THE EFFECT OF LANGUAGE EXPERIENCE APPROACH (LEA) ON THE STUDENTS' ACHIEVEMENT IN READING COMPREHENSION AT MTS UMAR BIN KHATTAB BATANG KUIS

SKRIPSI

Submitted to Faculty of Tarbiyah and Teachers Training UIN- SU Medan as a Partial Fulfillment of the Requirement for the (Degree of Sarjana Pendidikan) S-1 Program

By:

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DEPARTMENT OF ENGLISH EDUCATION
FACULTY OF TARBIYAH AND TEACHERS TRAINING
STATE ISLAMIC UNIVERSITY
NORTH SUMATERA
MEDAN
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Judul skripsi **: THE EFFECT OF LANGUAGE EXPERIENCE APPROACH (LEA) ON THE STUDENTS' ACHIEVEMENT IN READING COMPREHENSION AT MTS UMAR BIN KHATTAB BATANG KUIS**

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Ilmu Tarbiyah dan Keguruan UIN-SU

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Setelah membaca, meneliti dan memberi saran-saran perbaikan seperlunya, terhadap skripsi saudari:

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Judul : THE EFFECT OF LANGUAGE EXPERIENCE APPROACH (LEA) ON THE STUDENTS' ACHIEVEMENT IN READING COMPREHENSION AT MTS UMAR BIN KHATTAB BATANG KUIS

Dengan ini kami menilai skripsi tersebut dapat disetujui untuk diajukan dalam sidang Munaqasyah Skripsi pada Fakultas Ilmu Tarbiyah dan Keguruan UIN Sumatera Utara.

Wassalamu'alaikum Wr. Wb

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ABSTRACT

ULA SYAKBINA NURA, NIM.34141038, THE EFFECT OF LANGUAGE EXPERIENCE APPROACH (LEA) ON THE STUDENTS' ACHIEVEMENT IN READING COMPREHENSION AT MTS UMAR BIN KHATTAB BATANG KUIS.

Skripsi, Medan: Department of English Education, Faculty of Tarbiyah and Teachers Training, State Islamic University of North Sumatera, Medan 2018.

Key Words **:** ***Language Experience Approach (LEA) On the Students' Achievement In Reading Comprehension***

This research was intended to find out the effect of Language Experience Approach (LEA) on the students' achievement in reading comprehension at grade VIII at MTs Umar Bin Khattab Batang Kuis. The population of this research were the class VII - 1, VII - 2, VIII - 1, VIII - 2 , and IX . The samples of this research were taken from 30 students of experimental group (class VIII-1) and 30 students of control group (class VIII-2). The instrument for collecting data were multiple choice test. In the finding , researcher analyzing by t-test . After analyzing the data, the researcher got; (1) The students' achievement in reading comprehension by Language Experience Approach got the mean 91.33 and standard deviation was 4.53; (2) The students' achievement in reading comprehension by using the audio-lingual approach got the mean 68 and standard deviation was 3.84. The value of $t_{observed}$ was 5.41 and that of t_{table} was 2.042. So the value of $t_{observed}$ was higher than that of t_{table}. It means that there was significant effect of Language Experience Approach on the students' achievement in reading comprehension.

ACKNOWLEDGEMENT

In the name of Allah, the Beneficent, the Merciful. Praise and Gratitude be to Allah for the health and strength that has given to the writer in writing this *skripsi*. Peace and blessing be upon the Prophet Muhammad *Shallallaahu'alaihi wa salaam*, his family, his relatives, and all his followers.

This thesis is written to fulfill one of the requirements to obtain the S-1 program at English Department of Faculty of Tarbiyah Science and Teachers Training, State Islamic University of North Sumatera (UIN SU).

In finding the research, I have encountered some difficulties such as collecting the references, finding the data and especially in analyzing the data. I realized that without much help from numerous people, this thesis wouldn't finish effectively. That's why obviously I would like to thanks to the following people:

1. **Prof. Dr. H. Saidurrahman, M.Ag** as the rector of State Islamic University of North Sumatera (UIN SU).
2. **Dr. H. Amiruddin Siahaan, M.Pd** as a Dean of Faculty of Tarbiyah and Teachers' Training State of Islamic University of North Sumatera and all of the administration staff.
3. **Dr. Sholihatul Hamidah Daulay, S.Ag, M.Hum** as head master of English Department for the facilities that given to me during the completion this thesis.
4. **Dr. H. Amiruddin, MS.MA. MBA. Ph.D** the first advisor who providing careful guidance, helpful corrections, great advice as well as suggestion and encouragement during the consultation.
5. **Utami Dewi, S.Pd, M.Hum** as the second advisor who patiently guided and helped the writer to finish this skripsi.
6. All lecturers in the English Department for teaching precious knowledge, sharing philosophy of life, and giving wonderful study experience.
7. **Abdul Ghafur Sina. SH** as the principal of MTs Umar Bin Khattab Batang Kuis , **Mr. Putra Patria. S.Pd.I** as the English teacher and all students of VIII class who helped the writer during the research.
8. My beloved father Usman and my beloved mother Rubiani, my beloved young sister Nuri Rahmadani, my beloved young brother Muhammad Rizky and all of my family who always given me advices, suggestions, and spirits, so that I can finishing this

final task and also their prayer as the greatest power on this earth that makes me easy to do this thesis, big thanks for your endless love.

9. My beloved Friends in PBI-4 (2014), especially my SW ; Roziyana Anggreni , Yusnaini , Asthia Enita Pasa , Zahrina Ulfa , Ayu Rizki Lestari , Wulan Dwi Harpani , and Nurul Izzati as my inspiration in learning, my favorite hello and my hardest good bye, always support, and pray each other. See you on the top guys!
10. My beloved friends especially Ziana Zulkarnain Sitorus , Aida Saputri Nasution and Al Fajri Bahri , Danty Fitria , Zakiyyah Anisatul Ulfah who help me for finishing this thesis.
11. And for all who helped and gave me spirit when doing this thesis.

May Allah protect and give the great blessing for them. *Aamiin*.

Finally, the writer realizes that this paper is far from being perfect and to suggestion and correction. It is a great pleasure for the writer to receive critics and suggestions in developing this research and it will has some values for the writer and for a better thing in the future. Hopefully this thesis may give the advantages for all.

Medan, 31 July 2018

Ula Syakbina Nura
34.14.1.038

TABLE OF CONTENT

Page

LIST OF TABLE

LIST OF APPENDICES

Appendix **Title** **Page**

CHAPTER I

INTRODUCTION

A. BACKGROUND OF THE STUDY

Reading is one of the most important skills in learning languages besides listening, speaking, and writing because the fundamental goal to any reading activity is knowing enough science concepts and knowing the languages especially comprehending or understanding. In the real world, people who read, read for intellectual profit or pleasure. The content of whatever they have chosen, to read will be useful to them to understand better. For students, academic goals like *'passing the course'* provides something like a real world motivation for reading.

Reinking at.al.in Kustaryo stated that reading is an active process of interacting with print or text ang monitoring comprehension to establish meaning. Reading is the instantaneous recognition of various written symbols, simultaneous association with existing knowledge, and comprehension of the information and ideas communicated. So, when a reader interacts with text or passage, his prior knowledge combined with the text.[1]

Contrary to the fact, based on my experience during conducting Teaching Practice (PPL), it was found that almost students got difficulties in getting information or the main idea of a text in their text book. It caused by some factors such as; students had too little recognized words or sight vocabulary, they got

[1]Tina Winingsih,(2017) *An Analysis of The Difference of Students' Reading comprehension Between Islamic University And Non-Islamic University* , accessed from http://qualitativeresearch6i.blogspot.co.id/2017/05/chapter-ii-theoritical-review_1.html, accessed on 29 January 2018

difficulties in recognizing new words, and they got difficulties in organizing the words meaningful sentences. Beside that, the students lack of prior knowledge about text so that they found difficuities in predicting at the content of passage.

Burns said that the students are motivated by the expectation that they will receive these rewards, which then provide reinforcement continue reading.[2] Reinforcement encourages students to continue to make associations between printed word and the things to which student refer and to practice the skills that they need for reading. By giving reward students will be more motivated. It is hoped the process of learning will be fun. This condition enables students to share the experience as a basis for discussion. Because reading is a good way in sharing the experience so that is why the writer uses LEA (Language Experience Approach) in teaching reading. According to Grabe and Stoller LEA is an approach to teach reading whereby students and teacher prepare reading materials. LEA is more appropiate to students who have facility with language and are simultaneous, reader-based thinkers. If a student predict from his own experiences rather than words in the text. This approach uses student's word to create a text that becomes material for reading lesson.

Therefore, with Language Experience Approach (LEA) is a whole language approach that promotes reading and writing through the use of personal experiences and their oral language. And this approach helps them to visualize reading as " talk written down " and offers good opportunities for developing the concepts of writing, word, and sentence.

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[2] Burns, (1984) *Teaching Reading in Today's Elementary Schools (3rd ed.)* Boston: Houghton Mifflin Co, p.11

B. STATEMENTS OF THE PROBLEMS

Based on the background described, there are some things that can be identified for the study. Some of it is as follows.

1. Learning reading comprehension are still not achieving because of the way presented less attracted the attention of student.
2. The level of students' ability in reading comprehension is low.

C. RESEARCH QUESTION

In relation to the background of the study, the problem of this study is formulated as the following :

1. Is there any significant effect of applying Language Experience Approach (LEA) on the students' achievement in reading comprehension ?

D. PURPOSES OF THE STUDY

Based on the problem of the study, purposes of this study is to investigate whether there is the effect of applying Language Experience Approach (LEA) on the students' achievement in reading comprehension.

E. THE SIGNIFICANCES OF THE STUDY

The findings of the study are expected to be useful for :

1. The students, to enlarge their knowledge

2. The English teacher, to give them a clear picture about the application of Language Experience Approach (LEA).
3. The reader, to add reference or give alternative way about teaching and learning reading by using Language.

F. LIMITATION OF THE STUDY

This study is focused on reading comprehension by applying Language Experience Approach (LEA) at Mts Umar Bin Khattab Batang Kuis.

CHAPTER II

LITERATURE REVIEW

A. REVIEW OF LITERATURE

Research in reading comprehension has received more attention in the past 15 years than in the previous six decades. In the foreword to Becoming a Nation of Readers: The Report of the Commissionon Reading, Robert Glaser suggests that the research now available on the reading process can help to identify teaching practices that are effective and to differentiate effective approach or strategies from those that are less useful. [3]

B. THEORETICAL FRAMEWORK

This Study is planned to investigate the effect of Language Experience Approach (LEA) on the teaching of Reading Comprehension in conducting a research. It is important to elaborate theories dealing with this study in order to avoid misunderstanding between the writer and the reader.

B.1 Reading

B.1.1 Definition of Reading

Reading is the skill or activity of getting information from books or the way in which you understand something.[4] Reading is one of the most important language skill in academic field. It is also one of the most complex skill in developing second language fluency because in reading people not only have to

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[3] Anderson, Hiebert, Scott, & Wilkinson, (1985) *Center For The Study Of Reading,* Champaign, Illinois : University of Illinois, p.2

[4]Patrick Giliard, (2003) *Cambridge Advance Learner's Dictionary*, USA: Princeton University Press, p.97.

activate their language competence but also their competence in connecting the text to the context.[5] In reading, people can't control the language use because the writer is already set up the whole content. Besides, the reader don't have any opportunities to ask for clarification or additional information if they don't get the idea of the message. In reading, people need to work by themselves to interpret the text and get the meaning of what the writer wants convey.

Moreover, Heilman, Blair, & Rupley argue that the reading can be defined as a thinking process and it can be a communicative skill. They also define the reading is an interacting process with the language in the printed page. This printed page should be understood and the reader should be able to express in oral form. In the short sentence, they defines that reading is a language process. However, basically the nature of reading is difficult to be defined as in the process of reading exactly. This can be pointed out in many view. [6]

Reading is primarily a process of constructing meaning from written words, and students are also evaluated how to apply a variety of comprehension and critical thinking skill and strategies to do it well. These skills range from making inferences, understanding cause and effect relationships, and summarizing main ideas and key facts to understanding a writer's point of view, recognizing various persuasive devices, and being able to distinguish between fact and opinion.

Reading is very useful and important for us, not only in English Learning but also in the other learning; physics, mathematics, chemistry, biology, etc. We

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[5]Christine Nuttal,(2005) *Teaching Reading Skill*, London: Macmillan Publisher, p.3.

[6]Heilman, Blair Rupley, (1981) *Principle and Practices ofTeaching Reading*, USA: Merril, p.2.

can access more information though reading. Considering the importance of reading, no wonder that Allah Swt commands human being to read through the first revelations Allah says in the Holy Qur'an, Al – 'Alaq 1 – 5 :

The meaning are :
(1) Proclaim ! (Read) in the name of your Lord who created, (2) Who Created man from a clinging substance, (3) Proclaim, and your Lord is the most Bountiful, (4) He Who taught (the use of) the pen, (5) Taught man that which he knew not.[7]

The first word of the verse is " *Iqra!* " That means " Read ". It has a big meaning for us as Allah's creature, firstly however, we are the human come to this world can not read everything, but with all our abillity be permit from Allah finally we can read everything what we want. The verse also means that if we want to know something we must read, if we want to get some information or knowledge can change our condition by ourselves, it is important to know that reading not only mean reading situation and condition in this world but also increase knowledge.

B.1.2 Purposes for Reading

Grabe and Stoller classified the reading purposes as follows :

1) Reading to search for simple information and reading to skim

[7]Tim Penerjemah Al-Qur'an Terjemah Indonesia Inggris, (2008) *Al-Qur'an Terjemah Indonesia Inggris,* Solo: Penerbit Al-Qur'an Qamari, p.1304

Reading to search for simple information is a common reading ability, though some researchers see it as a relatively independent cognitive process. It is used so often in reading tasks that is probably best seen as a type of reading ability. In reading to search, we typically scan the text for a specific piece of information or specific word. Similarly, reading to skim is a common part of many reading tasks and useful skill in its own right. It involves, in essence, a combination of strategies for guessing where important information might be in the text.

2) Reading to learn from texts

Reading to learn typically occurs in academic and professional contexts in which a person needs to learn a considerable amount of information from a text. It requires abilities to :

a) Remember main ideas as well as number of details that elaborate the main and supporting ideas in text.

b) Link the text to the reader's knowledge base.

3) Reading to integrate information, write and critique texts

Reading to integrate information requires additional decisions about the relative importance of complementary, mutually supporting or conflicting information to accommodate information from multiple sources. In this respect, both reading to write and reading to critique texts may be task variants of reading to integrate information. Both require abilities to compose, select and critique information from a text.

4) Reading for general comprehension

Reading for general information is the most bacis purpose for reading, underlying and supporting most other purposes for reading. General reading comprehension is actually more complex than commonly assumed. Reading for general comprehension, when accomplished by a skilled fluent reader, requires very rapid and automatic processing of words, strong skills in forming a general meaning representation of main ideas, and efficient coordination of many process under very limited time constraints. [8]

B.1.3 The Basics Skills of Reading

Finocchario defines the basic skills of reading as follows :

1) Pronounciation

Pronunciation is the utterance of any sound symbol or word. It is important in recognizing a word because the correct pronunciation of a word would help the reader to recall the meaning of it. Stresss and intonation are under this part.

2) Structural System

Structural System is the part of a word that forms unit of meaning or sound. The unit may be past of an inflectional ending, a compound word, a prefix, suffix, and syllable.

3) Vocabulary

Vocabulary is a list of word in which a reader can find words to express the meaning. In other word recognition vocabulary is much larger than production vocabulary.

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[8]Stoller, *Op.cit* ., p. 13-15.

4) Comprehension

Comprehension is the combination of the knowledge in structure and vocabulary in which situation the language is used. [9]

B.2 Comprehension

Mikulecky and Jeffries state that comprehension is making sense of what someone reads and connecting the ideas in the text to what he already knows.[10]According to Smith, Comprehension may be regarded as relating aspects of the world around us – including what we read – to the knowledge, intentions and expectations we already have in our head. It is clearly the purpose of reading and of learning to read. [11]

Duke said that comprehension is intentional thinking during which meaning is constructed through interactions between text and reader. [12]

From definition above can be understood that comprehension is a process in which readers construct meaning by interacting with text through the combination of prior knowledge and previous experience, information in the text, and the stancethe reader takes in relationship to the text. As these different definition demonstrate, there are many interpretation of what it means to comprehend text.

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[9]Mary BanomoFinocchiaro,(1964) *English As A Second Language*, Newyork: Regents Publisher, p.41

[10]Mickulecky, B. S, and Jeffries, L, (2004) *More Reading Power: Reading for Pleasure, Comprehension Skills, Thinking Skill, Reading Faster*,New York: Pearson Education, p.74.

[11]Smith, F, (2004) *Understanding Reading: A Psycholinguistics Analysis of Reading and Learning to Read Sixth Ed.*NewJersey : Lawrence Erlbaum Associates, p.41.

[12]Duke, N, (2003) *Comprehension Instruction For Informational Text. Presentation at The Annual Meeting Of The Michigan Reading Association*, MI:Grand Rapids, p.124.

B.3 Reading Comprehension

B.3.1 Definition of Reading Comprehension

There are so many definition of reading. Linguistics give definition about reading in various ways. They say that reading is the process to get, to understand, to catch the content of the reading. They also add that reading is a process to understand a written text which means extracting the required information from it, as efficiently as a possible. Smith defines that reading as seen as a creative and constructive activity having four distinctive and fundamental characteristics – it is *purposeful,selective,anticipatory,* and based on *comprehension*, all matters where the reader must clearly exercise control.[13]

Richards and Schmidt say that comprehension is the identification of the intended meaning of written or spoken communication. They also adds that contemporary theories of comprehension emphasize that it is an active process drawing both on information contained in the message (bottom-up processing) as well as background knowledge, information from the context and from the listener's and speaker's purposes or intention (top-down processing).[14] It is also supported by Smith that readers learn the meaning by making sense of words from their context, using what is known to comprehend and learn the unfamiliar.[15]

Reading comprehension is an extraordinary feat of balancing and coordinating many abilities in a very complex and rapid set of routines that makes comprehension a seemingly effortless and enjoyable activity for fluent readers. In fact, the many process described here all occur in working memory, and they

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[13]*Ibid.*, p.3.
[14]Richard, J.C. & Schmidt, R, (2000) *Longman Dictionary of Language Teaching and Applied Linguistics*, England: Pearson Education Limited, p.99.
[15]Smith, F, *Op.Cit*, p. 165.

happen very quickly unless they are comprehension problem. So, roughly, in the space of any two second of riding time, fluent readers accomplish numerous operations.

Accordingly, reading comprehension is not memorization by rote, as ilustrated by John Brewery's visit to the class that had read how the earth was probably formed. In contrast with the older emphasis on teaching reading comprehension as a product by asking students to answer question about their reading, interactive approaches stress teacing reading comprehension as a process. Accordingly, students are taught techniques for processing text – making inferences, activating concepts, relating new information to old, creating picture images, and reducing the information in a text to a main idea.

B.3.2 Students' Achievement in Reading Comprehension

Achievement is a process of developing skill or knowledge. The most common type of achievement is a standardized process in developing the measurable skill and knowledge learned in a giving grade level, usually through planned instruction, such as training or classroom instruction. According to Hornby that achievement is a thing done successfully, especially with effort and skill or the action or process of achieving something.

Evaluation of the students' achievement is necessary. Teacher must gives score to the students' work in order to know successin teaching and students' achievement in learning. The goal of evaluation is not only to know the students' achievement but also the development and the progress of the students.

B.4 Level of Comprehension

B.4.1 Literal Comprehension

Literal comprehension is refers to ability to understand what state by the writer or taking the idea and facts that are directly stated on the printed page. The basic of literal of comprehension is recognizing stated mind idea, detailed, cause effect, and sequences. Mastering the basic of literal comprehension can be done through understanding of vocabulary, sentence meaning in paragraph meaning,the literal level is the easiest level of reading comprehension because a reader is not required to beyond what they actually said. In this level, the readers know the words meaning, able to paraphrase or recall of details directly in own words.

B.4.2 Inferential Comprehension

Inferential comprehension refers to the ability to go beyond what its stated directly, to understand what the writer means by looking for the inside meaning. Readers identified and derived ideas and meaning from a text they are explicitly stated. It can be said that inferential comprehension is the ability to get inference or implied meaning from the text. In this level, the reader is able to infer factual information, main idea, comparison, cause-effect relationship which is not explicitly stated in the passage.

B.4.3 Creative Comprehension

Creative comprehension refers to the ability of reader to use his / her imagination when reading the passage. Skill or creative reading comprehension includes the understanding cause – effect relationship on a story problem solving

and producing the creation. In this level, the reader able to product and new idea, develop his new insight through the reader material.

B.5 Language Experience Approach (LEA)

The Language Experience Approach (LEA) to reading instruction is based on principles of learning that have been documented and discussed for many years (Huey, 1908 and Smith, 1967).The Language Experience Approach (LEA) is an approach to reading instruction based on activities and stories developed from personal experience of the learner. The stories about personal experiences are written down by a teacher and read together until the learner assosiates the written from of the word with the spoken.

Language Experience Approach (LEA) is first described by Professor Roach Van alen in Brown in 1967. He said that Language Experience Approach (LEA) an integrated skill initially used in teaching native language reading skills, but more recently adapted to second language learning context.

Grabe and stoller said that Language Experience Approach (LEA) is teaching reading whereby students and teachers prepare reading materials together. They also said that students dictate a story the teacher about a topic of interest, the teacher writes the story down, the students copy the story and read.[16]

The language experience approach is not a panacea, however. A major comparative study of different approaches to teaching reading came to the rather predictable conclusion that the expertise ofthe classroom teacher is the critical factor. The value of the language experienceapproach is that it provides the

[16]Stoller.*Op.Cit*, p.206.

classroom teacher with a coherent and defensibleframework within which children can be taught to read. Materials and methodstaken from other approaches can he integrated easily with the language experience approach so as to develop truly eclectic reading programs. These programs will he based on what is known about children's language developmentand on their need for planned and integrated language experience.

This discussion has sought to rationalize the language experience approachby placing reading within a total language communication framework, by indicatingits compliance with present knowledge of child development, and by suggesting how it reduces the cognitive confusion associated with leaming toread. Throughout this discussion, however, no direct reference bas been made tohow language experience provides a purpose for reading.One purpose is that children may learn through reading. Reading is a tool for leaming, and language experience develops in children an expectation tbat reading is a meaning-getting activity. Their first experiences as readers involve comprehension of their own messages, which are interesting and have purpose. This expectation will carry over to the reading of material written by others. Reading therefore represents a direct and legitimate means of answering children's leaming needs as these successively appear through their years in school.But reading has a joy as weIl. It is a source of personal enrichment anddiscovery. Children see human experience rendered in written language atfirst their own, and then that of others. They come to anticipate pleasure inreading and to expect the excitement and personal discovery that reading canbring.[17]

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[17]*Ibid.,* p.8.

B.6 The Procedure of Language Experience Approach (LEA) in the Class

Traditionally,Language Experience Approach involves these step :

a. The teacher and the students discuss an experience in which all have recently participated, such as a school field trip or the examination of an unusual object. As the teacher and the students discuss their observations and reactions, the students' understanding of the experience is deepened while oral vocabulary and language skills are developed and reinforced.

b. As students formulate and express their ideas, the teacher guides them in creating a dictated account. Students offer statements that they want included in the account, or the teacher selects statements from the ongoing conversation and suggests that these be used. The teacherrecords the students' statements on chart paper, constructing the text while the students watch. Seeing their words written down, students connect what they just said to what appears on the paper.

c. The teacher reads the account to the students, modeling the sound of fluent, expressive reading. Students then read it several times, with teacher help as needed, until they become familiar with it.

d. With the teacher's guidance, students learn to recognize specific words from the account and develop the decoding skills of context, phonics, and structural analysis, using the account as a resource. Students may also write their own thoughts to supplement and extend the dictation.[18]

[18]Nessel and Jones , (1981) *Introduction to the Language Experience Approach*. p.1.

B.7 The Characteristics of Language Experience Approach (LEA)

The characteristics of Language Experience Approach are :

a. All communication skill such as reading, writing, language and skill are integrated.
b. Difficult of vocabulary and grammar are determined by the learners own language use.
c. Learning and teaching are personalized, communicative and creative. By Language Experience Approach (LEA) students are able to improve their ability in learning especially reading.

B.8 The Advantages of Language Experience Approach (LEA)

a. It brings together reading, writing art and language.
b. It extends the learners' creativity in story telling through writing.
c. It helps learners understand that what they think and say can be written.
d. It is learner centered and demonstrates that the learners' thoughts and language are valued.
e. It helps students in creating their own stories rather that being given other people's stories.
f. Students are directly involved in the creative process of fashioning their own products.
g. The development of shared experiences that extend children's knowledge of the world around them while building a sense of classroom community.

h. Students learn to recognize words in print that are orallyvery familiar to them.[19]

B.9 The Disadvantages of Language Experience Approach (LEA)

a. Students are careless to use inventive spelling so it makes students re-occur to interface the learning correct spelling.

b. Students are not able to correct their errors in language ability. So they can not correct their errors.

c. Students are not able to address their issue in a consistent manner because Language Experience Approach (LEA) is an interactive approach to teach reading.

d. Language Experience Approach is not currently in widespread use.[20]

C. CONCEPTUAL FRAMEWORK

This study is focused on the effect of Language Experience Approach (LEA) on the teaching of Reading Comprehension. Based on the previous elaborations on the theoretical framework. Language Experience Approach (LEA) is an approach of reading instruction based on activities and stories developed from personal experience of the learner. Students are involved in planning, experiencing, responding to and reading experience and in participating in activity of class.

Reading is an important skill that student must have. Because by reading students are able to read anything which give them a lot of information. Today,there are many problems in reading that students face in reading especially.

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[19]Jones. *Op.Cit*, p. 2.
[20]*Ibid*., p.3.

In Reading Comprehension students must have awareness about the content or material in reading to comprehend and to understand text.

So that is why, this study provide another approach in teaching namely Language Experience Approach (LEA) where it enable students to face the problems in reading and give teacher another way in teaching learning activities.

D. HYPOTHESIS

Based on theoretical and conceptual framework the two hyphotesis of this research can be formulated.

1. Alternative Hyphotesis (H_a)

   "There is a significant effect of the students' achievement in reading comprehension taught by Language Experience Approach .

2. Null Hypothesis (H_O)

   "There is no a significant effect of the students' achievement in reading comprehension taught by Language Experience Approach.

CHAPTER III

RESEARCH METHODOLOGY

A. RESEARCH DESIGN

This research was conducted in experimental research. This type of research was conducted with groups , pre – test and post-test design. The design was applied in order to investigate the effect Language Experience Approach (LEA) on students' reading comprehension. The treatment expected to affect reading comprehension skill. The group of experimental was talked by using Language Experience Approach (LEA). Meanwhile , the control group is the group was used the audio-lingual approach. The procedure of this approach is majority repeat the sentence, the students are confused because the teacher explain the material in simple way not in detail way.

Before the treatment conducted ; a pre – test was administrate into the two groups to ensure the quality and homogeneity. After the treatment has been done , a post – test was administrated.

Table I

Research Design

Group	Pre – Test	Treatment	Post – Test
Experimental	**X1**	✓	**X2**
Control	**Y1**	**-**	**Y2**

Where : X1 : Pre – test of Experimental Group

Y1 : Pre – test of Control Group

X2	:	Post – test of Experimental Group
Y2	:	Post – test of Control Group
✓	:	Teaching reading by using Language Experience Approach (LEA)
-	:	Teaching reading without using Language Experience Approach

B. POPULATION AND SAMPLE

B.1 Population

The objects was researched.[21] It was about all data that concerned in a scope and time that specified.[22] The population of this research was from Mts Umar Bin Khattab Batang Kuis, North Sumatera in academic year of 2017/2018. The population of the research was distributed as follow:

VII – 1 = 31 Students	VII – 2 = 30 Students
VIII – 1 = 30 Students	VIII – 2 = 30 Students

IX = 38 Students

So , the total was 159 Students at Mts Umar Bin Khattab Batang Kuis.

B.2 Sample

Small proportion of a population was selected for observation and analysis.[23] One classes of the two classes selected was used as the experimental group and the other one was the control group , and based on the randomized

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[21]Syahrum and Salim, (2011) *Metodologi Penelitian Kualitatif*, Bandung: Cita Pustaka Media, p.113

[22] Ibid.,

[23]Suharsimi Arikunto, (1993) *Prosedur Penelitian: Suatu Pendekatan Praktek*, Jakarta: PT Rineka Cipta, p.131

system 60 students was chosen in two classes VIII[1] (30) students as the experimental group and VIII[2] (30) students as the control group.

C. DATA COLLECTION

The data of this study was collected by using multiple choice test. To collect the data, this study was used pre-test and post-test. Data of pre – test was administrated before the class treatment of control and experimental groups. Data of post – test was administrated after the class treatment of control and experimental groups.

D. DATA ANALYSIS

Gain Score analysis is a method of data analysis from experimental design by finding the difference value of post-test and pre-test, moreover the gain score analysis is used if there is interaction / difference between group or group with pre score. Basically the gain score is the value of the difference in scores and can be tested using t-test.[24]

In this tudy , multiple choice test was used as the instrument to obtain data. The procedures in administrating the test was divided into : preparation , pre – test , teaching presentation (treatment) and post – test. The data was collected by giving a multiple choice test that consist of 20 items and it was took from the subject matter. Each of the tests consists of 4 options. Students was asked to choose one correct option for each item. In scoring the test , the cumulative score range is 0 – 100. To obtain the scores , the correct answers were counted.

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[24] http://www.statistikopensource.com/r/gain-score-dan-cohen-d-dalam-penelitian-eksperimen. Accessed on 30 April 2018 at 11.48

The following formula is applied :

$$S = \frac{}{}$$

Where :

S : the score
R : the number of the correct items
N : the number of the test

To find out the effect of Language Experience Approach on the students'achievement in reading comprehension, mean of the control group and experimental group was compared by using t-test,

as follows:

$$t_{test} = \frac{}{\sqrt{(\quad)(\quad)}}$$

In which:

t : total score
Ma : the mean of experimental group
Mb : the mean of control group
Da^2 : the standard of deviation of experimental group
Db^2 : the standard of deviation of control group
Na : the total numbers of experimental group
Nb : the total numbers of control group

D.1 Validity

The validity of a test refers to the degree to which what is being measured is what the researchers intended. There are a number of aspects of the validity of a measure that should be checked.[25]

[25] David Clark, *Quantitative Psychological Research*,(Psychological Press, 2004),

To interprets the test validity price, consult the price at the criticism price of r at product moment, . If so the item is valid.

D.2 Reliability

Reliability is the degree to which an assessment tool produces stable and consistent results.

D.3 Normality

Normality test was held to determine whether normal or abnormal research data or research variables.

a. The observation XI, X2, X3, … …, Xn are served raw numbers Z1, Z2, Z3, …, …, Zn using the formula. To count of raw numbers with the formulas :

$$\bar{X}$$

X = Average sample
S = Standard deviation

b. For each of these raw numbers using standard normal distribution is calculated odds F (Zi) = P (Z ≤ Zi)

c. Furthermore, in calculating the proportion that expressed by S (Zi) then :

( )

d. Calculate F (Zi) – S (Zi) and define the absolute priceDetermine the largest price of the difference F (Zi) – S (Zi) as Lo.[26]

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p. 28-29

[26]Jaya Indra, (2013) *Penerapan Statistik Untuk Pendidikan*, Bandung: Citapustaka Media Perintis, p. 107

D.4 Homogeneity

Homogeneity Test was used to determine whether the sample variance has the same or homogeneous variance, test of homogeneity was used with the following formula[27]

Criteria for testing Ho is rejected if $F \geq F_{0,05}$ (v1, v2) where $F_{0,05}$ (v1, v2) obtained from the F distribution list with a chance of $\alpha = 0,05$ and $\alpha = 0,01$,whereas the v1 and v2 degrees of freedom each corresponding to df numerator and denominator of the formula above.

E. RESEARCH PROCEDURE

In conducted the research, there were some procedures that applied for took the data:

E.1 Pre – Test

Before giving the treatment , the two groups were clearly chosen in same level of knowledge. Pre – test was conducted to find out homogeneity of the sample. It was used to determine whether the two groups are relatively equal in reading comprehension. So the homogeneity was seen from the average score of each group.

[27]*Metode Statistika, Op. Cit,* p. 14

E.2 Treatment

Treatment was gave to the experimental group for some period of time. It was to introduced the Language Experience Approach (LEA) in reading in learning to the students.

In this research , the writer was talked reading comprehension to the experimental group by using Language Experience Approach (LEA) meanwhile the control was given by the other ways except Language Experience Approach (LEA).

a. Teaching Activities using Language Experience Approach (LEA)

1). Introduction

The teacher told the students that they are going to read based on the text.

2). Realization

The following are adopted as the realization from the Language Experience Approach (LEA) procedures in the classroom.

1). Stage I : Experiencing

a). The teacher engages students in dialogue about a particular topic. A stimulating , engaging and concrete topic tends to elicit more language from fine students.

b). The students dictate a story and the teacher serves his / her self as a secretary for the class.

c). Using leading questions the teacher guides the students to develop a story line by using question such as these : " What is the next about ? , from the text , what do your opinion about the text ?

2). Stage II : Discussing the Experience

a). The students and the teacher read the story simultaneously to revise any statements or phrases that are unclear to the students. The story is to follow the natural language pattern of the students.

b). Then the teacher and the students read the story repeatedly because repetition of the entire story will encourage a predictive set for the story.

3). Stage III : Saving the Experience

a). Teacher save students' own language. The most important aspect of saving is to use students' own save. Keeping the match between what students say and what teacher writes.

b). The students are asked to read the story independently.

4). Stage IV : Using Saving of the Experience for Reading Activities

a). Stories are collated into anthologies that create the initial reading material and the students.

b). The students extend the experience in the class.

c). As words are repeatedly read in the context , the teacher cheecks them off a word list , but does not assess the knowledge in isolation.

Teaching Activities with another ways except using Language Experience Approach (LEA)

This control group is conducted without using LEA , the steps are :

1). The teacher introduces the topic to the students.

2). The teacher asks the students to read the text for a few minute.

3). The teacher read the whole text once again.

4). After that the teacher assigns the students to find out the meaning of the difficult words.

5). the teacher invites some students to say something about the text in the last meeting.

E.3 Post – Test

The post – test was administrated after the treatment has been completed. The post – test was conducted to measure the competence of the students then find out the difference in mean scores of both experimental and control group. It also used to find out the students' reading comprehension after treatment.

CHAPTER IV

FINDING AND DISCUSSION

A. Findings

A.1. Description Data

In this section, the researcher presents the students' reading comprehension before and after teaching by using Language Experience Approach in teaching reading. The subject of experiment class are 30 students and control class are 30 students of grade VIII at MTs Umar Bin Khattab Batang Kuis.

The method used in this research was quantitative data. There were two groups in this research, namely experimental and control groups. The students in the experimental group were taught by Language Experience Approach. The research was conducted from 17 July until 24 July. The research was given by multiple choice test based on descriptive text.

The Students' reading test was scored by calculating the correct answers based on descriptive text. After conducting the research, the researcher got the data of the students' scores in the pre-test and post-test from both experimental and control group.

A.2 Data Analysis

The student's ability in reading comprehension in experimental group was showed the lowest score of pre-test was 20 , and the highest score of pre-test was 85 and the student's ability in reading comprehension in experimental group was showed the lowest score of post-test was 80 , and the highest score of post-test was 95.

The students' ability in reading comprehension in control group showed the lowest score of pre – test was 20, and the highest score of pre-test was 55 and the

student's ability in reading comprehension in control group was showed the lowest score of post-test was 45 , and the highest score of post-test was 70.

The calculation of pre-test and post-test of experimental group and control group were showed that the increasing of students' reading comprehension by using Language Experience Approach of grade VIII at MTs Umar Bin Khattab Batang Kuis. It was showed fr'm the mean of experimental group in pre-test = 59.16 and in post-test = 91.33. Then the mean of control group in pre-test = 50.66 and in post-test = 67.66.

A.2.1 Normality Testing

Normality testing was used to determine if a data set was well-modeled by a normal distribution and to compute how likely it was for a randomed variable underlying the data set to be normally distributed.

A.2.1.1 Normality Testing of Experimental Group

Tabel II
Frequency Distribution of Pre Test in Experimental Group

NO	Xi	Fi	FiXi	Xi^2	$FiXi^2$
1	20	1	20	400	400
2	30	1	30	900	900
3	35	1	35	1225	1225
4	40	2	80	1600	6400
5	45	2	90	2025	8100
6	50	2	100	2500	10000
7	55	1	55	3025	3025
8	60	6	360	3600	129600
9	65	5	325	4225	105625
10	70	3	210	4900	44100
11	75	4	300	5625	90000
12	85	2	170	7225	28900
Total		**30**	**1775**	**37250**	**428275**

From the table above , It can be seen that 30 got the total of Fi (Frequency of Score in Pre Test). 1775 got from the total of FiXi (Frequency of Score in Pre Test Times Score of Pre Test). 37250 got from the total of Xi^2 (Score of Pre Test Times Two). 428275 got from the total of $FiXi^2$ (Frequency of Score in Pre Test and Score of Pre Test Times Two).

Based on the data above, the result of $F_iX_i^2$ is 428275 and F_iX_i is 1775. Then the following was the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{x} = \frac{}{}$$

Where:

$\bar{x}$ = Mean of variable x
$\sum F_iX_i$ = Total number of score
$\sum F_i$ = Number of sample

So,

$$\bar{x} = \frac{}{}$$

$$= \frac{}{}$$

= 59.16

b. Variant

Where:

S^2 = Variant
N = Number of sample

So,

$$S^2 = \frac{(\quad)}{(\quad)}$$

$$= \frac{- ( )}{(\quad)}$$

$$= \frac{-}{(\quad)}$$

$$= \frac{\quad}{\quad}$$

$$= 11.14$$

c. Standard Deviation

$$S = \sqrt{\quad}$$

$$= \sqrt{\quad}$$

$$= 3.33$$

After getting the calculation of mean, variant and deviation standard, then the next step is to find out the normality of the test.

It means that the test was given to the students is observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table III
Normality Testing of Pre Test in Experimental Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	20	-2.49	0.006	0.03	-0.024
2	30	-1.85	0.032	0.03	0.002
3	35	-1.53	0.063	0.03	0.033
4	40	-1.22	0.111	0.06	0.051
5	40	-1.22	0.111	0.06	0.051
6	45	-0.9	0.184	0.06	0.124
7	45	-0.9	0.814	0.06	0.754
8	50	-0.58	0.281	0.06	0.221
9	50	-0.58	0.281	0.06	0.221
10	55	-0.26	0.397	0.03	0.367
11	60	0.05	0.519	0.2	0.319

No	Score	Zi	F(Zi)	S(Zi)	S(Zi)
12	60	0.05	0.519	0.2	0.319
13	60	0.05	0.519	0.2	0.319
14	60	0.05	0.519	0.2	0.319
15	60	0.05	0.519	0.2	0.319
16	60	0.05	0.519	0.2	0.319
17	65	0.37	0.644	0.16	0.484
18	65	0.37	0.644	0.16	0.484
19	65	0.37	0.644	0.16	0.484
20	65	0.37	0.644	0.16	0.484
21	65	0.37	0.644	0.16	0.484
22	70	0.69	0.754	0.1	0.654
23	70	0.69	0.754	0.1	0.654
24	70	0.69	0.754	0.1	0.654
25	75	1.008	0.841	0.13	0.711
26	75	1.008	0.841	0.13	0.711
27	75	1.008	0.841	0.13	0.711
28	75	1.008	0.841	0.13	0.711
29	85	1.64	0.949	0.06	0.889
30	85	1.64	0.949	0.06	0.889
Total	**1775**	**Lo = 0.886**			
Mean	**59.16666667**	**Lt = 0.889**			

From the table above , It can be seen that 1775 got from the total of score. 59.16 got from the total of score divided the total of students. 0.889 got from the higher score Standard Normal Distribution minus The Calculation of Proportion Frequency Kumulatif divided the Total of Students. 0.886 the value of Lilliefors.

a. Finding Z score

Formula: $Z_i = \frac{1 - \bar{}}{\quad}$

Z_i $1 = \quad = 2.49$

Z_i $2 = \quad = 1.85$

Z_i $3 = \quad = 1.53$

Z_i 4 = = -1.22

Z_i 5 = = -0.9

Z_i 6 = = -0.58

Z_i 7 = = -0.26

Z_i 8 = = 0.05

Z_i 9 = = 0.37

Z_i 10 = = 0.69

Z_i 11 = = 1.008

Z_i 12 = = 1.64

b. Finding $S(Z_i)$

$S(Z_i)$ = _____

— = 0.03

— = 0.03

— = 0.03

— = 0.06

— = 0.06

— = 0.06

— = 0.03

— = 0.2

— = 0.16

— = 0.1

— = 0.13

— = 0.06

From the table above, it can be seen that Liliefors observation or L_o = 0.886 with n = 30 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.889.

It is known that the coefficient of L_o (0.886) < L_t (0.889). So it can be concluded that the data distribution of the student's ability in reading comprehension is **normal.**

Table IV
Frequency Distribution of Post Test in Experimental Group

NO	Xi	Fi	FiXi	Xi^2	$FiXi^2$
1	80	2	160	6400	12800
2	85	3	255	7225	21675
3	90	10	900	8100	81000
4	95	15	1425	9025	135375
Total		**30**	**2740**	**30750**	**250850**

From the table above , it can be seen that 30 got from the total of Fi (Frequency of Score in Post Test in Experimental Group). 2740 got from FiXi (Frequency of Score in Post Test Times Score of Post Test in Experimental

Group). 30750 got from Xi^2 (Score of Post Test Times Two in Experimental Group). 250850 got from $FiXi^2$ (Frequency of Score in Post Test and Score of Post Test Times Two in Experimental Group).

Based on the data above, the result of $F_iX_i^2$ is 250850 and F_iX_i is 2740. Then the following was the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{x} = \frac{}{}$$

Where:

$\bar{x}$ = Mean of variable x
$\sum F_iX_i$ = Total number of score
$\sum F_i$ = Number of sample

So,

$$\bar{x} = \frac{}{}$$

$$= \frac{}{}$$

= 91.33

b. Variant

Where:

S^2 = Variant
N = Number of sample

So,

$$S^2 = \frac{(\quad)}{(\quad)}$$

$$= \frac{\quad -(\quad)}{(\quad)}$$

$= \frac{-}{(\quad)}$

$=$

= 20.57

c. Standard Deviation

$S = \sqrt{\quad}$

$= \sqrt{\quad}$

= 4.53

After getting the calculation of mean, variant and deviation standard, then the next step was to find out the normality of the test. It means that the test was given to the students was observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table V
Normality Testing of Post Test in Experimental Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	80	-2.5	0.006	0.06	-0.054
2	80	-2.5	0.006	0.06	-0.054
3	85	-1.39	0.082	0.1	-0.018
4	85	-1.39	0.082	0.1	-0.018
5	85	-1.39	0.082	0.1	-0.018
6	90	-0.29	0.385	0.33	0.055
7	90	-0.29	0.385	0.33	0.055
8	90	-0.29	0.385	0.33	0.055
9	90	-0.29	0.385	0.33	0.055
10	90	-0.29	0.385	0.33	0.055
11	90	-0.29	0.385	0.33	0.055
12	90	-0.29	0.385	0.33	0.055
13	90	-0.29	0.385	0.33	0.055
14	90	-0.29	0.385	0.33	0.055
15	90	-0.29	0.385	0.33	0.055

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
16	95	0.81	0.791	0.5	0.291
17	95	0.81	0.791	0.5	0.291
18	95	0.81	0.791	0.5	0.291
19	95	0.81	0.791	0.5	0.291
20	95	0.81	0.791	0.5	0.291
21	95	0.81	0.791	0.5	0.291
22	95	0.81	0.791	0.5	0.291
23	95	0.81	0.791	0.5	0.291
24	95	0.81	0.791	0.5	0.291
25	95	0.81	0.791	0.5	0.291
26	95	0.81	0.791	0.5	0.291
27	95	0.81	0.791	0.5	0.291
28	95	0.81	0.791	0.5	0.291
29	95	0.81	0.791	0.5	0.291
30	95	0.81	0.791	0.5	0.291
Total	**2740**	**Lo = 0.291**			
Mean	**91.33333333**	**Lt = 0.889**			

From the table above , It can be seen that 2740 got from the total of score. 91.33 got from the total of score divided the total of students. 0.889 got from the higher score Standard Normal Distribution minus The Calculation of Proportion Frequency Kumulatif divided the Total of Students. 0.291the value of Lilliefors.

a. Finding Z score

Formula: $Z_i 1 = \frac{-}{}$

$Z_i 1 = \frac{}{} = -2.5$

$Z_i 2 = \frac{}{} = -1.39$

$Z_i 3 = \frac{}{} = -0.29$

^{i} Z 4 = = 0.81

b. Finding $S(Z_i)$

$S(Z_i)$ = _____

— = 0.06

— = 0.1

— = 0.33

— = 0.5

From the table above, it can be seen that Liliefors observation or L_o = 0.291 with n = 30 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.889.

It was known that the coefficient of L_o (0.291) < L_t (0.889). So it can be concluded that the data distribution of the student's ability in reading comprehension is **normal.**

A.2.1.2 Normality Testing of Control Group

Table VI
Frequency Distribution of Pre Test in Control Group

NO	Xi	Fi	FiXi	Xi^2	$FiXi^2$
1	20	1	20	400	400
2	35	1	35	1225	1225
3	40	3	120	1600	4800
4	45	1	45	2025	2025
5	50	4	200	2500	10000
6	55	20	1100	3025	60500
Total		**30**	**1520**	**10775**	**78950**

From the table above , It can be seen that 30 got the total of Fi (Frequency of Score in Pre Test). 1520 got from the total of FiXi (Frequency of Score in Pre Test Times Score of Pre Test). 10775 got from the total of Xi^2 (Score of Pre Test Times Two). 78950 got from the total of $FiXi^2$ (Frequency of Score in Pre Test and Score of Pre Test Times Two).

Based on the data above, the result of $F_iX_i^2$ is 78950 and F_iX_i is 1520. Then the following was the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{x} = \frac{}{}$$

Where:

$\bar{x}$ = Mean of variable x
$\sum F_iX_i$ = Total number of score
$\sum F_i$ = Number of sample

So,

$$\bar{x} = \frac{}{}$$

$$= \frac{}{}$$

$$= 50.66$$

b. Variant

Where:

S^2 = Variant
N = Number of sample

So,

$$S^2 = \frac{(\quad)}{(\quad)}$$

$$= \frac{-(\quad)}{(\quad)}$$

$= \frac{-}{(\quad)}$

$= \frac{\quad}{\quad}$

$= 66.78$

c. Standard Deviation

$S = \sqrt{\quad}$

$= \sqrt{\quad}$

$= 8.17$

After getting the calculation of mean, variant and deviation standard, then the next step is to find out the normality of the test. It means that the test was given to the students was observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table VII
Normality Testing of Pre Test in Control Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	20	-3.75	0	0.03	-0.03
2	35	-1.91	0.028	0.03	-0.002
3	40	-1.3	0.096	0.1	-0.004
4	40	-1.3	0.096	0.1	-0.004
5	40	-1.3	0.096	0.1	-0.004
6	45	-0.69	0.425	0.03	0.395
7	50	-0.08	0.468	0.13	0.338
8	50	-0.08	0.468	0.13	0.338
9	50	-0.08	0.468	0.13	0.338
10	50	-0.08	0.468	0.13	0.338
11	55	0.53	0.701	0.66	0.041
12	55	0.53	0.701	0.66	0.041
13	55	0.53	0.701	0.66	0.041
14	55	0.53	0.701	0.66	0.041

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
15	55	0.53	0.701	0.66	0.041
16	55	0.53	0.701	0.66	0.041
17	55	0.53	0.701	0.66	0.041
18	55	0.53	0.701	0.66	0.041
19	55	0.53	0.701	0.66	0.041
20	55	0.53	0.701	0.66	0.041
21	55	0.53	0.701	0.66	0.041
22	55	0.53	0.701	0.66	0.041
23	55	0.53	0.701	0.66	0.041
24	55	0.53	0.701	0.66	0.041
25	55	0.53	0.701	0.66	0.041
26	55	0.53	0.701	0.66	0.041
27	55	0.53	0.701	0.66	0.041
28	55	0.53	0.701	0.66	0.041
29	55	0.53	0.701	0.66	0.041
30	55	0.53	0.701	0.66	0.041
Total	**1520**	**Lo = 0.395**			
Mean	**50.66666667**	**Lt =0.889**			

From the table above , It can be seen that 1520 got from the total of score. 50.66 got from the total of score divided the total of students. 0.889 got from the higher score Standard Normal Distribution minus The Calculation of Proportion Frequency Kumulatif divided the Total of Students. **0.395** the value of Lilliefors.

a. **Finding Z score**

Formula: $Z_i = \frac{1 - \bar{}}{\quad}$

Z_i 1 = = 3.75

Z_i 2 = = 1.91

Z_i 3 = = -1.30

Z_i 4 = = -0.69

Z_i 5 = = -0.08

Z_i 6 = = 0.53

a. Finding $S(Z_i)$

$S(Z_i)$ = _____

— = 0.03

— = 0.03

— = 0.1

— = 0.03

— = 0.13

— = 0.66

From the table above, it can be seen that Liliefors observation or L_o = 0.395 with n = 30 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.889. It was known that the coefficient of L_o (0.395) < L_t (0.889). So it can be concluded that the data distribution of the student's ability in reading comprehension is **normal.**

Table VIII
Frequency Distribution of Post Test in Control Group

NO	Xi	Fi	FiXi	Xi^2	$FiXi^2$
1	55	1	55	3025	3025
2	60	2	120	3600	7200
3	65	5	325	4225	21125
4	70	22	1540	4900	107800
Total		**30**	**2040**	**15750**	**139150**

From the table above , It can be seen that 30 got the total of Fi (Frequency of Score in Pre Test). 2040 got from the total of FiXi (Frequency of Score in Pre Test Times Score of Pre Test). 15750 got from the total of Xi^2 (Score of Pre Test Times Two). 139150 got from the total of $FiXi^2$ (Frequency of Score in Pre Test and Score of Pre Test Times Two).

Based on the data above, the result of $F_iX_i^2$ is 139150 and F_iX_i is 2040. Then the following was the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{x} = \frac{\quad}{\quad}$$

Where:

$\bar{x}$ = Mean of variable x
$\sum F_iX_i$ = Total number of score
$\sum F_i$ = Number of sample

So,

$$\bar{x} = \frac{\quad}{\quad}$$

$$= \frac{\quad}{\quad}$$

= 68

b. Variant

Where:

S^2 = Variant
N = Number of sample

So,

$$S^2 = \frac{(\quad)}{(\quad)}$$

$$= \frac{-(\quad)}{(\quad)}$$

$$= \frac{-}{(\quad)}$$

$$=$$

= 14.82

c. Standard Deviation

$$S = \sqrt{\quad}$$

$$= \sqrt{\quad}$$

= 3.84

After getting the calculation of mean, variant and deviation standard, then the next step was to find out the normality of the test. It means that the test was given to the students was observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table IX
Normality Testing of Post Test in Control Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	55	-3.38	0	0.03	-0.03
2	60	-2.08	0.018	0.06	-0.042
3	60	-2.08	0.018	0.06	-0.042

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
4	65	-0.78	0.217	0.16	0.057
5	65	-0.78	0.217	0.16	0.057
6	65	-0.78	0.217	0.16	0.057
7	65	-0.78	0.217	0.16	0.057
8	65	-0.78	0.217	0.16	0.057
9	70	0.52	0.698	0.73	-0.032
10	70	0.52	0.698	0.73	-0.032
11	70	0.52	0.698	0.73	-0.032
12	70	0.52	0.698	0.73	-0.032
13	70	0.52	0.698	0.73	-0.032
14	70	0.52	0.698	0.73	-0.032
15	70	0.52	0.698	0.73	-0.032
16	70	0.52	0.698	0.73	-0.032
17	70	0.52	0.698	0.73	-0.032
18	70	0.52	0.698	0.73	-0.032
19	70	0.52	0.698	0.73	-0.032
20	70	0.52	0.698	0.73	-0.032
21	70	0.52	0.698	0.73	-0.032
22	70	0.52	0.698	0.73	-0.032
23	70	0.52	0.698	0.73	-0.032
24	70	0.52	0.698	0.73	-0.032
25	70	0.52	0.698	0.73	-0.032
26	70	0.52	0.698	0.73	-0.032
27	70	0.52	0.698	0.73	-0.032
28	70	0.52	0.698	0.73	-0.032
29	70	0.52	0.698	0.73	-0.032
30	70	0.52	0.698	0.73	-0.032
Total	**2040**	**Lo = 0.057**			
Mean	**68**	**Lt = 0.889**			

From the table above , It can be seen that 2040 got from the total of score. 68 got from the total of score divided the total of students. 0.889 got from the higher score Standard Normal Distribution minus The Calculation of

Proportion Frequency Kumulatif divided the Total of Students. 0.057 the value of Lilliefors.

a. Finding Z score

Formula: $Z_i = \frac{1 - \bar{}}{}$

$Z_i 1 = \frac{}{} = -3.38$

$Z_i 2 = \frac{}{} = -2.08$

$Z_i 3 = \frac{}{} = -0.78$

$Z_i 4 = \frac{}{} = 0.45$

b. Finding $S(Z_i)$

$S(Z_i) = \frac{}{}$

— = 0.03

— = 0.06

— = 0.16

— = 0.73

From the table above, it can be seen that Liliefors observation or L_o = 0.057 with n = 30 and at real level α= 0.05 from the list of critical value of Liliefors table L_t = 0.889. It was known that the coefficient of L_o (0.057) < L_t (0.889). So it can be concluded that the data distribution of the student's ability in reading comprehension is **normal.**

A.2.2 Homogeneity Testing

A.2.2.1 Homogeneity Testing of Pre Test

$$= \frac{\qquad\qquad}{\qquad}$$

$$= 1.84$$

Then the coefficient of $F_{obs} = 1.84$ is compared with $F_{table,}$ where F_{table} was determined at real level = 0.05 and the numerator df = N = 30 and the denominator dk = 30. So, by using the list of critical value at F distribution was found $F_{0.05(30,30)} = 1.87$

So $F_{obs} < F_{table}$ atau (1.84 < 1.87) so it can be concluded that the variant from the data was **homogenous**.

A.2.2.2 Homogeneity Testing of Post Test

$$= \frac{\qquad\qquad}{\qquad}$$

$$= 1.38$$

Then the coefficient of $F_{obs} = 1.38$ was compared with $F_{table,}$ where F_{table} is determined at real level = 0.05 and the numerator df = N = 30 and the denominator dk = 30. So, by using the list of critical value at F distribution was found $F_{0.05(30,30)} = 1.86$

So $F_{obs} < F_{table}$ atau (1.38 < 1.86) so it can be concluded that the variant from the data is **homogenous**.

A.2.3 Validity Testing

The test of validity used the formula was explained in chapter III. The test of validity used the formula was explained in chapter III. For example the question no. 1, the value of r_{count}= 0.438 and r_{table} is 0.349, with n = 30. After getting r_{count}, the value of r_{count}, is compared with the value of r_{table}. If r_{count}> r_{table}so the item tested is valid. It means that the instrument can be used as equipment for collecting data. (See in Appendic).

A.2.4 Reliability Testing

To test reliability used the formula that was explained in chapter III. The coefficient of reliability is reliable. For example KR-20 = 0.746126001. It can be seen from n (the total of students) divided n – 1 (the total of students minus 1) and times with the sum variants minus Σpq (p = Σx divided the total of students, and q = 1 minus the results of p). So the results of Reliability testing was Reliabel because KR-20 > 0.4. For the complete calculation can be (seen in appendic).

A.2.5 Hypothesis Testing

Table X
Mean of Post-Test – Pre-Test in Experimental Group

No	Score Post-Test	Score Pre-Test	Descrease	Da = (D-Ma)	$(Da)^2$
1	95	35	60	27.83	772.8
2	80	20	60	27.83	772.8
3	95	65	30	-2.17	4.66
4	90	30	60	27.83	772.8
5	90	60	30	-2.17	4.66
6	95	70	25	-7.17	51.2
7	90	50	40	7.83	61.3
8	90	40	50	17.83	316.8

No	Score Post-Test	Score Pre-Test	Descrease	Da = (D-Ma)	$(Da)^2$
9	95	70	25	-7.17	51.2
10	90	75	15	-17.17	294.4
11	85	40	45	12.83	163.8
12	90	65	25	-7.17	51.2
13	95	65	30	-2.17	4.66
14	95	45	50	17.83	316.8
15	95	75	20	-12.17	148.8
16	85	65	20	-12.17	148.8
17	90	75	15	-17.17	294.4
18	95	60	35	2.83	8
19	90	60	30	-2.17	4.66
20	95	45	50	17.83	316.8
21	80	70	10	-22.17	491.1
22	90	65	25	-7.17	51.2
23	95	85	10	-22.17	491.1
24	95	75	20	-12.17	148.8
25	90	60	30	-2.17	4.66
26	95	50	45	12.83	163.8
27	95	60	35	2.83	8
28	95	55	40	7.83	61.3
29	95	85	10	-22.17	491.1
30	85	60	25	-7.17	51.2
∑	**2740**	**1775**	**965**		**6522.8**
Mean	**91.33333333**	**59.16666667**	**32.17**		

From the table above , it can be seen that 2740 got from the total of score post test. 1775 got from the total of score pre test. 965 got from D (The total of Score Post Test minus Score Pre-Test). 6522.8 got from the total of $(Da)^2$ or The Standard of Deviation of Experimental Group Times Two. 91.33 got from the total of score post test divided the total of students. 59.16 got from the total of pre test divided the total of students. 32.17 got from the total of decrease divided the total of students.

Table XI
Mean of Post-Test – Pre-Test in Control Group

No	Score Post-Test	Score Pre-Test	Descrease	Db = (D-Mb)	$(Db)^2$
1	70	40	30	12.66	158.7
2	65	50	15	-2.34	5.42
3	70	55	15	-2.34	5.42
4	70	55	15	-2.34	5.42
5	70	55	15	-2.34	5.42
6	70	55	15	-2.34	5.42
7	65	45	20	2.66	7.07
8	70	55	15	-2.34	5.42
9	70	55	15	-2.34	5.42
10	70	55	15	-2.34	5.42
11	70	55	15	-2.34	5.42
12	60	40	20	2.66	7.07
13	70	55	15	-2.34	5.42
14	70	55	15	-2.34	5.42
15	65	50	15	-2.34	5.42
16	55	20	35	17.66	309.7
17	60	40	20	2.66	7.07
18	70	55	15	-2.34	5.42
19	70	55	15	-2.34	5.42
20	70	50	20	2.66	7.07
21	70	55	15	-2.34	5.42
22	70	55	15	-2.34	5.42
23	70	55	15	-2.34	5.42
24	65	35	30	12.66	158.7
25	70	55	15	-2.34	5.42
26	65	50	15	-2.34	5.42
27	70	55	15	-2.34	5.42
28	70	55	15	-2.34	5.42
29	70	55	15	-2.34	5.42
30	70	60	30	-2.34	5.42
∑	**2040**	**1520**	**520**		**780.04**
Mean	**68**	**50.66666667**	**17.34**		

From the table above , it can be seen that 2040 got from the total of score post test. 1520 got from the total of score pre test. 520 got from D (The total of Score Post Test minus Score Pre-Test). 780.04 got from the total of $(Db)^2$ or The Standard of Deviation of Control Group Times Two. 68 got from the total of score post test divided the total of students. 50.66 got from the total Score Post Test minus Score Pre-Test divided the total of students. 17.34 got from the total decrease divided the total of students.

The hypothesis testing in this research, it is used two average similarity test by using statistic, as follow:

$$t = \frac{}{\sqrt{(\quad)(\quad)}}$$

$$= \frac{}{\sqrt{(\quad)(\quad)}}$$

$$= \frac{}{\sqrt{(\quad)(\quad)}}$$

$$= \frac{}{\sqrt{(\quad)(\quad)}}$$

$$= \frac{}{\sqrt{\quad}}$$

$$= \frac{}{\quad}$$

$$= 5.41$$

From the calculation of the data, the value of $t_{observed}$ was 5.41 and the value of t_{table} was 2.04 at the level significance 0,05. It means that the value of $t_{observed}$ was higher than t_{table} . The result was showed that the alternative hypothesis (Ha) was accepted and null hypothesis was rejected. The hypothesis formulated as "there is a significant effect of Language Experience Approach on students'

achievement in reading comprehension. It means that Language Experience Approach significantly was affected on students' reading comprehension.

B. Discussion

There was a significant difference on students' achievement in reading comprehension by using Language Experience Approach. The students that were taught by Language Experience Approach was higher score than were taught by conventional strategy.

It was explained in Chapter II that Language Experience Approach is learning approach which has purpose to make students become more active in language learning. The language experience approach is that it provides the classroom teacher with a coherent and defensible framework within which children can be taught to read. Materials and methods were taken from other approaches can be integrated easily with the language experience approach so as to develop truly eclectic reading programs. These programs was based on what is known about children's language development and on their need for planned and integrated language experience.

From the calculation above it found that tobserved = 5.41 whereas the ttable = 2.04. It shows that students' achievement in Language Experience Approach was significant at 0.05. From the result, the researcher found that there was significant of the students' achievement in reading comprehension that were taught by Language Experience Approach. This means that the students' achievement in reading comprehension that were taught by Language Experience Approach was better than taught by conventional strategy.

CHAPTER V

CLOSING

A. Conclusion

In the final Part, the researcher give the conclusion as follow:

Language Experience Approach was significant to be used in affecting the students' achievement in reading comprehension. The result of $t_{observed}$ is 5.41 and t_{table} is 2.04 ($t_{observed} > t_{table}$, 5.41 > 2.04). It means that H_0 was rejected and H_a was accepted. There was a significant effect of Language Experience Approach on the students' achievement in reading comprehension.

B. Recommendation

Based on the conclusion above, the researcher gives some recommendations as follows:

1. English teachers are recommended to use Language Experience Approach in their teaching learning process in order to affect the students' achievement in reading comprehension.
2. For language learners, it is suggested to enrich their knowledge and comprehension through Language Experience Approach if they want to increase their reading comprehension. The students can become more independent students in learning.
3. The researchers who was interested in doing a research related to this study should try to apply Language Experience Approach on different level of learners to prove the effectiveness of Language Experience Approach on the students' achievement in reading comprehension.

C. Implication

Implications were drawn from the research finding. The research came with a finding that there is a significant effect of Language Experience Approach on students' reading achievement. Moreover, this research implies that using Language Experience Approach is needed in reading comprehension.

Considering the conclusions were drawn above, it implies that Language Experience Approach gives contribution to the students' reading achievement. It can be seen from the students' reading scores in which almost the students' who got higher scores in comprehending the text given. It was expected that the teachers were highly recommended to create the process of learning English in order to increase the students' reading achievement especially in comprehending the text.

Students were motivated and relaxed in learning reading process when they were taught using Language Experience Approach. Therefore, it implies that the use of Language Experience Approach can keep students' interest and help them to understand the meaning of the text in the easier way.

In summary, the use of Language Experience Approach during the research can affect the students' achievement in reading comprehension. Therefore, the application of Language Experience Approach needs to be applied continuously in teaching reading. It is because the use of Language Experience Approach can be effective strategy to help the students practice reading and create an enthusiastic learning process so that the standard of competence of learning process can be achieved.

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Appendix I

Lesson Plan

Experimental Group

School	:	MTs Umar Bin Khattab
Subject	:	English
Class/sem	:	VII/ II
Aspect/ Skill	:	Reading Comprehension
Time Allocation	:	2 x 40 Minutes

First Meeting

I. General instructional Objectives (GIO)

a. Students are able to read the text.

b. Students are able to get specific information from a text related to the topic.

c. Students are able to identify the meaning of new words in context.

II. Specific Instructional Objectives (SIO)

a. Students are able to share the experience based on the topic.

b. Students are able to answer the questions based on the information from the text correctly.

III. Material and Source

Material	:	The Sumatran Elephants
Source	:	An English Book of Grade VIII

IV. Teaching Learning Process

a. Approach : Language Experience Approach (LEA)

b. Teaching Process :

1. Introduction

   A Greeting

2. Core Activities

   Stage I : Experiencing

   - Teacher introduces topic to students by using some question for example :

     " What do you know.. ? "

     "What is the text about ? "

   - By using leading questions , the teacher guides the students to develop experience a prior knowledge of students to writing story.

   Stage II : Discussing the Experience

   - The students and the teacher read the story simultaneously to revisi many statements or phrases that are unclear to the students. The story is to follow the natural language pattern of the students.
   - Then the teacher and students read the story repeated because repetition of the entire story will encourage a predictive set for the story.

3. Closing
    a. Teacher gives a chance to students to ask some questions.
    b. Teacher and students make a reflection or conclusion about the topic.
    c. Teacher gives a task to students.

V. Evaluation

Reading Test : multiple choices which is consisted of 10 questions.

Evaluation rule:

$$S = \_ \times 100$$

Where:

S = score of the text
R = number of correct answer
N = number of question

Medan, 31 July 2018

The Headmaster of Mts Umar Bin Khattab

Abdul Ghafur Sina.SH

English Teacher

Putra Patria. S.Pd.I

Researcher

Ula Syakbina Nura
34.14.1.038

Lesson Plan

Experimental Group

School	:	MTs Umar Bin Khattab
Subject	:	English
Class/sem	:	VII/ II
Aspect/ Skill	:	Reading Comprehension
Time Allocation	:	2 x 40 Minutes

Second Meeting

I. General instructional Objectives (GIO)

a. Students are able to read the text.

b. Students are able to get specific information from a text related to the topic.

c. Students are able to identify the meaning of new words in context.

II. Specific Instructional Objectives (SIO)

a. Students are able to share the experience based on the topic.

b. Students are able to answer the questions based on the information from the text correctly.

III. Material and Source

Material	:	Kangaroo
Source	:	An English Book of Grade VIII

IV. Teaching Learning Process

a. Approach : Language Experience Approach (LEA)

b. Teaching Process :

1. Introduction

   A Greeting

2. Core Activities

   Stage I : Experiencing

   - Teacher introduces topic to students by using some question for example :

     " What do you know.. ? "

     " What is the text about ? "

   - By using leading questions , the teacher guides the students to develop experience a prior knowledge of students to writing story.

   Stage II : Discussing the Experience

   - The students and the teacher read the story simultaneously to revisi many statements or phrases that are unclear to the students. The story is to follow the natural language pattern of the students.
   - Then the teacher and students read the story repeated because repetition of the entire story will encourage a predictive set for the story.

3. Closing

   a. Teacher gives a chance to students to ask some questions.

   b. Teacher and students make a reflection or conclusion about the topic.

   c. Teacher gives a task to students.

V. Evaluation

Reading Test : multiple choices which is consisted of 10 questions.

Evaluation rule:

$$S = - \times 100$$

Where:

S = score of the text

R = number of correct answer

N = number of question

Medan, 31 July 2018

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Lesson Plan

Experimental Group

School	:	MTs Umar Bin Khattab
Subject	:	English
Class/sem	:	VII/ II
Aspect/ Skill	:	Reading Comprehension
Time Allocation	:	2 x 40 Minutes

Third Meeting

I. General instructional Objectives (GIO)

a. Students are able to read the text.

b. Students are able to get specific information from a text related to the topic.

c. Students are able to identify the meaning of new words in context.

II. Specific Instructional Objectives (SIO)

a. Students are able to share the experience based on the topic.

b. Students are able to answer the questions based on the information from the text correctly.

III. Material and Source

Material	:	Bee
Source	:	An English Book of Grade VIII

IV. Teaching Learning Process

a. Approach : Language Experience Approach (LEA)

b. Teaching Process :

1. Introduction

   A Greeting

2. Core Activities

   Stage I : Experiencing

   - Teacher introduces topic to students by using some question for example :

     " What do you know.. ? "

     " What is the text about ? "

   - By using leading questions , the teacher guides the students to develop experience a prior knowledge of students to writing story.

   Stage II : Discussing the Experience

   - The students and the teacher read the story simultaneously to revisi many statements or phrases that are unclear to the students. The story is to follow the natural language pattern of the students.
   - Then the teacher and students read the story repeated because repetition of the entire story will encourage a predictive set for the story.

3. Closing

   d. Teacher gives a chance to students to ask some questions.

   e. Teacher and students make a reflection or conclusion about the topic.

   f. Teacher gives a task to students.

V. Evaluation

Reading Test : multiple choices which is consisted of 10 questions.

Evaluation rule:

$$S = - \times 100$$

Where:

S = score of the text

R = number of correct answer

N = number of question

Medan, 31 July 2018

The Headmaster of Mts Umar Bin Khattab

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34.14.1.038

Lesson Plan

Experimental Group

School	:	MTs Umar Bin Khattab
Subject	:	English
Class/sem	:	VII/ II
Aspect/ Skill	:	Reading Comprehension
Time Allocation	:	2 x 40 Minutes

Fourth Meeting

I. General instructional Objectives (GIO)

a. Students are able to read the text.

b. Students are able to get specific information from a text related to the topic.

c. Students are able to identify the meaning of new words in context.

II. Specific Instructional Objectives (SIO)

a. Students are able to share the experience based on the topic.

b. Students are able to answer the questions based on the information from the text correctly.

III. Material and Source

Material	:	Whale
Source	:	An English Book of Grade VIII

IV. Teaching Learning Process

a. Approach : Language Experience Approach (LEA)

b. Teaching Process :

1. Introduction

   A Greeting

2. Core Activities

   Stage I : Experiencing

   - Teacher introduces topic to students by using some question for example :

     " What do you know.. ? "

     " What is the text about ? "

   - By using leading questions , the teacher guides the students to develop experience a prior knowledge of students to writing story.

   Stage II : Discussing the Experience

   - The students and the teacher read the story simultaneously to revisi many statements or phrases that are unclear to the students. The story is to follow the natural language pattern of the students.
   - Then the teacher and students read the story repeated because repetition of the entire story will encourage a predictive set for the story.

3. Closing

   a. Teacher gives a chance to students to ask some questions.

   b. Teacher and students make a reflection or conclusion about the topic.

   c. Teacher gives a task to students.

V. Evaluation

Reading Test : multiple choices which is consisted of 10 questions.

Evaluation rule:

$$S = - \times 100$$

Where:

S = score of the text

R = number of correct answer

N = number of question

Medan, 31 July 2018

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Lesson Plan

Control Group

School	:	MTs Umar Bin Khattab
Subject	:	English
Class/sem	:	VII/ II
Aspect/ Skill	:	Reading Comprehension
Time Allocation	:	2 x 40 Minutes

First Meeting

I. General instructional Objectives (GIO)

a. Students are able to read the text.

b. Students are able to get specific information from a text related to the topic.

c. Students are able to identify the meaning of new words in context.

II. Specific Instructional Objectives (SIO)

d. Students are able to share the experience based on the topic.

e. Students are able to answer the questions based on the information from the text correctly.

III. Material and Source

Material	:	The Sumatran Elephants
Source	:	An English Book of Grade VIII

IV. Teaching Learning Process

a. Approach : Audio-Lingual

b. Teaching Process :

1. Introduction

   A Greeting

2. Core Activities

   Stage I :

   - Teacher introduces topic to students
   - The teacher guides the students to write the topic.

   Stage II :

   - The teacher read the story about the topic.
   - Then the teacher ask the students to repeat and write what they are repeated.

3. Closing

   a. Teacher make reflection or conclusion about the topic.

   b. Teacher gives a task to students.

c. Evaluation

Reading Test : multiple choices which is consisted of 10 questions.

Evaluation rule:

$$S = \_ \times 100$$

Where:

S = score of the text

R = number of correct answer

N = number of question

Medan, 31 July 2018

The Headmaster of Mts Umar Bin Khattab

Abdul Ghafur Sina.SH

English Teacher

Putra Patria. S.Pd.I

Researcher

Ula Syakbina Nura

34.14.1.038

Appendix II **Name :**

Pre-Test and Post-Test **Class :**

Read the following text to answer questions number 1 to 5.

The Sumatran Elephants

The sumatran elephant's habitat is in Sumatra , Indonesia. This elephants have a trunk , two tusks , two eyes , two ears and two lumps on their head. They are known to be celever animals. When an elephant is hot , they fan themselves by flapping their ears back and forth. When an elephant herd wants to move they use their ears as a guide. Their hearing range is very large. Elephants hear some noises that can not be heard by a human ear. Sumatran elephants have enough strength to knock down a tree. They can also pick up a log using just their trunk and their tusks. Their trunk is their nose. They also use it like a hand. Just below their trunk they their tusks. Only male Sumatran Elephants have tusks. A baby elephant is called a calf , the females are called cow.

Choose the correct answer by crossing a,b,c, or d !

1. The sumatran elephants habitat in……
   a. Sumatra c. Tree
   b. Jawa d. Log
2. The elephants have……..trunk and…….tusks.
   a. One,one c. Two,two
   b. One, two d. Two,one

3. The hearing range of the elephant is…..

   a. Narrow c. Large

   b. Small d. Big

4. The trunk of the elephants have a function as….

   a. Eye c. Hear

   b. Hand d. Nose

5. The females elephant are called…..

   a. Cows c. Goats

   b. Buffaloes d. Babie

Read the following text to answer questions number 6 to 10.

Kangaroo

Kangaroo eat grass and plants. They have short front legs, but very long and very strong back legs and a tail. These they use for sitting up on and for jumping. Kangaroos have been known to make forward jumps of over eight metres , and leap across fences more than three metres high. They can also run at speeds of over 45 kilometres per hour. The largest kangaroos are the Great Grey Kangaroo and the Red Kangaroo. Adults grow to a length of 1.60 metres and weigh over 90 kilos. Kangaroo are marsupials. This means that the female kangaroo has an external pouch on the front of her body. A baby kangaroo is very tiny when it is born, and it crawls at once into this pouch where it spends its first five months of life.

6. Kangaroo eats…

   a. Grass and plants c. Cake and bread

   b. The wild animals d. Bee and fish

7. Kangaroo eat grass and plants. They have…

   They refers to…

   a. Kangaroo
   b. Kangaroos
   c. Babies
   d. Tails

8. The following are what the kangaroo can do ?

   a. They have been known to make forward jumps of over eight metres.
   b. They can leap across fences more than three metre high
   c. They can also run at speed of over 45 kilometres per hour
   d. A , B , C are true.

9. It's about the kangaroos , except…

   a. They eat grass and plants
   b. They have short front legs.
   c. They are not marsupials.
   d. They have a tail.

10. Adults grow to a length of…….metres and weigh over……kilos

    a. 1.30-40
    b. 1.40-50
    c. 1.50-60
    d. 1.60-90

Read the following text to answer questions number 11 to 15.

Bees

Bee are useful insects. There are about 20,000 kinds of bees , but only honeybees make honey. Honeybees live in groups called colonies. Each colony has one female queen bee , ten of thousands of worker bees , and few hundred males or drones. Honeybees live in hives.

Inside their hive , the bees make a honeycomb of wax. The honeycomb is a kind of bee apartment building , full of six – sided rooms in which the bees raise young and store food.

11. The bees consist of…….kinds.

    a. 10,000 c. 30,000

    b. 20,000 d. 40,000

12. Honeybees make…

    a. Queen c. Egg

    b. Drink d. Honey

13. Honeybees live in groups called……

    a. King c. Queen

    b. Colonies d. Drones

14. Each colony has……female queen bee..... of worker and……males.

    a. Tens of thousand , a few hundred one

    b. Tens of thousand , a few hundred , a few hundred

    c. One , tens of thousand , a few hundred

    d. A few hundred , one , tens of thousand

15. Honeybees live in….

    a. Pigsty c. Neast

    b. Hives d. Web

Read the following text to answer questions number 16 to 20.

Whales

The whale looks rather like a fish , but there are important differences in its external structure: its tail consist of a pair of broad, flat , horizontal paddles

(the tail of a fish is vertical) and it has a single nostril on top of its large , broad head. The skin is smooth and shiny and beneath it lies a layer of fat (blubber). This is up to 30 cm in thickness and serves to converse heat and body fluids.

16. The title of the text is…

    a. Mammals
    c. Whales
    b. Tail
    d. Nostril

17. The whale ..... rather like a fish.

    a. Sees
    c. Looks at
    b. Looks
    d. Looks after

18. There are important difference in…..... between the whale and a fish.

    a. External structure
    c. Body structure
    b. Internal structure
    d. Species

19. The whale….consists of a pair of broad, flat , horizontal paddles.

    a. Body
    c. Head
    b. Tail
    d. Skin

20. The following are true about the whale , except…

    a. It has a single nostril
    c. The skin is smooth
    b. It has broad head
    d. The tail is vertical

Appendix III **Name :**

Treatment 1 **Class :**

Read the following text to answer questions number 1 to 10.

The Sumatran elephant is a sub-species of Asian elephant which includes the Indian elephant, the Sumatran elephant, the Sri-Lanka elephant and the Borneo elephant.The Sumatran elephant is extremely rare today, with estimates in 2000 putting Sumatran elephant numbers at just over 2,000 individuals. As its name suggests, the Sumatran elephant is found exclusively on the Indonesian island of Sumatra. However, the Sumatran elephant population has severely declined as they have lost more than 80% of their natural habitat to deforestation for palm oil plantations. Sumatran elephants are herbivorous animals meaning that they only eat plants and plant matter in order to gain all of the nutrients that they need to survive. Sumatran elephants eat a wide variety of vegetation including grasses, leaves, shoots, barks, fruits, nuts and seeds. Sumatran elephants often use their long trunk to assist them in gathering food.

Today, the Sumatran elephant is considered to be an animal that is in immediate danger of becoming extinct due to the fact that Sumatran elephant populations have been declining at a critical rate. Sumatran elephants are thought to be suffering primarily due to habitat loss in the form of deforestation and hunting for their ivory tusks by human poachers.

Choose the correct answer by crossing a , b , c or d.

1. The Sumatran elephant is a sub-species of…….
   a. Eropa Elephant
   b. Asian Elephant
   c. Animals
   d. Nation Habitat

2. This is include of Asian Elephant , except…….
   a. Sri-Lanka Elephant
   b. Borneo Elephant
   c. Indian Elephant
   d. Jawa Elephant
3. The Sumatran Elephant is found exclusively on……
   a. Kalimantan Island
   b. Jawa Island
   c. Indonesian island of Sumatra
   d. Indonesian
4. The Sumatran elephant population has severely declined as they have lost more than..... of their natural habitat.
   a. 80%
   b. 75 %
   c. 25 %
   d. 50 %
5. Sumatran Elephants are.....
   a. Karnivorous Animals
   b. Herbivorous Animals
   c. Insectivorous Animals
   d. Nutrients
6. Eat plants and plant matter in order to gain all of the nutrients that they need to survive , its called by..
   a. Insectivorous Animals
   b. Nutrients
   c. Karnivorous Animals
   d. Herbivorous Animals
7. Sumatran Elephants eat a wide variety of vegetation including…….
   a. Leaves , Fruits , Nuts
   b. Woods
   c. Books
   d. Water
8. The use Elephants long trunk is……..
   a. To make their life balance
   b. To assist them in gathering food
   c. To listen another voice
   d. To help them
9. The Sumatran elephant is considered to be an animal that is in…….
   a. Sumatra Forest
   b. Sumatra Population
   c. Immediate Danger
   d. Indonesian Nation
10. Sumatran elephants are thought to be suffering primarily due to habitat loss in the form of deforestation and hunting for their ivory tusks by…..
    a. Children
    b. Another Animals
    c. Life
    d. Human Poachers

Appendix IV **Name :**

Treatment 2 **Class :**

Read the following text to answer questions number 1 to 10.

Kangaroos are large marsupials that are found only in Australia. They are identified by their muscular tails, strong back legs, large feet, short fur and long, pointed ears. Like all marsupials, a sub-type of mammal, females have pouches that contain mammary glands, where their young live until they are old enough to emerge.

The largest kangaroo, as well as the largest marsupial, is the red kangaroo, according to National Geographic. The length from the red kangaroo's head to its rump is 3.25 to 5.25 feet (1 to 1.6 meters) long. Its tail adds another 35.5 to 43.5 inches (90 to 110 centimeters) to its length and its entire body weighs around 200 lbs. (90 kilograms). The smallest kangaroo is the musky rat-kangaroo. It is only 6 to 8 inches (15.24 to 20.32 cm) long and weighs only 12 ounces (340 grams). Its ratlike tail adds another 5 to 6 inches (12.7 to 15.24 cm) to its length. Most kangaroos live on the continent of Australia, though each species has a different place it likes to call home. Kangaroos are the only large animals that hop as a primary means of locomotion. Their springy hind legs and feet are much stronger and larger than their arms (or "forelimbs").

Choose the correct answer by crossing a , b , c or d.

1. Kangaroos are…….
   a. Karnivorous Animals
   b. Insectivorous Animals
   c. Large Marsupials
   d. Animals

2. Kangaroos are found only in……..
   a. America
   b. Australia
   c. Sumatra
   d. Hollywood
3. Muscular tails, strong back legs, large feet, short fur and long, pointed ears , all of this refers to……
   a. Cat
   b. Tiger
   c. Rabbit
   d. Kangaroo
4. Marsupials is a sub-type of.....
   a. Mammal
   b. Animals
   c.Large Animals
   d. Smallest Animals
5. Females have pouches that contain of……
   a. Pouche
   b. Mammary Glands
   c. Marsupials
   d. Musky Rat Kangaroo
6. The largest kangaroo, as well as the largest marsupial, is the……..
   a. Australias Kangaroo
   b. Brown Kangaroo
   c. Red Kangaroo
   d. Grey Kangaroo
7. The length from the red kangaroo's head to its rump is……
   a. 3.25 to 5.25 feet
   b. 4.25 to 5.25 feet
   c. 2.25 to 5.25 feet
   d. 3.25 to 5.26 feet
8. The smallest kangaroo is the…….
   a. Rat Kangaroo
   b. Red Kangaroo
   c. Roof
   d. Musky Rat - Kangaroo
9. The smallest kangaroo, It is only…….
   a. 6 to 8 inches (15.24 to 20.32 cm) long
   b. 6 to 9 inches (15.24 to 20.32 cm) long
   c. 6 to 8 inches
   d. 6 to 10 inches
10. The only large animals that hop as a primary means of locomotion, called by…
    a. Goat
    b. Lion
    c. Kangaroo
    d. Bird

Appendix V **Name :**

Treatment 3 **Class :**

Read the following text to answer questions number 1 to 10.

Bees are flying insects closely related to wasps and ants, known for their role in pollination and, in the case of the best-known bee species, the European honey bee, for producing honey and beeswax. Some species including honey bees, bumblebees, and stingless bees live socially in colonies. Bees are adapted for feeding on nectar and pollen, the former primarily as an energy source and the latter primarily for protein and other nutrients. Most pollen is used as food for larvae. Bee pollination is important both ecologically and commercially; the decline in wild bees has increased the value of pollination by commercially managed hives of honey bees. Bees make honey to feed their young and so they have something to eat during the winter.

Bees see all colors except the color red. That and their sense of smell help them find the flowers they need to collect pollen. Not only is pollen a food source for bees, but also some of the pollen is dropped in flight, resulting in cross pollination. The relationship between the plant and the insect is called symbiosis. Bees range in size from tiny stingless bee species whose workers are less than 2 millimetres (0.08 in) long, to *Megachile pluto*, the largest species of leafcutter bee, whose females can attain a length of 39 millimetres (1.54 in). The most common bees in the Northern Hemisphere are the Halictidae, or sweat bees, but they are small and often mistaken for wasps or flies. Vertebrate predators of bees include birds such as bee-eaters; insect predators include beewolves and dragonflies.

Choose the correct answer by crossing a , b, c or d.

1. Flying insects closely related to wasps and ants , called by……..
   a. Bird
   b. Ants
   c. Bee
   d. Mosquito

2. The best-known bee species is……..
   a. The Australia Honey Bee
   b. The European Honey Bee
   c. The Sumatra Honey Bee
   d. The Overseas Honey Bee

3. The European honey bee can produce…….
   a. Honey and Beeswax
   b. Wood
   c. Food
   d. Liquid

4. Honey bees, bumblebees, and stingless bees live in…....
   a. Single
   b. Alone
   c. With another Bees
   d. Colonies

5. Bees are adapted for feeding on……..
   a. Liquid
   b. Water
   c. Nectar and Pollen
   d. Pollen

6. Pollen is used…….
   a. To Eat
   b. As Food for Larvae
   c. To Health
   d. To Mask

7. Bee Pollination is important both……
   a. Environtment
   b. Ecological
   c.EcologicallyandEnvirontment
   d.Ecologically and Commercially

8. The function Bees make honey is……..
   a. To Eat during The Winter
   b. To Anticipation
   c. As Food
   d. To Save

9. Bees see all colors except……..
   a. Yelloow
   b. Green
   c. Red
   d. Purple

10. The most common Bees in the Northern Hemisphere are…….
    a. The Halictidae
    b. The Ecological
    c. The Hemisphere
    d. The Commercial

Appendix VI **Name :**

Treatment 4 **Class :**

Read the following text to answer questions number 1 to 10.

Whales are a widely distributed and diverse group of fully aquatic placental marine mammals. They are an informal grouping within the infraorder Cetacea, usually excluding dolphins and porpoises.Whales are creatures of the open ocean; they feed, mate, give birth, suckle and raise their young at sea. So extreme is their adaptation to life underwater that they are unable to survive on land. Whales range in size from the 2.6 metres (8.5 ft) and 135 kilograms (298 lb) dwarf sperm whale to the 29.9 metres (98 ft) and 190 metric tons (210 short tons) blue whale, which is the largest creature that has ever lived. The sperm whale is the largest toothed predator on earth.Toothed whales, on the other hand, have conical teeth designed for catching fish or squid. Baleen whales have a well developed sense of "smell", whereas toothed whales have well-developed hearing − their hearing, that is adapted for both air and water, is so well developed that some can survive even if they are blind. Some species, such as sperm whales, are well adapted for diving to great depths to catch squid and other favoured prey.

Whales have evolved from land-living mammals. As such whales must breathe air regularly, although they can remain submerged under water for long periods of time. Some species such as the sperm whale are able to stay submerged for as much as 90 minutes. They have blowholes (modified nostrils) located on top of their heads, through which air is taken in and expelled. They are warm-blooded, and have a layer of fat, or blubber, under the skin. With streamlined

fusiform bodies and two limbs that are modified into flippers, whales can travel at up to 20 knots, though they are not as flexible or agile as seals. Whales produce a great variety of vocalizations, notably the extended songs of the humpback whale. Although whales are widespread, most species prefer the colder waters of the Northern and Southern Hemispheres, and migrate to the equator to give birth.

Choose the correct answer by crossing a , b , c , or d.

1. Widely distributed and diverse group of fully aquatic placental marine mammals , called by……
   a. Dolphin
   b. Shark
   c. Whale
   d. Bird

2. Whales range in size from…….
   a. 2.7 metres (8.5 ft)
   b. 2.6 metres (8.5 ft)
   c. 2.7 metres (8.6 ft)
   d. 1.7 metres (8.5 ft)

3. The largest toothed predator on earth is…….
   a. Whale
   b. Dolphin
   c. Shark
   d. Sperm Whale

4. The function of Toothed whales have conical teeth is…..
   a. For catching fish or squid
   b. For Food
   c. For Fight with Another Whale
   d. For Their Life

5. They have ..... located on top of their heads.
   a. Teeth
   b. Mouth
   c. Blowholes
   d. Fin

6. Baleen whales have a well developed sense of……..
   a. Fragrant
   b. Smell
   c. Nose
   d. Intonation

7. Whales have……
   a. Warm Blooded
   b. Cool Blooded
   c. Blood
   d. Warm and Cool Blooded

8. This is include of Whales life , except…..
   a. Mate
   b. Give Birth
   c. Suckle and Raise
   d. Drink

9. The sperm whale are able to stay submerged for as much as……..
   a. 80 Minutes
   b. 90 minutes
   c. 70 Minutes
   d. 60 Minutes

10. Whales can travel at up to ..... Knots.
   a. 20
   b. 40
   c. 30
   d. 10

Appendix VII

Answer Key of Pre-test and Post-test

1. A. Sumatra
2. B. One , Two
3. C. Large
4. D. Nose
5. A. Cows
6. A. Grass and Plants
7. B. Kangaroos
8. D. A,B,C are true
9. C. They are not marsupials
10. D. 1.60 - 90
11. B. 20.000
12. D. Honey
13. B. Colonies
14. C. One , tens of thousand , a few hundred
15. B. Hives
16. C. Whales
17. B. Looks
18. A. External structure
19. B. Tail
20. D. The tail is vertical

Answer Key of Treatment 1

1. B. Asian Elephant
2. D. Jawa Elephant3
3. C. Indonesian island of Sumatra
4. A. 80%
5. B. Herbivorous Animals
6. D. Herbivorous Animals
7. A. Leaves , Fruits , Nuts
8. B. To assist them in gathering food
9. C. Immediate Danger
10. D. Human Poachers

Answer Key of Treatment 2

1. C. Large Marsupials
2. B. Australia
3. D. Kangaroo
4. A. Mammal
5. B. Mammary Glands
6. C. Red Kangaroo
7. A. 3.25 to 5.25 feet
8. D. Musky Rat - Kangaroo
9. A. 6 to 8 inches (15.24 to 20.32 cm) long
10. C. Kangaroo

Answer Key of Treatment 3

1. C. Bee
2. B. The European Honey Bee
3. A. Honey and Beeswax
4. D. With another Bees
5. C. Nectar and Pollen
6. B. As Food for Larvae
7. D. Ecologically and Commercially
8. A. To Eat during The Winter
9. C. Red
10. A. The Halictidae

Answer Key of Treatment 4

1. C. Whale
2. B. 2.6 metres (8.5 ft)
3. D. Sperm Whale
4. A. For catching fish or squid
5. C. Blowholes
6. B. Smell
7. A. Warm Blooded
8. D. Suckle and Raise
9. B. 90 minutes
10. A. 20

Appendix VIII

THE STUDENTS' INITIAL AND REAL NAME

AT EXPERIMENT CLASS (VIII – 1)

No	Initial Name	Real Name
1	AAS	ADE AHMAD SIDDIK
2	AA	ADITYA ATHA
3	AAK	ALVINO ALBAK
4	ANB	ANANDA NOVA BELLA
5	AR	ARYA RAMADAN
6	AZ	AYUMI ZEYANTI
7	CDB	CHERI DIA BINTANG
8	DFN	DHOIFA FARHANI NASUTION
9	DA	DINDA AGUSTIA
10	FM	FAJAR MAULANA
11	MH	MAULANA HAFIZ
12	MA	MUHAMMAD ARDIANSYAH
13	MH	MUHAMMAD HASAN

14	MPA	MUTIA PUTRI ARIDHA
s15	NA	NIA ANDINI
16	NSN	NIRNANDA SRI NINGSIH
17	NRD	NOVITA RAHMA DANI
18	PDL	PUTRI DEVINA LUBIS
19	RNR	REVANI NATASYA RIZKI
20	RR	RICKY RAMADAN
21	RD	RIZAL DAMANIK
22	RA	RYANGGA ANDIKA
23	SDSN	SILVINA DIAHANI SYAHFITRI NASUTION
24	SN	SITI NURHASANAH
25	SI	SUPRIYANI
26	TA	THARA ARTOZANA
27	WIS	WAN IQBAL SYAHPUTRA
28	YP	YUDA PRABOWO
29	ZR	ZAIDA RAMADANI
30	ZA	ZIDDAN ARISANDI

Appendix IX

THE STUDENTS' INITIAL AND REAL NAME

AT CONTROL CLASS (VIII – 2)

No	Initial Name	Real Name
1	AA	ADE AISYA
2	AK	AGUNG KURNIAWAN
3	AM	ALIM MAHMUDDIN
4	ATS	ANDIKA TRI SYAHPUTRA
5	AP	ASTI PRAMITA
6	AR	AZHAR RAMADHAN
7	DSS	DEVI SYAWALIA SIREGAR
8	DS	DIMAS SYAHPUTRA
9	EB	EBRU
10	IP	IKHSAN PRAYOGA
11	JE	JENNY
12	KA	KEVIN ALFARINO
13	MRP	MAULANA RIFKY PRATAMA
14	MR	MICHAEL FRANSKENY

15	MF	MUHAMMAD FIKRI
16	NW	NICO WARDANU
17	NA	NOVI AFRIANI
18	NJ	NUR JANNAH
19	RH	RAFLI HAMDANI
20	RR	RANGGA RADITYA
21	RAS	REZA ANANDA SYAHPUTRA
22	RS	RIKY SYAHPUTRA
23	RZP	RISKY ZAKY PRATAMA
24	SW	SAHMATUL WARDAH
25	SAD	SINTA AMELIA DEWI
26	SA	SUCI ANNISA
27	SAA	SUSANTO ADITYA
28	TH	THOMAS
29	WDR	WIDYA DAMAR ROZA
30	ZAR	ZIHAN AMALIA RAMBE

Appendix X

THE STUDENTS' SCORE IN POST TEST AT EXPERIMENT CLASS AND CONTROL CLASS

No	X	Y	X^2	Y^2	XY
1	95	60	9025	3600	5700
2	80	65	6400	4225	5200
3	95	75	9025	5625	7125
4	90	80	8100	6400	7200
5	90	90	8100	8100	8100
6	95	80	9025	6400	7600
7	90	65	8100	4225	5850
8	90	75	8100	5625	6750
9	95	80	9025	6400	7600
10	90	85	8100	7225	7650
11	85	85	7225	7225	7225
12	90	60	8100	3600	5400
13	95	95	9025	9025	9025
14	95	70	9025	4900	6650
15	95	65	9025	4225	6175
16	85	45	7225	2025	3825
17	90	60	8100	3600	5400
18	95	85	9025	7225	8075
19	90	70	8100	4900	6300

20	95	85	9025	7225	8075
21	80	75	6400	5625	6000
22	90	70	8100	4900	6300
23	95	75	9025	5625	7125
24	95	65	9025	4225	6175
25	90	90	8100	8100	8100
26	95	65	9025	4225	6175
27	95	70	9025	4900	6650
28	95	85	9025	7225	8075
29	95	95	9025	9025	9025
30	85	75	7225	5625	6375
N = 30	$\sum x$ = 2740	$\sum y$ = 2240	$\sum x^2$ = 250850	$\sum y^2$ = 171250	$\sum xy$ = 204925

Appendix XI

CALCULATION OF PRE TEST AND POST-TEST OF EXPERIMENTAL GROUP AND CONTROL GROUP

Experimental Group			Control Group	
No	**Pre-test (x)**	**Post-test (x_1)**	**Pre-test (y)**	**Post-test (y_1)**
1	35	95	40	60
2	20	80	50	65
3	65	95	60	75
4	30	90	65	80
5	60	90	75	90
6	70	95	65	80
7	50	90	45	65
8	40	90	60	75
9	70	95	65	80
10	75	90	70	85
11	40	85	70	85
12	65	90	40	60
13	65	95	80	95
14	45	95	55	70
15	75	95	50	65
16	65	85	20	45
17	75	90	40	60
18	60	95	70	85
19	60	90	55	70
20	45	95	75	85
21	70	80	60	75

No	Pre-test (x)	Post-test (x_1)	Pre-test (y)	Post-test (y_1)
22	65	90	55	70
23	85	95	60	75
24	75	95	35	65
25	60	90	75	90
26	50	95	50	65
27	60	95	65	70
28	55	95	75	85
29	85	95	80	95
30	60	85	60	75
$\sum n = 30$	$\sum x = 1775$	$\sum x_1 = 2740$	$\sum y = 1765$	$\sum y_1 = 2240$
Mean	59,16	91.33	58.83	74.66
Modus	60	95	55	70
Median	60	92.5	55	70

Appendix XII

VALIDITY TESTING

No	r_{table}	$r_{observed}$	Status
1	0.349	0,438736	Valid
2	0.349	0,313971	Tidak Valid
3	0.349	0,376973	Valid
4	0.349	0,303304	Tidak Valid
5	0.349	0,381964	Valid
6	0.349	0,385695	Valid
7	0.349	-0,05421	Tidak Valid
8	0.349	0,239216	Tidak Valid
9	0.349	0,306435	Tidak Valid
10	0.349	0,385876	Valid
11	0.349	0,166165	Tidak Valid
12	0.349	0,471148	Valid
13	0.349	0,252485	Tidak Valid
14	0.349	-0,03458	Tidak Valid
15	0.349	0,471148	Valid
16	0.349	0,114374	Tidak Valid
17	0.349	0,454067	Valid
18	0.349	0,166053	Tidak Valid
19	0.349	-0,02805	Tidak Valid
20	0.349	0,396448	Valid
21	0.349	0,396448	Valid
22	0.349	0,511528	Valid
23	0.349	-0,10567	Tidak Valid

24	0.349	0,464734	Valid
25	0.349	0,135953	Tidak Valid
26	0.349	0,481024	Valid
27	0.349	0,168559	Tidak Valid
28	0.349	-0,34471	Tidak Valid
29	0.349	0,177885	Tidak Valid
30	0.349	0,194363	Tidak Valid
31	0.349	0,217561	Tidak Valid
32	0.349	0,280299	Tidak Valid
33	0.349	0,160723	Tidak Valid
34	0.349	0,384122	Valid
35	0.349	0,315393	Tidak Valid
36	0.349	0,364732	Valid
37	0.349	0,195581	Tidak Valid
38	0.349	0,026136	Tidak Valid
39	0.349	0,217966	Tidak Valid
40	0.349	0,324638	Tidak Valid
41	0.349	0,107275	Tidak Valid
42	0.349	0,487928	Valid
43	0.349	0,315393	Tidak Valid
44	0.349	0,190498	Tidak Valid
45	0.349	0,502812	Valid
46	0.349	0,507403	Valid
47	0.349	0,146621	Tidak Valid
48	0.349	0,238752	Tidak Valid
49	0.349	0,058266	Tidak Valid
50	0.349	0,346231	Tidak Valid

Appendix XIII

RELIABILITY TESTING

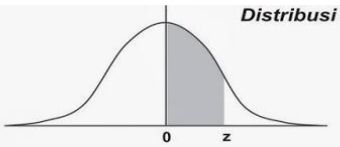
NO	∑X	P	Q	PQ
1	15	0,5	0,5	0,25
2	17	0,566667	0	0
3	19	0,633333	0,366667	0,232222
4	17	0,566667	0,433333	0,245556
5	18	0,6	0,4	0,24
6	22	0,733333	0,266667	0,195556
7	21	0,7	0,3	0,21
8	20	0,666667	0,333333	0,222222
9	18	0,6	0,4	0,24
10	15	0,5	0,5	0,25
11	18	0,6	0,4	0,24
12	16	0,533333	0,466667	0,248889
13	18	0,6	0,4	0,24
14	23	0,766667	0,233333	0,178889
15	16	0,533333	0,466667	0,248889
16	12	0,4	0,6	0,24
17	13	0,433333	0,566667	0,245556
18	13	0,433333	0,566667	0,245556
19	18	0,6	0,4	0,24
20	15	0,5	0,5	0,25
21	15	0,5	0,5	0,25
22	11	0,366667	0,633333	0,232222
23	19	0,633333	0,366667	0,232222
24	13	0,433333	0,566667	0,245556

25	12	0,4	0,6	0,24
26	15	0,5	0,5	0,25
27	19	0,633333	0,366667	0,232222
28	16	0,533333	0,466667	0,248889
29	23	0,766667	0,233333	0,178889
30	20	0,666667	0,333333	0,222222
31	14	0,466667	0,533333	0,248889
32	21	0,7	0,3	0,21
33	20	0,666667	0,333333	0,222222
34	12	0,4	0,6	0,24
35	13	0,433333	0,566667	0,245556
36	15	0,5	0,5	0,25
37	15	0,5	0,5	0,25
38	16	0,533333	0,466667	0,248889
39	17	0,566667	0,433333	0,245556
40	17	0,566667	0,433333	0,245556
41	21	0,7	0,3	0,21
42	21	0,7	0,3	0,21
43	13	0,433333	0,566667	0,245556
44	19	0,633333	0,366667	0,232222
45	12	0,4	0,6	0,24
46	13	0,433333	0,566667	0,245556
47	19	0,633333	0,366667	0,232222
48	14	0,466667	0,533333	0,248889
49	18	0,6	0,4	0,24
50	24	0,8	0,2	0,16

Appendix XIV

TABLE DSTRIBUTION NORMAL BAKU 0-Z

Kumulatif sebaran frekuensi normal
(Area di bawah kurva normal baku dari 0 sampai z)



Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3.1	0.4990	0.4991	0.4991	0.4991	0.4992	0.4992	0.4992	0.4992	0.4993	0.4993
3.2	0.4993	0.4993	0.4994	0.4994	0.4994	0.4994	0.4994	0.4995	0.4995	0.4995
3.3	0.4995	0.4995	0.4995	0.4996	0.4996	0.4996	0.4996	0.4996	0.4996	0.4997
3.4	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4998
3.5	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998
3.6	0.4998	0.4998	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.7	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.8	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.9	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000

Dipergunakan untuk kepentingan Praktikum dan Kuliah Statistika Agrotek cit. Ade

Source : http://jam-statistic.blogspot.co.id/2014/04/cara-menentukan-nilai-alpha-dengan.html

Appendix XV

THE CRITICAL VALUE LILIEFORS TEST

Ukuran Sampel	Taraf Nyata (α)				
	0,01	0,05	0,10	0,15	0,20
n = 4	0,417	0,381	0,352	0,319	0,300
5	0,405	0,337	0,315	0,299	0,285
6	0,364	0,319	0,294	0,277	0,265
7	0,348	0,300	0,276	0,258	0,247
8	0,331	0,285	0,261	0,244	0,233
9	0,311	0,271	0,249	0,233	0,223
10	0,294	0,258	0,239	0,022	0,215
11	0,284	0,249	0,230	0,217	0,206
12	0,275	0,242	0,223	0,212	0,199
13	0,268	0,234	0,214	0,202	0,190
14	0,261	0,227	0,207	0,194	0,183
15	0,257	0,220	0,201	0,187	0,177
16	0,250	0,213	0,195	0,182	0,173
17	0,245	0,206	0,189	0,177	0,169
18	0,239	0,200	0,184	0,173	0,166
19	0,235	0,195	0,179	0,169	0,163
20	0,231	0,190	0,174	0,166	0,160
25	0,200	0,173	0,158	0,147	0,142
30	0,187	0,161	0,144	0,136	0,131
n > 30	$\frac{1,031}{\sqrt{n}}$	$\frac{0,886}{\sqrt{n}}$	$\frac{0,805}{\sqrt{n}}$	$\frac{0,768}{\sqrt{n}}$	$\frac{0,736}{\sqrt{n}}$

(Bilangan Dalam Badan Daftar Menyatakaan:

Fp : Baris Atas untuk p = 0,05 dan Baris Bawah untuk p = 0,01)

v_2 = dk penyebut	v_1 = dk pembilang																							
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞
1	161	200	216	225	230	234	237	239	241	242	243	244	245	246	248	249	250	251	252	253	253	254	254	254
	4062	4999	5403	5625	5764	5859	5928	5981	6022	6056	6082	6106	6142	6169	6208	6234	6258	6286	6302	6323	6334	6352	6361	6366
2	18,51	19,00	19,16	19,25	19,30	19,33	19,36	19,37	19,38	19,39	19,40	19,41	19,42	19,43	19,44	19,45	19,46	19,47	19,47	19,48	19,49	19,49	19,50	19,50
	98,49	99,01	99,17	99,25	99,30	99,33	99,34	99,36	99,38	99,40	99,41	99,42	99,43	99,44	99,45	99,46	99,47	99,48	99,48	99,49	99,49	99,49	99,50	99,50
3	10,13	9,55	9,28	9,12	9,01	8,94	8,88	8,84	8,81	8,78	8,76	8,74	8,71	8,69	8,66	8,64	8,62	8,60	8,58	8,57	8,56	8,54	8,54	8,52
	34,12	30,81	29,46	28,71	28,24	27,91	27,67	27,49	27,34	27,23	27,13	27,05	26,92	26,83	26,69	26,60	26,50	26,41	26,30	26,27	26,23	26,18	26,14	26,12
4	7,17	6,94	6,59	6,39	6,26	6,16	6,09	6,04	6,00	5,96	5,93	5,91	5,87	5,84	5,80	5,77	5,74	5,71	5,70	5,68	5,66	5,65	5,64	5,63
	21,20	18,00	16,69	15,98	15,52	15,21	14,98	14,80	14,66	14,54	14,45	14,37	14,24	14,15	14,02	13,93	13,83	13,74	13,69	13,61	13,57	13,52	13,48	13,46
5	6,61	5,79	5,41	5,19	5,05	4,95	4,88	4,82	4,78	4,74	4,70	4,68	4,64	4,60	4,56	4,53	4,50	4,46	4,44	4,42	4,40	4,38	4,37	4,36
	16,26	13,27	12,06	11,39	10,97	10,67	10,45	10,27	10,15	10,05	9,96	9,89	9,77	9,86	9,55	9,47	9,38	9,29	9,24	9,17	9,13	9,07	9,04	9,02
6	5,99	5,14	4,76	4,53	4,39	4,28	4,21	4,15	4,10	4,06	4,03	4,00	3,96	3,92	3,87	3,84	3,81	3,77	3,75	3,72	3,71	3,69	3,68	3,67
	13,74	10,92	9,78	9,15	8,75	8,47	8,26	8,10	7,98	7,87	7,79	7,72	7,60	7,52	7,39	7,31	7,23	7,14	7,09	7,02	6,99	6,94	6,90	6,88
7	5,59	4,74	4,35	4,12	3,97	3,87	3,79	3,73	3,68	3,63	3,60	3,57	3,52	3,49	3,44	3,41	3,38	3,34	3,32	3,29	3,28	3,25	3,24	3,23
	12,25	9,55	8,45	7,86	7,46	7,19	7,00	6,84	6,71	6,62	6,54	6,47	6,35	6,27	6,15	6,07	5,98	5,90	5,85	5,78	5,75	5,70	5,67	5,65
8	5,32	4,46	4,07	3,84	3,69	3,58	3,50	3,44	3,39	3,34	3,31	3,28	3,23	3,20	3,15	3,12	3,08	3,05	3,03	3,00	2,98	2,96	2,94	2,93
	11,26	8,65	7,59	7,01	6,63	6,37	6,19	6,03	5,91	5,82	5,74	5,67	5,56	5,48	5,36	5,28	5,20	5,11	5,06	5,00	4,96	4,91	4,88	4,86
9	5,12	4,26	3,86	3,63	3,48	3,37	3,29	3,23	3,18	3,13	3,10	3,07	3,02	2,98	2,93	2,90	2,86	2,82	2,80	2,77	2,76	2,73	2,72	2,71
	10,56	8,02	6,99	6,42	6,06	5,80	5,62	5,47	5,35	5,26	5,18	5,11	5,00	4,92	4,80	4,73	4,64	4,56	4,51	4,45	4,41	4,36	4,33	4,31
10	4,96	4,80	3,71	3,48	3,33	3,22	3,14	3,07	3,02	2,97	2,94	2,91	2,86	2,82	2,77	2,74	2,70	2,67	2,64	2,61	2,59	2,56	2,55	2,54
	10,04	7,56	6,55	5,99	5,64	5,39	5,21	5,06	4,95	4,85	4,78	4,71	4,60	4,52	4,41	4,33	4,25	4,17	4,12	4,05	4,01	3,96	3,93	3,91
11	4,84	3,98	3,59	3,36	3,20	3,09	3,01	2,95	2,90	2,86	2,82	2,79	2,74	2,70	2,65	2,61	2,57	2,53	2,50	2,47	2,45	2,42	2,41	2,40
	9,65	7,20	6,22	5,67	5,32	5,07	4,88	4,74	4,63	4,54	4,46	4,40	4,29	4,21	4,10	4,02	3,94	3,86	3,80	3,74	3,70	3,86	3,62	3,50
12	4,75	3,88	3,49	3,26	3,11	3,00	2,92	2,85	2,80	2,76	2,72	2,69	2,64	2,60	2,54	2,50	2,46	2,42	2,40	2,36	2,35	2,32	2,31	2,30
	9,38	6,93	5,95	5,41	5,06	4,82	4,65	4,50	4,39	4,30	4,22	4,16	4,05	3,98	3,86	3,78	3,70	3,61	3,56	3,49	3,46	3,41	3,38	3,36
13	4,67	3,80	3,41	3,18	3,02	2,92	2,84	2,77	2,72	2,67	2,63	2,60	2,55	2,51	2,46	2,42	2,38	2,34	2,32	2,28	2,26	2,24	2,22	2,21
	9,07	6,70	5,74	5,20	4,86	4,62	4,44	4,30	4,19	4,10	4,02	3,96	3,85	3,78	3,67	3,60	3,51	3,42	3,37	3,30	3,27	3,21	3,18	3,16
14	4,60	3,74	3,34	3,11	2,96	2,85	2,77	2,70	2,65	2,60	2,56	2,53	2,48	2,44	2,39	2,35	2,31	2,27	2,24	2,21	2,19	2,16	2,14	2,13
	8,86	6,51	5,56	5,03	4,89	4,46	4,28	4,14	4,03	3,94	3,86	3,80	3,70	3,62	3,51	3,43	3,34	3,26	3,21	3,14	3,11	3,06	3,02	3,00
15	4,54	3,68	3,29	3,06	2,90	2,79	2,70	2,64	2,59	2,55	2,51	2,48	2,43	2,39	2,33	2,29	2,25	2,21	2,18	2,15	2,12	2,10	2,06	2,07
	8,68	6,36	5,42	4,89	4,56	4,32	4,14	4,00	3,89	3,80	3,73	3,67	3,56	3,48	3,36	3,29	3,20	3,12	3,07	3,00	2,97	2,92	2,89	2,87
16	4,49	3,63	3,24	3,01	2,85	2,74	2,66	2,59	2,54	2,49	2,45	2,42	2,37	2,33	2,28	2,24	2,20	2,16	2,13	2,09	2,07	2,04	2,02	2,01
	8,53	6,23	5,29	4,77	4,44	4,20	4,03	3,89	3,78	3,69	3,61	3,55	3,45	3,37	3,25	3,18	3,10	3,01	2,96	2,89	2,86	2,80	2,77	2,75
17	4,45	3,59	3,20	2,96	2,81	2,70	2,62	2,55	2,50	2,45	2,41	2,38	2,33	2,29	2,23	2,19	2,15	2,11	2,08	2,04	2,02	1,99	1,97	1,96
	8,40	6,11	5,18	4,67	4,34	4,10	3,93	3,79	3,68	3,59	3,52	3,45	3,35	3,27	3,16	3,08	3,00	2,92	2,86	2,79	2,76	2,70	2,67	2,65
18	4,41	3,55	3,16	2,93	2,77	2,66	2,58	2,51	2,46	2,41	2,37	2,34	2,29	2,25	2,19	2,15	2,11	2,07	2,04	2,00	1,98	1,96	1,93	1,92
	8,28	6,01	5,09	4,58	4,25	4,01	3,85	3,71	3,60	3,51	3,44	3,37	3,27	3,19	3,07	3,00	2,91	2,88	2,78	2,71	2,68	2,62	2,59	2,57
19	4,38	3,52	3,13	2,90	2,74	2,63	2,55	2,48	2,43	2,38	2,34	2,31	2,26	2,21	2,15	2,11	2,07	2,02	2,00	1,96	1,94	1,91	1,90	1,88
	8,18	5,93	5,01	4,50	4,17	3,94	3,77	3,63	3,52	3,43	3,36	3,30	3,19	3,12	3,00	2,92	2,84	2,76	2,70	2,63	2,60	2,54	2,51	2,49
20	4,35	3,49	3,10	2,87	2,71	2,60	2,52	2,45	2,40	2,35	2,31	2,26	2,23	2,18	2,12	2,08	2,04	1,99	1,96	1,92	1,90	1,87	1,85	1,84
	8,10	5,85	4,94	4,48	4,10	3,87	3,71	3,56	3,45	3,37	3,30	3,23	3,13	3,05	2,94	2,86	2,77	2,69	2,63	2,56	2,53	2,47	2,44	2,42
21	4,32	3,47	3,07	2,84	2,68	2,57	2,49	2,42	2,37	2,32	2,28	2,25	2,20	2,15	2,09	2,05	2,00	1,96	1,93	1,89	1,87	1,84	1,82	1,81
	8,02	5,78	4,87	4,37	4,04	3,81	3,65	3,51	3,40	3,31	3,24	3,17	3,07	2,99	2,88	2,80	2,72	2,63	2,58	2,51	2,47	2,42	2,38	2,36
22	4,30	3,44	3,05	2,82	2,66	2,55	2,47	2,40	2,35	2,30	2,26	2,23	2,18	2,13	2,07	2,03	1,98	1,93	1,91	1,87	1,84	1,81	1,80	1,78
	7,94	5,72	4,82	4,31	3,99	3,76	3,59	3,45	3,35	3,26	3,18	3,12	3,02	2,94	2,83	2,75	2,67	2,58	2,53	2,46	2,42	2,37	2,33	2,31
23	4,28	3,42	3,03	2,80	2,64	2,53	2,45	2,38	2,32	2,28	2,24	2,20	2,14	2,10	2,04	2,00	1,96	1,91	1,88	1,84	1,82	1,79	1,77	1,76
	7,88	5,66	4,76	4,26	3,94	3,71	3,54	3,41	3,30	3,21	3,14	3,07	2,97	2,89	2,78	2,70	2,62	2,53	2,48	2,41	2,37	2,32	2,28	2,26
24	4,26	3,40	3,01	2,78	2,62	2,51	2,43	2,36	2,30	2,26	2,22	2,18	2,13	2,09	2,02	1,98	1,94	1,89	1,86	1,82	1,80	1,76	1,74	1,73
	7,82	5,61	4,72	4,22	3,90	3,67	3,50	3,36	3,25	3,17	3,09	3,03	2,93	2,85	2,74	2,66	2,58	2,49	2,44	2,36	2,33	2,27	2,23	2,21
25	4,24	3,38	2,99	2,76	2,60	2,49	2,41	2,34	2,28	2,24	2,20	2,16	2,11	2,06	2,00	1,96	1,92	1,87	1,84	1,80	1,77	1,74	1,72	1,71
	7,77	5,57	4,68	4,18	3,86	3,63	3,46	3,32	3,21	3,13	3,05	2,99	2,89	2,81	2,70	2,62	2,54	2,45	2,40	2,32	2,29	2,23	2,19	2,17

26	4,22	3,37	2,89	2,74	2,59	2,47	2,39	2,32	2,27	2,22	2,18	2,15	2,10	2,05	1,99	1,95	1,90	1,85	1,82	1,78	1,76	1,72	1,70	1,69
	7,72	5,53	4,64	4,14	3,82	3,59	3,42	3,29	3,17	3,09	3,02	2,96	2,86	2,77	2,66	2,58	2,50	2,41	2,36	2,28	2,25	2,19	2,15	2,13
27	4,21	3,35	2,96	2,73	2,57	2,46	2,37	2,30	2,25	2,20	2,16	2,13	2,08	2,03	1,97	1,93	1,88	1,84	1,80	1,76	1,74	1,71	1,68	1,67
	7,68	5,49	4,60	4,11	3,79	3,56	3,39	3,26	3,14	3,06	2,98	2,93	2,83	2,74	2,63	2,55	2,47	2,38	2,33	2,25	2,21	2,16	2,12	2,10
28	4,20	3,34	2,95	2,71	2,56	2,44	2,36	2,29	2,24	2,19	2,15	2,12	2,06	2,02	1,96	1,91	1,87	1,81	1,78	1,75	1,72	1,69	1,67	1,65
	7,64	5,45	4,57	4,07	3,76	3,53	3,36	3,23	3,11	3,03	2,95	2,90	2,80	2,71	2,60	2,52	2,44	2,35	2,30	2,22	2,18	2,13	2,09	2,06
29	4,18	3,33	2,93	2,70	2,54	2,43	2,35	2,28	2,22	2,18	2,14	2,10	2,05	2,00	1,94	1,90	1,85	1,80	1,77	1,73	1,71	1,68	1,65	1,64
	7,60	5,52	4,54	4,04	3,73	3,50	3,33	3,20	3,08	3,00	2,92	2,87	2,77	2,68	2,57	2,49	2,41	2,32	2,27	2,19	2,15	2,10	2,06	2,03
30	4,17	3,32	2,92	2,69	2,53	2,42	2,34	2,27	2,21	2,16	2,12	2,09	2,04	1,99	1,93	1,89	1,84	1,79	1,76	1,72	1,69	1,66	1,64	1,62
	7,56	5,39	4,51	4,02	3,70	3,47	3,30	3,17	3,06	2,98	2,90	2,84	2,74	2,66	2,55	2,47	2,38	2,29	2,24	2,16	2,13	2,07	2,03	2,01
32	4,15	3,30	29,00	2,67	2,51	2,40	2,32	2,25	2,19	2,14	2,10	2,07	2,02	1,97	1,91	1,86	1,82	1,76	1,74	1,69	1,67	1,64	1,61	1,59
	7,50	5,34	4,46	3,97	3,66	3,42	3,25	3,12	3,01	2,94	2,86	2,80	2,70	2,62	2,51	2,42	2,34	2,25	2,20	2,12	2,08	2,02	,98	1,96
34	4,13	3,28	2,88	2,65	2,49	2,38	2,30	2,23	2,17	2,12	2,08	2,05	2,00	1,95	1,89	1,84	1,80	1,74	1,71	1,67	1,64	1,61	1,59	1,57
	7,44	5,29	4,42	3,93	3,61	3,38	3,21	3,08	2,97	2,89	2,82	2,76	2,66	2,58	2,47	2,38	2,30	2,21	2,15	2,08	2,04	1,98	1,94	1,91
36	4,11	3,26	2,86	2,63	2,48	2,36	2,28	2,21	2,15	2,10	2,06	2,03	1,89	1,93	1,87	1,82	1,78	1,72	1,69	1,65	1,62	1,59	1,56	1,55
	7,39	5,25	4,38	3,89	3,58	3,35	3,18	3,04	2,94	2,86	2,78	2,72	2,62	2,54	2,43	2,35	2,26	2,17	2,12	2,04	2,00	1,94	1,90	1,87
38	4,10	3,25	2,85	2,62	2,46	2,35	2,26	2,19	2,14	2,09	2,05	2,02	1,96	1,92	1,85	1,80	1,76	1,71	1,67	1,63	1,60	1,57	1,54	1,53
	7,35	5,21	4,34	3,86	3,84	3,32	3,15	3,02	2,91	2,82	2,75	2,69	2,59	2,51	2,40	2,32	2,22	2,14	2,08	2,00	1,97	1,90	1,86	1,84
40	4,08	3,23	2,84	2,61	2,45	2,34	2,25	2,18	2,12	2,07	2,04	2,00	1,95	1,90	1,84	1,79	1,74	1,69	1,66	1,61	1,59	1,55	1,53	1,51
	7,31	5,18	4,31	3,83	3,51	3,29	3,12	2,99	2,88	2,80	2,73	2,66	2,56	2,49	2,37	2,29	2,20	2,11	2,05	1,97	1,94	1,88	1,84	1,81
42	4,07	3,22	2,83	2,59	2,44	2,32	2,24	2,17	2,11	2,06	2,02	1,99	1,94	1,89	1,82	1,78	1,73	1,68	1,64	1,60	1,57	1,54	1,51	1,49
	7,27	5,15	4,29	3,80	3,49	3,26	3,10	2,96	2,86	2,77	2,70	2,64	2,54	2,46	2,35	2,26	2,17	2,08	2,02	1,94	1,91	1,85	1,80	1,78
44	4,06	3,21	2,82	2,58	2,43	2,31	2,23	2,16	2,10	2,05	2,01	1,98	1,92	1,88	1,81	1,76	2,17	1,66	1,63	1,58	1,56	1,52	1,50	1,48
	7,24	5,12	4,26	3,78	3,46	3,24	3,07	2,94	2,84	2,75	2,68	2,62	2,52	2,44	2,32	2,24	1,72	2,06	2,00	1,92	1,88	1,82	1,78	1,75
46	4,05	3,20	2,81	2,57	2,42	2,30	2,22	2,14	2,09	2,04	2,00	1,97	1,91	1,87	1,80	1,75	2,15	1,65	1,62	1,57	1,54	1,51	1,48	1,46
	7,21	5,10	4,24	3,76	3,44	3,22	3,05	2,92	2,82	2,73	2,66	2,60	2,50	2,42	2,32	2,22	1,71	2,04	1,98	1,90	1,86	1,80	1,76	1,72
48	4,04	3,19	2,80	2,56	2,41	2,30	2,21	2,14	2,08	2,03	1,99	1,96	1,90	1,86	1,79	1,74	2,13	1,64	1,61	1,56	1,53	1,50	1,47	1,45
	7,19	5,08	4,22	3,74	3,42	3,20	3,04	2,90	2,80	2,71	2,64	2,58	2,48	2,40	2,28	2,20	1,70	2,02	1,96	1,88	1,84	1,78	1,73	1,70
50	4,03	3,18	2,79	2,56	2,40	2,29	2,20	2,13	2,07	2,02	1,98	1,95	1,90	1,85	1,78	1,74	1,69	1,63	1,60	1,55	1,52	1,48	1,46	1,44
	7,17	5,06	4,20	3,72	3,44	3,18	3,02	2,88	2,78	2,70	2,62	2,56	2,46	2,39	2,26	2,18	2,10	2,00	1,94	1,86	1,82	1,76	1,71	1,68
55	4,02	3,17	2,78	2,54	2,38	2,27	2,18	2,11	2,05	2,00	1,97	1,93	1,88	1,83	1,76	1,72	1,67	1,61	1,58	1,52	1,50	1,46	1,43	1,41
	7,12	5,01	4,16	3,65	3,37	3,15	2,98	2,85	2,75	2,66	2,59	2,53	2,43	2,35	2,23	2,15	2,00	1,96	1,90	1,82	1,78	1,71	1,66	1,64
60	4,00	3,15	2,76	2,52	2,37	2,25	2,17	2,10	2,04	1,99	1,95	1,92	1,86	1,81	1,75	1,70	1,65	1,59	1,56	1,50	1,48	1,44	1,41	1,39
	7,08	4,98	4,13	3,65	3,34	3,12	2,95	2,82	2,72	2,03	2,56	2,50	2,40	2,32	2,20	2,12	2,03	1,93	1,87	1,79	1,74	1,68	1,63	1,60
65	3,99	3,14	2,75	2,51	2,36	2,21	2,15	2,08	2,02	1,98	1,94	1,90	1,85	1,80	1,73	1,68	1,63	1,57	1,54	1,49	1,46	1,42	1,39	1,37
	7,01	4,95	4,10	3,62	3,31	3,09	2,93	2,79	2,70	2,61	2,54	2,47	2,37	2,30	2,18	2,09	2,00	1,90	1,84	1,76	1,71	1,64	1,60	1,56
70	3,98	3,13	2,74	2,50	2,35	2,32	2,14	2,07	2,01	1,97	1,93	1,89	1,84	1,79	1,72	1,67	1,62	1,56	1,53	1,47	1,45	1,40	1,37	1,35
	7,01	4,92	4,08	3,60	3,29	3,07	2,91	2,77	2,67	2,59	2,51	2,45	2,35	2,28	2,15	2,07	1,98	1,88	1,82	1,74	1,69	1,63	1,56	1,53
80	3,96	3,11	2,72	2,48	2,33	2,21	2,12	2,05	1,99	1,95	1,91	1,88	1,82	1,77	1,70	1,65	1,60	1,54	1,51	1,45	1,42	1,38	1,35	1,32
	6,96	4,88	4,01	3,58	3,25	3,04	2,87	2,74	2,64	2,55	2,48	2,44	2,32	2,24	2,11	2,03	1,94	1,84	1,78	1,70	1,65	1,57	1,52	1,49
100	3,94	3,09	2,70	2,46	2,30	2,19	2,10	2,03	1,97	1,92	1,88	1,85	1,79	1,75	1,68	1,63	1,57	1,51	1,48	1,42	1,39	1,34	1,30	1,28
	6,90	4,82	3,98	3,51	3,20	2,99	2,82	2,69	2,59	2,51	2,43	2,36	2,26	2,19	2,06	1,98	1,89	1,79	1,73	1,64	1,59	1,51	1,46	1,43
125	3,92	3,07	2,68	2,44	2,29	2,17	2,08	2,01	1,95	1,90	1,86	1,83	1,77	1,72	1,65	1,60	1,55	1,49	1,45	1,39	1,36	1,31	1,27	1,25
	6,84	4,78	3,94	3,47	3,17	2,95	2,79	2,65	2,56	2,17	2,40	2,33	2,23	2,15	2,03	1,94	1,85	1,75	1,68	1,59	1,54	1,46	1,40	1,37
150	3,91	3,06	2,67	2,43	2,27	2,16	2,07	2,00	1,94	1,89	1,85	1,82	1,76	1,71	1,64	1,59	1,54	1,47	1,44	1,37	1,34	1,29	1,25	1,22
	6,81	4,75	3,91	3,44	3,13	2,92	2,76	2,62	2,53	2,44	2,37	2,30	2,20	2,12	2,00	1,91	1,82	1,72	1,66	1,56	1,51	1,43	1,37	1,33
200	3,89	3,01	2,65	2,41	2,26	2,14	2,05	1,98	1,92	1,87	1,83	1,80	1,74	1,69	1,62	1,57	1,52	1,45	1,42	1,35	1,32	1,26	1,22	1,19
	6,76	4,71	3,88	3,41	3,11	2,90	2,73	2,60	2,50	2,41	2,34	2,28	1,17	2,09	1,97	1,88	1,79	1,69	1,62	1,53	1,48	1,39	1,33	1,28
400	3,86	3,02	2,62	2,39	2,23	2,12	2,03	1,96	1,90	1,85	1,81	1,78	1,72	1,67	1,60	1,54	1,49	1,42	1,38	1,32	1,28	1,22	1,16	1,13
	6,70	4,66	3,83	3,36	3,06	2,85	2,69	2,55	2,16	2,37	2,29	2,23	2,12	2,04	1,92	1,84	1,74	1,64	1,57	1,47	1,42	1,32	1,24	1,19
1000	3,85	3,00	2,61	2,38	2,22	2,10	2,02	1,95	1,89	1,81	1,80	1,76	1,70	1,65	1,58	1,53	1,47	1,41	1,36	1,30	1,26	1,19	1,13	1,08
	6,68	4,62	3,80	3,34	3,04	2,82	2,66	2,53	2,43	2,34	2,26	2,20	2,09	2,01	1,89	1,81	1,71	1,61	1,54	1,44	1,38	1,28	1,19	1,11
∞	3,84	2,99	2,60	2,37	2,21	2,09	2,01	1,94	1,88	1,83	1,79	1,75	1,69	1,64	1,57	1,52	1,46	1,40	1,35	1,28	1,24	1,17	1,11	1,00
	6,64	4,60	3,78	3,32	3,02	2,80	2,64	2,51	2,41	2,32	2,24	2,18	2,07	1,99	1,87	1,79	1,69	1,59	1,52	1,41	1,36	1,25	1,12	1,00

Source: Sudjana. *Metoda Statistika*. Bandung: Tarsito, 2002

APPENDIX XVI

PERCENTAGE POINTS OF DISTRIBUTION

DF	A P		0.80 0.20	0.90 0.10	0.95 0.05	0.98 0.02	0.99 0.01	0.995 0.005	0.998 0.002	0.999 0.001
1			3.078	6.314	12.706	31.820	63.657	127.321	318.309	636.619
2			1.886	2.920	4.303	6.965	9.925	14.089	22.327	31.599
3			1.638	2.353	3.182	4.541	5.841	7.453	10.215	12.924
4			1.533	2.132	2.776	3.747	4.604	5.598	7.173	8.610
5			1.476	2.015	2.571	3.365	4.032	4.773	5.893	6.869
6			1.440	1.943	2.447	3.143	3.707	4.317	5.208	5.959
7			1.415	1.895	2.365	2.998	3.499	4.029	4.785	5.408
8			1.397	1.860	2.306	2.897	3.355	3.833	4.501	5.041
9			1.383	1.833	2.262	2.821	3.250	3.690	4.297	4.781
10			1.372	1.812	2.228	2.764	3.169	3.581	4.144	4.587
11			1.363	1.796	2.201	2.718	3.106	3.497	4.025	4.437
12			1.356	1.782	2.179	2.681	3.055	3.428	3.930	4.318
13			1.350	1.771	2.160	2.650	3.012	3.372	3.852	4.221
14			1.345	1.761	2.145	2.625	2.977	3.326	3.787	4.140
15			1.341	1.753	2.131	2.602	2.947	3.286	3.733	4.073
16			1.337	1.746	2.120	2.584	2.921	3.252	3.686	4.015
17			1.333	1.740	2.110	2.567	2.898	3.222	3.646	3.965
18			1.330	1.734	2.101	2.552	2.878	3.197	3.610	3.922
19			1.328	1.729	2.093	2.539	2.861	3.174	3.579	3.883
20			1.325	1.725	2.086	2.528	2.845	3.153	3.552	3.850
21			1.323	1.721	2.080	2.518	2.831	3.135	3.527	3.819
22			1.321	1.717	2.074	2.508	2.819	3.119	3.505	3.792
23			1.319	1.714	2.069	2.500	2.807	3.104	3.485	3.768
24			1.318	1.711	2.064	2.492	2.797	3.090	3.467	3.745
25			1.316	1.708	2.060	2.485	2.787	3.078	3.450	3.725
26			1.315	1.706	2.056	2.479	2.779	3.067	3.435	3.707
27			1.314	1.703	2.052	2.473	2.771	3.057	3.421	3.690
28			1.313	1.701	2.048	2.467	2.763	3.047	3.408	3.674
29			1.311	1.699	2.045	2.462	2.756	3.038	3.396	3.659
30			1.310	1.697	2.042	2.457	2.750	3.030	3.385	3.646

DF	A P		0.80 0.20	0.90 0.10	0.95 0.05	0.98 0.02	0.99 0.01	0.995 0.005	0.998 0.002	0.999 0.001
31			1.309	1.695	2.040	2.453	2.744	3.022	3.375	3.633
32			1.309	1.694	2.037	2.449	2.738	3.015	3.365	3.622
33			1.308	1.692	2.035	2.445	2.733	3.008	3.356	3.611
34			1.307	1.691	2.032	2.441	2.728	3.002	3.348	3.601
35			1.306	1.690	2.030	2.438	2.724	2.996	3.340	3.591
36			1.306	1.688	2.028	2.434	2.719	2.991	3.333	3.582
37			1.305	1.687	2.026	2.431	2.715	2.985	3.326	3.574
38			1.304	1.686	2.024	2.429	2.712	2.980	3.319	3.566
39			1.304	1.685	2.023	2.426	2.708	2.976	3.313	3.558
40			1.303	1.684	2.021	2.423	2.704	2.971	3.307	3.551
42			1.302	1.682	2.018	2.418	2.698	2.963	3.296	3.538
44			1.301	1.680	2.015	2.414	2.692	2.956	3.286	3.526
46			1.300	1.679	2.013	2.410	2.687	2.949	3.277	3.515
48			1.299	1.677	2.011	2.407	2.682	2.943	3.269	3.505
50			1.299	1.676	2.009	2.403	2.678	2.937	3.261	3.496
60			1.296	1.671	2.000	2.390	2.660	2.915	3.232	3.460
70			1.294	1.667	1.994	2.381	2.648	2.899	3.211	3.435
80			1.292	1.664	1.990	2.374	2.639	2.887	3.195	3.416
90			1.291	1.662	1.987	2.369	2.632	2.878	3.183	3.402
100			1.290	1.660	1.984	2.364	2.626	2.871	3.174	3.391
120			1.289	1.658	1.980	2.358	2.617	2.860	3.160	3.373
150			1.287	1.655	1.976	2.351	2.609	2.849	3.145	3.357
200			1.286	1.652	1.972	2.345	2.601	2.839	3.131	3.340
300			1.284	1.650	1.968	2.339	2.592	2.828	3.118	3.323
500			1.283	1.648	1.965	2.334	2.586	2.820	3.107	3.310
∞			1.282	1.645	1.960	2.326	2.576	2.807	3.090	3.291

APPENDIX XVII

DOCUMENTATION

Pic 1. The researcher give pre test paper to the students

Pic 2. The researcher give the treatment to the students

Pic 1. The researcher give post test paper to the students