1. Mengidentifikasi topik dalam teks narrative
2. Mengidentifikasi main idea dalam teks narrative
3. Mengidentifikasi spesifik informasi dalam teks narrative
4. Mengidentifikasi kesimpulan dari teks narrative
5. Memahami vocabulary dari teks narrative
6. Mengidentifikasi skematik struktur: Orientation, complication, resolution.

B. Tujuan Pembelajaran

1. Siswa dapat Mengidentifikasi topik dalam teks narrative
2. Siswa dapat Mengidentifikasi main idea dalam teks narrative
3. Siswa dapat Mengidentifikasi spesifik informasi dalam teks narrative
4. Siswa dapat Mengidentifikasi kesimpulan dari teks narrative
5. Siswa dapat Memahami vocabulary dari teks narrative.
6. Siswa dapat Mengidentifikasi skematik struktur: Orientation, complication, resolution.

C. Materi pembelajaran : Narrative Text

D. Metode pembelajaran : Directed Reading Thinking Activity (DRTA)

E. Langkah-langkah Pembelajaran

Pertemuan Pertama

| NO | KEGIATAN PEMBELAJARAN | WAKTU |
|----|---|---------------|
| 1 | Pendahuluan a. Greeting/salam b. Absensi c. Berdo'a d. Menjelaskan indikator dan memberi motivasi | 10 Minutes |
| 2 | Kegiatan Inti 1. Kekurangan dalam membaca a. Guru menanyakan latar belakang pengalaman siswa. b. Guru menyajikan bahan bacaan c. Guru memperkenalkan kosa kata yang berkaitan dengan teks. d. Guru menjelaskan tujuan membaca. 2. Membaca materi secara diam a. Guru memperhatikan kemampuan siswa untuk menyesuaikan bacaan mereka dengan tujuan materi tersebut. b. Guru Memperhatikan kebutuhan siswa dalam membaca. 3. Mengembangkan pemahaman a. Mendiskusikan jawaban soal b. Guru menjelaskan dan membimbing pengembangan teks dan kosa kata selanjutnya, serta memperkenalkan kosa kata baru jika dibutuhkan. c. Membantu siswa menemukan informasi dan mengingat fakta yang bersangkutan d. Memperhatikan kebutuhan siswa untuk menemukan | 65 Minutes |

| | | |
|---|---|---------------|
| | <p>informasi dari text/ buku sumber lain.</p> <p>e. Menjelaskan kembali tujuan membaca dan menetapkan informasi baru.</p> <p>4. Membaca ulang (diam/nyaring) sebagian atau seluruhnya.</p> <p>a. Menjelaskan lebih lanjut tentang informasi penting dalam teks</p> <p>b. Memberikan pelatihan khusus untuk meningkatkan pemahaman siswa dalam membaca.</p> <p>5. Menindaklanjuti informasi</p> <p>a. Menemukan informasi untuk mengetahui informasi selanjutnya.</p> <p>b. Memilih bacaan yang berkaitan dengan topic untuk mengembangkan dan memperluas minat, sikap, dan apresiasi siswa.</p> <p>c. Memperluas pemahaman selanjutnya dan menjelaskann konsep/teks tambahan yang diperlukan.</p> <p>d. Menganalisis informasi dan membantu siswa menghubungkannya dengan kehidupan mereka sendiri.</p> <p>6. Memberikan kesimpulan</p> | |
| 3 | Kegiatan Penutup: Greeting/salam | 10 Minutes |

Pertemuan Kedua

| NO | KEGIATAN PEMBELAJARAN | WAKTU |
|----|--|------------|
| 1 | Kegiatan Pendahuluan a. Greeting/salam b. Absensi c. Berdo'a d. Menjelaskan indikator dan memberi motivasi | 10 minutes |
| 2 | Kegiatan Inti a. Siswa mengerjakan kuis individual b. Guru memberi evaluasi kuis individual siswa c. Guru memberikan penghargaan apabila skor rata-rata siswa mencapai kriteria tertentu. | 65 Minutes |
| 3 | Kegiatan penutup: Greeting/salam | 10 minutes |

F. Sumber pembelajaran

1. Buku-buku yang relevan
2. Internet

G. Evaluasi

| Indikator | Teknik | Bentuk penilaian | Instrument |
|--|---------------|-------------------------|---|
| 1. Mengidentifikasi topik dalam teks narrative 2. Mengidentifikasi main idea dalam teks narrative 3. Mengidentifikasi spesifik informasi dalam teks narrative 4. Mengidentifikasi kesimpulan dari teks narrative 5. Memahami vocabulary dari teks narrative 6. Mengidentifikasi skematik struktur: Orientation, complication, resolution. | Tes tertulis | Multiple choice | Choose the correct answer by crossing A,B,C,D |

BAHAN AJAR

Narrative Text

A. The Definition of Narrative Text

Narrative is to construct a pattern of events with a problematic and/ or unexpected outcome that entertains and instruct the reader and listener.

B. Text Organization

1. Orientation, introducing the participants and informing the time and the place.
2. Complication of problem, describing the rising crises which the participants have to do with
3. Resolution, showing the way of participant to solve the crises, better or worse

C. Language feature

1. Using simple past tense.
2. Using linking verbs and linking words of time.
3. Focus on specific and usually individualized participant.
4. Connectives, linking word to do with time.
5. Use of senses, where appropriate, the senses can be used to describe and develop the experiences, setting and character.

6. Example of narrative text

| Text organization | Example |
|-------------------|---|
| Orientation | Once upon a time, there was a king reigned in East Java named Sindureja. He had a prime minister named Sidapaksa. Sidapaksa had a very beautiful wife. Sidapaksa loved his wife deeply. They lived in complete happiness. However, Sidapaksa's mother didn't like her daughter in law. Each day she tried to think a way to separate Sidapaksa |

| | |
|--------------|--|
| | from his wife. |
| Complication | <p>One day, King Sindureja asked Sidapaksa to search for a bud of a magic flower on Mount Ijen. It was a long journey. The assignment from the king was so important and urgent. Sidapaksa had to leave his pregnant wife.</p> <p>Not long afterwards, a son was born. The baby’s birth gave much happiness to the young mother.</p> <p>However, one day, while young mother was bathing, her evil mother-in-law threw the baby into the river. Knowing that her baby had disappeared, the young mother was very sad. She could neither eat nor sleep. She became very ill.</p> <p>Two years passed and Sidapaksa returned from his journey. He succeeded in doing his duty. Just as he was about to enter his house, her mother told him that his wife had thrown their baby into the river. Sidapaksa believed her mother’s story. He was too angry to use his common sense. He drew his <i>keris</i> and approached her wife who was lying weak on her bed.</p> <p>‘Ah, Wicked woman. Tell me why you threw our new-born child into the river. Tell me!’ he said in a rough and angry voice.</p> <p>‘Oh my dearest husband, I am innocent. I love you, and our baby. I didn’t kill our child. If you don’t believe me, carry me to the river. I will prove that I didn’t do it’ replied his wife calmly.</p> <p>Sidapaksa took her wife to the edge of the river. Suddenly, his wife leaped up and threw herself into the river.</p> <p>“Oh my God! How will I know who killed my child?” moaned Sidupaksa.</p> |
| Resolution | <p>Then he looked down the water. Suddenly, two pure white flower buds appeared, one longer and taller than the other. A</p> |

| | |
|--|--|
| | <p>sweet fragrance came from them.</p> <p>‘Sidapaksa, come and have a look here! Beside me is our child. He himself will tell you who drowned him,’ the taller one spoke.</p> <p>‘Father, my mother is innocent. Grandmother threw me into the river. Now I am happy because my beloved mother has come with me,’ The smaller one spoke. Then, the two flowers vanished into the water. They left their fragrance behind.</p> <p style="text-align: center;">Since then, people call the city on its banks of the river <i>Banyuwangi</i>. <i>Banyu</i> means water and <i>wangi</i> means fragrant.</p> |
|--|--|

1. Generic structure

a. Orientation: (Beginning or introduction)

- Languge Introduces main characters, setting and time
- The opening paragraph introduces characters / participants of the story and sets the scene (it answers the questions *who, when, what and where*)

b. Complication: (Middle)

- The problem happens among the characters
- It is about the problems which involve the main characters in the story developed

c. Resolution: (Ending)

- The problem is dissolved
- It is about how the problems in the story are solved (better or worse). Here, the main characters find ways to solve the problems.

2. Language future:

1. Using simple past tense (*reigned, ordered, cursed, turned, married, etc*).

2. *Time sequence conjunctions (then, before that, after that, soon, when, finally, first, etc)*
3. Focus on specific and usually individualized participant. (I; Sindureja, etc)
4. Connectives, linking word to do with time. (*once upon a time, long ago, oneday, etc.*)
5. Use of senses, where appropriate, the senses can be used to describe and develop the experiences, setting and character.

Validator

Reseacher

SOJUANGON RAMBE, S.S., M.Pd.
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Appendix 3

Instrument of Pre-test

The following text is for questions 1 to 3.

A MOUSE AND A LION

Once, as a lion lay sleeping in his den, a naughty little mouse ran up his tail, onto his back, up his mane and danced and jumped on his head, so that the lion woke up. Lion angry grabbed the mouse and, holding him in his large claws, roared in anger. 'How dare you wake me up! Don't you know that I am King of the Beasts? Anyone who disturbs my rest deserves to die! I shall kill you and eat you!'

The terrified mouse, shaking and trembling, begged the lion to let him go. 'Please don't eat me Your Majesty! I did not mean to wake you, it was a mistake. I was only playing. Please let me go - and I promise I will be your friend forever. Who knows but one day I could save your life?' The lion looked at the tiny mouse and laughed. 'You save my life? What an absurd idea!' he said scornfully. 'But you have made me laugh, and put me into a good mood again, so I shall let you go.' And the lion opened his claws and let the mouse go free.

'Oh thank you, your majesty,' squeaked the mouse, and scurried away as fast as he could.

A few days later the lion was caught in a hunter's snare. Struggle as he might, he couldn't break free and became even more entangled in the net of ropes. He let out a roar of anger that shook the forest. Every animal heard it, including the tiny mouse.

The mouse was rushing to the source of its roar and he found the lion was powerless. The mouse then bit the rope that caught the lion so that the lion can escape from the trap. The lions are very grateful to the mouse, and they became friends best forever.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

1. The text above tells about

 - a. A little mouse and the lion
 - b. The mouse and the lion
 - c. A mouse and A Lion
 - d. A lion and the mousses

2. What is the main idea of the second paragraph?

 - a. The lion looked at the tiny mouse and laughed.
 - b. The terrified mouse, shaking and trembling, begged the lion to let him go.
 - c. Lion angry grabbed the mouse and, holding him in his large claws, roared in anger.
 - d. The lion looked at the tiny mouse and laughed.

3. The conclusion of the text is...
- The mouse then bit the rope that caught the lion so that the lion can escape from the trap.
 - The lions are very grateful to the mouse, and they became friends best forever.
 - A few days later the lion was caught in a hunter's snare.
 - The lions are not very grateful to the mouse, and they not became friends best forever.

The following text is for questions 4 to 7.

THE BOY WHO CRIED WOLF



There was once a young shepherd boy who tended his sheep at the foot of a mountain near a dark forest. 1 It was lonely for him watching the sheep all day. No one was near; except for three farmers he could sometimes see working in the fields in the valley below.

One day the boy thought of a plan that would help him get a little company and have some fun. 3 He ran down toward the valley crying, "Wolf! Wolf!" The men ran to meet him, and after they found out there was no wolf after all, one man remained to talk with the boy awhile. The boy enjoyed the company so much that a few days later he tried the same prank again, and again the men ran to help him.

A few days later, a real wolf came from the forest and began to steal the sheep. The startled 6 boy ran toward the valley, and more loudly than ever he cried, "Wolf! Wolf!" But the men, who had been fooled twice before, thought that the boy was tricking them again. So no one came to help the boy save his sheep.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

4. The text above tells about.....
 - a. A young shepherd boy
 - b. Boy Cried Wolf
 - c. The Boy Who Cried Wolf
 - d. A boy that Cried Wolf
5. What is the conclusion of the text above?
 - a. The boy thought of a plan that would help him get a little company and have some fun.
 - b. So no one came to help the boy save his sheep.
 - c. The end of the story was
 - d. The boy enjoyed the company so much that a few days later he tried the same prank again.
6. "One man remained to talk with the boy awhile." What does the underlined word mean?
 - a. Stay
 - b. Remove
 - c. Leave
 - d. Depart
7. At the end of the story, how the boy's feeling based on the text above?
 - a. Sad
 - b. Afraid
 - c. Happy
 - d. Boring

The following text is for questions 8 to 12.

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 clever she was. 'Why, I know at least a hundred tricks to get away from our mutual enemies, the dogs,' she said. 'I know only one trick to get away from 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 dogs were coming in their direction! At once the cat ran 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.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

8. The main idea of the first paragraph from the text above is...
 - a. A cat and a fox were having a conversation.
 - b. The fox, who was a conceited creature, boasted how clever she was.
 - c. One day a cat and a fox were having a conversation.
 - d. One day a cat and a fox were having a conversation. The fox, who was a conceited creature, boasted how clever she was.
9. The story is about.....
 - a. The fox, who was a conceited creature
 - b. A Fox and a Cat
 - c. The dogs,
 - d. A Foxes and a Cats
10. "Boasted how clever she was" The word 'clever' means ...
 - a. Stupid
 - b. Beautiful
 - c. Smart
 - d. Stubborn
11. The conclusion of the text above is....
 - a. The fox sat silently under the tree.
 - b. Just then they heard the barking of a pack of dogs in the distance.
 - c. They fell upon the fox and tore her to pieces.
 - d. A cat and a fox were having a conversation.
12. From the text above the right statement about a fox and a cat, except.....
 - a. After she could make up her mind, the dogs arrived.
 - b. You should teach me some of yours!
 - c. Just we heard the barking of a pack of dogs in the distance.
 - d. The fox, that was a conceited creature, boasted how clever she was.

The following text is for questions 13 to 16.

THE FREEDOM OF ANTS

Ants are very small animals and often got the oppression by the animals which are greater than them. One of the animals that colonize the ants was grasshoppers. Every day they ordered the ants to find food and collect it. When the food was collected, then a locust took the food and put it in the nest. Every day the ants were given the job and had to work without stopping.

Many ants had died because of the exhaustion at work and that condition always continued. In the ants' colony, there were two ants which were very brave and always plotted a rebellion. The two ants named Riandi and Anggara. They invited others to subvert the power possessed by the locusts. However, no ant dared to unite and overthrow the power of locusts. Most ants thought that the condition was a destiny and a willing of God which should be received.

Riandi and Anggara never gave up and kept trying to get a lot of members in order to destroy the colony owned by the locusts. One day, the king's son died because of running the food out. Each food was given entirely to the locust, so the young king died by starvation. This happening realized the ants that they had to fight and led their own nation.

Anggara Riandi and serve as the leader of the rebellion. Ant Riandi is very expert in making weapons while Anggara is an expert in creating ant war strategy. Several weeks later, Riandi has managed to make hundreds of weapons without being noticed by the locusts. Meanwhile, Anggara and all ants have agreed that they will attack the headquarters of the grasshopper when the evening. Before the army ants supplied by arms, they soon moved to the headquarters of locusts through existing tunnels underground.

When they arrived, Anggara immediately gave orders for the ants were divided into 10 groups and dispersed to every corner. They then came out of the tunnel through the holes dug. After all the soldiers out of the tunnel, then they fired weapons into the bodies of each grasshopper. In less than ten seconds, many locusts are dying due to exposure to the toxins produced by these weapons. The attack carried out continuously for one night, and the next day, the ants have won the fight. They returned home with a sense of joy because it had been free from colonization by locusts. Meanwhile, Riandi and Anggara appointed as the new king. Ants lived happily and peacefully because of their brave.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

13. The main idea of the fourth paragraph is...
 - a. Riandi and Anggara never gave up and kept trying to get a lot of members in order to destroy the colony owned by the locusts.
 - b. Riandi and Anggara appointed as the new king.
 - c. Ant Riandi is very expert in making weapons while Anggara is an expert in creating ant war strategy.
 - d. Anggara Riandi and serve as the leader of the rebellion.
14. “Riandi and Anggara appointed as the new king”. The underline word means...
 - a. Designated
 - b. Ignore
 - c. Neglect
 - d. Discharge
15. Which of the following statement is true according to the text?
 - a. Riandi and Anggara ever gave up and kept trying to get a lot of members
 - b. Riandi and Anggara disappointed as the new king.
 - c. In less than ten seconds, many locusts are dying due to exposure to the toxins produced by these weapons.
 - d. Ants are very small animals and often got the oppression by the animals which are small than them.
16. The conclusion of the text above is
 - a. Ants lived happily and peacefully because of their brave.
 - b. Many ants had died
 - c. The attack carried out continuously
 - d. The ants were divided into 10 groups and dispersed to every corner.

The following text is for questions 17 to 20.

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 how 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 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 any more. 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 ran away.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

17. What is the topic of the text above?
 - a. The dog
 - b. The wolf
 - c. The dog and a cat
 - d. A Wolf and a Dog
18. What is the main idea of the first Paragraph?
 - a. Once there was a wolf that was nearly dead with hunger.
 - b. The wolf thought it over for a few minutes and then decided that the dog was right.
 - c. The wolf had little hope of finding food.
 - d. A dog out for a walk noticed him.
19. The following statement is true, except....
 - a. I work regularly and I eat regularly
 - b. You'll get used to it soon enough.
 - c. The wolf turned and ran away.
 - d. I have eaten because you and your friends are doing such a good job of guarding the sheep.
20. "The dog was right." Antonym with....
 - a. True
 - b. Correct
 - c. Good
 - d. Wrong

Appendix 4

Instrument of Post Test

The following text is for questions 1 to 3.

THE RATS AND THE ELEPHANTS

Once upon a time the rats lived a group of mice under a tree in peace. However, a group of elephants crossing the jungle unknowingly destroyed the homes of all the rats. Many of them were even crushed to death.

Then taking of rats decided to approach the elephant's chief and request him to guide his herd through another route. On hearing the sad story, the elephant's king apologized and agreed to take another route. And so the lives of the rats were saved.

One day elephant-hunters came to the jungle and trapped a group of elephants in huge nets. Then the elephant king suddenly remembered the king of the rats. He summoned one of the elephants of his herd, which had not been trapped, to go seek help from the king and told him about the trapped elephants.

The rat's king immediately took his entire group of rats and they cut open the nets which had trapped the elephant's herd. The elephant herd was totally set free. So, they danced with joy and thank the rats.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

1. "They danced with joy and thank the rats." The underlined word refers to
 - a. The elephant
 - b. The arts
 - c. The arts and the elephant
 - d. The other
2. What is the story about?
 - a. The elephant king
 - b. The elephant's herd
 - c. The Rats and the Elephants
 - d. The Rats
3. What is the main idea of the first paragraph?
 - a. The rats group lived under a tree in peace.
 - b. The elephant herd was totally set free.
 - c. The elephant danced with joy and thank the rats
 - d. Once upon a time the rats lived a group of mice under a tree in peace.

The following text is for questions 4 to 6.

THE SMART PARROT

A man in Puerto Rico had a wonderful parrot. There was no another parrot like it. It was very, very smart. This parrot would say any word-except one. He would not say the name of the town where he was born. The name of the town was Catano.

The man tried to teach the parrot to say Catano. But the bird would not say the word. At first the man was very nice, but then he got angry. "You are a stupid bird! Why can't you say the word? Say Catano, or I will kill you!" but the parrot would not say it. Then the man got so angry that he shouted over and over, "Say Catano, or I'll kill you!" but the bird wouldn't talk.

One day after trying for many hours to make the bird say Catano, the man got very angry. He picked up the bird and threw him into the chicken house. "You are more stupid than the chickens. Soon I will eat them, and I will eat you, too." In the chicken house there are four old chickens. They were for Sunday's dinner. The man put the parrot in the chicken house and left.

The next day the man came back to the chicken house. He opened the door and stopped. He was very surprised at what he saw! He saw three dead chickens on the floor. The parrot was screaming at the fourth chicken, "Say Catano, or I'll kill you!"

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

4. The conclusion from text above is...
 - a. This parrot would say any word-except one. Puerto Rico
 - b. A man in Puerto Rico had a wonderful parrot. Buenos Aires
 - c. The parrot was screaming at the fourth chicken, "Say Catano, or I'll kill you!"
 - d. The name of the town was Catano.
5. What is the topic of the text above?
 - a. A parrot and a cat
 - b. A parrot and a chicken
 - c. A parrot and the owner
 - d. The smart parrot
6. "The parrot was very, very smart"
The word 'smart' means
 - a. Stupid
 - b. Clever
 - c. Stubborn
 - d. Beautiful

The following text is for questions 7 to 10.

THREE FISHES

Once, three fish lived in a pond. One evening, some fishermen passed by the pond and saw the fish. “This pond is full of fish”, they told each other excitedly. “We have never fished here before. We must come back tomorrow morning with our nets and catch these fish!” So saying, the fishermen left.

When the eldest of the three fish heard this, he was troubled. He called the other fish together and said, “Did you hear what the fishermen said? We must leave this pond at once. The fishermen will return tomorrow and kill us all!” The second of the three fish agreed. “You are right”, he said. “We must leave the pond.” But the youngest fish laughed. “You are worrying without reason”, he said. “We have lived in this pond all our lives, and no fisherman has ever come here. Why should these men return? I am not going anywhere – my luck will keep me safe”.

The eldest of the fish left the pond that very evening with his entire family. The second fish saw the fishermen coming in the distance early next morning and left the pond at once with all his family. The third fish refused to leave even then. The fishermen arrived and caught all the fish left in the pond. The third fish’s luck did not help him, he was caught and killed.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

7. What is the topic of text above?
 - a. Three fish
 - b. Two fish
 - c. Fishermen
 - d. The foxes
8. Who are lived in a pond?
 - a. A fishermen
 - b. The other fish
 - c. The eldest of the fish
 - d. Three fish
9. The main idea of the first paragraph is...
 - a. Some fishermen passed by the pond and saw the fish.
 - b. Three fish lived in a pond.
 - c. He was caught and killed.
 - d. Once, three fish lived in a pond.

10. The conclusion of the text is...
- a. The fishermen will return tomorrow and kill us all.
 - b. Three fish lived in a pond.
 - c. The third fish refused to leave even then.
 - d. The third fish's luck did not help him, he was caught and killed.

The following text is for questions 11 to 15.

A GOAT AND A FOX

A fox fell into a well and couldn't get out. By and by a thirsty goat came along. Seeing the fox in the well, it asked if the water was good. "Good," said the fox, "It's the best water I've tested in all my life. Come down and try it yourself."

The goat was thirsty, so he got into the well. When he had drunk enough, he looked around but there was no way to get out. Then the fox said, "I have a good idea. You stand on your hind legs and put your forelegs against the side of the well. Then, I'll climb on your back, from here. I'll step on your horns, and I can get out. And when I'm out, I'll help you out of the well."

The goat did as he was asked and the fox got on his back and climbed out of the well. Then, He coolly walked away. The goat called out loudly after him and reminded him of his promise to help him out. The fox merely turned to him and said, "If you only had thought carefully about getting out, you wouldn't have jumped into the well."

The goat felt very sad. He called out loudly. An old man walking nearby heard him and put a plank into the well. The goat got out and thanked the old man.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

11. The goat got out and thanked the old man.
The antonym of the underline word is...
- a. Young
 - b. Slim
 - c. Parent
 - d. Fat
12. At the end of the story, how the goat's felt based on the text above?
- a. Angry
 - b. Happy
 - c. Sad
 - d. Boring

13. “Good”, said the fox, the underlined word antonym with...
- Well
 - Fine
 - False
 - Right
14. The conclusion of the text is...
- The goat got out and thanked the old man.
 - A fox fell into a well and couldn't get out.
 - The goat felt very sad. He called out loudly.
 - The goat was thirsty, so he got into the well.
15. The main idea of the first paragraph is...
- The goat felt very sad.
 - A fox fell into a well and couldn't get out.
 - The goat was thirsty, so he got into the well.
 - The goat got out and thanked the old man.

The following text is for questions 16 to 20.

THE ARROGANT TREE

In a forest, there is a tree that was so big and so beautiful. However, the trees were so arrogant because not all of the animals were allowed to stay on a branch and perch that he had. One day, there was a beautiful white bird that wanted to perch on her branch. The bird asked, “Could I stay on your branch?” The tree replied “Of course you can, because you are a very pretty bird”. The beautiful bird perched on a branch and then stayed for a long time on the tree.

On the next week, the tree saw a sick rabbit with the falling out of hair. The rabbit was so exhausted from walking because he wanted to meet the physicians in the forest edge. He saw the rabbit and he knew that the rabbit was being sick because the face was pale and the hair was falling out. However, he was reluctant to offer a help to the rabbit because he was disgusted with the disease.

Because of so tired, the rabbit asked permission from him to take the shelter and a rest for a moment near his roots. However, he did not allow it for fear of contracting the disease of the rabbit. He snapped the rabbit and told him to get out and went away from him. The rabbit continued to beg in order to have a rest even though only a few minutes. He still did not allow the rabbits and even getting snapped.

The rabbit felt so humiliated and prayed to God that purpose to the punishment for the tree in accordance with his behavior. When the rabbit prayed, he was laughing and said that the rabbits did the silly things.

Rabbit prayer was granted by God and the beautiful tree immediately attacked caterpillars. Gradually, the leaves which were owned by the tree were falling out and

the flowers withered. He was not the beautiful tree anymore and just being a rod that would die soon. After being withered, he continued to pray to God and being so kind to others. He has repented and promised not to repeat the cavalier attitude that he had before. Then, God forgave him and sent the golden woodpecker to eat the caterpillars which were present throughout the body. After cleaning the caterpillars on his body, the tree turned back into a very beautiful tree. He kept his promise for not bragging and keeping to help others. Currently, he was liked by all the residents of the forest and he lived happily.

Exercise

Choose the best answer based on the story above by crossing A, B, C, or D.

16. The text tells the story of...
 - a. The arrogant tree
 - b. The beautiful tree
 - c. A beautiful white bird
 - d. The rabbit
17. "In a forest, there is a tree that was so big and so beautiful" The underlined word synonym with...
 - a. Bad
 - b. Smart
 - c. Ugly
 - d. Pretty
18. The conclusion from the text above is....
 - a. The tree saw a sick rabbit with the falling out of hair.
 - b. Currently, he was liked by all the residents of the forest and he lived happily.
 - c. The rabbit felt so humiliated
 - d. The trees were not arrogant because all of the animals were allowed to stay on a branch.
19. What is the main idea of the first paragraph from the text above?
 - a. In a forest, there is a tree that was so big and so beautiful.
 - b. The tree saw a sick rabbit with the falling out of hair.
 - c. Rabbit prayer was granted by God and the beautiful tree immediately attacked caterpillars.
 - d. The beautiful bird perched on a branch and then stayed for a long time on the tree.
20. Why the tree knew that the rabbit was being sick?
 - a. Because he wanted to meet the physicians in the forest edge.
 - b. Because the face was pale and the hair was falling out.
 - c. Because of so tired, the rabbit asked permission from him to take the shelter and a rest for a moment near his roots.
 - d. Because not all of the animals were allowed to stay on a branch and perch that he had.

Appendix 5

KEY ANSWER

A. Pre-Test

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

B. Post-Test

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

Appendix 7

Table Validity of Pre- Test

| Number of Item | \bar{X}_1 | \bar{X}_2 | \bar{X}_3 | P | Q | $r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{D}{q}}$ | Non 5% significant | Interpretation |
|----------------|-------------|-------------|-------------|-----|-----|---|--------------------|----------------|
| 1. | 18.18 | 16.43 | 4.88 | 0.7 | 0.3 | 0.544 | 0.349 | Valid |
| 2. | 18.36 | 16.43 | 4.88 | 0.7 | 0.3 | 0.600 | 0.349 | Valid |
| 3. | 18.42 | 16.43 | 4.88 | 0.6 | 0.4 | 0.496 | 0.349 | Valid |
| 4. | 19.00 | 16.43 | 4.88 | 0.3 | 0.7 | 0.344 | 0.349 | Invalid |
| 5. | 13.90 | 16.43 | 4.88 | 0.3 | 0.7 | 0.338 | 0.349 | Invalid |
| 6. | 17.95 | 16.43 | 4.88 | 0.8 | 0.2 | 0.622 | 0.349 | Valid |
| 7. | 17.38 | 16.43 | 4.88 | 0.6 | 0.4 | 0.236 | 0.349 | Invalid |
| 8. | 17.91 | 16.43 | 4.88 | 0.8 | 0.2 | 0.606 | 0.349 | Valid |
| 9. | 18.09 | 16.43 | 4.88 | 0.7 | 0.3 | 0.516 | 0.349 | Valid |
| 10. | 18.66 | 16.43 | 4.88 | 0.7 | 0.3 | 0.693 | 0.349 | Valid |
| 11. | 19.81 | 16.43 | 4.88 | 0.5 | 0.5 | 0.692 | 0.349 | Valid |
| 12. | 17.54 | 16.43 | 4.88 | 0.8 | 0.2 | 0.454 | 0.349 | Valid |
| 13. | 19.04 | 16.43 | 4.88 | 0.8 | 0.2 | 1.068 | 0.349 | Valid |
| 14. | 17.76 | 16.43 | 4.88 | 0.7 | 0.3 | 0.413 | 0.349 | Valid |
| 15. | 18.91 | 16.43 | 4.88 | 0.4 | 0.6 | 0.412 | 0.349 | Valid |
| 16. | 18.38 | 16.43 | 4.88 | 0.7 | 0.3 | 0.606 | 0.349 | Valid |
| 17. | 17.78 | 16.43 | 4.88 | 0.8 | 0.2 | 0.552 | 0.349 | Valid |
| 18. | 19.45 | 16.43 | 4.88 | 0.7 | 0.3 | 0.939 | 0.349 | Valid |
| 19. | 17.50 | 16.43 | 4.88 | 0.9 | 0.1 | 0.633 | 0.349 | Valid |
| 20. | 17.50 | 16.43 | 4.88 | 0.4 | 0.6 | 0.177 | 0.349 | Invalid |
| 21. | 18.09 | 16.43 | 4.88 | 0.7 | 0.3 | 0.784 | 0.349 | Valid |
| 22. | 17.07 | 16.43 | 4.88 | 0.4 | 0.6 | 0.106 | 0.349 | Invalid |
| 23. | 17.66 | 16.43 | 4.88 | 0.8 | 0.2 | 0.504 | 0.349 | Valid |
| 24. | 16.60 | 16.43 | 4.88 | 0.8 | 0.2 | 0.392 | 0.349 | Valid |
| 25. | 17.36 | 16.43 | 4.88 | 0.7 | 0.3 | 0.372 | 0.349 | Valid |

Appendix 8

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

A. Calculation of Pre-Test

1. Means score from score total (M_t)

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

$$M_t = \frac{493}{30} = 16.43$$

2. Standard Deviation (SD_t)

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

$$SD_t = \sqrt{\frac{8815}{30} - \left(\frac{493}{30}\right)^2}$$

$$SD_t = \sqrt{293.8 - 16.43^2}$$

$$SD_t = \sqrt{293.8 - 269.9} = \sqrt{23.9} = 4.88$$

3. Means Score (M_p)

Item 1 $M_{p1} = \frac{\text{the total of students score that true item answer}}{n1}$

$$M_{p1} = \frac{22+20+20+18+21+18+20+12+20+17+17+20+16+14+17+20+21+19+16+22+18+12}{22}$$

$$M_{p1} = \frac{400}{22} = 18.18$$

Item 2 $M_{p2} = \frac{\text{the total of students score that answer true item}}{n2}$

$$M_{p2} = \frac{22+20+15+20+18+21+18+20+20+17+20+16+20+17+20+21+19+19+22+9+18+12}{22}$$

$$M_{p2} = \frac{404}{22} = 18.36$$

Item 3 $M_{p3} = \frac{\text{the total of students score that answer true item}}{n3}$

$$M_{p3} = \frac{22+20+15+20+18+21+18+20+20+16+20+17+21+19+19+22+9+15+18}{19}$$

$$M_{p3} = \frac{350}{19} = 18.42$$

Item 4 $M_{p4} = \frac{\text{the total of students score that answer true item}}{n4}$

$$M_{p4} = \frac{22+18+20+17+16+17+20+22}{8}$$

$$M_{p4} = \frac{152}{8} = 19.00$$

$$\text{Item 5 } M_{p5} = \frac{\text{the total of students score that answer true item}}{n5}$$

$$M_{p5} = \frac{6+12+5+20+4+17+16+17+20+22}{10}$$

$$= \frac{139}{10} = 13.90$$

$$\text{Item 6 } M_{p6} = \frac{\text{the total of students score that answer true item}}{n6}$$

$$M_{p6} = \frac{22+20+15+20+18+21+18+20+12+20+17+17+20+16+20+14+17+20+21+19+16+18+12}{23}$$

$$= \frac{413}{23} = 17.95$$

$$\text{Item 7 } M_{p7} = \frac{\text{the total of students score that answer true item}}{n7}$$

$$M_{p7} = \frac{22+20+15+20+18+21+18+12+17+20+16+20+14+16+22+9+15+18}{18}$$

$$= \frac{313}{18} = 17.38$$

$$\text{Item 8 } M_{p8} = \frac{\text{the total of students score that answer true item}}{n8}$$

$$M_{p8} = \frac{22+20+20+18+21+18+20+12+20+4+17+17+20+16+20+20+21+19+19+16+22+18+12}{23}$$

$$M_{p8} = \frac{412}{23} = 17.91$$

$$\text{Item 9 } = \frac{\text{the total of students score that answer true item}}{n9}$$

$$M_{p9} = \frac{22+20+15+20+18+21+20+12+20+4+17+17+20+20+20+21+19+19+22+15+18}{21}$$

$$= \frac{318}{21} = 18.09$$

$$\text{Item 10 } M_{p10} = \frac{\text{the total of students score that answer true item}}{n10}$$

$$M_{p10} = \frac{22+20+15+20+18+21+18+20+20+17+20+16+14+17+20+21+19+19+22+15+18}{21}$$

$$M_{p10} = \frac{392}{21} = 18.66$$

$$\text{Item 11 } M_{p11} = \frac{\text{the total of students score that answer true item}}{n11}$$

$$M_{p11} = \frac{22+20+20+18+21+18+20+17+20+14+20+21+19+22+15+18+12}{16}$$

$$M_{p11} = \frac{317}{16} = 19.81$$

$$\text{Item 12 } M_{p12} = \frac{\text{the total of students score that answer true item}}{n12}$$

$$M_{p12} = \frac{22+20+15+20+18+21+20+6+12+17+17+20+16+20+14+17+20+21+19+19+22+15+18+12}{24}$$

$$M_{p12} = \frac{421}{24} = 17.54$$

Item 13 $M_{p13} = \frac{\text{the total of students score that answer true item}}{n13}$

$$M_{p13} = \frac{22+20+15+20+18+21+18+20+5+20+17+17+20+16+20+17+20+20+21+19+19+16+22+9+15+12}{25}$$

$$M_{p13} = \frac{476}{25} = 19.04$$

Item 14 $M_{p14} = \frac{\text{the total of students score that answer true item}}{n14}$

$$M_{p14} = \frac{22+20+15+20+18+21+20+5+17+17+20+16+20+14+17+21+19+16+22+15+18}{21}$$

$$M_{p14} = \frac{373}{21} = 17.76$$

Item 15 $M_{p15} = \frac{\text{the total of students score that answer true item}}{n15}$

$$M_{p15} = \frac{20+21+20+12+20+17+20+20+21+19+22}{9}$$

$$M_{p15} = \frac{227}{12} = 18.91$$

Item 16 $M_{p16} = \frac{\text{the total of students score that answer true item}}{n23}$

$$M_{p16} = \frac{22+20+15+20+18+21+18+20+12+20+17+17+20+16+21+19+19+16+22+15+18}{21}$$

$$M_{p16} = \frac{386}{21} = 18.38$$

Item 17 $M_{p17} = \frac{\text{the total of students score that answer true item}}{n17}$

$$M_{p17} = \frac{22+20+15+20+21+18+20+12+20+17+20+16+20+14+17+20+21+19+19+16+9+15+18}{23}$$

$$M_{p17} = \frac{409}{23} = 17.78$$

Item 18 $M_{p18} = \frac{\text{the total of students score that answer true item}}{n18}$

$$M_{p18} = \frac{22+20+15+20+18+21+18+20+6+5+20+17+20+20+21+19+19+16+22+18+12}{22}$$

$$M_{p18} = \frac{428}{22} = 19.45$$

Item 19 $M_{p19} = \frac{\text{the total of students score that answer true item}}{n19}$

$$M_{p19} = \frac{22+20+15+20+18+21+18+20+20+4+17+17+20+16+14+17+20+21+19+19+16+22+9+18+12}{26}$$

$$M_{p19} = \frac{455}{26} = 17.50$$

$$\text{Item 20 } M_{p20} = \frac{\text{the total of students score that answer true item}}{n_{20}}$$

$$M_{p20} = \frac{20+20+20+20++20+17+20+21+19+16+22+15}{12}$$

$$M_{p20} = \frac{210}{12} = 17.50$$

$$\text{Item 21 } M_{p21} = \frac{\text{the total of students score that answer true item}}{n_{21}}$$

$$M_{p21} = \frac{22+20+18+21+18+20+12+20+17+17+20+20+14+17+21+19+19+16+22+15+18+12}{22}$$

$$M_{p21} = \frac{398}{22} = 18.09$$

$$\text{Item 22 } M_{p22} = \frac{\text{the total of students score that answer true item}}{n_{22}}$$

$$M_{p22} = \frac{20+6+12+17+20+20+14+17+20+19+19+16+22}{13}$$

$$M_{p22} = \frac{222}{13} = 17.07$$

$$\text{Item 23 } M_{p23} = \frac{\text{the total of students score that answer true item}}{n_{16}}$$

$$M_{p23} = \frac{22+20+15+20+18+21+18+20+5+20+17+17+20+16+20+14+17+20+21+19+19+16+22+9+18}{24}$$

$$M_{p23} = \frac{424}{24} = 17.66$$

$$\text{Item 24 } M_{p24} = \frac{\text{the total of students score that answer true item}}{n_{24}}$$

$$M_{p24} = \frac{22+20+15+20+18+21+18+20+6+20+17+20+20+14+20+21+19+19+16+9+15+18+12}{23}$$

$$M_{p24} = \frac{382}{23} = 16.60$$

$$\text{Item 25 } M_{p25} = \frac{\text{the total of students score that answer true item}}{n_{25}}$$

$$M_{p25} = \frac{22+20+20+21+18+20+6+20+17+20+20+14+17+20+21+19+19+16+22+9+15+12}{22}$$

$$M_{p25} = \frac{388}{22} = 17.63$$

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

$$\begin{aligned} \text{Item 1 } r_{pbi} &= \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}} \\ r_{pbi} &= \frac{18.18 - 16.43}{4.88} \sqrt{\frac{0.7}{0.3}} \\ r &= \frac{1.75}{4.88} \sqrt{2.33} \\ r &= 0.358 \times 1.52 = 0.544 \end{aligned}$$

$$\begin{aligned} \text{Item 2 } r_{pbi} &= \frac{18.36 - 16.43}{4.88} \sqrt{\frac{0.7}{0.3}} \\ r &= \frac{1.93}{4.48} \sqrt{2.33} \\ r &= 0.395 \times 1.52 = 0.600 \end{aligned}$$

$$\begin{aligned} \text{Item 3 } r_{pbi} &= \frac{18.42 - 16.43}{4.88} \sqrt{\frac{0.6}{0.4}} \\ r &= \frac{1.99}{4.88} \sqrt{1.5} \\ r &= 0.407 \times 1.22 = 0.496 \end{aligned}$$

$$\begin{aligned} \text{Item 4 } r_{pbi} &= \frac{19.00 - 16.43}{4.88} \sqrt{\frac{0.3}{0.7}} \\ r &= \frac{2.57}{4.48} \sqrt{0.428} \\ r &= 0.526 \times 0.654 = 0.344 \end{aligned}$$

$$\begin{aligned} \text{Item 5 } r_{pbi} &= \frac{13.90 - 16.43}{4.88} \sqrt{\frac{0.3}{0.7}} \\ r &= \frac{-2.53}{4.88} \sqrt{0.428} \\ r &= -0.518 \times 0.654 = -0.338 \end{aligned}$$

$$\begin{aligned} \text{Item 6 } r_{pbi} &= \frac{17.95 - 16.43}{4.88} \sqrt{\frac{0.8}{0.2}} \\ r &= \frac{0.52}{4.88} \sqrt{4} \\ r &= 0.311 \times 2 = 0.622 \end{aligned}$$

$$\begin{aligned} \text{Item 7 } r_{pbi} &= \frac{17.38 - 16.43}{4.88} \sqrt{\frac{0.6}{0.4}} \\ r &= \frac{0.95}{4.88} \sqrt{1.5} \\ r &= 0.194 \times 1.22 = 0.236 \end{aligned}$$

$$\text{Item 8 } r_{\text{pbi}} = \frac{17.91-16.43}{4.88} \sqrt{\frac{0.8}{0.2}}$$

$$r = \frac{1.48}{4.88} \sqrt{4}$$

$$r = 0.303 \times 2 = 0.606$$

$$\text{Item 9 } r_{\text{pbi}} = \frac{18.09-16.43}{4.88} \sqrt{\frac{0.7}{0.3}}$$

$$r = \frac{1.66}{4.88} \sqrt{2.33}$$

$$r = 0.340 \times 1.52 = 0.516$$

$$\text{Item 10 } r_{\text{pbi}} = \frac{18.66-16.43}{4.88} \sqrt{\frac{0.7}{0.3}}$$

$$r = \frac{2.23}{4.88} \sqrt{2.33}$$

$$r = 0.456 \times 1.52 = 0.693$$

$$\text{Item 11 } r_{\text{pbi}} = \frac{19.81-16.43}{4.88} \sqrt{\frac{0.5}{0.5}}$$

$$r = \frac{3.38}{4.88} \sqrt{1}$$

$$r = 0.692 \times 1 = 0.692$$

$$\text{Item 12 } r_{\text{pbi}} = \frac{17.54-16.43}{4.88} \sqrt{\frac{0.8}{0.2}}$$

$$r = \frac{1.11}{4.88} \sqrt{4}$$

$$r = 0.227 \times 2 = 0.454$$

$$\text{Item 13 } r_{\text{pbi}} = \frac{19.04-16.43}{4.88} \sqrt{\frac{0.8}{0.2}}$$

$$r = \frac{2.61}{4.88} \sqrt{4}$$

$$r = 0.534 \times 2 = 1.068$$

$$\text{Item 14 } r_{\text{pbi}} = \frac{17.76-16.43}{4.88} \sqrt{\frac{0.7}{0.3}}$$

$$r = \frac{1.33}{4.88} \sqrt{2.33}$$

$$r = 0.272 \times 1.52 = 0.413$$

$$\text{Item 15 } r_{\text{pbi}} = \frac{18.91-16.43}{4.88} \sqrt{\frac{0.4}{0.6}}$$

$$r = \frac{2.48}{4.88} \sqrt{0.66}$$

$$r = 0.508 \times 0.812 = 0.412$$

Item 16 $r_{\text{pbi}} = \frac{18.38 - 16.43}{4.88} \sqrt{\frac{0.7}{0.3}}$

$$r = \frac{1.95}{4.88} \sqrt{2.33}$$

$$r = 0.399 \times 1.52 = 0.606$$

Item 17 $r_{\text{pbi}} = \frac{17.78 - 16.43}{4.88} \sqrt{\frac{0.8}{0.2}}$

$$r = \frac{1.35}{4.88} \sqrt{4}$$

$$r = 0.276 \times 2 = 0.552$$

Item 18 $r_{\text{pbi}} = \frac{19.45 - 16.43}{4.88} \sqrt{\frac{0.7}{0.3}}$

$$r = \frac{3.02}{4.88} \sqrt{2.33}$$

$$r = 0.618 \times 1.52 = 0.939$$

Item 19 $r_{\text{pbi}} = \frac{17.50 - 16.43}{4.88} \sqrt{\frac{0.9}{0.1}}$

$$r = \frac{1.03}{4.88} \sqrt{9}$$

$$r = 0.221 \times 3 = 0.633$$

Item 20 $r_{\text{pbi}} = \frac{17.50 - 16.43}{4.88} \sqrt{\frac{0.4}{0.6}}$

$$r = \frac{1.07}{4.88} \sqrt{0.66}$$

$$r = 0.219 \times 0.812 = 0.177$$

Item 21 $r_{\text{pbi}} = \frac{18.09 - 16.43}{4.88} \sqrt{\frac{0.7}{0.3}}$

$$r = \frac{1.66}{4.88} \sqrt{2.33}$$

$$r = 0.340 \times 1.52 = 0.516$$

Item 22 $r_{\text{pbi}} = \frac{17.07 - 16.43}{4.88} \sqrt{\frac{0.4}{0.6}}$

$$r = \frac{0.46}{4.88} \sqrt{0.66}$$

$$r = 0.131 \times 0.812 = 0.106$$

$$\begin{aligned}\text{Item 23 } r_{\text{pbi}} &= \frac{17.66-16.43}{4.88} \sqrt{\frac{0.8}{0.2}} \\ r &= \frac{1.23}{4.88} \sqrt{4} \\ r &= 0.252 \times 2 = 0.504\end{aligned}$$

$$\begin{aligned}\text{Item 24 } r_{\text{pbi}} &= \frac{17.39-16.43}{4.88} \sqrt{\frac{0.8}{0.2}} \\ r &= \frac{0.96}{4.88} \sqrt{4} \\ r &= 0.196 \times 2 = 0.392\end{aligned}$$

$$\begin{aligned}\text{Item 25 } r_{\text{pbi}} &= \frac{17.63-16.43}{4.88} \sqrt{\frac{0.7}{0.3}} \\ r &= \frac{1.2}{4.88} \sqrt{2.33} \\ r &= 0.245 \times 1.52 = 0.372\end{aligned}$$

Appendix 10

Table Validity of Post- Test

| Number of Item | \bar{X}_1 | \bar{X}_2 | \bar{X}_3 | P | Q | $r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{D}{q}}$ | Non 5% significant | Interpretation |
|----------------|-------------|-------------|-------------|-----|-----|---|--------------------|----------------|
| 1. | 18.10 | 16.5 | 3.95 | 0.3 | 0.7 | 0.264 | 0.349 | Invalid |
| 2. | 17.68 | 16.5 | 3.95 | 0.6 | 0.4 | 0.363 | 0.349 | Valid |
| 3. | 17.29 | 16.5 | 3.95 | 0.8 | 0.2 | 0.400 | 0.349 | Valid |
| 4. | 19.14 | 16.5 | 3.95 | 0.5 | 0.5 | 0.668 | 0.349 | Valid |
| 5. | 16.46 | 16.5 | 3.95 | 0.4 | 0.6 | -0.008 | 0.349 | Invalid |
| 6. | 17.50 | 16.5 | 3.95 | 0.7 | 0.3 | 0.384 | 0.349 | Valid |
| 7. | 16.60 | 16.5 | 3.95 | 0.5 | 0.5 | 0.025 | 0.349 | Invalid |
| 8. | 18.07 | 16.5 | 3.95 | 0.5 | 0.5 | 0.397 | 0.349 | Valid |
| 9. | 16.93 | 16.5 | 3.95 | 0.5 | 0.5 | 0.108 | 0.349 | Invalid |
| 10. | 17.50 | 16.5 | 3.95 | 0.8 | 0.2 | 0.546 | 0.349 | Valid |
| 11. | 17.29 | 16.5 | 3.95 | 0.8 | 0.2 | 0.400 | 0.349 | Valid |
| 12. | 18.22 | 16.5 | 3.95 | 0.7 | 0.3 | 0.661 | 0.349 | Valid |
| 13. | 17.54 | 16.5 | 3.95 | 0.8 | 0.2 | 0.526 | 0.349 | Valid |
| 14. | 18.00 | 16.5 | 3.95 | 0.8 | 0.2 | 0.758 | 0.349 | Valid |
| 15. | 15.55 | 16.5 | 3.95 | 0.3 | 0.7 | 0.194 | 0.349 | Invalid |
| 16. | 17.63 | 16.5 | 3.95 | 0.7 | 0.3 | 0.434 | 0.349 | Valid |
| 17. | 18.61 | 16.5 | 3.95 | 0.7 | 0.3 | 0.811 | 0.349 | Valid |
| 18. | 17.41 | 16.5 | 3.95 | 0.8 | 0.2 | 0.460 | 0.349 | Valid |
| 19. | 18.04 | 16.5 | 3.95 | 0.7 | 0.3 | 0.591 | 0.349 | Valid |
| 20. | 17.86 | 16.5 | 3.95 | 0.8 | 0.2 | 0.668 | 0.349 | Valid |
| 21. | 17.33 | 16.5 | 3.95 | 0.8 | 0.2 | 0.420 | 0.349 | Valid |
| 22. | 17.75 | 16.5 | 3.95 | 0.7 | 0.3 | 0.480 | 0.349 | Valid |
| 23. | 17.90 | 16.5 | 3.95 | 0.7 | 0.3 | 0.538 | 0.349 | Valid |
| 24. | 17.23 | 16.5 | 3.95 | 0.9 | 0.1 | 0.552 | 0.349 | Valid |
| 25. | 19.40 | 16.5 | 3.95 | 0.7 | 0.3 | 1.109 | 0.349 | Valid |

Appendix 11

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

B. Calculation of Pre-Test

5. Means score from score total (M_t)

$$M_t = \frac{\sum X_t}{N}$$
$$M_t = \frac{495}{30} = 16.5$$

6. Standard Deviation (SD_t)

$$SD_t = \sqrt{\frac{\sum X_t^2}{N} - \left(\frac{\sum X_t}{N}\right)^2}$$
$$SD_t = \sqrt{\frac{8637}{30} - \left(\frac{495}{30}\right)^2}$$
$$SD_t = \sqrt{287.9 - 16.5^2}$$
$$SD_t = \sqrt{287.9 - 272.25} = \sqrt{15.65} = 3.95$$

7. Means Score (M_p)

Item 1 $M_{p1} = \frac{\text{the total of students score that true item answer}}{n1}$

$$M_{p1} = \frac{19+17+22+21+17+20+12+21+14+18}{10}$$
$$M_{p1} = \frac{181}{10} = 18.10$$

Item 2 $M_{p2} = \frac{\text{the total of students score that answer true item}}{n2}$

$$M_{p2} = \frac{17+21+14+18+22+16+21+20+20+17+20}{19}$$
$$M_{p2} = \frac{335}{19} = 17.68$$

Item 3 $M_{p3} = \frac{\text{the total of students score that answer true item}}{n3}$

$$M_{p3} = \frac{12+16+19+19+19+17+15+17+21+14+18+22+16+21+20+20+20+15+16+21+12+13+14+18}{24}$$
$$M_{p3} = \frac{415}{24} = 17.29$$

Item 4 $M_{p4} = \frac{\text{the total of students score that answer true item}}{n4}$

$$M_{p4} = \frac{19+19+21+14+18+22+21+20+20+20+21+21+14+18}{14}$$
$$M_{p4} = \frac{268}{14} = 19.14$$

$$\begin{aligned} \text{Item 5 } M_{p5} &= \frac{\text{the total of students score that answer true item}}{n5} \\ M_{p5} &= \frac{12+19+19+19+17+17+6+16+21+21+13+16+18}{13} \\ &= \frac{214}{13} = 16.46 \end{aligned}$$

$$\begin{aligned} \text{Item 6 } M_{p6} &= \frac{\text{the total of students score that answer true item}}{n6} \\ M_{p6} &= \frac{16+19+19+17+17+14+18+22+16+21+20+20+16+21+12+14+21+13+16+18}{20} \\ &= \frac{350}{20} = 17.50 \end{aligned}$$

$$\begin{aligned} \text{Item 7 } M_{p7} &= \frac{\text{the total of students score that answer true item}}{n7} \\ M_{p7} &= \frac{12+16+19+19+19+17+15+21+22+20+20+6+12+14+21+14}{15} \\ &= \frac{240}{15} = 16.60 \end{aligned}$$

$$\begin{aligned} \text{Item 8 } M_{p8} &= \frac{\text{the total of students score that answer true item}}{n8} \\ M_{p8} &= \frac{12+16+19+19+17+6+21+22+20+21+12+21+13+16+18}{14} \\ M_{p8} &= \frac{253}{14} = 18.07 \end{aligned}$$

$$\begin{aligned} \text{Item 9 } M_{p9} &= \frac{\text{the total of students score that answer true item}}{n9} \\ M_{p9} &= \frac{12+19+21+22+16+20+20+15+16+12+14+21+13+14+18}{15} \\ &= \frac{254}{15} = 16.93 \end{aligned}$$

$$\begin{aligned} \text{Item 10 } M_{p10} &= \frac{\text{the total of students score that answer true item}}{n10} \\ M_{p10} &= \frac{12+16+19+19+19+15+17+21+14+18+22+16+21+20+20+17+20+15+16+21+14+21+14+16}{24} \\ M_{p10} &= \frac{422}{24} = 17.58 \end{aligned}$$

$$\begin{aligned} \text{Item 11 } M_{p11} &= \frac{\text{the total of students score that answer true item}}{n11} \\ M_{p11} &= \frac{12+16+19+19+19+15+6+17+21+18+22+16+21+20+20+17+20+15+16+21+14+21+14+16}{24} \\ M_{p11} &= \frac{415}{24} = 17.29 \end{aligned}$$

$$\begin{aligned} \text{Item 12 } M_{p12} &= \frac{\text{the total of students score that answer true item}}{n12} \\ M_{p12} &= \frac{16+19+19+19+17+17+21+18+22+16+21+20+20+17+20+16+21+14+21+13+16+18}{22} \end{aligned}$$

$$M_{p12} = \frac{401}{22} = 18.22$$

$$\text{Item 13 } M_{p13} = \frac{\text{the total of students score that answer true item}}{\frac{n13}{12+16+19+19+19+17+15+6+17+21+18+22+16+21+20+20+17+6+20+15+16+21+14+16+18}}$$

$$M_{p13} = \frac{421}{24} = 17.54$$

$$\text{Item 14 } M_{p14} = \frac{\text{the total of students score that answer true item}}{\frac{n14}{12+19+19+19+17+15+17+21+14+18+22+16+21+20+20+17+20+15+16+21+21+16+18}}$$

$$M_{p14} = \frac{414}{23} = 18.00$$

$$\text{Item 15 } M_{p15} = \frac{\text{the total of students score that answer true item}}{\frac{n15}{19+19+6+17+17+6+21+21+14}}$$

$$M_{p15} = \frac{140}{9} = 15.55$$

$$\text{Item 16 } M_{p16} = \frac{\text{the total of students score that answer true item}}{\frac{n23}{16+19+19+17+15+17+21+14+18+22+16+21+20+20+20+15+16+21+14+13+16+18}}$$

$$M_{p16} = \frac{388}{22} = 17.63$$

$$\text{Item 17 } M_{p17} = \frac{\text{the total of students score that answer true item}}{\frac{n17}{19+19+19+15+6+21+14+18+22+21+20+20+17+20+15+16+21+14+21+14+16}}$$

$$M_{p17} = \frac{391}{21} = 18.61$$

$$\text{Item 18 } M_{p18} = \frac{\text{the total of students score that answer true item}}{\frac{n18}{12+16+19+19+19+17+15+17+21+14+18+22+16+21+20+20+17+20+15+16+21+12+13+18}}$$

$$M_{p18} = \frac{418}{24} = 17.41$$

$$\text{Item 19 } M_{p19} = \frac{\text{the total of students score that answer true item}}{\frac{n19}{16+19+19+19+17+6+21+14+18+22+20+20+17+20+15+21+12+14+21+14+16+18}}$$

$$M_{p19} = \frac{379}{21} = 18.04$$

$$\text{Item 20 } M_{p20} = \frac{\text{the total of students score that answer true item}}{n20}$$

$$M_{p20} = \frac{16+19+19+19+19+17+15+21+14+18+22+16+21+20+20+17+20+15+16+21+12+21+14+18}{23}$$

$$M_{p20} = \frac{411}{23} = 17.86$$

$$\text{Item 21 } M_{p21} = \frac{\text{the total of students score that answer true item}}{n21}$$

$$M_{p21} = \frac{12+16+19+19+19+17+15+17+21+14+18+22+21+20+20+17+6+20+16+21+21+13+14+18}{24}$$

$$M_{p21} = \frac{416}{24} = 17.33$$

$$\text{Item 22 } M_{p22} = \frac{\text{the total of students score that answer true item}}{n22}$$

$$M_{p22} = \frac{19+19+17+15+17+21+14+18+16+21+20+20+20+15+21+14+21+13+16+18}{20}$$

$$M_{p22} = \frac{355}{20} = 17.75$$

$$\text{Item 23 } M_{p23} = \frac{\text{the total of students score that answer true item}}{n16}$$

$$M_{p23} = \frac{16+19+17+15+17+21+14+18+22+16+21+20+20+17+20+15+16+21+14+21+16+18}{22}$$

$$M_{p23} = \frac{394}{22} = 17.90$$

$$\text{Item 24 } M_{p24} = \frac{\text{the total of students score that answer true item}}{n24}$$

$$M_{p24} = \frac{12+16+19+19+19+17+15+17+21+18+22+16+21+20+20+17+6+20+16+21+14+21+13+14+16+18}{26}$$

$$M_{p24} = \frac{448}{26} = 17.23$$

$$\text{Item 25 } M_{p25} = \frac{\text{the total of students score that answer true item}}{n25}$$

$$M_{p25} = \frac{16+19+17+15+17+21+22+16+21+20+20+17+20+15+21+12+14+21+13+16}{20}$$

$$M_{p25} = \frac{388}{20} = 19.40$$

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

$$\text{Item 1} = r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{18.10 - 16.5}{3.95} \sqrt{\frac{0.3}{0.7}}$$

$$r = \frac{1.6}{3.95} \sqrt{0.468}$$

$$r = 0.405 \times 0.654 = 0.264$$

Item 2 $r_{\text{pbi}} = \frac{17.68-16.5}{3.95} \sqrt{\frac{0.6}{0.4}}$

$$r = \frac{1.18}{3.95} \sqrt{1.5}$$

$$r = 0.298 \times 1.22 = 0.363$$

Item 3 $r_{\text{pbi}} = \frac{17.29-16.5}{3.95} \sqrt{\frac{0.8}{0.2}}$

$$r = \frac{0.79}{3.95} \sqrt{4}$$

$$r = 0.200 \times 2 = 0.400$$

Item 4 $r_{\text{pbi}} = \frac{19.14-16.5}{3.95} \sqrt{\frac{0.5}{0.5}}$

$$r = \frac{2.64}{3.95} \sqrt{1}$$

$$r = 0.668 \times 1 = 0.668$$

Item 5 $r_{\text{pbi}} = \frac{16.46-16.5}{3.95} \sqrt{\frac{0.4}{0.6}}$

$$r = \frac{-0.04}{3.95} \sqrt{0.66}$$

$$r = -0.010 \times 0.812 = -0.008$$

Item 6 $r_{\text{pbi}} = \frac{17.50-16.5}{3.95} \sqrt{\frac{0.7}{0.3}}$

$$r = \frac{1.00}{3.95} \sqrt{2.33}$$

$$r = 0.253 \times 1.52 = 0.384$$

Item 7 $r_{\text{pbi}} = \frac{16.60-16.5}{3.95} \sqrt{\frac{0.5}{0.5}}$

$$r = \frac{0.10}{3.95} \sqrt{1}$$

$$r = 0.025 \times 1 = 0.025$$

Item 8 $r_{\text{pbi}} = \frac{18.07-16.5}{3.95} \sqrt{\frac{0.5}{0.5}}$

$$r = \frac{1.57}{3.95} \sqrt{1}$$

$$r = 0.397 \times 1 = 0.397$$

$$\begin{aligned}\text{Item 9 } r_{\text{pbi}} &= \frac{16.93-16.5}{3.95} \sqrt{\frac{0.5}{0.5}} \\ r &= \frac{0.43}{3.95} \sqrt{1} \\ r &= 0.108 \times 1 = 0.108\end{aligned}$$

$$\begin{aligned}\text{Item 10 } r_{\text{pbi}} &= \frac{17.58-16.5}{3.95} \sqrt{\frac{0.8}{0.2}} \\ r &= \frac{1.08}{3.95} \sqrt{4} \\ r &= 0.273 \times 2 = 0.546\end{aligned}$$

$$\begin{aligned}\text{Item 11 } r_{\text{pbi}} &= \frac{17.29-16.5}{3.95} \sqrt{\frac{0.8}{0.2}} \\ r &= \frac{0.79}{3.95} \sqrt{4} \\ r &= 0.200 \times 2 = 0.400\end{aligned}$$

$$\begin{aligned}\text{Item 12 } r_{\text{pbi}} &= \frac{18.22-16.5}{3.95} \sqrt{\frac{0.7}{0.3}} \\ r &= \frac{1.72}{3.95} \sqrt{2.33} \\ r &= 0.435 \times 1.52 = 0.661\end{aligned}$$

$$\begin{aligned}\text{Item 13 } r_{\text{pbi}} &= \frac{17.54-16.5}{3.95} \sqrt{\frac{0.8}{0.2}} \\ r &= \frac{1.04}{3.95} \sqrt{4} \\ r &= 0.263 \times 2 = 0.526\end{aligned}$$

$$\begin{aligned}\text{Item 14 } r_{\text{pbi}} &= \frac{18.00-16.5}{3.95} \sqrt{\frac{0.8}{0.2}} \\ r &= \frac{1.5}{3.95} \sqrt{4} \\ r &= 0.379 \times 2 = 0.758\end{aligned}$$

$$\begin{aligned}\text{Item 15 } r_{\text{pbi}} &= \frac{15.55-16.5}{3.95} \sqrt{\frac{0.3}{0.7}} \\ r &= \frac{-0.95}{3.95} \sqrt{0.66} \\ r &= -0.240 \times 0.812 = -0.194\end{aligned}$$

$$\begin{aligned}\text{Item 16 } r_{\text{pbi}} &= \frac{17.63-16.5}{3.95} \sqrt{\frac{0.7}{0.3}} \\ r &= \frac{1.13}{3.95} \sqrt{2.33} \\ r &= 0.286 \times 1.52 = 0.434\end{aligned}$$

$$\text{Item 17 } r_{\text{pbi}} = \frac{18.61 - 16.5}{3.95} \sqrt{\frac{0.7}{0.3}}$$

$$r = \frac{2.11}{3.95} \sqrt{2.33}$$

$$r = 0.534 \times 1.52 = 0.811$$

$$\text{Item 18 } r_{\text{pbi}} = \frac{17.41 - 16.5}{3.95} \sqrt{\frac{0.8}{0.2}}$$

$$r = \frac{0.91}{3.95} \sqrt{4}$$

$$r = 0.230 \times 2 = 0.460$$

$$\text{Item 19 } r_{\text{pbi}} = \frac{18.04 - 16.5}{3.95} \sqrt{\frac{0.7}{0.3}}$$

$$r = \frac{1.54}{3.95} \sqrt{2.33}$$

$$r = 0.389 \times 1.52 = 0.591$$

$$\text{Item 20 } r_{\text{pbi}} = \frac{17.86 - 16.5}{3.95} \sqrt{\frac{0.8}{0.2}}$$

$$r = \frac{1.36}{3.95} \sqrt{4}$$

$$r = 0.344 \times 2 = 0.688$$

$$\text{Item 21 } r_{\text{pbi}} = \frac{17.33 - 16.5}{3.95} \sqrt{\frac{0.8}{0.2}}$$

$$r = \frac{0.83}{3.95} \sqrt{4}$$

$$r = 0.210 \times 2 = 0.420$$

$$\text{Item 22 } r_{\text{pbi}} = \frac{17.75 - 16.5}{3.95} \sqrt{\frac{0.7}{0.3}}$$

$$r = \frac{1.25}{3.95} \sqrt{2.33}$$

$$r = 0.316 \times 1.52 = 0.480$$

$$\text{Item 23 } r_{\text{pbi}} = \frac{17.90 - 16.5}{3.95} \sqrt{\frac{0.7}{0.3}}$$

$$r = \frac{1.4}{3.95} \sqrt{2.33}$$

$$r = 0.354 \times 1.52 = 0.538$$

$$\begin{aligned}\text{Item 24 } r_{\text{pbi}} &= \frac{17.23-16.5}{3.95} \sqrt{\frac{0.9}{0.1}} \\ r &= \frac{0.73}{3.95} \sqrt{9} \\ r &= 0.184 \times 3 = 0.552\end{aligned}$$

$$\begin{aligned}\text{Item 25 } r_{\text{pbi}} &= \frac{19.40-16.5}{3.95} \sqrt{\frac{0.7}{0.3}} \\ r &= \frac{2.9}{3.95} \sqrt{2.33} \\ r &= 0.734 \times 1.52 = 1.109\end{aligned}$$

Appendix 12

REABILITY OF PRE TEST

| No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | Xt | Xt ² | |
|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------|---|
| 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 4 | |
| 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 4 | |
| 3 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | |
| 4 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 4 | |
| 5 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 3 | |
| 6 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 4 | |
| 7 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | |
| 8 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 4 | |
| 9 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 6 | |
| 10 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | |
| 11 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 25 | |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 4 | |
| 13 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 16 | |
| 14 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | |
| 15 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | |
| 16 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 4 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |

Appendix 13

REALIBILITY OF POST TEST

| No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | X | X ² | | |
|----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|---|----------------|----|-----|
| 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 12 | 144 |
| 2 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 16 | 256 |
| 3 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 19 | 361 |
| 4 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | 81 |
| 5 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 19 | 361 |
| 6 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 17 | 289 |
| 7 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 15 | 225 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 36 |
| 9 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 17 | 289 |
| 10 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 21 | 441 |
| 11 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 14 | 196 |
| 12 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 18 | 324 |
| 13 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 22 | 484 |
| 14 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 16 | 256 |
| 15 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 20 | 400 |
| 16 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 20 | 400 |
| 17 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 20 | 400 |

Appendix 14

Reliability Pre Test

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

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{S_t^2 - \sum pq}{S_t^2} \right)$$

$$N = 30$$

$$\sum Xt = 493$$

$$\sum Xt^2 = 8815$$

$$\sum pq = 5.729$$

$$\begin{aligned} S_t^2 &= \sum Xt^2 - \left(\frac{\sum xt}{N} \right)^2 \\ &= 8815 - \left(\frac{493}{30} \right)^2 = 8815 - \frac{243049}{30} = 8815 - 8101.63 = 713.37 \end{aligned}$$

$$S_t^2 = \frac{\sum Xt^2}{N} = \frac{713.37}{30}$$

$$S_t^2 = 23.779$$

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{S_t^2 - \sum pq}{S_t^2} \right)$$

$$R_{11} = \left(\frac{30}{30-1} \right) \left(\frac{23.779 - 5.729}{23.779} \right) = \left(\frac{30}{29} \right) \left(\frac{18.05}{23.779} \right)$$

$$= (1.034) (0.759)$$

$$R_{11} = 0.822$$

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

Test is reliable if $r_{\text{count}} > r_{\text{tabel}}$. Based on calculation above, the test have very high reliable.

Appendix 15

Reliability Post Test

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

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{S_t^2 - \sum pq}{S_t^2} \right)$$

$$N = 30$$

$$\sum Xt = 495$$

$$\sum Xt^2 = 8637$$

$$\sum pq = 5.1065$$

$$\begin{aligned} S_t^2 &= \sum Xt^2 - \left(\frac{\sum xt}{N} \right)^2 \\ &= 8637 - \left(\frac{495}{30} \right)^2 = 8637 - \frac{245025}{30} = 8637 - 8167.5 = 469.5 \end{aligned}$$

$$S_t^2 = \frac{\sum Xt^2}{N} = \frac{469.5}{30}$$

$$S_t^2 = 15.65$$

$$R_{11} = \left(\frac{n}{n-1} \right) \left(\frac{S_t^2 - \sum pq}{S_t^2} \right)$$

$$R_{11} = \left(\frac{30}{30-1} \right) \left(\frac{15.65 - 5.1065}{15.65} \right) = \left(\frac{30}{29} \right) \left(\frac{10.5435}{15.65} \right)$$

$$= (1.034) (0.673)$$

$$R_{11} = 0.70 \quad (r_{11} = 0.70 = \text{reliable})$$

Appendix 16

Score of Experimental Class and Control Class Pre Test

1. Score of Experimental Class Pre Test before using Directed Reading Thinking Activity (DRTA) strategy

| No | The Initial Name of Students (n) | Pre-Test | No | The Initial Name of Students (n) | Pre-Test |
|----|----------------------------------|----------|----|----------------------------------|----------|
| 1 | Almh.p | 45 | 19 | Rhmd | 65 |
| 2 | Aml | 60 | 20 | Sbh | 55 |
| 3 | Amh | 70 | 21 | Smd | 55 |
| 4 | A H | 50 | 22 | Sth | 75 |
| 5 | Aph | 75 | 23 | Soh | 65 |
| 6 | A S H | 75 | 24 | SHR | 70 |
| 7 | Fjh | 50 | 25 | Sdy | 45 |
| 8 | Fbr | 55 | 26 | Sunas | 70 |
| 9 | Ftr | 70 | 27 | Sursi | 55 |
| 10 | Hrt | 65 | 28 | Tkmw | 70 |
| 11 | Mmh | 65 | 29 | Vanny | 70 |
| 12 | Msh | 55 | 30 | Wrmn | 65 |
| 13 | Mwn | 60 | 31 | WSS | 75 |
| 14 | Mania | 60 | 32 | YWD | 50 |
| 15 | Msr | 45 | 33 | YHR | 50 |
| 16 | Nur | 75 | 34 | YM R | 65 |
| 17 | Ptr | 65 | 35 | YAD | 75 |
| 18 | Raiksa | 65 | | | |
| | Total | | | 2175 | |

2. Score of Control Class Pre Test

| No | The Initial Name of Students (n) | Pre-Test | No | The Initial Name of Students (n) | Pre-Test |
|----|----------------------------------|----------|----|----------------------------------|----------|
| 1 | Ads | 75 | 15 | MHM | 65 |
| 2 | Ajwn | 45 | 16 | NAR | 75 |
| 3 | A M | 50 | 17 | NH | 65 |
| 4 | Dhl | 60 | 18 | Nrm | 50 |
| 5 | EMR | 50 | 19 | Rmd | 65 |
| 6 | Gsn | 55 | 20 | RZK | 70 |
| 7 | Hdn | 55 | 21 | SHY | 55 |
| 8 | IT O | 70 | 22 | SMW | 70 |
| 9 | Irn | 55 | 23 | Sndr | 65 |
| 10 | JSN | 60 | 24 | S Hh | 75 |
| 11 | Lmn | 75 | 25 | Sbl | 60 |
| 12 | Mpn | 60 | 26 | UMF | 75 |
| 13 | MHR | 60 | 27 | UMS | 45 |
| 14 | MHS | 65 | | | |
| | Total | | | 1675 | |

Appendix 17**Score of Experimental Class and control Class Post Test****3. Score of Experimental Class Post-Test after using Directed Reading Thinking Activity (DRTA) strategy**

| No | The Initial Name of Students (n) | Pre-Test | No | The Initial Name of Students (n) | Pre-Test |
|-------|----------------------------------|----------|------|----------------------------------|----------|
| 1 | Almh.p | 85 | 19 | Rhmd | 80 |
| 2 | Aml | 90 | 20 | Sbh | 65 |
| 3 | Amh | 80 | 21 | Smd | 95 |
| 4 | A H | 90 | 22 | Sth | 90 |
| 5 | Aph | 85 | 23 | Soh | 70 |
| 6 | A S H | 75 | 24 | SHR | 80 |
| 7 | Fjh | 80 | 25 | Sdy | 70 |
| 8 | Fbr | 75 | 26 | Sunas | 80 |
| 9 | Ftr | 80 | 27 | Sursi | 95 |
| 10 | Hrt | 75 | 28 | Tkmw | 70 |
| 11 | Mmh | 80 | 29 | Vanny | 90 |
| 12 | Msh | 75 | 30 | Wrmn | 70 |
| 13 | Mwn | 80 | 31 | WSS | 80 |
| 14 | Mania | 85 | 32 | YWD | 80 |
| 15 | Msr | 95 | 33 | YHR | 80 |
| 16 | Nur | 85 | 34 | YM R | 80 |
| 17 | Ptr | 90 | 35 | YAD | 65 |
| 18 | Raiksa | 80 | | | |
| Total | | | 2825 | | |

1. The Score of Control Class Post Test by Using Conventional Strategy

| No | The Initial Name of Students (n) | Pre-Test | No | The Initial Name of Students (n) | Pre-Test |
|----|----------------------------------|----------|----|----------------------------------|----------|
| 1 | Ads | 75 | 15 | MHM | 60 |
| 2 | Ajwn | 60 | 16 | NAR | 75 |
| 3 | A M | 80 | 17 | NH | 50 |
| 4 | Dhl | 70 | 18 | Nrm | 65 |
| 5 | EMR | 75 | 19 | Rmd | 65 |
| 6 | Gsn | 50 | 20 | RZK | 60 |
| 7 | Hdn | 65 | 21 | SHY | 80 |
| 8 | IT O | 55 | 22 | SMW | 65 |
| 9 | Irn | 70 | 23 | Sndr | 70 |
| 10 | JSN | 65 | 24 | S Hh | 65 |
| 11 | Lmn | 75 | 25 | Sbl | 80 |
| 12 | Mpn | 70 | 26 | UMF | 55 |
| 13 | MHR | 75 | 27 | UMS | 65 |
| 14 | MHS | 70 | | | |
| | Total | | | 1810 | |

Appendix 18

RESULT OF NORMALITY TEST IN PRE TEST

RESULT OF THE NORMALITY TEST OF XI-1 IN PRE-TEST

1. The score of XI-1 class in pre test from low score to high score:

45 45 45 50 50 50 50 55 55 55
 55 55 60 60 60 60 65 65 65 65
 65 65 65 70 70 70 70 70 70 75
 75 75 75 75 75

2. High = 75
 Low = 45
 Range = High – Low

$$= 75 - 45$$

$$= 30$$

3. Total of Classes = $1 + 3,3 \log (n)$
 $= 1 + 3,3 \log (35)$
 $= 1 + 3,3 (1,54)$
 $= 1 + 5.08$
 $= 6.08$
 $= 6$

4. Length of Classes = $\frac{range}{total\ of\ class} = \frac{30}{6} = 5$

5. Mean

| Interval Class | F | X | x' | fx' | x' ² | fx' ² |
|----------------|----|-----------|----|-----|-----------------|------------------|
| 45 – 49 | 3 | 47 | 4 | 12 | 16 | 48 |
| 50 – 54 | 4 | 52 | 3 | 12 | 9 | 36 |
| 55 – 59 | 5 | 57 | 2 | 10 | 4 | 20 |
| 60 – 64 | 4 | 62 | 1 | 4 | 1 | 4 |
| 65 – 69 | 7 | 67 | 0 | 0 | 0 | 0 |
| 70 – 74 | 6 | 72 | -1 | -6 | 1 | 6 |
| 75 – 79 | 6 | 77 | -2 | -12 | 4 | 24 |
| <i>i</i> = 5 | 35 | - | - | 20 | - | 138 |

$$M_x = M^1 + i \frac{\sum fx^1}{N}$$

$$= 67 + 5 \left(\frac{20}{35} \right)$$

$$= 67 + 5 (0.57)$$

$$= 67 + (2.58)$$

$$= 69.85$$

$$SD_t = i \sqrt{\frac{\sum fx'^2}{N} - \left[\frac{\sum fx'}{N} \right]^2}$$

$$= \sqrt[5]{\frac{138}{35} - \left(\frac{20}{35} \right)^2}$$

$$= \sqrt[5]{3.94 - (0.57)^2}$$

$$= \sqrt[5]{3.94 - 0.32}$$

$$= \sqrt[5]{3.62}$$

$$= 5 (1.90)$$

$$= 9.5$$

Table of Normality Data Test with Chi Kuadrat Formula

| Interval of Score | Real Upper Limit | Z – Score | Limit of Large of the Area | Large of area | f_h | f_0 | $\frac{(f_0-f_h)}{f_h}$ |
|-------------------|------------------|-----------|----------------------------|---------------|-------|-------|-------------------------|
| 75–79 | 79,5 | 0.99 | 0.3438 | 0.15 | 5.25 | 6 | 0.14 |
| 70 – 74 | 74,5 | 0.45 | 0.1844 | -0.30 | -10.5 | 6 | -0.42 |
| 65 – 69 | 69,5 | -0.08 | 0.48803 | 0.20 | 7 | 7 | 0 |
| 60 – 64 | 64,5 | -0.62 | 0.28774 | 0.08 | 2.8 | 4 | 0.42 |
| 55 – 59 | 59,5 | -1.16 | 0.14007 | 0.40 | 14 | 5 | -0.64 |
| 50 – 54 | 54,5 | -1.70 | 0.05480 | 0.04 | 1.4 | 4 | 1.85 |
| 45 – 49 | 49,5 | -2.24 | 0.00798 | 0.00 | 0 | 3 | 3.00 |
| | 44,5 | -2.78 | 0.00391 | | | | |
| X^2 | | | | | | | 4.35 |

Based on table above, reseracher found that $x^2_{count} = 4.35$ while $x^2_{table}=5.991$ cause $x^2_{cause} < x^2_{table}$ ($4.35 < 5.991$) with degree of freedom $dk = 5 - 3 = 2$ and significat level $\alpha = 5\%$. So distribution of XI-1 class (Pre-test) is normal.

6. Median

| No | Interval of Classes | F | Fk |
|----|---------------------|----------|----|
| 1 | 45 - 49 | 3 | 3 |
| 2 | 50 - 54 | 4 | 7 |
| 3 | 55 - 59 | 5 | 12 |
| 4 | 60 - 64 | 4 | 16 |
| 5 | 65 - 69 | 7 | 23 |
| 6 | 70 - 74 | 6 | 29 |
| 7 | 75 - 79 | 6 | 35 |

Position of Me in the interval of classes is number 5, that:

$$Bb = 64.5$$

$$F = 4$$

$$fm = 7$$

$$i = 5$$

$$n = 35$$

$$1/2n = 17.5$$

So :

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

$$= 64.5 + 5 \left(\frac{17.5 - 4}{7} \right)$$

$$= 64.5 + 5 (1.92)$$

$$= 64.5 + 9.6$$

$$= 74.1$$

7. Modus

| No | Interval of Classes | F | Fk |
|----|---------------------|----------|----|
| 1 | 45 - 49 | 3 | 3 |
| 2 | 50 - 54 | 4 | 7 |
| 3 | 55 - 59 | 5 | 12 |
| 4 | 60 - 64 | 4 | 16 |
| 5 | 65 - 69 | 7 | 23 |
| 6 | 70 - 74 | 6 | 29 |
| 7 | 75 - 79 | 6 | 35 |

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

$$L = 64.5$$

$$d_1 = 3$$

$$d_2 = 1$$

$$i = 5$$

$$\begin{aligned} M_o &= 64.5 + \frac{3}{3+1} 5 \\ &= 64.5 + 0.75 (5) \\ &= 64.5 + 3.75 \\ &= 68.25 \end{aligned}$$

RESULT OF NORMALITY TEST IN PRE TEST

RESULT OF THE NORMALITY TEST OF XI-2 IN PRE-TEST

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

45 45 50 50 50 55 55 55 55
 60 60 60 60 65 65 65 70 70
 70 70 70 70 75 75 75 75 75

2. High = 75
 Low = 45
 Range = High – Low

$$= 70 - 45$$

$$= 30$$

3. Total of Classes = $1 + 3,3 \log (n)$
 $= 1 + 3,3 \log (27)$
 $= 1 + 3,3 (1,43)$
 $= 1 + 4.71$
 $= 5.71$
 $= 6$

4. Length of Classes = $\frac{range}{total\ of\ class} = \frac{30}{6} = 5$

5. Mean

| Interval Class | F | X | x' | fx' | x' ² | fx' ² |
|----------------|----|----|----|-----|-----------------|------------------|
| 45 – 49 | 2 | 47 | 4 | 8 | 16 | 32 |
| 50 – 54 | 3 | 52 | 3 | 9 | 9 | 27 |
| 55 – 59 | 4 | 57 | 2 | 8 | 4 | 16 |
| 60 – 64 | 4 | 62 | 1 | 4 | 1 | 4 |
| 65 – 69 | 6 | 67 | 0 | 0 | 0 | 0 |
| 70 – 74 | 3 | 72 | -1 | -3 | 1 | 6 |
| 75 – 79 | 5 | 77 | -2 | -5 | 4 | 20 |
| <i>i</i> = 5 | 27 | - | - | 21 | - | 105 |

$$M_x = M^1 + i \frac{\sum fx^1}{N}$$

$$= 67 + 5 \left(\frac{21}{27} \right)$$

$$= 67 + 5 (0.77)$$

$$= 67 + (3.85)$$

$$= 70.85$$

$$SD_t = i \sqrt{\frac{\sum fx^{12}}{N} - \left[\frac{\sum fx^1}{N} \right]^2}$$

$$= 5 \sqrt{\frac{105}{27} - \left(\frac{21}{27} \right)^2}$$

$$= 5 \sqrt{3.88 - (0.77)^2}$$

$$= 5 \sqrt{3.88 - 0.59}$$

$$= 5 \sqrt{3.29}$$

$$= 5 (1.81)$$

$$= 9.05$$

Table of Normality Data Test with Chi Kuadrat Formula

| Interval of Score | Real Upper Limit | Z – Score | Limit of Large of the Area | Large of area | f_h | f_0 | $\frac{(f_0-f_h)}{f_h}$ |
|-------------------|------------------|-----------|----------------------------|---------------|-------|-------|-------------------------|
| 75–79 | 79,5 | 0.95 | 0.3289 | 0.17 | 5.95 | 5 | -0.15 |
| 70 – 74 | 74,5 | 0.40 | 0.1554 | -0.28 | -9.8 | 3 | -0.20 |
| 65 – 69 | 69,5 | -0.14 | 0.44433 | -0.20 | -7 | 6 | -0.14 |
| 60 – 64 | 64,5 | -0.70 | 0.24196 | 0.12 | 4.2 | 4 | -0.04 |
| 55 – 59 | 59,5 | -1.19 | 0.11702 | 0.08 | 2.8 | 4 | 0.64 |
| 50 – 54 | 54,5 | -1.80 | 0.03593 | 0.02 | 0.7 | 3 | 0.42 |
| 45 – 49 | 49,5 | -2.35 | 0.00939 | 0.00 | 0 | 2 | 2.00 |
| | 44,5 | -2.91 | 0.00181 | | | | |
| | | | | | | X^2 | 2.52 |

Based on table above, reseracher found that $x^2_{count} = 2.52$ while $x^2_{table} = 5.991$ cause $x^2_{cause} < x^2_{table}$ ($2.52 < 5.991$) with degree of freedom $dk = 5 - 3 = 2$ and significat level $\alpha = 5\%$. So distribution of XI-2 class (Pre-test) is normal.

6. Median

| No | Interval of Classes | F | Fk |
|----|---------------------|----------|----|
| 1 | 45 - 49 | 2 | 2 |
| 2 | 50 - 54 | 3 | 5 |
| 3 | 55 - 59 | 4 | 9 |
| 4 | 60 - 64 | 4 | 13 |
| 5 | 65 - 69 | 6 | 19 |
| 6 | 70 - 74 | 3 | 22 |
| 7 | 75 - 79 | 5 | 27 |

Position of Me in the interval of classes is number 5, that:

$$Bb = 64.5$$

$$F = 4$$

$$fm = 6$$

$$i = 5$$

$$n = 27$$

$$1/2n = 13.5$$

So :

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

$$= 64.5 + 5 \left(\frac{13.5 - 4}{6} \right)$$

$$= 64.5 + 5 (1.58)$$

$$= 64.5 + 7.9$$

$$= 72.4$$

7. Modus

| No | Interval of Classes | F | Fk |
|----|---------------------|----------|----|
| 1 | 45 - 49 | 2 | 2 |
| 2 | 50 - 54 | 3 | 5 |
| 3 | 55 - 59 | 4 | 9 |
| 4 | 60 - 64 | 4 | 13 |
| 5 | 65 - 69 | 6 | 19 |
| 6 | 70 - 74 | 3 | 22 |
| 7 | 75 - 79 | 5 | 27 |

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

$$L = 64.5$$

$$d_1 = 2$$

$$d_2 = 3$$

$$i = 5$$

$$\begin{aligned} M_o &= 64.5 + \frac{2}{2+3} 5 \\ &= 64.5 + 0.4 (5) \\ &= 64.5 + 2 \\ &= 66.5 \end{aligned}$$

RESULT OF NORMALITY TEST IN PRE TEST

RESULT OF THE NORMALITY TEST OF XI-1 IN PRE-TEST

1. The score of XI-3 class in pre test from low score to high score:

45 45 50 50 50 55 55 55 55 55
 55 60 60 60 60 65 65 65 65 65
 65 65 65 70 70 70 70 70 70 75
 75 75 75 75 75

2. High = 75
 Low = 45
 Range = High – Low

$$= 75 - 45$$

$$= 30$$

3. Total of Classes = $1 + 3,3 \log (n)$
 $= 1 + 3,3 \log (35)$
 $= 1 + 3,3 (1,54)$
 $= 1 + 5.08$
 $= 6.08$
 $= 6$

4. Length of Classes = $\frac{range}{total\ of\ class} = \frac{30}{6} = 5$

5. Mean

| Interval Class | F | X | x' | fx' | x' ² | fx' ² |
|----------------|----|-----------|----|-----|-----------------|------------------|
| 45 – 49 | 2 | 47 | 4 | 8 | 16 | 32 |
| 50 – 54 | 3 | 52 | 3 | 9 | 9 | 27 |
| 55 – 59 | 6 | 57 | 2 | 12 | 4 | 24 |
| 60 – 64 | 4 | 62 | 1 | 4 | 1 | 4 |
| 65 – 69 | 8 | 67 | 0 | 0 | 0 | 0 |
| 70 – 74 | 6 | 72 | -1 | -6 | 1 | 6 |
| 75 – 79 | 6 | 77 | -2 | -12 | 4 | 24 |
| <i>i</i> = 5 | 35 | - | - | 15 | - | 117 |

$$M_x = M^1 + i \frac{\Sigma fx^1}{N}$$

$$= 67 + 5 \left(\frac{15}{35} \right)$$

$$= 67 + 5 (0.42)$$

$$= 67 + (2.1)$$

$$= 69.1$$

$$SD_t = i \sqrt{\frac{\Sigma fx^2}{N} - \left[\frac{\Sigma fx^1}{N} \right]^2}$$

$$= \sqrt{\frac{117}{35} - \left(\frac{15}{35} \right)^2}$$

$$= \sqrt{3.34 - (0.42)^2}$$

$$= \sqrt{3.34 - 0.17}$$

$$= \sqrt{3.17}$$

$$= 5 (1.78)$$

$$= 8.9$$

Table of Normality Data Test with Chi Kuadrat Formula

| Interval of Score | Real Upper Limit | Z – Score | Limit of Large of the Area | Large of area | f_h | f_0 | $\frac{(f_0-f_h)}{f_h}$ |
|-------------------|------------------|-----------|----------------------------|---------------|-------|-------|-------------------------|
| 75–79 | 79,5 | 1.16 | 0.3770 | 0.15 | 5.25 | 6 | 0.14 |
| 70 – 74 | 74,5 | 0.60 | 0.2257 | 0.20 | 7 | 6 | -0.14 |
| 65 – 69 | 69,5 | 0.04 | 0.0160 | -30 | -10 | 8 | -0.2 |
| 60 – 64 | 64,5 | -0.51 | 0.30854 | 0.16 | 5.6 | 4 | -0.28 |
| 55 – 59 | 59,5 | -1.07 | 0.14231 | 0.09 | 3.15 | 6 | 0.90 |
| 50 – 54 | 54,5 | -1.64 | 0.05050 | 0.03 | 1.05 | 3 | 1.85 |
| 45 – 49 | 49,5 | -2.20 | 0.01390 | 0.01 | 0.35 | 2 | 4.71 |
| | 44,5 | -2.76 | 0.00289 | | | | |
| | | | | | | X^2 | 6.98 |

Based on table above, reseracher found that $x^2_{count} = 6.98$ while $x^2_{table}=5.991$ cause $x^2_{cause} < x^2_{table}$ ($6.98 < 5.991$) with degree of freedom $dk = 5 - 3 = 2$ and significat level $\alpha = 5\%$. So distribution of XI-3 class (Pre-test) is not normal.

6. Median

| No | Interval of Classes | F | Fk |
|----|---------------------|----------|----|
| 1 | 45 - 49 | 2 | 2 |
| 2 | 50 - 54 | 3 | 5 |
| 3 | 55 - 59 | 6 | 11 |
| 4 | 60 - 64 | 4 | 15 |
| 5 | 65 - 69 | 8 | 23 |
| 6 | 70 - 74 | 6 | 29 |
| 7 | 75 - 79 | 6 | 35 |

Position of Me in the interval of classes is number 5, that:

$$Bb = 64.5$$

$$F = 4$$

$$fm = 8$$

$$i = 5$$

$$n = 35$$

$$1/2n = 17.5$$

$$\begin{aligned}
 \text{So : Me} &= Bb + i \left(\frac{n/2 - F}{fm} \right) \\
 &= 64.5 + 5 \left(\frac{17.5 - 4}{8} \right) \\
 &= 64.5 + 5 (1.68) \\
 &= 64.5 + 8.4 \\
 &= 72.9
 \end{aligned}$$

7. Modus

| No | Interval of Classes | F | Fk |
|----|---------------------|----------|----|
| 1 | 45 - 49 | 2 | 2 |
| 2 | 50 - 54 | 3 | 5 |
| 3 | 55 - 59 | 6 | 11 |
| 4 | 60 - 64 | 4 | 15 |
| 5 | 65 - 69 | 8 | 23 |
| 6 | 70 - 74 | 6 | 29 |
| 7 | 75 - 79 | 6 | 35 |

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

$$L = 64.5$$

$$d_1 = 4$$

$$d_2 = 2$$

$$i = 5$$

$$M_o = 64.5 + \frac{4}{4+2} 5$$

$$= 64.5 + 0.66 (5)$$

$$= 64.5 + 3.3$$

$$= 67.8$$

Appendix 19

HOMOGENEITY TEST (PRE-TEST)

Calculation of parameter to get variant of the first class as experimental class sample by using Directed Reading Thinking Activity (DRTA) Strategy and variant of the second class as control class sample by using conventional strategy are used homogeneity test by using formula:

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

Hypotheses:

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

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

A. Variant of the XI-1 class is:

| NO | Xi | Xi ² |
|----|----|-----------------|
| 1 | 45 | 2025 |
| 2 | 45 | 2025 |
| 3 | 45 | 2025 |
| 4 | 50 | 2500 |
| 5 | 50 | 2500 |
| 6 | 50 | 2500 |
| 7 | 50 | 2500 |
| 8 | 55 | 3025 |
| 9 | 55 | 3025 |
| 10 | 55 | 3025 |
| 11 | 55 | 3025 |
| 12 | 55 | 3025 |
| 13 | 60 | 3600 |
| 14 | 60 | 3600 |
| 15 | 60 | 3600 |
| 16 | 60 | 3600 |
| 17 | 65 | 4225 |
| 18 | 65 | 4225 |

| | | |
|----|------|--------|
| 19 | 65 | 4225 |
| 20 | 65 | 4225 |
| 21 | 65 | 4225 |
| 22 | 65 | 4225 |
| 23 | 65 | 4225 |
| 24 | 70 | 4900 |
| 25 | 70 | 4900 |
| 26 | 70 | 4900 |
| 27 | 70 | 4900 |
| 28 | 70 | 4900 |
| 29 | 70 | 4900 |
| 30 | 75 | 5625 |
| 31 | 75 | 5625 |
| 32 | 75 | 5625 |
| 33 | 75 | 5625 |
| 34 | 75 | 5625 |
| 35 | 75 | 5625 |
| | 2175 | 138535 |

$$n = 35$$

$$\sum xi = 2175$$

$$\sum xi^2 = 138535$$

So:

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

$$= \frac{35(138535) - (2175)^2}{35(35-1)}$$

$$= \frac{4848725 - 4730625}{35(34)}$$

$$= \frac{118100}{1190}$$

$$= 99.24$$

B. Variant of the XI-2 class is:

| NO | Xi | Xi² |
|-----------|-----------|-----------------------|
| 1 | 45 | 2025 |
| 2 | 45 | 2025 |
| 3 | 50 | 2500 |
| 4 | 50 | 2500 |
| 5 | 50 | 2500 |
| 6 | 55 | 3025 |
| 7 | 55 | 3025 |
| 8 | 55 | 3025 |
| 9 | 55 | 3025 |
| 10 | 60 | 3600 |
| 11 | 60 | 3600 |
| 12 | 60 | 3600 |
| 13 | 60 | 3600 |
| 14 | 65 | 4225 |
| 15 | 65 | 4225 |
| 16 | 65 | 4225 |
| 17 | 65 | 4225 |
| 18 | 65 | 4225 |
| 19 | 65 | 4225 |
| 20 | 70 | 4900 |
| 21 | 70 | 4900 |
| 22 | 70 | 4900 |
| 23 | 75 | 5625 |
| 24 | 75 | 5625 |
| 25 | 75 | 5625 |
| 26 | 75 | 5625 |
| 27 | 75 | 5625 |
| | 1675 | 106225 |

$$\begin{aligned}
 n &= 27 \\
 \sum xi &= 1675 \\
 \sum xi^2 &= 106225
 \end{aligned}$$

So:

$$\begin{aligned}
 S^2 &= \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)} \\
 &= \frac{27(106225) - (1675)^2}{27(27-1)} \\
 &= \frac{2868075 - 2805625}{27(26)} \\
 &= \frac{62450}{702} \\
 &= 88.96
 \end{aligned}$$

C. Variant of the XI- 3 class is:

| NO | Xi | Xi ² |
|----|----|-----------------|
| 1 | 45 | 2025 |
| 2 | 45 | 2025 |
| 3 | 50 | 2500 |
| 4 | 50 | 2500 |
| 5 | 50 | 2500 |
| 6 | 55 | 3025 |
| 7 | 55 | 3025 |
| 8 | 55 | 3025 |
| 9 | 55 | 3025 |
| 10 | 55 | 3025 |
| 11 | 55 | 3025 |
| 12 | 60 | 3600 |
| 13 | 60 | 3600 |
| 14 | 60 | 3600 |
| 15 | 60 | 3600 |
| 16 | 65 | 4225 |
| 17 | 65 | 4225 |

| | | |
|----|------|--------|
| 18 | 65 | 4225 |
| 19 | 65 | 4225 |
| 20 | 65 | 4225 |
| 21 | 65 | 4225 |
| 22 | 65 | 4225 |
| 23 | 65 | 4225 |
| 24 | 70 | 4900 |
| 25 | 70 | 4900 |
| 26 | 70 | 4900 |
| 27 | 70 | 4900 |
| 28 | 70 | 4900 |
| 29 | 70 | 4900 |
| 30 | 75 | 5625 |
| 31 | 75 | 5625 |
| 32 | 75 | 5625 |
| 33 | 75 | 5625 |
| 34 | 75 | 5625 |
| 35 | 75 | 5625 |
| | 2200 | 141050 |

$$n = 35$$

$$\sum xi = 2200$$

$$\sum xi^2 = 141050$$

So:

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

$$= \frac{35(141050) - (2200)^2}{35(35-1)}$$

$$= \frac{4936750 - 4840000}{35(34)}$$

$$= \frac{96750}{1190}$$

$$= 81.30$$

The Formula was used to test hypothesis was:

1. XI-1 and XI -2 :

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

So:

$$F = \frac{99.24}{88.96}$$

$$= 1.11$$

After doing the calculation, researcher found that $F_{\text{count}} = 1.11$ with α 5 % and $dk = 35$ from the distribution list F, researcher found that $F_{\text{table}} = 2.042$, cause $F_{\text{count}} < F_{\text{table}}$ ($1.11 < 2.042$). So, there is no difference the variant between the XI-1 class and XI-2 class. It means that the variant is homogenous.

2. XI -1 and XI -3 :

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

So:

$$F = \frac{99.24}{81.30}$$

$$= 1.22$$

After doing the calculation, researcher found that $F_{\text{count}} = 1.22$ with α 5 % and $dk = 35$ from the distribution list F, researcher found that $F_{\text{table}} = 2.042$, cause $F_{\text{count}} < F_{\text{table}}$ ($1.22 < 2.042$). So, there is no difference the variant between the XI-1 class and XI-3 class. It means that the variant is homogenous.

3. XI -2 and XI - 3 :

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

So:

$$F = \frac{88.96}{81.30}$$
$$= 1.09$$

After doing the calculation, researcher found that $F_{\text{count}} = 1.09$ with α 5 % and dk = 35 and 27 from the distribution list F, researcher found that $F_{\text{table}} = 2.042$ & 2.052 , cause $F_{\text{count}} < F_{\text{table}}$ ($1.09 < 2.042$ & 2.052). So, there is no difference the variant between the XI-2 class and XI-3 class. It means that the variant is homogenous.

Appendix 20

**RESULT OF THE NORMALITY TEST OF EXPERIMENT CLASS
IN POST-TEST**

1. The score of experiment class in post test from low score to high score:

65 65 70 70 70 70 75 75 75 75
 80 80 80 80 80 80 80 80 80 80
 80 80 80 85 85 85 85 90 90 90
 90 90 95 95 95

2. High = 95

Low = 65

Range = High – Low

$$= 95 - 65$$

$$= 30$$

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

$$= 1 + 3,3 \log (35)$$

$$= 1 + 3,3 (1.54)$$

$$= 1 + 5.08$$

$$= 6.08$$

$$= 6$$

4. Length of Classes = $\frac{\text{range}}{\text{total of class}} = \frac{30}{6} = 5$

5. Mean

| Interval Class | F | X | x | fx | x ² | fx ² |
|----------------|----|----|----|-----|----------------|-----------------|
| 65 – 69 | 2 | 67 | 3 | 6 | 9 | 18 |
| 70 – 74 | 4 | 72 | 2 | 8 | 4 | 16 |
| 75 – 79 | 4 | 77 | 1 | 4 | 1 | 4 |
| 80 – 84 | 13 | 82 | 0 | 0 | 0 | 0 |
| 85 – 89 | 4 | 87 | -1 | -4 | 1 | 4 |
| 90 – 94 | 5 | 92 | -2 | -10 | 4 | 20 |
| 95 – 99 | 3 | 97 | -3 | -9 | 9 | 27 |
| <i>i</i> = 5 | 35 | - | | -5 | | 85 |

$$\begin{aligned}
M_x &= M^1 + i \frac{\sum fx^1}{N} \\
&= 82 + 5\left(\frac{-5}{35}\right) \\
&= 82 + 5(-0.14) \\
&= 82 + (-0.7) \\
&= 82.7
\end{aligned}$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum fx'^2}{N} - \left[\frac{\sum fx'}{N}\right]^2} \\
&= 5 \sqrt{\frac{85}{35} - \left(\frac{-5}{35}\right)^2} \\
&= 5 \sqrt{2.42 - (-0.14)^2} \\
&= 5 \sqrt{2.42 - 0.019} \\
&= 5 \sqrt{2.401} \\
&= 5 (1.54) \\
&= 7.7
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

| Interval of Score | Real Upper Limit | Z – Score | Limit of Large of the Area | Large of area | f_h | f_0 | $\frac{(f_0-f_h)}{f_h}$ |
|-------------------|------------------|-----------|----------------------------|---------------|-------|-------|-------------------------|
| 95–99 | 99.5 | 2.18 | 0.4854 | 0.04 | 1.4 | 3 | 1.14 |
| 90– 94 | 94.5 | 1.53 | 0.4370 | 0.12 | 4.2 | 5 | 0.19 |
| 85 – 89 | 89.5 | 0.88 | 0.3106 | 0.21 | 7.35 | 4 | -0.45 |
| 80 – 84 | 84.5 | 0.23 | 0.0910 | -0.24 | -8.4 | 13 | 0.54 |
| 75 – 79 | 79.5 | -0.41 | 0.34090 | 0.19 | 6.65 | 4 | -0.39 |
| 70 – 74 | 74.5 | -1.06 | 0.14457 | 0.10 | 3.5 | 4 | 0.14 |
| 65 – 69 | 69.5 | -1.71 | 0.04363 | 0.03 | 1.05 | 2 | 0.90 |
| | 64.5 | -2.36 | 0.00914 | | | | |
| | | | | | | X^2 | 2.07 |

Based on table above, reseracher found that $x^2_{count} = 2.07$ while $x^2_{table} = 5.991$ cause $x^2_{count} < x^2_{table}$ ($2.07 < 5.991$) with degree of freedom $dk = 5 - 3 = 2$ and significat level $\alpha = 5\%$. So distribution of experiment class (Post Test) was normal.

6. Median

| No | Interval of Classes | F | fk |
|----|---------------------|----|----|
| 1 | 65 - 69 | 2 | 2 |
| 2 | 70 - 74 | 4 | 6 |
| 3 | 75 - 79 | 4 | 10 |
| 4 | 80 - 84 | 13 | 23 |
| 5 | 85 - 89 | 4 | 27 |
| 6 | 90 - 94 | 5 | 32 |
| 7 | 95 - 99 | 3 | 35 |

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

$$Bb = 79.5$$

$$F = 4$$

$$fm = 13$$

$$i = 5$$

$$n = 35$$

$$1/2n = 17.5$$

So :

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

$$= 79.5 + 5 \left(\frac{17.5 - 4}{13} \right)$$

$$= 79.5 + 5(1.03)$$

$$= 79.5 + 5.15$$

$$= 84.65$$

7. Modus

| No | Interval of Classes | F | fk |
|----|---------------------|----|----|
| 1 | 65 - 69 | 2 | 2 |
| 2 | 70 - 74 | 4 | 6 |
| 3 | 75 - 79 | 4 | 10 |
| 4 | 80 - 84 | 13 | 23 |
| 5 | 85 - 89 | 4 | 27 |
| 6 | 90 - 94 | 5 | 32 |
| 7 | 95 - 99 | 3 | 35 |

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

$$L = 79.5$$

$$d_1 = 9$$

$$d_2 = 9$$

$$i = 5$$

$$M_o = 79.5 + \frac{9}{9+9} 5$$

$$= 79.5 + 0.5(5)$$

$$= 79.5 + 2.5$$

$$= 82$$

Appendix 21

RESULT OF THE NORMALITY TEST OF CONTROL CLASS IN POST TEST

1. The score of control class in post test from low score to high score:

50 50 55 55 60 60 60 65 65

65 65 65 65 65 70 70 70 70

70 75 75 75 75 75 80 80 80

2. High = 80

Low = 50

Range = High – Low
= 80 – 50
= 30

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

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

= $1 + 3,3 (1.43)$

= $1 + 4.7$

= 5.7

= 6

4. Length of Classes = $\frac{range}{total\ of\ class} = \frac{30}{6} = 5$

5. Mean

| Interval Class | F | X | \bar{x} | $f\bar{x}$ | \bar{x}^2 | $f\bar{x}^2$ |
|----------------|----|-----------|-----------|------------|-------------|--------------|
| 50 – 54 | 2 | 52 | 3 | 6 | 9 | 18 |
| 55 – 59 | 2 | 57 | 2 | 4 | 4 | 8 |
| 60 – 64 | 3 | 62 | 1 | 3 | 1 | 3 |
| 65 – 69 | 7 | 67 | 0 | 0 | 0 | 0 |
| 70 – 74 | 5 | 72 | -1 | -5 | 1 | 5 |
| 75 – 79 | 5 | 77 | -2 | -10 | 4 | 20 |
| 80 – 84 | 3 | 82 | -3 | -9 | 9 | 27 |
| $i=5$ | 27 | - | - | -11 | - | 81 |

$$\begin{aligned}
M_x &= M^1 + i \frac{\sum fx^1}{N} \\
&= 67 + 5 \left(\frac{-11}{27} \right) \\
&= 67 + 5(-0.40) \\
&= 67 + (-2) \\
&= 65
\end{aligned}$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum fx^1^2}{N} - \left[\frac{\sum fx^1}{N} \right]^2} \\
&= 5 \sqrt{\frac{81}{27} - \left(\frac{-11}{27} \right)^2} \\
&= 5 \sqrt{3 - (-0.40)^2} \\
&= 5 \sqrt{3 - (-0.16)} \\
&= 5 \sqrt{2.84} \\
&= 5 (1.68) \\
&= 8.4
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

| Interval of Score | Real Upper Limit | Z – Score | Limit of Large of the Area | Large of area | f_h | f_0 | $\frac{(f_0-f_h)}{f_h}$ |
|-------------------|------------------|-----------|----------------------------|---------------|-------|-------|-------------------------|
| 80 - 84 | 84.5 | 2.32 | 0.4898 | 0.03 | 0.81 | 3 | 2.70 |
| 75 – 79 | 79.5 | 1.72 | 0.4573 | 0.09 | 2.43 | 5 | 1.05 |
| 70 – 74 | 74.5 | 1.11 | 0.3665 | 0.16 | 4.32 | 5 | 0.15 |
| 65 – 69 | 69.5 | 0.53 | 0.2019 | -0.27 | -7.29 | 7 | -0.03 |
| 60– 64 | 64.5 | -0.05 | 0.48006 | 0.22 | 5.94 | 3 | -0.49 |
| 55- 59 | 59.5 | -0.65 | 0.25785 | 0.15 | 4.05 | 2 | -0.50 |
| 50 – 54 | 54.5 | -1.25 | 0.10565 | 0.06 | 1.62 | 2 | 0.23 |
| | 50.5 | -1.70 | 0.04457 | | | | |
| | | | | | | X^2 | 3.11 |

Based on table above, reseracher found that $x^2_{count} = 3.11$ while $x^2_{table} = 5.991$ cause $x^2_{cause} < x^2_{table}$ ($3.11 < 5.991$) with degree of freedom $dk = 5 - 3 = 2$ and significant level $\alpha = 5\%$. So distribution of control class (Post-test) was normal.

6. Median

| No | Interval Class | F | fk |
|----|----------------|---|----|
| 1 | 50 - 54 | 2 | 2 |
| 2 | 55 - 59 | 2 | 4 |
| 3 | 60 - 64 | 3 | 7 |
| 4 | 65 - 69 | 7 | 14 |
| 5 | 70 - 74 | 5 | 19 |
| 6 | 75 - 79 | 5 | 24 |
| 7 | 80 - 84 | 3 | 27 |

Position of Me in the interval of classes is number 2, that:

$$Bb = 64.5$$

$$F = 3$$

$$fm = 7$$

$$i = 5$$

$$n = 27$$

$$1/2n = 13.5$$

So :

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

$$= 64.5 + 5 \left(\frac{13.5 - 3}{7} \right)$$

$$= 64.5 + 5 (1.5)$$

$$= 64.5 + 7.5$$

$$= 72$$

7. Modus

| No | Interval Class | F | fk |
|----|----------------|---|----|
| 1 | 50 - 54 | 2 | 2 |
| 2 | 55 - 59 | 2 | 4 |
| 3 | 60 - 64 | 3 | 7 |
| 4 | 65 - 69 | 7 | 14 |
| 5 | 70 - 74 | 5 | 19 |
| 6 | 75 - 79 | 5 | 24 |
| 7 | 80 - 84 | 3 | 27 |

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

$$L = 64.5$$

$$d_1 = 3$$

$$d_2 = 5$$

$$i = 5$$

$$M_o = 64.5 + \frac{3}{3+5} 5$$

$$= 64.5 + 0.37 (5)$$

$$= 64.5 + 1.85$$

$$= 66.35$$

Appendix 22

HOMOGENEITY TEST (POST TEST)

1. EXPERIMENT CLASS

| NO | X_i | X_i^2 |
|----|-------|---------|
| 1 | 85 | 7225 |
| 2 | 90 | 8100 |
| 3 | 80 | 6400 |
| 4 | 90 | 8100 |
| 5 | 85 | 7225 |
| 6 | 75 | 5625 |
| 7 | 80 | 6400 |
| 8 | 75 | 5625 |
| 9 | 80 | 6400 |
| 10 | 75 | 5625 |
| 11 | 80 | 6400 |
| 12 | 75 | 5625 |
| 13 | 80 | 6400 |
| 14 | 85 | 7225 |
| 15 | 95 | 9025 |
| 16 | 85 | 7225 |
| 17 | 90 | 8100 |
| 18 | 80 | 6400 |
| 19 | 80 | 6400 |
| 20 | 65 | 4225 |
| 21 | 95 | 9025 |
| 22 | 90 | 8100 |
| 23 | 70 | 4900 |
| 24 | 80 | 6400 |
| 25 | 70 | 4900 |
| 26 | 80 | 6400 |
| 27 | 95 | 9025 |
| 28 | 70 | 4900 |
| 29 | 90 | 8100 |
| 30 | 70 | 4900 |
| 31 | 80 | 6400 |
| 32 | 80 | 6400 |
| 33 | 80 | 6400 |

| | | |
|----|------|--------|
| 34 | 80 | 6400 |
| 35 | 65 | 4225 |
| | 2825 | 230225 |

$$n = 35$$

$$\sum xi = 2825$$

$$\sum xi^2 = 230225$$

So:

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

$$= \frac{35(230225) - (2825)^2}{35(35-1)}$$

$$= \frac{8057875 - 7980625}{35(34)}$$

$$= \frac{77250}{1190}$$

$$= 64.91$$

2. CONTROL CLASS

| NO | X_i | X_i^2 |
|----|-------|---------|
| 1 | 75 | 5625 |
| 2 | 60 | 3600 |
| 3 | 80 | 6400 |
| 4 | 70 | 4900 |
| 5 | 75 | 5625 |
| 6 | 50 | 2500 |
| 7 | 65 | 4225 |
| 8 | 55 | 3025 |
| 9 | 70 | 4900 |
| 10 | 65 | 4225 |
| 11 | 75 | 5625 |
| 12 | 70 | 4900 |
| 13 | 75 | 5625 |
| 14 | 70 | 4900 |
| 15 | 60 | 3600 |
| 16 | 75 | 5625 |
| 17 | 50 | 2500 |
| 18 | 65 | 4225 |
| 19 | 65 | 4225 |
| 20 | 60 | 3600 |
| 21 | 80 | 6400 |
| 22 | 65 | 4225 |
| 23 | 70 | 4900 |
| 24 | 65 | 3600 |
| 25 | 80 | 6400 |
| 26 | 55 | 3025 |
| 27 | 65 | 3600 |
| | 1810 | 123250 |

$$\begin{aligned}n &= 27 \\ \sum xi &= 1810 \\ \sum_{xi}^2 &= 123250\end{aligned}$$

So:

$$\begin{aligned}S^2 &= \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)} \\ &= \frac{27(123250) - (1810)^2}{27(27-1)} \\ &= \frac{3327750 - 3276100}{27(26)} \\ &= \frac{51650}{702} \\ &= 73.57\end{aligned}$$

The Formula was used to test hypothesis was:

4. XI-1 and XI-2 :

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

So:

$$\begin{aligned}F &= \frac{73.57}{64.91} \\ &= 1.13\end{aligned}$$

After doing the calculation, researcher found that $F_{\text{count}} = 1.13$ with α 5 % and $dk = 35$ & 27 from the distribution list F, researcher found that $F_{\text{table}} = 2.042$ & 2.052 , cause $F_{\text{count}} < F_{\text{table}}$ ($1.13 < 2.042$ & 2.052). So, there is no difference the variant between the XI-1 class and XI-2 class. It means that the variant is homogenous.

Appendix 23

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:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \text{ with } S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 2)S_2^2}{n_1 + n_2 - 2}}$$

So:

$$\begin{aligned} S &= \sqrt{\frac{(35-1) 99.24 + (27-2)88.96}{35+27-2}} \\ &= \sqrt{\frac{34 (99.24) + 25 (88.96)}{60}} \\ &= \sqrt{\frac{3374.16 + 2224}{60}} \\ &= \sqrt{\frac{5598.16}{60}} \\ &= \sqrt{93.30} \\ &= 9.65 \end{aligned}$$

So:

$$\begin{aligned} t &= \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \\ t &= \frac{70.85 - 69.85}{9.65 \sqrt{\frac{1}{35} + \frac{1}{27}}} \\ &= \frac{1}{9.65 \sqrt{0.028 + 0.037}} \end{aligned}$$

$$\begin{aligned}
&= \frac{1}{9.65 (0.065)} \\
&= \frac{1}{0.627} \\
&= 1.59
\end{aligned}$$

Based on researcher calculation result of the homogeneity test of the both averages, researcher found that $t_{\text{count}} = 1.59$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dk = n_1 + n_2 - 2 = 35 + 27 - 2 = 60$, researcher found that $t_{\text{table}} = 2.000$, cause $t_{\text{count}} < t_{\text{table}} (1.59 < 2.000)$. So, H_a 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 24

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:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \text{ with } S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 2)S_2^2}{n_1 + n_2 - 2}}$$

So:

$$\begin{aligned} S &= \sqrt{\frac{(35-1) 64.91 + (27-2) 73.57}{35+27-2}} \\ &= \sqrt{\frac{35 (64.91) + 27 (73.57)}{60}} \\ &= \sqrt{\frac{2271.85 + 1986.39}{60}} \\ &= \sqrt{\frac{4258.24}{60}} \\ &= \sqrt{70.97} \\ &= 8.42 \end{aligned}$$

So:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$\begin{aligned}
t &= \frac{82.7 - 65}{8.42 \sqrt{\frac{1}{35} + \frac{1}{27}}} \\
&= \frac{17.7}{8.42 \sqrt{0.028 + 0.037}} \\
&= \frac{17.7}{8.42 (0.065)} \\
&= \frac{17.7}{0.547} \\
&= 32.35
\end{aligned}$$

Based on researcher calculation result of the homogeneity test of the both averages, researcher found that $t_{\text{count}} = 32.35$ with opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dk = n_1 + n_2 - 2 = 35 + 27 - 2 = 60$, researcher found that $t_{\text{table}} = 2.000$, cause $t_{\text{count}} > t_{\text{table}} (32.35 > 2.000)$. So, H_a was 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 25

Chi-Square Table

| dk | Significant level | | | | | |
|-----------|--------------------------|------------|------------|------------|--------------|-----------|
| | 50% | 30% | 20% | 10% | 5% | 1% |
| 1 | 0,455 | 1,074 | 1,642 | 2,706 | 3,841 | 6,635 |
| 2 | 1,386 | 2,408 | 3,219 | 4,605 | 5,991 | 9,210 |
| 3 | 2,366 | 3,665 | 4,642 | 6,251 | 7,815 | 11,341 |
| 4 | 3,357 | 4,878 | 5,989 | 7,779 | 9,488 | 13,277 |
| 5 | 4,351 | 6,064 | 7,289 | 9,236 | 11,070 | 15,086 |
| 6 | 5,348 | 7,231 | 8,558 | 10,645 | 12,592 | 16,812 |
| 7 | 6,346 | 8,383 | 9,803 | 12,017 | 14,067 | 18,475 |
| 8 | 7,344 | 9,524 | 11,030 | 13,362 | 15,507 | 20,090 |
| 9 | 8,343 | 10,656 | 12,242 | 14,684 | 16,919 | 21,666 |
| 10 | 9,342 | 11,781 | 13,442 | 15,987 | 18,307 | 23,209 |
| 11 | 10,341 | 12,899 | 14,631 | 17,275 | 19,675 | 24,725 |
| 12 | 11,340 | 14,011 | 15,812 | 18,549 | 21,026 | 26,217 |
| 13 | 12,340 | 15,119 | 16,985 | 19,812 | 22,362 | 27,688 |
| 14 | 13,339 | 16,222 | 18,151 | 21,064 | 23,685 | 29,141 |
| 15 | 14,339 | 17,222 | 19,311 | 22,307 | 24,996 | 30,578 |
| 16 | 15,338 | 18,418 | 20,465 | 23,542 | 26,296 | 32,000 |
| 17 | 16,338 | 19,511 | 21,615 | 24,769 | 27,587 | 33,409 |
| 18 | 17,338 | 20,601 | 22,760 | 25,989 | 28,869 | 34,805 |
| 19 | 18,338 | 21,689 | 23,900 | 27,204 | 30,144 | 36,191 |
| 20 | 19,337 | 22,775 | 25,038 | 28,412 | 31,410 | 37,566 |
| 21 | 20,337 | 23,858 | 26,171 | 29,615 | 32,671 | 38,932 |
| 22 | 21,337 | 24,939 | 27,301 | 30,813 | 33,924 | 40,289 |
| 23 | 22,337 | 26,018 | 28,429 | 32,007 | 35,172 | 41,638 |
| 24 | 23,337 | 27,096 | 29,553 | 33,196 | 35,415 | 42,980 |
| 25 | 24,337 | 28,172 | 30,675 | 34,382 | 37,652 | 44,314 |
| 26 | 25,336 | 29,246 | 31,795 | 35,563 | 38,885 | 45,642 |
| 27 | 26,336 | 30,319 | 32,912 | 36,741 | 40,113 | 46,963 |
| 28 | 27,336 | 31,391 | 34,027 | 37,916 | 41,337 | 48,278 |
| 29 | 28,336 | 32,461 | 35,139 | 39,087 | 42,557 | 49,588 |
| 30 | 29,336 | 33,530 | 36,250 | 40,256 | 43,773 | 50,892 |

APPENDIX 26

Z-Table

| Z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| - | | | | | | | | | | |
| 3. | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 9 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 |
| - | | | | | | | | | | |
| 3. | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 8 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 5 |
| - | | | | | | | | | | |
| 3. | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 7 | 1 | 0 | 0 | 0 | 9 | 9 | 8 | 8 | 8 | 8 |
| - | | | | | | | | | | |
| 3. | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| 6 | 6 | 5 | 5 | 4 | 4 | 3 | 3 | 2 | 2 | 1 |
| - | | | | | | | | | | |
| 3. | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| 5 | 3 | 2 | 2 | 1 | 0 | 9 | 9 | 8 | 7 | 7 |
| - | | | | | | | | | | |
| 3. | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 |
| 4 | 4 | 2 | 1 | 0 | 9 | 8 | 7 | 6 | 5 | 4 |
| - | | | | | | | | | | |
| | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0003 | 0.0003 | 0.0003 | 0.0003 |

| | | | | | | | | | | |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 3. | 8 | 7 | 5 | 3 | 2 | 0 | 9 | 8 | 6 | 5 |
| 3 | | | | | | | | | | |
| - | | | | | | | | | | |
| 3. | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |
| 2 | 9 | 6 | 4 | 2 | 0 | 8 | 6 | 4 | 2 | 0 |
| - | | | | | | | | | | |
| 3. | 0.0009 | 0.0009 | 0.0009 | 0.0008 | 0.0008 | 0.0008 | 0.0007 | 0.0007 | 0.0007 | 0.0007 |
| 1 | 7 | 4 | 0 | 7 | 4 | 2 | 9 | 6 | 4 | 1 |
| - | | | | | | | | | | |
| 3. | 0.0013 | 0.0013 | 0.0012 | 0.0012 | 0.0011 | 0.0011 | 0.0011 | 0.0010 | 0.0010 | 0.0010 |
| 0 | 5 | 1 | 6 | 2 | 8 | 4 | 1 | 7 | 4 | 0 |
| - | | | | | | | | | | |
| 2. | 0.0018 | 0.0018 | 0.0017 | 0.0016 | 0.0016 | 0.0015 | 0.0015 | 0.0014 | 0.0014 | 0.0013 |
| 9 | 7 | 1 | 5 | 9 | 4 | 9 | 4 | 9 | 4 | 9 |
| - | | | | | | | | | | |
| 2. | 0.0025 | 0.0024 | 0.0024 | 0.0023 | 0.0022 | 0.0021 | 0.0021 | 0.0020 | 0.0019 | 0.0019 |
| 8 | 6 | 8 | 0 | 3 | 6 | 9 | 2 | 5 | 9 | 3 |
| - | | | | | | | | | | |
| 2. | 0.0034 | 0.0033 | 0.0032 | 0.0031 | 0.0030 | 0.0029 | 0.0028 | 0.0028 | 0.0027 | 0.0026 |
| 7 | 7 | 6 | 6 | 7 | 7 | 8 | 9 | 0 | 2 | 4 |
| - | | | | | | | | | | |
| 2. | 0.0046 | 0.0045 | 0.0044 | 0.0042 | 0.0041 | 0.0040 | 0.0039 | 0.0037 | 0.0368 | 0.0035 |
| 6 | 6 | 3 | 0 | 7 | 5 | 2 | 1 | 9 | 0 | 7 |
| - | | | | | | | | | | |
| 2. | 0.0062 | 0.0060 | 0.0058 | 0.0057 | 0.0055 | 0.0053 | 0.0052 | 0.0050 | 0.0049 | 0.0048 |
| 2. | 1 | 4 | 7 | 0 | 4 | 9 | 3 | 8 | 4 | 0 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5 | | | | | | | | | | |
| - | | | | | | | | | | |
| 2. | 0.0082 | 0.0079 | 0.0077 | 0.0075 | 0.0073 | 0.0071 | 0.0069 | 0.0067 | 0.0065 | 0.0063 |
| 4 | 0 | 8 | 6 | 5 | 4 | 4 | 5 | 6 | 7 | 9 |
| - | | | | | | | | | | |
| 2. | 0.0107 | 0.0104 | 0.0101 | 0.0099 | 0.0096 | 0.0093 | 0.0091 | 0.0088 | 0.0086 | 0.0084 |
| 3 | 2 | 4 | 7 | 0 | 4 | 9 | 4 | 9 | 6 | 2 |
| - | | | | | | | | | | |
| 2. | 0.0139 | 0.0135 | 0.0132 | 0.0128 | 0.0125 | 0.0122 | 0.0119 | 0.0116 | 0.0113 | 0.0110 |
| 2 | 0 | 5 | 1 | 7 | 5 | 2 | 1 | 0 | 0 | 1 |
| - | | | | | | | | | | |
| 2. | 0.0178 | 0.0174 | 0.0170 | 0.0165 | 0.0161 | 0.0157 | 0.0153 | 0.0150 | 0.0146 | 0.0142 |
| 1 | 6 | 3 | 0 | 9 | 8 | 8 | 9 | 0 | 3 | 6 |
| - | | | | | | | | | | |
| 2. | 0.0227 | 0.0222 | 0.0216 | 0.0211 | 0.0206 | 0.0201 | 0.0197 | 0.0192 | 0.0187 | 0.0183 |
| 0 | 5 | 2 | 9 | 8 | 8 | 8 | 0 | 3 | 6 | 1 |
| - | | | | | | | | | | |
| 1. | 0.0287 | 0.0280 | 0.0274 | 0.0268 | 0.0261 | 0.0255 | 0.0250 | 0.0244 | 0.0238 | 0.0233 |
| 9 | 2 | 7 | 3 | 0 | 9 | 9 | 0 | 2 | 5 | 0 |
| - | | | | | | | | | | |
| 1. | 0.0359 | 0.0351 | 0.0343 | 0.0336 | 0.0328 | 0.0321 | 0.0314 | 0.0307 | 0.0300 | 0.0293 |
| 8 | 3 | 5 | 8 | 2 | 8 | 6 | 4 | 4 | 5 | 8 |
| - | | | | | | | | | | |
| 1. | 0.0445 | 0.0436 | 0.0427 | 0.0418 | 0.0409 | 0.0400 | 0.0392 | 0.0383 | 0.0375 | 0.0367 |
| 7 | 7 | 3 | 2 | 2 | 3 | 6 | 0 | 6 | 4 | 3 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| - | | | | | | | | | | |
| 1. | 0.0548 | 0.0537 | 0.0526 | 0.0515 | 0.0505 | 0.0494 | 0.0484 | 0.0474 | 0.0464 | 0.0455 |
| 6 | 0 | 0 | 2 | 5 | 0 | 7 | 6 | 6 | 8 | 1 |
| - | | | | | | | 0.0593 | | | |
| 1. | 0.0668 | 0.0655 | 0.0642 | 0.0630 | 0.0617 | 0.0605 | 8 | 0.0582 | 0.0570 | 0.0559 |
| 5 | 1 | 2 | 6 | 1 | 8 | 7 | | 1 | 5 | 2 |
| - | | | | | | | | | | |
| 1. | 0.0807 | 0.0792 | 0.0778 | 0.0763 | 0.0749 | 0.0735 | 0.0721 | 0.0707 | 0.0694 | 0.0681 |
| 4 | 6 | 7 | 0 | 6 | 3 | 3 | 5 | 8 | 4 | 1 |
| - | | | | | | | | | | |
| 1. | 0.0968 | 0.0951 | 0.0934 | 0.0917 | 0.0901 | 0.0885 | 0.0869 | 0.0853 | 0.0837 | 0.0822 |
| 3 | 0 | 0 | 2 | 6 | 2 | 1 | 1 | 4 | 9 | 6 |
| - | | | | | | | | | | |
| 1. | 0.1150 | 0.1131 | 0.1112 | 0.1093 | 0.1074 | 0.1056 | 0.1038 | 0.1020 | 0.1002 | 0.0985 |
| 2 | 7 | 4 | 3 | 5 | 9 | 5 | 3 | 4 | 7 | 3 |
| - | | | | | | | | | | |
| 1. | 0.1356 | 0.1335 | 0.1313 | 0.1292 | 0.1271 | 0.1250 | 0.1230 | 0.1210 | 0.1190 | 0.1170 |
| 1 | 7 | 0 | 6 | 4 | 4 | 7 | 2 | 0 | 0 | 2 |
| - | | | | | | | | | | |
| 1. | 0.1586 | 0.1562 | 0.1538 | 0.1515 | 0.1491 | 0.1468 | 0.1445 | 0.1423 | 0.1400 | 0.1378 |
| 0 | 6 | 5 | 6 | 1 | 7 | 6 | 7 | 1 | 7 | 6 |
| - | | | | | | | | | | |
| 0. | 0.1840 | 0.1814 | 0.1787 | 0.1761 | 0.1736 | 0.1710 | 0.1685 | 0.1660 | 0.1635 | 0.1610 |
| 9 | 6 | 1 | 9 | 9 | 1 | 6 | 3 | 2 | 4 | 9 |
| - | | | | | | | | | | |
| | 0.2118 | 0.2089 | 0.2061 | 0.2032 | 0.2004 | 0.1976 | 0.1948 | 0.1921 | 0.1894 | 0.1867 |

| | | | | | | | | | | |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 0.8 | 6 | 7 | 1 | 7 | 5 | 6 | 9 | 5 | 3 | 3 |
| - 0.7 | 0.2419 6 | 0.2388 5 | 0.2357 6 | 0.2327 0 | 0.2296 5 | 0.2266 3 | 0.2236 3 | 0.2206 5 | 0.2177 0 | 0.2147 6 |
| - 0.6 | 0.2742 5 | 0.2709 3 | 0.2676 3 | 0.2643 5 | 0.2610 9 | 0.2578 5 | 0.2546 3 | 0.2514 3 | 0.2482 5 | 0.2451 0 |
| - 0.5 | 0.3085 4 | 0.3050 3 | 0.3015 3 | 0.2980 6 | 0.2946 0 | 0.2911 6 | 0.2877 4 | 0.2843 4 | 0.2809 6 | 0.2776 0 |
| - 0.4 | 0.3445 8 | 0.3409 0 | 0.3372 4 | 0.3336 0 | 0.3299 7 | 0.3263 6 | 0.3227 6 | 0.3191 8 | 0.3156 1 | 0.3120 7 |
| - 0.3 | 0.3820 9 | 0.3782 8 | 0.3744 8 | 0.3707 0 | 0.3669 3 | 0.3631 7 | 0.3594 2 | 0.3556 9 | 0.3519 7 | 0.3482 7 |
| - 0.2 | 0.4207 4 | 0.4168 3 | 0.4129 4 | 0.4090 5 | 0.4051 7 | 0.4012 9 | 0.3974 3 | 0.3935 8 | 0.3897 4 | 0.3859 1 |
| - 0.1 | 0.4601 7 | 0.4562 0 | 0.4522 4 | 0.4482 8 | 0.4443 3 | 0.4403 8 | 0.4364 4 | 0.4325 1 | 0.4285 8 | 0.4246 5 |
| - 0. | 0.5000 0 | 0.4960 1 | 0.4920 2 | 0.4880 3 | 0.4840 5 | 0.4800 6 | 0.4760 8 | 0.4721 0 | 0.4681 2 | 0.4641 4 |

| | | | | | | | | | | |
|----------|--|--|--|--|--|--|--|--|--|--|
| 0 | | | | | | | | | | |
|----------|--|--|--|--|--|--|--|--|--|--|

Z-Table

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 0.0 | 0.0000 | 0.0040 | 0.0080 | 0.0120 | 0.0160 | 0.0199 | 0.0239 | 0.0279 | 0.0319 | 0.0359 |
| 0.1 | 0.0398 | 0.0438 | 0.0478 | 0.0517 | 0.0557 | 0.0596 | 0.0636 | 0.0675 | 0.0714 | 0.0753 |
| 0.2 | 0.0793 | 0.0832 | 0.0871 | 0.0910 | 0.0948 | 0.0987 | 0.1026 | 0.1064 | 0.1103 | 0.1141 |
| 0.3 | 0.1179 | 0.1217 | 0.1255 | 0.1293 | 0.1331 | 0.1368 | 0.1406 | 0.1443 | 0.1480 | 0.1517 |
| 0.4 | 0.1554 | 0.1591 | 0.1628 | 0.1664 | 0.1700 | 0.1736 | 0.1772 | 0.1808 | 0.1844 | 0.1879 |
| 0.5 | 0.1915 | 0.1950 | 0.1985 | 0.2019 | 0.2054 | 0.2088 | 0.2123 | 0.2157 | 0.2190 | 0.2224 |
| 0.6 | 0.2257 | 0.2291 | 0.2324 | 0.2357 | 0.2389 | 0.2422 | 0.2454 | 0.2486 | 0.2517 | 0.2549 |
| 0.7 | 0.2580 | 0.2611 | 0.2642 | 0.2673 | 0.2704 | 0.2734 | 0.2764 | 0.2794 | 0.2823 | 0.2852 |
| 0.8 | 0.2881 | 0.2910 | 0.2939 | 0.2967 | 0.2995 | 0.3023 | 0.3051 | 0.3078 | 0.3106 | 0.3133 |
| 0.9 | 0.3159 | 0.3186 | 0.3212 | 0.3238 | 0.3264 | 0.3289 | 0.3315 | 0.3340 | 0.3365 | 0.3389 |
| 1.0 | 0.3413 | 0.3438 | 0.3461 | 0.3485 | 0.3508 | 0.3531 | 0.3554 | 0.3577 | 0.3599 | 0.3621 |

APPENDIX 27

Percentage Points of the t Distribution

| Two Tail Test | | | | | | |
|---------------|-------|-------|--------|--------------|--------|--------|
| | 0,50 | 0,20 | 0,10 | 0,05 | 0,02 | 0,01 |
| One Tail Test | | | | | | |
| dk | 0,25 | 0,10 | 0, 005 | 0,025 | 0,01 | 0,05 |
| 1 | 1,000 | 3,078 | 6,314 | 12,706 | 31,821 | 63,657 |
| 2 | 0,816 | 1,886 | 2,920 | 4,303 | 6,965 | 9,925 |
| 3 | 0,765 | 1,638 | 2,353 | 3,182 | 4,541 | 5,841 |
| 4 | 0,741 | 1,533 | 2,132 | 2,776 | 3,747 | 4,604 |
| 5 | 0,721 | 1,486 | 2,015 | 2,571 | 3,365 | 4,032 |
| 6 | 0,718 | 1,440 | 1,943 | 2,447 | 3,143 | 3,707 |
| 7 | 0,711 | 1,415 | 1,895 | 2,365 | 2,998 | 3,499 |
| 8 | 0,706 | 1,397 | 1,860 | 2,306 | 2,896 | 3,355 |
| 9 | 0,703 | 1,383 | 1,833 | 2,262 | 2,821 | 3,250 |
| 10 | 0,700 | 1,372 | 1,812 | 2,228 | 2,764 | 3,165 |
| 11 | 0,697 | 1,363 | 1,796 | 2,201 | 2,718 | 3,106 |
| 12 | 0,695 | 1,356 | 1,782 | 2,178 | 2,681 | 3,055 |
| 13 | 0,692 | 1,350 | 1,771 | 2,160 | 2,650 | 3,012 |
| 14 | 0,691 | 1,345 | 1,761 | 2,145 | 2,624 | 2,977 |
| 15 | 0,690 | 1,341 | 1,753 | 2,132 | 2,623 | 2,947 |
| 16 | 0,689 | 1,337 | 1,746 | 2,120 | 2,583 | 2,921 |
| 17 | 0,688 | 1,333 | 1,743 | 2,110 | 2,567 | 2,898 |
| 18 | 0,688 | 1,330 | 1,740 | 2,101 | 2,552 | 2,878 |
| 19 | 0,687 | 1,328 | 1,729 | 2,093 | 2,539 | 2,861 |
| 20 | 0,687 | 1,325 | 1,725 | 2,086 | 2,528 | 2,845 |
| 21 | 0,686 | 1,323 | 1,721 | 2,080 | 2,518 | 2,831 |
| 22 | 0,686 | 1,321 | 1,717 | 2,074 | 2,508 | 2,819 |
| 23 | 0,685 | 1,319 | 1,714 | 2,069 | 2,500 | 2,807 |
| 24 | 0,685 | 1,318 | 1,711 | 2,064 | 2,492 | 2,797 |
| 25 | 0,684 | 1,316 | 1,708 | 2,060 | 2,485 | 2,787 |
| 26 | 0,684 | 1,315 | 1,706 | 2,056 | 2,479 | 2,779 |
| 27 | 0,684 | 1,314 | 1,703 | 2,052 | 2,473 | 2,771 |
| 28 | 0,683 | 1,313 | 1,701 | 2,048 | 2,467 | 2,763 |
| 29 | 0,683 | 1,311 | 1,699 | 2,045 | 2,462 | 2,756 |
| 30 | 0,683 | 1,310 | 1,697 | 2,042 | 2,457 | 2,750 |
| 40 | 0,681 | 1,303 | 1,684 | 2,021 | 2,423 | 2,704 |
| 60 | 0,679 | 1,296 | 1,671 | 2,000 | 2,390 | 2,660 |
| 120 | 0,677 | 1,289 | 1,658 | 1,980 | 2,358 | 2,617 |
| ∞ | 0,674 | 1,282 | 1,645 | 1,960 | 2,326 | 2,576 |

| | | | | | | |
|--|--|--|--|--|--|--|
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CHAPTER I

INTRODUCTION

A. Background of the Problem

Reading is the crucial elements of studying English. It is certainly an important activity for expanding knowledge of a language. It also means to understand the meaning of printing words which consists of recognition and comprehension skill. In daily life, reading is most useful and important skill for people and students, readers can explore knowledge by reading books. Reading is a source of learning and source of enjoyment. The reading process requires continuous practice, development, and refinement. Therefore, Reading is an important in life. The following explanation will present an important of reading in life success.

First, reading is good relation between knowledge and information to the development of mental individual. Furthermore, in Holy book, Allah orders the people to read Al- Quran as much as people can. Allah states in holy book, Al- Alaq 1-5 as follow:¹

أَقْرَأْ بِأَسْمِ رَبِّكَ الَّذِي خَلَقَ ۝ خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ ۝ أَقْرَأْ وَرَبُّكَ الْأَكْرَمُ ۝
 الَّذِي عَلَّمَ بِالْقَلَمِ ۝ عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ ۝

The meaning: “(1).Read! In the name of your Lord who has created (all the exists). (2). He has created man from a clot (a piece of thick

¹ Muhammad Taqi-ud-Din Al-Hilali and Muhammad Muhsin Khan, *Translation of the Meanings of the Noble Qur'an in the English Language* (Madinah: King Fadh Complex for the Printing of Holy Qur'an, 1454), p. 840.

coagulated blood. (3). Read! And your Lord is the most Generous. (4). Who has taught (the writing) by the pen. (5). He has taught men that which He knew not”.

Based on the verse above Allah SWT, it can be concluded that Allah teaches the people by intercession with reading. He has given thought to people how to know Him, how to know life, how to study and also how to know everything in the world. Allah SWT also gives knowledge through humans' mind, humans' spoken and also humans' written. In this verse, Allah commanded human to read, because by reading human can comprehend something. Therefore, reading gives learning to the students that they will know their creator. In addition, Allah SWT gives priority of reading. It means that everybody has knowledge and Allah will raise the degree of the people who has knowledge.

Second, the readers can develop their knowledge, developmental accomplishments: attention, memory, language, motivation, comprehension, and more knowledge, example, when the students reading textbook, journals, newspapers, magazines, tabloids, articles, short story, and even a novel. It`s means reading is not only a cognitive psycholinguistic activity but also a social activity to involving a network of cognitive actions that work together to construct the meaning. Reading habits not only help the student to get knowledge and wisdom from cultural of heritage, but also very helpful is passing for leisure period.

Finally, reading is a basic life skill. It is a cornerstone for our life. Without the ability to read well, opportunities for personal fulfillment and job success inevitably will be lost. Every segment in our life needs reading skill not only students but also all of the people in this world. Beside it, reading also to communicate, sharing, and gets idea.

Based on the explanation above, the students must pay attention to their reading comprehension and don't disregard it. However, based on interviewed with the teacher at MA YPKS Padangsidimpuan, there are problems in reading skill, they are: the students got difficult in understanding what they have read, lack of reading motivation, and reading comprehension of students is low.² The students' problems to comprehend the learning process of reading text will be present.

First, students' got difficulties in understanding what they have read. Students can't find the component of paragraph; in finding of main idea, supporting idea and conclusion. It occurs when the teacher asked the students to retell the story or questioned some informational question related to the text that they have read, most of them did not have any idea, and their answer diverge.

Second, students lack of reading motivation and attention about of reading, it's make them lazy to read and not try to understanding the text in reading activities, and the student lazy to practice about English language,

²Interviewed with Afrida, S.Pd., *English Teacher* at Grade XI MA YPKS Padangsidimpuan (Padangsidimpuan: MA YPKS Padangsidimpuan) Monday, 15 May 2014

especially in reading. They more like to read in Indonesian language, they lazy to usually their self to reading English. They also said that the English is so difficult especially in reading text. We are in Indonesian not in England.

Third, students` reading comprehension especially in narrative text still low. Based on the research observation and information from the teacher the standard of minimum completeness of mastery learning for senior high school in MA YPKS Padangsidempuan of grade XI is 80 for all subject and skills includes reading skill. However the data is found in MA YPKS reveal the average of students` reading mastery is 75.³ So, students` reading comprehension does not fulfill the expectation.

Finally, not all teachers realize the teaching reading strategy. In teaching reading, there are some teachers that just say “please turn to page 25. Read the passage and answer the question”. The teachers who start the lesson in this way are hardly likely to motivate students to read. It can make the students just read the text and do not comprehend the text; while in the competence standard, it is stated the student have to comprehend the text.

There are many strategies that can solve the problems above, such as, K-W-L strategy is an instructional reading strategy designed for instructors to help learners learn from nonfiction text in any content area.⁴The K-W-L strategy has

³ *Ibid.*,

⁴ Zhang Fengzuan”The integration of the Know–Want –Learn (KWL) Strategy into English Language Teaching for Non English Major”, *Journal linguistics (Bimonthly)*, vol. 33. No.4.august 2010, p. 78.

been used as an instructional reading strategy. As a reading strategy, it helps new teachers engage students from the beginning of a reading lesson by activating prior knowledge, Think Pair Share (TPS), Think Pair Share is a cooperative teaching technique that includes three components. There are time for thinking, time for sharing with a partner and time for each pair to share back to a larger group, directed reading thinking activity (DRTA), and the other strategies. These strategies theoretically good to be apply in comprehending text through reading.

Based on strategies and technique above, directed reading thinking activity (DRTA) is suitable strategy for teaching reading comprehension in narrative text. Like stated by Stauffer who explained that is directed reading thinking activity (DRTA) is a popular method for engaging students in reading narrative text for understanding.⁵ The best reasons of the researcher to choose the method are explained in the following paragraphs.

First, DRTA strategy is relevant to student's activity to know relate background knowledge to the text, determine goals for reading, and then engage in predicting activities at set stopping points throughout the text. DRTA is one of the alternative strategies in teaching narrative text.⁶ By using DRTA strategy it is hoped that the Teacher will be able to motivate the students to learn and pay attention to the material presented by the teacher.

⁵Diane Lapp., et.al, *Content Area Reading Learning Instructional Strategies* (London: Lawrwncce Erlbaum Associates, 2004), p. 44.

⁶Peter Westwood, *teaching and learning difficulties* (Australia: Acer; BPA, 2001) p. 99.

Second, DRTA approach can be used with students at any stage of reading development, and also can encourage students to make predictions while they are reading. After reading segments of a text, students stop, confirm or revise previous predictions, and make new predictions about what they will read next. This strategy definitely forces the students to be an active reader since this cyclic of reading, making prediction, and confirming predictions requires the critical thinking of the reader and also a full attention from the reader.

Finally, another condition for a successful reading is the existence of the motivation from the readers. The motivation itself can be grown up and acquired if there is an important element; that is a purpose of reading. If there is not any purpose in reading, readers would not have passion to continue reading. The main purposes of Directed Reading Thinking Activity can cover both the active reader and the purpose of reading. When applying this strategy, the students have a purpose of reading and this encourages him or her to be an active reader.

Based on the explanation above, the researcher interested to do a research about; “The Effect of Directed Reading Thinking Activity (DRTA) strategy on Students` Reading Comprehension in Narrative Text at Grade XI MA YPKS Padangsidempuan.”

B. Identification of the Problem

Based on background of the research above, there were many students can't comprehend English text especially in narrative text at MA YPKS Padangsidempuan as followings: they got difficulties in understanding what they have read, lack of reading motivation in reading, reading comprehension of them is low and the teacher less effective in teaching English. So they cannot comprehend the text well.

C. Limitation of the Problem

The researcher gave the limitation of this research. The researcher focused on strategy that using DRTA on students' reading comprehension in narrative text; it is fable text at grade XI at MA YPKS Padangsidempuan.

D. Definition of the Operational Variables

To avoid misunderstanding of researcher and reader in the title of the problem, researcher gave the definition of the problems from the background above. The definition of operational variables as the follows:

1. DRTA: reading comprehension/critical thinking activity for the building knowledge part of a reading lesson with either narrative or informational text.
2. Reading comprehension in narrative text: refers to student's ability to understand what they have read especially narrative text. It's means interactive process between a reader and a writer to get information from narrative text or something that is written.

E. Formulation of the Problem

Based on the problems above, the researcher described the formulation of the problem: “Is there the effect of using Directed Reading Thinking Activity (DRTA) strategy on students’ reading comprehension in narrative text at Grade XI MA YPKS Padangsidempuan?”

F. Purpose of the Research

Derived from the formulation above, the purpose of this research is to find out the effect of using Directed Reading Thinking Activity (DRTA) strategy on students’ reading comprehension in narrative text at Grade XI MA YPKS Padangsidempuan.

G. Significances of the Research

The result of this research was expected to be useful as:

1. Theoretically, this research can be referable to the next researchers for studying in the field of teaching reading. And also this research will give contribution and enrich the science of language education in general and specifically to the field of teaching reading skill.
2. Practically, the result of the research is expected to be useful for headmaster as a domain of measurement in teaching progress, and for the teacher as information and as source of teaching in MA YPKS Padangsidempuan Institution, especially in teaching and learning of reading with using the DRTA strategy.

H. Outline of Thesis

There are five chapters of systematic this research. Each chapter consists of some sub chapters with detail as follow:

Chapter I discussed of Introduction; consisted of background of the problem, identification of the problem, limitation of the problem, formulation of the problem, purpose of the research, definition operational variables, and significances of the research.

Chapter II; theoretical description with some sub theory about Directed Reading Thinking Activity (DRTA) strategy, reading comprehension, related findings, conceptual framework and hypothesis.

Chapter III; methodology of the research that consisted of place and schedule of the research, research design, population and sample, the instrument of collecting the data, technique of collecting the data and technique of data analysis.

Chapter IV; the result of the research; data analyzing that consist of description of the data, discussion of the research and threats of the research.

Chapter V; conclusion and suggestion.

CHAPTER II

THEORETICAL DESCRIPTION

A. Theoretical Description

1. Literature Review

a. Directed Reading Thinking Activity (DRTA)

1) Background of (DRTA)

DRTA is a silent reading activity. It is participants stop and hypothesis about possible information or events ahead. Debbra Uttero has defined “a teaching strategy, the cooperative DRTA, which follows the structure and achieves most of the benefit of the directed reading thinking activity (DRTA) thorough a cooperative learning approach.”¹ Cooperative learning is a means of encouraging collaboration among students.

Cooperative learning is learning strategies work with others to complete tasks, build confidence, give and receive feedback with met cognitive processes. According Morton Delitsch “cooperative learning as an alternative to completive and individualistic learning. In cooperative learning situations, each student`s achievement depends on the achievement of group”.² Furtherance, Johnson and Holubc said, “Cooperative learning is the instructional use of small groups through

¹Anthony Manjo & Ula Manjo, *Content Area Reading a Heuristic Approach* (USA: Maril publishing company, 1990), p. 115.

²*Ibid.*, p. 112

which students work together to maximize their own and each other's learning."³. So, it means that cooperative learning students work together in groups whose usual size is two to four members. Various approach, methods, and techniques of language teaching have been created, used and replaced.

Directed Reading Thinking Activity can be one alternative technique used by teachers in teaching reading comprehension. Since reading is an active process, the students must be active in doing the reading. In Directed Reading Thinking Activity, the students are invited to be active readers within their groups. The students will be divided into small groups to learn the texts to help them have a supporting and comfortable environment to read, give opinion, and cooperate. The teacher will guide the students within their groups by providing questions related to the comprehension of the text. The students will be directed while reading the texts so that the students can comprehend the texts better.

Moreover, students are invited not only to develop their critical thinking because they will make predictions and determine reasons why they predict so, but also to set a purpose of reading since they have to confirm their previous predictions.

³ Johnson and Holubc, *Cooperative Learning* ([Http: /www. Pgcps. Org/-elc/ learning1. html](http://www.Pgcps.Org/-elc/learning1.html) Retrieved on Sunday/ 30th february 2015 at 09: 00 pm).

2) Definition and Concept of DRTA

DRTA is a strategy that guides students in asking questions about the text, making predictions, and then reading to confirm or refute their predictions. According to Stauffer “Directed Reading Thinking Activity is a popular method for engaging students in reading narrative texts for understanding”.⁴ The DRTA process encourages students to be active and thoughtful readers, enhancing their comprehension. In this approach student relate background knowledge to the text, determine goals for reading, and then engage in predicting activities at set stopping point throughout the text.

DRTA strategy is the student’s activity to know related background knowledge to the text, determine the goals of reading text, and then engage in predicting activities as set stopping points throughout the text. Walker stated “Directed Reading Thinking Activity (DRTA) is an instructional strategy designed to give children experience in predicting what an author will say, reading the text to confirm or revise the predictions and elaborating upon responses”. Whereas according to Rubin “DRTA use questioning by the teacher encourages children to think more analytically and critically about the subject matter they are reading”.⁵ It means the strategy of DRTA helps

⁴Diane Lapp., et.al., *Content Area Reading Learning*, (London: LEA, 2004), p. 44.

⁵Peter Westwood, *Reading and Learning Difficulties*, (Australia: Acer Press, 2001), p. 59.

the students become aware of the reading strategies, understand the reading process, and develop prediction skills.

Based on the definitions above, the researcher concluded that DRTA is a strategy that intended to develop students' ability to read critically and reflectively. The directed reading thinking activity attempts to equip readers with the ability to determine the purposes of reading, the ability to extract, comprehend, and assimilate information, the ability to make predictions to examine reading materials based on the purposes of reading, the ability to pass judgments, and finally the ability to make decisions based upon information gleaned from reading.

3) Steps of DRTA

DRTA procedure involves having students make predictions about what is going to happen next in the story. They will then read up to a designated stopping point, and determine whether or not their predictions were correct based on what the students have read. The DRTA method is done in 3 steps. The procedural steps DRTA strategy stated by Westwood, Peter Stuart as follows:⁶

- a) Predicting some of the information the students may find or raising some questions students hopes to have answered in the text.

⁶*Ibid.*,

This activity is the most important part in DRTA strategy, Have students make predictions about what might happen in the text after predict, some question will be raising and the students must answered it from the text. In this activity, it's improves prediction skill.

- b) Reading the text carefully, with predictions and questions in mind.

Re-read the text carefully, by prediction and question in their mind will help the students get the answered of their question, Sometimes inference is needed by the students to make easy answer the text.

- c) Being able to prove, with evidence from the text, any conclusions made from the reading.

After predict and read the text, the teacher proves the evidence from the text, summarize any conclusion made from the text. The teacher confirms or rejects the prediction by show the real text.

Based on the explanation above, the researcher concluded the steps of DRTA are: Predicting some of the information the students may find or raising some questions student hopes to have answered in the text, Reading the text carefully, with predictions and questions in mind, and being able to prove, with evidence from the

text, any conclusions made from the reading. By doing all of the steps in DRTA, the students will be helped to construct the information meaningfully in reading narrative text.

4) Goals and Objectives of DRTA

The primary goal of DRTA training is to develop critical readers; following three basic outlined below can help student`s reach this goal.⁷

- a) Setting a purpose, it is can develop of purposes for reading is most important part of DRTA, during for portion of the lesson, students at first with teacher direction and later by themselves, establish their reasons for reading.
- b) Thinking, the student silently read the selection, relating both personal and vicarious experiences to the story.
- c) Testing hypothesis, this culminating step of DRTA and is intimately linked with the other step.

Based explanation above can be concluded goals and objectives of DRTA are; setting a purpose, thinking, and hypothesis.

5) Procedure of DRTA

Procedures of DRTA for content are use:⁸

- a) Privation for reading

⁷Addison & Wesley, *How to Teach Reading* (London: Publishing Compan, 1979), p. 24.

⁸Anthony Manjo & Ula Manjo, *Op.Cit.*, p. 105.

- (1) Investigating and expanding the background of student experience
- (2) Previewing the reading material
- (3) Introducing the vocabulary pertinent to the fundamental concept
- (4) Evolving purposes for reading
- b) Reading material silently
 - (1) Noting the student ability to adjust their reading to the purposes set up and to the material.
 - (2) Observing student to note specific areas for need.
- c) Developing comprehension
 - (1) Discussing answers to purposes questions
 - (2) Clarifying and guiding further development of the concepts and vocabulary introducing new vocabulary if needed.
 - (3) Assisting the student in nothing organization of information and recall of pertinent fact.
 - (4) Noting need for further information from the text and/ other source books.
 - (5) Redefining purposes, setting new purposes for reading.
- d) Rereading (silent and /oral), in part or in entirety
 - (1) Clarifying further the essential pertinent information and concept
 - (2) Giving specific skills training in comprehension as indicated by student needs.
- e) Following up the information
 - (1) Setting up problems requiring further information
 - (2) Choosing supplementary reading related to the topic to develop and extend interests, attitudes, and appreciations.
 - (3) Extending further understanding and clarifying, additional concepts as necessary.
 - (4) Analyzing the information and helping students relate it to their own lives.

Based explanation above procedure of DRTA there are five steps, they are; Privation for reading, Reading material silently, Developing comprehension, Rereading (silent and /oral), in part or in entirety, and Following up the information.

6) Implementation

There are some implementations of DRTA:⁹

- a) The groups sit in a circle to facilitate discussion.
- b) The students start by reading the title and studying any diagrams on the first page, and predict what they will read about.
- c) They all read the material at the same time to a certain point in the text (evaluation point). This may be a paragraph or a page or two, depending on the density of the text.
- d) Students set purposes for reading (for example to find answers to focus questions).
- e) The students predict what the next part of the text will be about, and consider the accuracy of earlier predictions.
- f) When used with text books or similar material, the example below will help students focus discussion at each evaluation point.

Based explanation above the researcher concluded the implementation of DRTA strategy can help the student to construct the information meaningfully in reading narrative text.

b. Conventional strategy

Conventional strategy is the strategy or the way that usually used by the teachers to teach the text to students.¹⁰ According to Hudson that conventional strategy is the strategy used by the teachers based on mutual agreement in a school.¹¹ In addition, it uses the traditional way in teaching and learning process. The researcher concluded that conventional strategy

⁹Miller & Player, *Secondary Literacy Across Curricula* (Quean Bryan District Office, 1998), p. 93

¹⁰Jhon Deriden. *Conventional Strategy* (<http://www.britannia.com/EBchecked/topic/421797/nuclear-strategy/52993/conventional-strategy>), retrieved on November 17, 2014 at 08.00 p.m.

¹¹Hudson. *The meaning of Conventional Strategy* (<http://www.conventional-strategy/topic/54372-strategy>), retrieved on November 17, 2014 at 08.00 p.m.

is the way that is used by the teachers in teaching a material based on the agreement of the teacher at school.

Based on the explanation above, the researcher concluded that the procedure used by the English teachers at MA YPKS Padangsidempuan, are as follows:

- a. Choose the subject matter
 - b. Explain the subject matter
 - c. Ordering the student giving opinion
 - d. Answering the questions
- c. Reading comprehension
- 1) Definition reading comprehension
 - a) Reading

Reading is complex process involving a network of cognitive actions that work together to construct meaning. Bacon remarks in his essay of studies “Reading makes a full man.” Reading means to understand the meaning or printed word i.e. written symbol. Reading is an interactive process which consists of recognition and comprehension skill.¹² Reading is an important activity in daily life with which one can update his or her knowledge, reading skill is an important tool for academic success.

¹²Patel & Praveen M. Jain, *English Language Teaching* (Sunrise: Jaipur, 2008), p. 113.

Reading is a fluent process of readers combining information from a text and their own knowledge to build meaning. The goal of reading is comprehension.¹³ Reading is most important in any language class. reading is not only a source of information activity but also as a means of consolidating and extending one`s knowledge of the language. Reading is very necessary to widen the mind and gain and understanding of the foreign culture. Reading certainly is an important activity for expanding knowledge of a language.

In addition, reading is also central tool of learning across the curriculum.¹⁴ In order to learn from reading, the readers must engage with the text. They are reading in a way that ensures that what they read connects with and stays in their mind afterwards; that is the readers need to read actively, making links with what is already known and expending or adjusting schema to include the new information.

Based explanation above can be concluded that reading is an activity of meaning getting process, in reading the readers must be able to combining their own background knowledge and information from text to build meaning and readers also must be understand ideas, recognizing the relationships and structures among ideas.

¹³Davin Nunan, *Practical English Language Teaching* (America: the MC. Grow Hill Companies, 2003), p. 68.

¹⁴ Teresa Cremlia, *Teaching English Creatively* (USA and Canada: Routledge, 2009), p. 57

b) Comprehension

Comprehension is a complex process regulated by cognitive, emotional, perceptual, and social experiences. When individual read, they apply a range of comprehending strategies to monitor and sustain their meaning. Thorndike explained that comprehension is a process of interacting with the text and that to do effectively the reader must be attentive, analytically, purposeful, flexible, self-aware, word-aware, socially, and emotionally sound.¹⁵

In addition David Nunan said, “Comprehension is essential to successful reading, for success comprehend the reader must use cognitive and meta cognitive skills, cognition can be defined as thinking give and met cognitive skill. Cognition can be defined as thinking about or thinking”.¹⁶ So, comprehension is an ability to improve or testing understand of language (written, spoken and comprehension needed reading and listening).

So, reading comprehension is refers to students ability to understand what have been read, and also reading comprehension is a combination of identification and interpretation skills. Rubin has been described Reading comprehension is as ‘a complex intellectual process involving a number of abilities’. The Readers must use information

¹⁵Anthony Manjo & Ula Manjo, *Op. Cit.*, P. 97

¹⁶David Nunan, *Op. Cit.*, p. 7.

already acquired to filter, interpret, organize, reflect upon and establish relationships with the new incoming information on the page.¹⁷ In order to understand text, a reader must be able to identify words rapidly, know the meaning of almost all of the words and be able to combine units of meaning into a coherent message.

Reading is an activity of meaning getting process. According to Wainwright “reading comprehension is completing many skills which are success or failed. After reading, we have to memorizing a lot of information in the text”.¹⁸ The similar idea meaning of reading comprehension is stated by William Grabe and Frederika L Stoller they said that “reading comprehension is reading fluently by understand of the words, general meaning is represented of main idea and this skill process under very limited time constrains”.¹⁹ In conclusion reading comprehension is reading to understanding the meaning of the text.

From the statement above, it can be concluded that reading comprehension is the act of combining information by using skill, context analysis, prior knowledge, and language In order to constructs

¹⁷Peter Westwood, *Op. Cit.* ,P. 10.

¹⁸Wainwright, *Speed Reading Better Recalling* (Jakarta: Gramedia Pustaka Utama: 2006), p. 42.

¹⁹William Grabe, & Fredricka L. Stoller, *Teaching and Researching Reading* (England: Longman, 2002), p. 14.

meaning of the text. The success of reading is determined by whether the reader can grasp the intended meaning. If she or he does not get the meaning, she or he does not read at all.

2) Model of reading

David Nunan divided the models of reading process into three categories that are: bottom-up models, top-down models and interactive models.²⁰

- 1) Bottom-up models typically consist of lower-level reading process student start with the fundamental basics of letter and sound recognition. Building up to the identification of grammatical structures, sentences and longer texts. Letters, letter clusters, words, phrases, sentences. Longer text and finally meaning is the order in achieving comprehension.
- 2) Top-down models, on the other hand begin with the idea that comprehension resides in the reader. The reader uses background knowledge, makes predictions, and searches the text to confirm or reject the predictions that are made. Within a top down approach to reading the teacher should focus on meaning generating activities rather than on mastery of word recognition. Extensive reading plays a key role in top-down approaches to reading.
- 3) Interactive models that are accepted as the most comprehensive description of the reading process are interactive models. This third type combines elements of both bottom-up and top-down models assuming “that a pattern is synthesized based on information provided simultaneously from several knowledge sources”.

Based on explanation above, it can be concluded that there are three stage of reading process, they are: recognition stage, structuring stage, and interpretation stage. While, model of reading process there

²⁰David Nunan, *Op. Cit*, p. 70-72

are three categories that are: bottom-up models, top-down models and interactive models.

3) Types of reading

Reading is also consists of some types. There are four types of reading, as follows:²¹

a) Intensive reading

Intensive reading is text reading or passage reading. Intensive reading material will be the basis for classroom activity. It will not only be read but will be discussed in detail in the target language, sometimes analyzed and use a basis for writing exercises. In this reading the learner read the text to get knowledge or analysis. The goal of this reading is to read shorter text. This reading is done to carry out and to get specific information. There are few characteristics of intensive reading:

- (1) This reading helps learner to develop active vocabulary.
- (2) Teacher play main role in this reading.
- (3) This reading aims at active use of language.
- (4) Intensive reading is reading aloud.
- (5) In intensive reading speech habit are emphasized and accent, stress, intonation, and rhythm can be corrected.

²¹ Patel & Praveen M. Jain, *English Language Teaching*, (Jaipur: Sunrice, 2008), p. 117-123.

b) Extensive reading

Extensive reading is the reading for pleasure. The readers want to know about something. The reader does care about specific of important information after reading. Usually the reader read for keep them update.

There are few characteristics of extensive reading, are follows:²²

- (1) This reading helps learner to develop to active vocabulary.
- (2) Extensive reading is silent reading
- (3) In extensive reading the subject matter is emphasized.
- (4) In extensive reading the learners play main role because they have to ask for measures.
- (5) In extensive reading the idea can be develop.
- (6) The aims of extensive reading to enrich learner`s knowledge.
- (7) Thorough extensive reading the good reading habit can be developed.

c) Aloud reading

Reading aloud is reading by voicing, reading aloud also play important role in teaching of English. According to H.

²² *Ibid.*, p. 120

Douglas Brown,²³ “loud reading is the test – taker separate letters, word, and or short sentences and read them loud, one by one, in the presence of an administrator since the easement is reading comprehension, any recognizable oral approximation of the target response is considered correct”. So, it concluded that loud reading is read orally or with voice by using correct pronunciation to express the content of the material or text, so the reader and listener can get the information or the authors’ messages from the text.

There are the advantages of reading aloud:²⁴

- (1) Reading aloud enables learner to develop the skill of reading very well by speaking or expressing idea.
- (2) Reading aloud enables learner to develop the skill of pronounce.
- (3) Reading aloud can make reading very enjoyable while the teacher uses reinforcement during reading.
- (4) Reading aloud can make activity very affective.

d) Silent reading

According to David Nunan, silent reading generally focus in the classroom should be on getting the meaning from print when

²³ H. Douglas Brown, *Language Assessment Principles and Classroom Practice* (USA: Longman, 2004), p. 190.

²⁴Patel & Praveen M. Jain, *Op. Cit*, p. 120.

comparison is the goal of reading.²⁵ Then, according to Oxford dictionary “Silent is condition of not speaking and a sound track”.²⁶ So, silent reading is reading by heart or without sounds to get the deep understanding of the material. Reading silently improves students’ understanding because it helps them concentrate on what they are reading, rather than the pronunciation of individual words.

Advantages of silent reading:²⁷

- (1) This reading makes students very active and accurate.
- (2) Silent reading concentrates the attention of learners toward subject matter and the learners naturally.
- (3) Silent reading saves time because in this activity is done at a time, all students participate together in this time.
- (4) Silent reading very useful to develop the skill of reading fast.
- (5) The skill of silent reading plays main role to increase the knowledge of students.

Based on explanation above, there are four types of reading, they are: intensive reading, extensive reading, aloud reading and the last is silent reading. In every types of reading have different comprehension that making the readers active in connecting their prior

²⁵David Nunan, *Practical English Language Teaching. Op. Cit.*, p. 69.

²⁶AS. Hornby, *Op. Cit.*, p. 887.

²⁷Patel & Praveen M. Jain, *Op. Cit.*, p. 123.

knowledge with new information, and can increase their knowledge to get idea.

4) Level reading Comprehension

Reading comprehension is considered to occur at four levels of complexity. These levels are often referred to as literal level, inferential level, critical level and creative level. Consider the following brief passage:²⁸

a) Literal level

At the literal level the basic facts are understood. For example, knowing that the lady's name is Miss Tika; she lives in an apartment on the 10th floor; her neighbors are noisy; she has complained to the landlord before. This information is contained explicitly within the text.

b) Inferential level

At the inferential level the reader is able to go beyond what is written on the page and add meaning or draw conclusions.

c) Critical level

At the critical level the reader assesses the good sense of what he or she is reading, its clarity, accuracy and any apparent exaggeration or bias.

d) Creative level

²⁸Peter Westwood, *Op. Cit*, P.21-22

At the creative level the reader can take information or ideas from what has been read and develop new ideas from them. The creative level stimulates the reader to new and original thinking.

The level of reading comprehension in helping the students become interactive reader there are two levels, they are:²⁹

- 1) Surface level. The surface level of comprehension is a literal level of understanding presented by the ability to recall factual information from the text. It is retrieval process involves short-term memory; thus, this level of understanding directly relates to the decency of the reading.
- 2) Deep level. The deep level of comprehension is a conceptual level of understanding that results from the reader`s ability to think beyond the text, thus integrating the author`s intentions with the reader`s point of view. At this level, the author`s message serves as a pivotal point in regulating the deeper thinking.

In addition According to Salvia and Ysseldyke, there are six levels of reading comprehension skills:³⁰

- a) Literal comprehension: the student reads the paragraph or story and is then asked questions based on it.

²⁹ Linda J. Dorn & Carla Soffos, *Teaching for Deep Comprehension* (Stenhouse Publishers: USA, 2005), p.14

³⁰Roger Pierangelo & George Guiliani, *Teaching Students with Learning Disabilities* (Corwin Press: London UK, 2008), p. 20.

- b) Inferential comprehension: the student reads a paragraph or story and must interpret what has been read.
- c) Listening comprehension: the student reads a paragraph or story by the examiner and then asked the questions about what the examiner has read.
- d) Critical comprehension: the student reads a paragraph or story and then analyzes, evaluates, or makes judgments about what has been read.
- e) Affective comprehension: the student reads a paragraph or story, and the examiner evaluates the child's emotional responses to the text.
- f) Lexical comprehension: the student reads a paragraph or story, and the examiner assesses the child's knowledge of vocabulary words.

Based on explanation above, many levels of reading comprehension, but the levels of the experts is same. The levels of that can be chosen is suitable for the students to become interactive reader.

5) The purpose of reading

The purpose of reading are to get and find information include content and meaning of the text based on the purpose.³¹Tarigan stated that, Here some goals of reading such as:

³¹Henry Guntur Tarigan, *Membaca Sebagai Suatu Keterampilan Berbahasa* (Bandung: Angkasa, 2005), p. 9.

- 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.

Based on the list above, the researcher makes an inference that reading has some goals that refer to general point of understanding and comprehending.

6) Indicator of reading

Reading comprehension has some indicators. The indicators are students able to³²:

- a) Identify the topic from the text
- b) Identify main idea from the text
- c) Identify information that needed from the text
- d) Give conclusions from the text
- e) Understand vocabulary of the text

³² Jonathan Sarwanto & Yudhy Purwanto, *English for Academic Purposes* (Yogyakarta: c.v Andi Offset, 2013), p. 1-2

Researcher gave test of reading text to know students' reading comprehension.

The test purposes to measure students' reading comprehension. There are some techniques to test reading comprehension. Those are multiple choice questions (MCOs), short answer questions, cloze, and so on.

d. Narrative Text

1) The definition of narrative text

Narrative text is focusing specific participants. It's social function is to tell stories of past events and entertain the readers. Narrative deals with problematic events which lead to a crisis or turning point of some kind, which in turn finds a resolution. Narrative text is told from a defined point of view, often the author's, so there is feeling as well as specific and often sensory.³³ Narrative text can be considered as reflection of author's values told as a story. Narrative text offers us to opportunity to think and to write about ourselves, to explain our experiences lead to some important realization or conclusion about our live in this world.

Talking about narrative text itself, Sanggam Siahaan stated "Narrative is any written English text in which the writer wants to assume, entertain people, and to deal with actual or vicarious experience in

³³Ahmad Thommy, *Writing Genres in English*, (Era pustaka Utama: Surakarta, 2008), p. 18.

different ways.”³⁴ Similarly, Otong Setiawan said “narrative is a kind of story to entertain the reader, there is a problem and there are solutions to solve the problem. Narrative text can be fiction and concrete story”.³⁵ It`s means narrative is the story it have problem and solution.

In conclusion, based on quotation above that narrative is a story to entertain, to gain and hold a reader`s interest and the most powerful ways of communications with others. A good written story lets your readers respond to some event, but they can almost feel it.

2) Kinds of narrative text

Kinds of narrative text there are thirteen, they are.³⁶

- a) Fiction: prose writing that tells an imaginary story
- b) Nonfiction: prose writing that tells about real people, places, and events.
- c) Historical Fiction: contemporary fiction set in the past, may reference actual people or events
- d) Tall Tales: humorously exaggerated stories about impossible events in which the main characters have extraordinary abilities
- e) Folktales: stories passed by word of mouth from generation to generation
- f) Folklore: traditions, customs, and stories passed down within a culture
- g) Legend: a story handed down from the past about a specific person who usually demonstrates heroic accomplishments
- h) Fables brief tales that teach lessons about human nature
- i) Fairy Tales: stories about imaginary beings possessing magical powers

³⁴Sanggam Siahaan & Kisno Shinoda, *Generic Text Structure*,(Graha Ilmu: Yogyakarta) p.

³⁵Otong Setiawan Djuharie. *Genre*, (Bandung: Yrama Widya, 2007), p. 41.

³⁶“Narrative text” (<http://www.englishindo.com>, accessed at 20, 2014 retrieved on 9 pm).

- j) Fantasy: literature that contains fantastic or unreal elements
- k) Biography: story of a person's life written by someone else
- l) Autobiography: nonfiction; a person tells about his or her own life
- m) Poetry: stories, ideas, and feelings expressed in compact, imaginative, often musical language

Based on the list above, the researcher concluded kinds of narrative text there are thirteen, they are; fiction, nonfiction, historical fiction, tall tales, folktales, folklore, legend, fables, fairy tales, biography, autobiography, and poetry. In this research the researcher chooses fables text that teach lesson about human nature.

3) Generic of narrative text

The generic of narrative text are:³⁷

- a) Orientation, introducing the participants and informing the time and the place
- b) Evaluation; it is optional, used to a stepping back to evaluate the plight
- c) Complication of problem, describing the rising crises which the participants have to do with
- d) Resolution, showing the way of participant to solve the crises, better or worse
- e) Reorientation, it is optional.

³⁷Rachmat Wahidi "Genre of the text", <http://rachmatwahidi.wordpress.com>, Accessed on June 10, 2014, Retrieved on 11 pm. p. 7.

4) Language feature of narrative text

The language features of narrative text are:³⁸

- a) Using processes verbs.
- b) Using linking verbs and linking words of time.
- c) Using temporal conjunction and temporal circumstances.
- d) Using material process, behavioral and verbal process.
- e) Using action verbs.
- f) Focus on specific and usually individualized participant.
- g) Some dialogue may include, using present or future.
- h) Connectives, linking word to do with time.
- i) Use of senses, where appropriate, the senses can be used to describe and develop the experiences, setting and character.
- j) Using simple past tense.

5. Related Finding

There have been many researches done regard to this research and the research found some related research as follows;

First, Ade Yusrina, her thesis is ³⁹ “The Effect of Think-Pair-Share Technique on Students’ Reading Comprehension in Analytical Exposition Text at Grade XI of SMA Negeri 2 Padangsidimpuan”, The conclusion there was the Effect of Think-Pair-Share Technique on Students’ Reading Comprehension in Analytical Exposition Text at Grade XI of SMA Negeri 2 Padangsidimpuan, it can be seen from The data were obtained from pre-test and post-test scores of the experimental and control groups. The mean score of the experimental group in pre-test = 63 while the mean score of the control group = 61. The mean score of experimental group in post-test = 80,7 is higher than control group 62.

³⁸*Ibid.*,

³⁹ Ade Yusrina “The Effect of Think-Pair-Share Technique on Students’ Reading Comprehension in Analytical Exposition Text at Grade XI of SMA Negeri 2 Padangsidimpuan” (*Unpublished Thesis*: IAIN Padangsidimpuan, 2012), p. 62-63

Furtherance, the reading comprehension in experimental group increase 38,09 % while in control group only 18,03 %. And based on the calculation of t-test is 6,33 is higher than 2,00 t table.

Second, Ummi Kalsum Batubara, her thesis is “The Effect of Semantic Mapping to Students’ Reading Comprehension at Grade XI SMK Negeri 1 Batangtoru in 2013-2014 Academic Years”. The conclusion is: the students’ comprehension before use or pre test by semantic mapping technique is bad, it was provided by the mean score of Experimental class was 43.78 and Control class was 33.70, and the students comprehension after used semantic mapping is good, It can be seen from the mean score of experimental class was bigger than control class (82.19>56.40). It means that semantic mapping gave significant effect to students’ reading comprehension at grade XI in SMK Negeri 1 Batangtoru. Based on the conclusion, that studying reading by using semantic mapping at SMK Negeri 1 Batangtoru has a significant. In other words, there is a significant effect of semantic mapping to students’ reading comprehension at grade XI SMK Negeri 1 Batangtoru.⁴⁰

Third, Fadhilah Tanjung “The effect of SQ3R (Survey, Question, Read, Recite and Review) strategy to students’ reading comprehension at grade XI SMA N 3 Panyabungan”. The result of her research shows that the students’ achievement in reading ability after learning by SQ3R strategy at

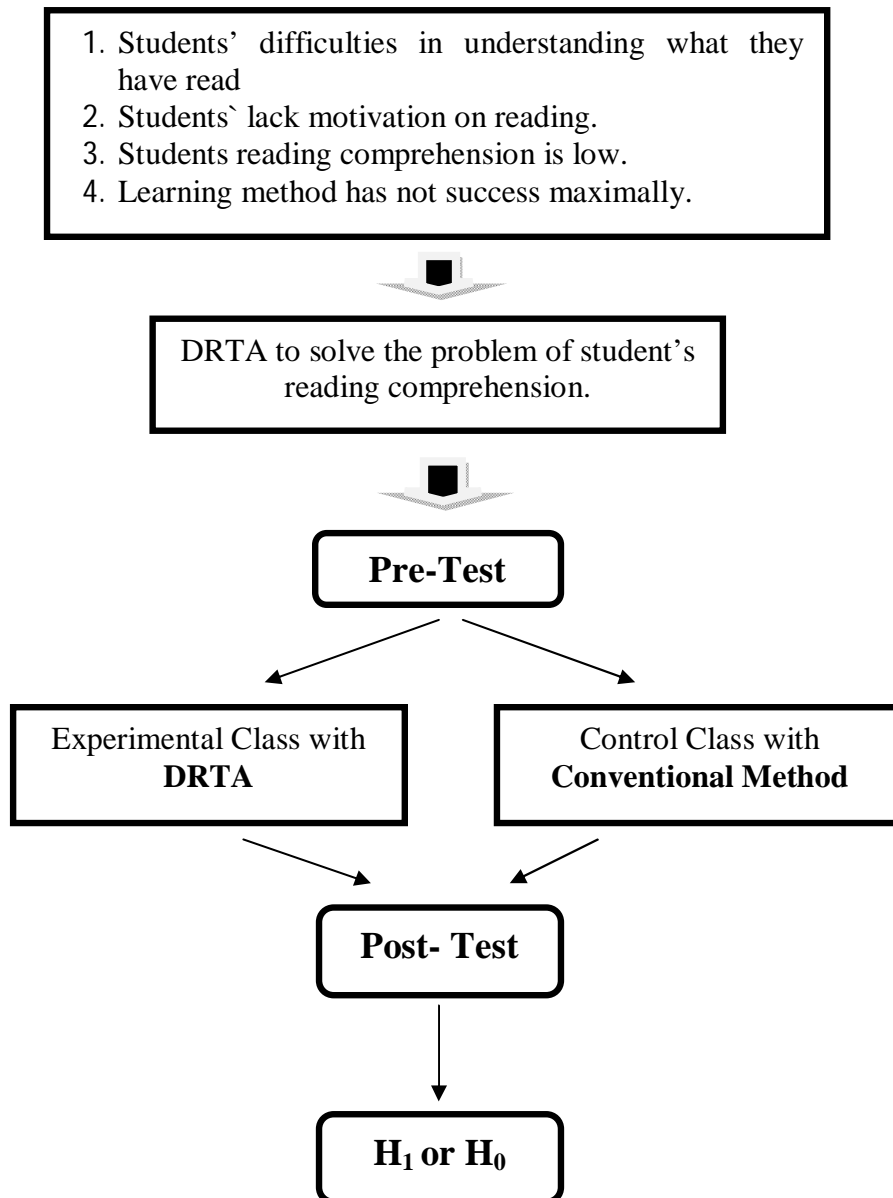
⁴⁰Ummi Kalsum Batubara, “The Effect of Semantic Mapping to Students’ Reading Comprehension at Grade XI SMK Negeri 1 Batangtoru”. (*Unpublished Thesis*: IAIN Padangsidimpuan, 2014), p. 56-57.

SMA N 3 Panyabungan was 74,3. It can be seen from the mean score of experimental class, and student's reading comprehension achievement by using 3 strategies is better than conventional strategy. So students' reading comprehension achievement by using predicting information from the pictures is better than conventional strategy at grade XI SMA N 3 Panyabungan.⁴¹

Based on the previous related findings above, the researcher can conclude that many methods can increase the students' ability in reading comprehension. So, the researcher is interested to know the other method that has the greatest effect on reading comprehension. The researcher wants to know which one is the best method to develop students' reading comprehension. So, the researcher wants to do a research on the effect of DRTA in reading comprehension in narrative text at MA YPKS Padangsidimpuan.

⁴¹Fadhilah Tanjung, "The Effect of SQ3R (Survey, Question, Read, Recite, and Review) Strategy to Students' Reading Comprehension at Grade XI SMA N 1 Panyabungan". (*Unpublished Thesis*: STAIN Padangsidimpuan, 2013), p. 52.

2. Conceptual Framework



From the picture above, can be seen that the problem of students; they were difficulties in understanding what they have read, lack motivation on reading, have low reading comprehension, and learning method has not success maximally. Therefore, in this research used DRTA to solve the problem. Before doing DRTA, researcher gave Pre-test to Control and Experimental Class. After that, researcher teached Reading Comprehension with DRTA to Experimental class, and the English Teacher with conventional method to Control class. Then, both are two classes are given Post-test, Experimental and Control class. Finally, the researcher compared the reading result of Pre-test and Post- test between Experimental and Control class.

3. Hypothesis

In accordance with the formulation of the problem above and in order to provide guidance for this research which specifies the correct processing, acquiring and analyzing of the data, it needs to formulate hypothesis, Thus, the hypotheses of this research stated that “There is the significant effect of Directed Reading Thinking Activity (DRTA) strategy on students’ reading comprehension in narrative text at Grade XI MA YPKS Padangsidimpuan. (H_a)”

CHAPTER III

RESEARCH METHODOLOGY

A. Time and Place of the Research

The location of this research is at MA YPKS. It is located at Jl. Sultan Soripada Mulia No. 52A Telp. (0634)27567, Kec. North Padangsidimpuan, padangsidimpuan city 22715 of North Sumatera. The subject of this research is the eleventh grade of students in MA YPKS Padangsidimpuan. The schedule of this research has been done from Mei 2014 up to 13 February 2015.

B. Research Design

The kind of this research is quantitative research with experimental method. Experimental research is the research that manipulates the object of the research and controls certain variable. The research purposes to investigate the cause-effect, and how to extend the cause-effect with the treatment of experimental class and control class as a comparing.¹

From the definition above, researcher concluded that the experiment is a kind of research that is aim to know the causal effect of DRTA on students' reading comprehension. Experimental classroom implement DRTA, and the control classroom implement conventional method. Students' reading comprehension will be got before and after the learning process. The both of classes are given Pre-test to know the ability and score of students. The design is presented as follow:

¹Ikbal Hasan, *Analisis Data Penelitian dengan Statistik* (Jakarta: Bumi Aksara, 2004), p. 10.

Tabel I

RESEARCH DESIGN

| Class | Pre-Test | Treatment | Post-Test |
|------------------|----------|--|-----------|
| Experiment Class | Pre-Test | Teaching Narrative Text by Using DRTA Strategy | Post Test |
| Control Class | Pre Test | Teaching Narrative Text by Using Conventional Strategy | Post Test |

The second, after teaching reading with different implementation, both of the classes gave Post-test. It is employ as a basis to calculate whether the difference of reading comprehension with and without DRTA is significant or not.

C. Population and Sample

According to Gay, “population is the group of interest to the researcher, the group to which she or he would like the result of the study to be generalizable”.² Meanwile, Suharsimi Arikunto said, “A population is a set (collection) of all elements processing one or more attributes of interest.”³ So, the population is the whole of the students at grade XI MA YPKS Padangsidimpuan.

Based on the Quotation above, the research has been done for the grade XI MA YPKS Padangsidimpuan in 2014 academic year. The population of

² L. R. Gay and Peter Airasian. *Educational Research for Analysis and Application*, (America: Prentice Hall, 1992), p. 122.

³Suharsimi Arikunto, *Prosedur Penelitian* (Jakarta: Rineka Cipta, 2002), p. 108.

research consists of 2 classes with 62 students. It can be seen from the table follow:

Table II
Grade XI MA YPKS Padangsidempuan

Academic Year 2014

| No | Classroom | Male | Female | Amount |
|---------------------|-----------|------|--------|-----------|
| 1. | XI-1 | 25 | 10 | 35 |
| 2. | XI-2 | 19 | 8 | 27 |
| 3 | XI-3 | 28 | 7 | 35 |
| Total Number | | | | 97 |

Source: School Administration Data of MA YPKS Padangsidempuan

In this research, the researcher takes all of population as sample being the subject is less than 100. It is related with statement of Suharsimi Arikunto, who said that if the subjects less of 100, it is better to take all as the sample. So, the research is the population of research, meanwhile if the subjects are large, it can be taken between 10-15 %, and 20-25% or more appropriate with the researchers ability.⁴

From the explanation above, the population in this research less than 100, so the researcher takes all of population as sample, it`s consist three classes. They are XI-1, XI-2 and XI-3. In this research class XI-1 is an experimental class and XI-2 as control class. The total number has 62 students.

⁴*Ibid.*, p.134.

To determine appropriate sample of population is tested with Normality and Homogeneity test.

a. Normality Test

In Normality test, the data can be tested with Chi-quadrante:⁵

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

Where:

x^2 = Chi-Quadrate

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

f_h = Frequency is gotten from the sample as image from frequency is hoped from the population.

To calculate the result of Chi- Quadrate uses significant level 5% (0,05) and degree of freedom as big as total of frequency is lessened 3 (dk= k- 3). If result $x^2_{count} < x^2_{table}$. So, the data is distributed by normal. Based on the calculation of normality test in pre- test, the researcher found that there are two classes that is classified normal with dk=5-3=2 = 5.991. They are XI- 1(4.35 < 5.991), XI- 2 (2.52 < 5.991), and there is a class that was not normal with dk = 5-3= 5.991, (XI.III-3 = 6.98 < 5.991).

⁵Mardalis, *Metode Penelitian: Suatu Pendekatan Proposal* (Jakarta: Bumi Aksara, 2003), p. 85.

b. Homogeneity Test

Homogeneity test was used to know the variant experimental class and control class is the same or different. If the both of classes are same, it is can be called homogeneous. To test it, researcher used formula as follow: ⁶

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

Where:

n_1 = Total of the data that bigger variant

n_2 = Total of the data that smaller variant

Hypothesis is rejected if $F \leq F_{\frac{1}{2}a(n_1-1)(1=n_2-1)}$ While if $F_{count} > F_{table}$ hypothesis is accepted. It determined with significant level 5% (0,05) and dk numerator is $(n_1 - 1)$ while dk denominator is $(n_2 - 1)$. So, $dk = (35-1)=34 = 2.042$ and $(27-1)= 26= 2.052$. Based on the calculation of homogeneity test in pre-test, the researcher found that all of the classes are classified homogenous. It can be seen on appendix 18.

From the discussion before, the sample are three classes of the second year students, two classes are took in order to be an experimental or control class. After comparing the normality and homogeneity test of the third classes in pre-test, the researcher found that all the classes are homogenous and the normal classes are XI-I, XI-2, and XI-3 is not normal. So, the researcher concluded that XI-1 and XI-2 are the sample of this research. The

⁶*Ibid.*, p. 250.

experimental class is XI-1 consist 35 students and control class is XI-2 consists of 27 students. So, total of samples are 62 students.

Table III:

Sample of the Research

| Experimental Class | Control Class | Total |
|--------------------|---------------|-------|
| XI-1 = 35 | XI-2 = 27 | 62 |

D. Instrument of Collecting Data

A research must have a good instrument in this research because good instruments certify the validity of the data. Suharsimi Arikunto said “instrument of the research is a tool of facility is used by the researcher to collect data”.⁷ The researcher uses instrument of validity and reliability for the taking the valid data. The research uses test as instrumentation.

From explanation above the indicator of reading comprehension have five indicators; the indicators are students able to find the topic of the text, able to identify main idea of the text, able to identify information needed from the text, and able to give conclusion the text.

In this research, the test consist of 40 questions, where 20 for pre-test, and 20 for post-test by choosing an answer from the 4 options to prepare the students' reading comprehension. These tests gave to both class, experiment and

⁷*Suharsimi Ibid.*, p. 21.

control class. To find out the scores of the students' answer, the researcher gave 5 score for each item. Thus, the maximum score of test was 100.

Table IV

The Indicators of Reading Comprehension of Pre-Test:

| NO | Indicators | Items | Number of items | Score | Total Score |
|-------|---|-------|-----------------|-------|-------------|
| 1 | Able to find the topic of the text | 4 | 1,4,9,17 | 5 | 25 |
| 2 | Able to identify main idea of the text | 4 | 2,8,13,18 | 5 | 20 |
| 3 | Able to identify information needed from the text | 4 | 7,12,15,19 | 5 | 20 |
| 4 | Able to give conclusion to the text | 4 | 3,5,11,16 | 5 | 20 |
| 5 | Able to understand the vocabulary of the text | 4 | 6,10,14,20 | 5 | 15 |
| TOTAL | | 20 | 20 | 25 | 100 |

Table V

The Indicator Reading Comprehension Text of Post – Test

| NO | Indicators | Items | Number of items | Score | Total Score |
|-------|---|-------|-----------------|-------|-------------|
| 1 | Able to find the topic of the text | 4 | 2,5,7,16 | 5 | 25 |
| 2 | Able to identify main idea of the text | 4 | 3,9,15,19 | 5 | 20 |
| 3 | Able to identify information needed from the text | 4 | 1,8,12,20 | 5 | 25 |
| 4 | Able to give conclusions to the text | 4 | 4,10,14,18 | 5 | 20 |
| 5 | Able to understand the vocabulary of the text | 4 | 6,11,13,17 | 5 | 10 |
| TOTAL | | 20 | 20 | 25 | 100 |

E. Validity and reliability instrument

According to Anas Sudijono “Validity is a characteristic of the good test.

To get the validity of an achievement test can be used two ways”:⁸

1. Totality of the test validity
2. Item validity

To get the validity of instrumentation the researcher used item validity. Item validity is a part of the test as a totality to measure the test by

⁸Anas Sudijono. *Pengantar Evaluasi Pendidikan* (Jakarta: PT Raja GrafindoPersada, 1996), p. 163.

items. Where, the test consists of 50 multiple-choice tests that will be divided in to two groups. They are 25 for pre-test and 25 for post-test.

To know the validity of the each question will be refer to list *r* biserial with *r_t* in 5% significant: 0.381 and 1% significant: 0.418. So, if *r_{account}* > *r_{table}* the test is classified valid.

So, to get the validity of the test, the formula of *r point biserial* can be used as follow:

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

Where:

r_{pbi} : coefficient item validity

M_p : mean score of the total sore

SD_t: Standard Deviation of the total score

p: presentation of the right answer of the item tested validity.

q: presentation of the wrong answer of the item tested validity.

The result of the analysis from fifty instrument test, where twenty five for pre-test and twenty five for post-test. So, pre-test only twenty are categorized valid and five are categorized invalid. It can be seen on appendix 7. Then, for the post-test also twenty were categorized valid, and five categorized invalid. The calculation of how to get it can be seen in the appendix 13. So, researcher conducted 20 items for each group (Appendix 3 and 4).

Reliability test

Reliability is the degree to which a test consistently measures whatever it measures. Reliability is expressed numerically, usually as a coefficient ranging from 0.0 to 1.0; a high coefficient indicates high reliability.⁹

Testing of instrument reliability could be done with the technique of KR.20 (Kuder Richardson) formula, as follows:¹⁰

$$r_{11} = \left(\frac{n}{n-1} \right) \left(\frac{St^2 - \sum pq}{St^2} \right)$$

Where:

r_{11} = Reliability of the test

$\sum pq$ = Total of the result times p and q

P = Proportion of the students answer correctly

q = Proportion of students answer incorrectly

n = Total of the items

S_t = Standard of deviation of the test

Reliability is a good character of the test that refers to the consistency of the measurement. The test is reliable $r_{\text{count}} > r_{\text{table}}$ by using formulation KR-20 with $r_{\text{table}} 0.70$.

⁹L.R. Gay and Peter Airasian, *Op. cit.*, p. 155.

¹⁰Anas Sudijono, *Op. cit.*, p. 254

Criteria of test reliability is as follows:¹¹

$r_{11} = 0,70$ high correlation (reliable)

$r_{11} > 0,70$ high correlation (reliable)

$r_{11} < 0,70$ low correlation (un- reliable)

F. Technique of Data Collection

In collecting data, the research conducts twice of test for these classes.

They are pre-test and post-test like in the table below:

Table VI

Table of the Design of Collecting Data

| Class | Pre-test | Treatment | Post-test |
|--------------------|----------|-----------|-----------|
| Experimental Class | ✓ | ✓ | ✓ |
| Control Class | ✓ | ✗ | ✓ |

The process of data collection as follow:

a. Pre-test

The pre-test is to find the mean scores of the DRTA strategy and conventional group before doing treatment to the experimental group.

¹¹ *Ibid.*, p. 209

b. Treatment

The experimental class was given treatment by using Directed Reading Thinking Activity (DRTA) strategy and the control class was only by reading narrative text.

c. Post-test

Experimental class and control class was given the final test after the treatment. This test is to measure students' reading comprehension. This test used to investigate the difference of reading comprehension between the DRTA class and conventional class.

G. Technique of Data Analysis

In this research, the researcher uses the technique of data analysis as follow:

a. Requirement test

1. Normality test

The researcher uses normality test with using *Chi-Quadrat* formula, as follow:

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

Where:

x^2 =Chi-Quadrate

f_o =Frequency is gotten from the sample/result of observation (questioner).

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

To calculate the result of Chi- Quadrate, it is used in significant level 5% (0.05) = 5.991 and degree of freedom as big as total of frequency is lessened 3 (dk= k-3).

2. Homogeneity test

The researcher used Harley test, to test the data whether is homogenous or not as follow:¹²

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

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

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

Hypothesis is rejected if $F \leq F_{\frac{1}{2}}^I$ a (n_1-1) $(1= n_2-1)$, while if $F_{count} > F_{table}$, hypothesis is accepted. It determined with significant level 5% (0.05) = 2.042, and dk numerator was (n_1-1) , while dk denominator is (n_2-1) .

¹²Agus Irianto, *Statistik Konsep Dasar dan Aplikasinya* (Padang: P2PLTK, 2003), p.276.

b. Hypothesis Test

The analysis of the data is done to find out the ability of two groups that have been divided into experiment class and control class. Hypothesis is the answering result of the research. So, data Analysis is used to test the hypothesis by using *t-test*.

$$H_a: \mu_1 > \mu_2$$

If $H_a: \mu_1 > \mu_2$, It means the result of students' reading comprehension by using Directed Reading Thinking Activity (DRTA) strategy at grade XI MA YPKS Padangsidempuan is better than conventional strategy. But, if the to test the hypothesis, researcher used the formula as follow:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where:

\bar{x}_1 = Mean of experimental class sample

\bar{x}_2 = Mean of control class sample

n_1 = Total of experimental class sample

n_2 = Total of control class sample¹³

¹³Sugiyono. *Statistika untuk Penelitian*(Bandung: Alfabeta, 2011), p. 138-139.

And the formula of standard deviation is:

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Where:

s = Variant

s_1^2 = Variant of experimental class

s_2^2 = Variant of control class

To test the criteria of hypothesis is if H_a is accepted by –

$t_{table} < t_{count} < t_{table}$. By opportunity $\left(1 - \frac{1}{2}\alpha\right)$ and $dk = (n_1 + n_2 - 2)$, $(35+27-2) =$

$60=2.00$

In analysis data, researcher used t-test to test hypotheses, as follow:¹⁴

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

Notes

- T** : The value which the statistical significance
- M₁** : The average score of the experimental class
- M₂** : The average score of the control class
- X₁²** : Deviation of the experimental class
- X₂²** : Deviation of the control class
- n₁** : Number of experimental
- n₂** : Number of control

¹⁴Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik* (Jakarta: PT Rineka Cipta, 2006), p. 311.

CHAPTER IV

DATA ANALYSIS

This chapter presents research result. In this case, it discussed the effect of Directed Reading Thinking Activity (DRTA) strategy on students' reading comprehension in narrative text. The researcher has calculated the data using pre test and post test. Applying quantitative research, the research used the formulation of T-test. Next, researcher will describe the result based on the data that has been researched as follow:

A. Description of Data

1. **Description of Data Before Using Directed Reading Thinking Activity (DRTA) strategy**
 - a. **Score of Pre-Test Experimental Class**

Tabel VII
The score of Experimental Class in Pre-Test

| | |
|--------------------|-------|
| Total | 2175 |
| Highest score | 75 |
| Lowest score | 45 |
| Mean | 69.85 |
| Median | 74.1 |
| Modus | 68.25 |
| Range | 30 |
| Interval | 5 |
| Standart deviation | 9.5 |
| Varians | 99.4 |

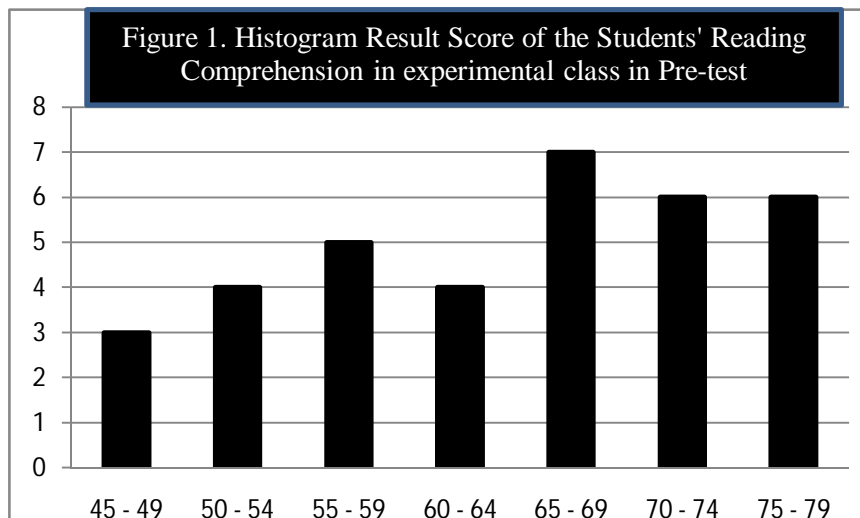
Based on the table above the total score of experiment class in pre-test was 2175, mean was 69.85, standart deviation was 9.5, varians was 99.5, median was 74.1, range was 30, modus was 68.25, interval was 5. The researcher got the highest score was 75 and the lowest score was 45. It can be

seen on appendix 18. Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

Table VIII
Frequency Distribution of Students' Score

| No | Interval | Frequency | Percentages |
|---------|----------|-----------|-------------|
| 1 | 45 – 49 | 3 | 8.57% |
| 2 | 50 – 54 | 4 | 11.42% |
| 3 | 55 – 59 | 5 | 14.28% |
| 4 | 60 – 64 | 4 | 11.42% |
| 5 | 65 – 69 | 7 | 20% |
| 6 | 70 – 74 | 6 | 17.14% |
| 7 | 75 – 79 | 6 | 17.14% |
| $i = 5$ | | 35 | 100% |

Based on the table above, it can be drawn at histogram as follow:



b. Score of Pre Test Control Class

Tabel IX
The Score of Control Class in PreTest

| | |
|--------------------|-------|
| Total | 1675 |
| Highest score | 75 |
| Lowest score | 35 |
| Mean | 70.85 |
| Median | 72.4 |
| Modus | 66.5 |
| Range | 30 |
| Interval | 5 |
| Standart deviation | 9.05 |
| Varians | 88.96 |

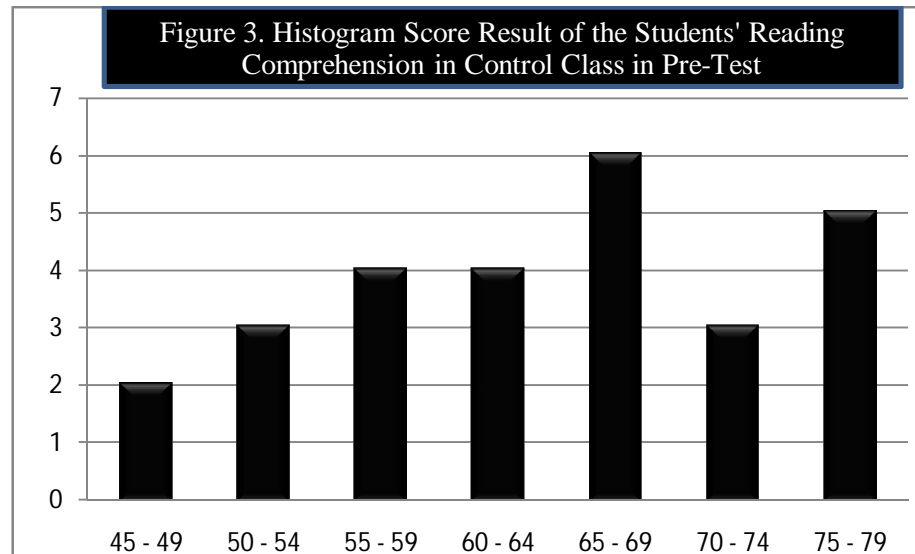
Based on the table above the total score of control class in pre-test was 1675, mean was 70.85, median was 72.4, modus was 66.5, range was 30, interval was 5, standart deviation was 9.05, varians was 88.96. The researcher got the highest score was 75, and the lowest score was 45. It can be seen on appendix 18. Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

Table X
Frequency Distribution of Students' Score

| No | Interval Class | F | Percentages |
|----|----------------|---|-------------|
| 1 | 45 – 49 | 2 | 7.40% |
| 2 | 50 – 54 | 3 | 11.11% |
| 3 | 55 – 59 | 4 | 14.81% |
| 4 | 60 – 64 | 4 | 14.81% |
| 5 | 65 – 69 | 6 | 22.22% |
| 6 | 70 – 74 | 3 | 11.11% |

| | | | |
|---------|---------|----|--------|
| 7 | 75 – 79 | 5 | 18.51% |
| $i = 5$ | | 27 | |

Based on the table above, it can be drawn at histogram as follow:



2. Description of Data After Directed Reading Thinking Activity (DRTA) strategy

a. Score Post-Test of Experimental Class

Tabel XI
Score of Experimental Class in Post-Test

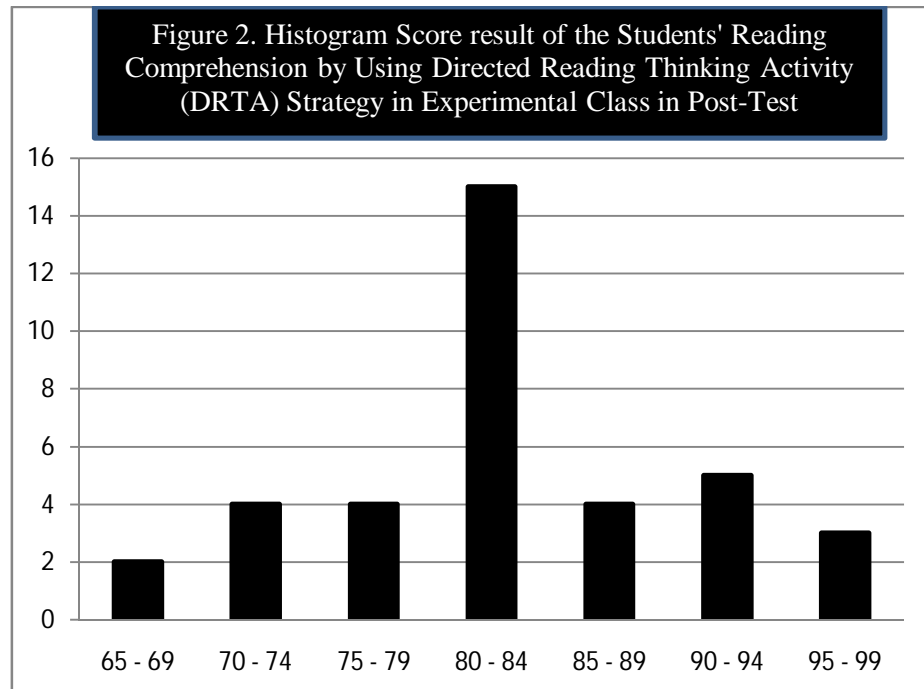
| | |
|--------------------|-------|
| Total | 2825 |
| Highest score | 95 |
| Lowest score | 65 |
| Mean | 82.7 |
| Median | 7.7 |
| Modus | 84.65 |
| Range | 30 |
| Interval | 5 |
| Standart deviation | 8.2 |
| Varians | 64.91 |

Based on the table above the total score of experiment class in post-test was 2825, mean was 82.7, median was 7.7, modus was 84.65, range was 30, interval was 5, standart deviation was 8.2, varians was 64.91. The researcher got the highest score was 95 and the lowest score was 65. The calculation can be seen on the appendix 20. Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

Table XII
The Frequency Distribution of Students' Score

| No | Interval Class | F | Percentages |
|--------------|----------------|----|-------------|
| 1 | 65 – 69 | 3 | 8.57% |
| 2 | 70 – 74 | 4 | 11.42% |
| 3 | 75 – 79 | 4 | 11.42% |
| 4 | 80 – 84 | 13 | 37.14% |
| 5 | 85 – 89 | 4 | 11.42% |
| 6 | 90 – 94 | 5 | 14.28% |
| 7 | 95 – 99 | 3 | 8.57% |
| <i>i</i> = 5 | | 35 | 100% |

Based on the table above, it can be drawn at histogram as follow:



b. Score of Control Class in Post-Test

Tabel XIII
The Score of Control Class in Post-Test

| | |
|--------------------|-------|
| Total | 1810 |
| Highest score | 80 |
| Lowest score | 50 |
| Mean | 65 |
| Median | 72 |
| Modus | 66.35 |
| Range | 30 |
| Interval | 5 |
| Standart deviation | 8.4 |
| Varians | 73.50 |

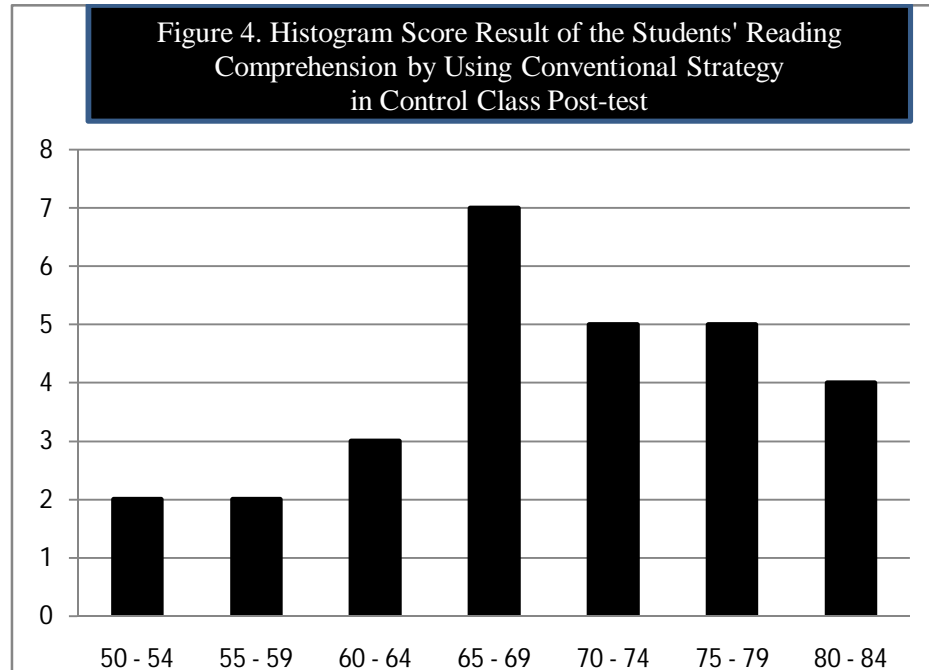
Based on the table above the total score of control class in post-test was 1810 ,mean was 65, standart deviation was 8.4, varians

was 73.50, median was 72, modus was 66.35, range was 30, interval was 5. The researcher got the highest score was 80 and the lowest 50 score was. The calculation can be seen in the appendix 21. Then, the computed of the frequency distribution of the students' score of control class could be applied into table frequency distribution as follow:

Table XIV
Frequency Distribution of Students' Score

| No | Interval Class | F | Percentages |
|--------------|----------------|----|-------------|
| 1 | 50 – 54 | 2 | 7.40% |
| 2 | 55 – 59 | 2 | 7.40% |
| 3 | 60 – 64 | 3 | 11.11% |
| 4 | 65 – 69 | 7 | 25.92% |
| 5 | 70 – 74 | 5 | 18.51% |
| 6 | 75 – 79 | 5 | 18.51% |
| 7 | 80 – 84 | 3 | 11.11% |
| <i>i</i> = 5 | | 27 | 100% |

Based on the table above, it can be drawn at histogram as follow:



c. Technique of Data Analysis

1. Requirement test

a. Normality and Homogeneity Pre-Test

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

Tabel XV
Normality and Homogeneity in Pre-Test

| Class | Normality Test | | Homogeneity Test | |
|------------------|----------------|-------------|------------------|-------------|
| | t_{count} | t_{table} | t_{count} | t_{table} |
| Experiment Class | 4.35 | 5.991 | $1.11 < 2.042$ | |
| Control Class | 2.52 | 5.991 | | |

Based on the table above researcher calculation, the score of experiment class $L_o=4.35 < L_t=5.991$ with $n = 35$ and control class $L_o=2.52 < L_t=5.991$ with $n = 27$, and real level $\alpha = 0.05$. Cause $L_o < L_t$ in the both class. So, H_a was accepted. It mean that experiment class and control class were distributed normal. It can be seen in appendix 18 and 19.

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

The coefficient of $F_{count} = 1.11$ was compared with F table. Where F table was determined at real $\alpha = 0.05$, and the different numerator $dk = N-1 = 35-1=34$ and denominator $dk N-1 = 27-1= 26$ So, by using the list of critical value at F distribution is got $F_{0.05} = 2.042$ and 2.052. It showed that $F_{count} (1.11) < F_{table} (2.042 \& 2.052)$. So, the researcher concluded that the variant from the data of the students' Reading Comprehension at MA YPKS Padangsidimpun by experimental and control class was homogen. The calculation can be seen on the appendix 19.

b. Normality and Homogeneity Post Test

1) Normality of experimental class and control class in Post-test

Tabel XVI
Normality and homogeneity in post-test

| Class | Normality Test | | Homogeneity Test | |
|------------------|----------------|-------------|------------------|-------------|
| | t_{count} | t_{table} | t_{count} | t_{table} |
| Experiment Class | 2.07 | 5.991 | 1.13 < 2.042 | |
| Control Class | 3.11 | 5.991 | | |

Based on the table above, the score of eksperimental class $Lo=2.07 < Lt=5.991$ with $n = 35$ and control class $Lo=3.11 < Lt=5.991$ with $n=27$, real level α was 0.05, Cause $Lo < Lt$ in the both class. So, H_a was accepted, it mean that experiment class and control class were distributed normal. It can be seen on appendix 20 and 22.

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

The coefficient of $F_{count} = 1.13$ was compared with F table. Where F table was determined at real $\alpha = 0.05$, and the different numerator $dk=N-1= 35-1=34$ and denominator $dk N-1= 27-1=26$ So, by using the list of critical value at F distribution was got $F_{0.05}=2.042$ and 2.052. It show that $F_{count} (1.13) < F_{table} (2.042 \& 2052)$. So, the researcher concluded that the variant from the data of the students' ability on Students' Reading Comprehension at MA YPKS

Padangsidimpuan by exsperimental and control class was homogeny.

The calculation can be seen on the appendix 22.

2. Hypothesis Test

The data would be analyzed to prove hypothesis by using formula of T-test. Hypothesis alternative (H_a) of research was “There was the effect of Directed Reading Thinking Activity (DRTA) strategy on Students’ Reading Comprehension. The result of the researcher calculation could be seen as follow:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \text{ with } S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 2)S_2^2}{n_1 + n_2 - 2}}$$

So:

$$\begin{aligned} S &= \sqrt{\frac{(35-1) 64.91 + (27-2)73.57}{35+27-2}} \\ &= \sqrt{\frac{35 (64.91) + 27 (73.57)}{60}} \\ &= \sqrt{\frac{2271.85 + 1986.39}{60}} \\ &= \sqrt{\frac{4258.24}{60}} \\ &= \sqrt{70.97} \\ &= 8.42 \end{aligned}$$

So:

$$\begin{aligned}
 t &= \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \\
 t &= \frac{82.7 - 65}{8.42 \sqrt{\frac{1}{35} + \frac{1}{27}}} \\
 &= \frac{17.7}{8.42 \sqrt{0.028 + 0.037}} \\
 &= \frac{17.7}{8.42 (0.065)} \\
 &= \frac{17.7}{0.547} \\
 &= 32.35
 \end{aligned}$$

Table XVII
Result of T-test from the Both Averages

| Pre-test | | Post-test | |
|--------------------|--------------------|--------------------|--------------------|
| t _{count} | t _{table} | t _{count} | t _{table} |
| 1.59 | 2.000 | 32.35 | 2.000 |

$$H_a: \mu_1 > \mu_2$$

Where:

$H_a: \mu_1 > \mu_2$ “ Directed Reading Thinking Activity (DRTA) strategies better than conventional strategy on Students’ Reading Comprehension.”

Based on researcher calculation, researcher found that $t_{\text{count}} 32.35$. while $t_{\text{table}} 2.000$. With opportunity $(1 - \alpha) = 1 - 5\% = 95\%$ and $dt = (n_1 + n_2 - 2) = (35 + 27 - 2) = 60$, cause $t_{\text{count}} > t_{\text{table}}$ ($32.35 > 2.000$). It means that hypothesis (H_a) was accepted. So, there is the significant effect of Directed Reading Thinking Activity (DRTA) strategy on Students' Reading Comprehension. In this case, the mean score of experiment class by using Directed Reading Thinking Activity (DRTA) strategy was 82.7, and mean score of control class was 65. The calculation can be seen on the appendix 23 and 24.

d. Discussion

Based on theory of DRTA strategy, Like stated by Stauffer who explained that is directed reading thinking activity (DRTA) is a popular method for engaging students in reading narrative text for understanding. In this research showed that DRTA has effect on students' reading comprehension in narrative text. It can be seen from the result after using DRTA the mean score in experimental class was 82.7, and control class 65.

Based on related finding, the research by Ade Yusrina, about Think-Pair-Share Technique on Students' Reading Comprehension in Analytical Exposition Text, the mean score of the experimental class in pre-test was 63. Next, Ummi Kalsum Batubara about semantic mapping strategy was 43.78, and the last the research with my thesis about DRTA the mean score of the experimental class in pre-test was 82.7, and than the mean score of Experimental in post test by

Ade Yusrina was 80,7, next, Ummi Kalsum Batubara was 82.19, and the last by using DRTA was 82.7. Furtherance based on the calculation of T-test by Ade Yusrina was $6.33 > 2.00$. Next, Ummi Kalsum Batubara the T- test was $(5.06 > 3.46)$, and the last by using DRTA the T-test was $32.35 > 2.000$.

Based on explanation above can be concluded that the result of students' reading comprehension in using Think-Pair-Share technique and semantic mapping strategy was lower than DRTA. It can be seen from mean score of pre test, post test and t-test. Finally, the researcher concluded that hypotheses alternative was accepted and there was effect of DRTA on students' reading comprehension in narrative text, and DRTA strategy is better to teaching students' reading comprehension.

e. Threats of the Research

The researcher found the threats of this research as follows:

1. The students needed more time for answering the test.
2. There were some students that were noisy while teaching and learning process. So, it can disturb the concentration of the others.
3. There were some students that were lack of serious to answer the test in pre-test and post-test. It can be the threat of the research. So, the researcher can not reach the validity of trustworthiness data.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

Based on the result of the research and calculation of the data, the researcher got the conclusion that there was the effect of using Directed Reading Thinking Activity (DRTA) strategy on Students' Reading Comprehension in narrative Text at MA YPKS Padangsidimpuan.. The hypothesis alternative (H_a) was accepted. It was based on the mean score of experimental class in pre test was 69.85, and the mean score of experimental class in post test was 82.7, it was bigger than control class ($82.7 > 65$) and proven with t_{count} was higher than t_{table} ($32.35 > 2.000$). So, the researcher concluded that Directed Reading Thinking Activity (DRTA) strategy was an effective on students' reading comprehension.

B. Suggestion

Based on the conclusion above the researcher suggested to:

1. The Principal of MA YPKS Padangsidimpuan, to motivate the teacher, especially English teachers to teach as well as possible by maximizing the using of Directed Reading Thinking (DRTA) Strategy in teaching reading.
2. The English teacher, the researcher suggests as an English teacher were hoped to use appropriate method to explain or to teach English subject to the students.

3. Other researcher, the researcher hopes that the others researchers who want to conduct a research related to this research to find the others influence of these strategies deeply. In order to motivate readers more critics and consider whatever they read and to increase their reading comprehension and to find the others problem in reading.

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