THE EFFECT OF USING MEDIA TAPE RECORDER ON STUDENTS' LISTENING COMPREHENSION AT GRADE VIII SMP NEGERI 1 SIHAPAS BARUMUN

A THESIS

Submitted to State Institute for Islamic Studies (IAIN) Padangsidimpuan as a Partial Fulfillment of Requirement for Degree of Islamic Educational Scholar (S.Pd.I) in English

Written By:

AKUB HUMALA
Reg No: 08 340 0041

ENGLISH EDUCATION DEPARTMENT

TARBIYAH AND TEACHER TRAINING FACULTY
STATE INSTITUTE FOR ISLAMIC STUDIES
PADANGSIDIMPUAN
2015

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Appendix : 6 (Six Exemplars)

Padangsidimpuan, 20th June 2014
To:
Dean of Tarbiyah Teacher Training
In -
Padangsidimpuan

Assalamu'alaikum Wr. Wb.

After reading, studying and giving advice for necessary revise on thesis belong to Akub Humala, entitle **"THE EFFECT OF USING MEDIA TAPE RECORDER ON STUDENTS' LISTENING COMPREHENSION AT GRADE VIII SMP NEGERI 1 SIHAPAS BARUMUN"**. We assume that the thesis has been acceptable to complete the assignments and fulfill the requirements for the degree of Sarjana Pendidikan Islam (S.Pd.I), English Department at Tarbiyah and teacher Training Faculty Padangsidimpuan in IAIN Padangsidimpuan.

Therefore, we hoped that he could be to defend his thesis in Munaqosyah. That's all and thanks you for attention.

Wssalamu'alaikum Wr. Wb.

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DECLATARION LETTER OF WRITING OWN THESIS

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LEGALIZATION

The thesis with tittle : THE EFFECT OF USING MEDIA TAPE RECORDER ON STUDENTS' LISTENING COMPREHENSION AT GRADE VIII SMP NEGERI 1 SIHAPAS BARUMUN

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ABSTRACT

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Study Program	: TADRIS BAHASA INGGRIS
The little of the thesis	: THE EFFECT OF USING MEDIA TAPE RECORDING ON STUDENTS' LISTENING COMPREHENSION AT GRADE VIII SMP NEGERI 1 SIHAPAS BARUMUN

The objective of the research was to examine whether there was a significant effect of using media tape recording on students' listening comprehension at grade VIII SMP NEGERI 1 Sihapas Barumun.

In order to achieve the purpose of this research, the writer carried out the quantitative approach by applying experimental research. The population of this research was the eighth grade students of SMPN 1 Sihapas Barumun. They were VIII.A and VIII.B students so the sample is 47 students. The writer took all the population as the sample. In collecting the data, the instrument was multiple choice tests by listening to audio through media tape recorder. The number of test consists of 40 items of tests. They were 20 items of pretest and 20 items of post test. To analyze the data, it was used t-test formula.

Based on the data, it was found that (1) The students' achievement of Using Media Tape Recording in Listening comprehension is "enough" (63,35), (2) The students' achievement without Using Media Tape Recording in Listening comprehension (using conventional strategy) as "Low" (59,92), and (3) there is significant effect of using media tape recording on students' listening comprehension at grade VIII SMPN 1 Sihapas Barumun. (t_s = 0,19), categorized as "very low". It means that the hypothesis is accepted.

ACKNOWLEDGEMENT

Bismillahirrahmanirrahim

Praise is to Allah lord of the word who has bestowed upon the write in completing this thesis. Peace and blessing upon our prophet Muhammad SAW, his families, his companies, and his followers'.

This thesis is presented to the English Study Program of the Institute Collage for Islamic Studies (IAIN) Padangsidimpuan as partial fulfillment of the requirement for degree of strata I (S1).

This thesis can't be completed without a great deal of help from many people, especially Rayendriani Fahmei Lubis, M.Pd as the first advisor and Hamka, M.Hum as the second advisor who always give their time, valuable help, guidance, correction, and suggestion for completion of this thesis.

His deepest gratitude also goes to those who have helped the writer in finishing this thesis, among others:

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2. Mrs. Hj. Zulhimma, S.Ag, M.Pd, the dean of Tarbiyah and Pedagogy Faculty.
3. Mrs. Rayendriani Fahmei Lubis, M.Ag, the dean of English Study Program.
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10. All the people who have helped the writer to finish her study that he can't mention one by one.

May Allah, The almighty bless them all, Amin.

Padangsidimpuan, Mei 2014
The Writer

A K U B H U M A L A
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CHAPTER I

INTRODUCTION

A. The Background of Problem

Language is a medium of communication, which helps the members of a community in the society, to communicate and interact with one another. This involves both verbal and non-verbal communication. Language focuses on listening and reading that can be named as passive or receptive skills, while speaking and writing can be named as, active or productive skills.

Listening is one of the important skills in learning a language. If we dig in deep, it is worth mentioning here that for acquisition of a language listening plays a pivotal role. The process of acquiring a language starts with listening and ends up in the production of writing.

After birth, a child hears variety of sounds and can distinguish among them. Every language has a common and a natural sequence for the development of the language skills. Similarly English language has the natural sequence of listening, speaking, reading, and writing. Listening skill is ranked first of all the four folds of English skills. This highlights the importance of listening skill in the life of human beings.

All of people learn their mother tongue firstly by using listening skill. Aware or not, they use it since the birth. In the line with human being growth, they get better skill of listening. When they have understood a mother tongue

language, they try to learn another language. It occurs to students trying to learn another language even in school or outside of school for instance English.

Listening comprehension is very influenced by the source of listening that is listened. Listening to spoken English can be a problem for non-native English students who are learning English. We know that English is spoken with many differences of pronunciation, dialect and accent across the world. Those enable the students to get some difficulties in listening comprehension, moreover the source which heard by a non-native English teacher.

The rapid growth of technology nowadays forces education institutions to use the technology in their learning process to hasten achieving the objectives. Tape recording has been chosen as one of the medium to drill the students' listening comprehension.

Using tapes recording mainly need to native speakers' recording. The problem mostly covered by the students whether they will focus on listening to the native or they prefer to listen to more simple material. Then, the process of sorting and accuracy of the materials consider as the aspects hoped can influence the students' listening comprehension. In specific scope, especially in SMP Negeri 5 Sihapas Barumun, the students have many problems with listening. In accordance with an English teacher in the school mrs. Hanifa Utra statement that student's value of English subject are in low average and then, they have not ever get treatment of listening to an English native

speaker's spoken directly through media such as audio video or tape recording.

Using tapes recorder provides opportunities for students to listen some authentic native speech, which is now available spreading whole the world. Tapes may used to provide the students with recorded sample of native speaker conversation.

So, by the explanations above, the writer did a research entitled **"The Effect of Using Media Tape Recording on Students' Listening comprehension at Grade VIII SMP Negeri 5 Sihapas Barumun.**

B. The Identification of Problems

The problems of this research are identified as follow:

1. Grade VIII SMP Negeri 5 Sihapas Barumun Students are in low average of English Subject value especially listening comprehension.
2. Students get difficulties in listening comprehension caused by English has many differences of pronunciation, dialect and accent across the world.
3. The students are not familiar with listening to source of native speaker English spoken directly even in simple conversation. It can be found through tape recording.

C. The Limitation of Problems

Based on the identification of the problems above, the writer only focus on investigating how the students listening comprehension level in listening to some simple native conversations from tapes recording media.

D. The Formulation of Problem

In order to make a systematic approach to solve the problems, the statements of the problems are further developed into the following questions:

1. How is the students' listening comprehension at grade VIII SMP Negeri 5 Sihapas Barumun?
2. Is there the effect of Using Media Tape Recording on Students' Listening comprehension at Grade VIII SMP Negeri 5 Sihapas Barumun?
3. How far the effect of Using Media Tape Recording affected students' Listening comprehension at grade VIII SMP Negeri 5 Sihapas Barumun?

E. The Objectives of Research

The aims of the research are as follow:

1. To know how the students' listening comprehension at grade VIII SMP Negeri 5 Barumun tengah students' listening comprehension was.
2. To know whether there was effects of Using Media Tape Recording on Students' Listening comprehension at Grade VIII SMP Negeri 5 Barumun tengah.

3. To know how far the effect of Using Media Tape Recording affected to students' Listening comprehension at grade VIII SMP Negeri 5 Barumun Tengah is.

F. The Significances of Research

Hopefully this research is useful to give some contributions to English language teaching and learning:

1. For teachers; the finding of the research informed them about the effect of using tape recording media on students' listening comprehension in learning process.
2. For the students; they can be motivated to train their listening comprehension more than they did before and they are encouraged to use the existing media in their way to learn English. Besides, this research can be as a basic of further research for new problem that found in this research.
3. For the readers, it could inform them about the effect of using media tapes recording on students' listening comprehension.

G. The Definitions of Operational Variables

To avoid ambiguity, the writer clarrify the terms used in this research as follows:

1. Media

   According to Hornby, the word media derives from medium where medium is way of communicating information. a means by which something is communicated or expressed.[1]

   Then, Jack Richard and Schmidt state that media is a general term for television, radio, news papers considered as a whole and as ways of entertaining or spreading news or information to a large number of people. In language teaching, teaching materials which involve the use of different kinds of media such as visual, audio and printed media are sometimes known as multimedia or mixed media.[2] Besides, Martin Morgomery says that media in which verbal language is used are speech and writing together with various other technologically enabled forms (language can be broadcast, recorded, telephone, e-mail, texted, etc.)

2. Tape Recording

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[1] Hornby, *Oxford Learner's Pocket Dictionary,* (China: Oxford University Press, 2003), p. 275

[2] Jack C. Richards and Richard Schmidt, *Language Teaching and Applied Linguistics,* (Great Britain: Longman, 2010). P. 357

Tape Recorder is a mechanical device for recording on magnetic tape and usually for playing back the recorded material.[3]

3. Students' Listening Comprehension

Listening Comprehension is a process of listening to verbal symbols with caring, understanding, appreciation, and interpretation for obtaining information, catch the content or the message and understand the meaning of communication submitted by the speaker through speech or spoken language.

So, Students' Listening Comprehension is the ability of students to carry, understand, appreciate, interpret, and understanding the meaning of what they are hearing.

H. Outline of the Thesis

The systematic of this research is divided into five chapters. Each chapter consists of many sub chapters with detail as follow:

1. In the chapter one, it is consists of background of the problem, identification of problem, limitation of the problem, formulation of the problem, aims of problem, significances of research, definition of operational variables and the last outline the thesis.

[3]Admin, *"Definition of Tape Recorder"*, *www.http://www.thefreedictionary.com/ tape+recorder*, accessed on March[29th] at 09.43 pm

2. In the chapter two, it is consists of theoretical description, review of related findings, conceptual framework, and the last hypothesis.
3. In chapter three, it is consist of research methodology. And in the research methodology consists of time and place of the research, research design, population and sample, instrument of collecting the data, procedure of research, testing of instrument, and result of validity and the last technique of data analysis.
4. In the chapter four, it is consist of a. Description of Data. it has sub title they are: a. the result of Experiment Class for Pre test and post test. 2. The result of control Class in pre test and post test, 3. Normality Test and Homogeneity Test, b. Hypothesis Test, c. Discussion.
5. Chapter five was the conclusion and Suggestion.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Theoretical Description

1. Media

a. Definition of Media

The word "media" derives from Latin and it is plural form of the word "medium" means conveyance or mediator. In other word media is message conveyance from sender to receiver.

Then, Jack Richard and Schmidt state that media is a general term for television, radio, news papers considered as a whole and as ways of entertaining or spreading news or information to a large number of people. In language teaching, teaching materials which involve the use of different kinds of media such as visual, audio and printed media are sometimes known as multimedia or mixed media.[1] Besides, Martin Morgomery says that media in which verbal language is used are speech and writing together with various other technologically enabled forms (language can be broadcast, recorded, telephone, e-mail, texted, etc.)

From those above definitions, we can take a conclusion that Media is something that has aim at conveying information between

[1] Jack C. Richards and Richard Schmidt, *Op. Cit.*

sender (source of information) and receiver. Media is as a connector that connects information between source and receiver.

b. Instructional Media

In general, learning Media is a tool of the learning process. Everything that can be used to stimulate thoughts, feelings, concerns and abilities or skills of learners so as to facilitate the process of learning is called by Learning Media or Media of education. These limits are quite extensive and include in-depth understanding of the source, the environment, humans and the methods used for the purpose of learning / training.

Meanwhile, Briggs says that, "Learning Media is the physical media to convey the content / learning materials such as books, movies, videos, and so on". Then, according to the National Education Association revealed that "learning media is the means of communication in print or view heard, including hardware technology".

c. The position of instructional media.

Therefore, the learning process is a communication process and takes place in a system; the instructional media occupies an important position as one of the components of the learning system. Without the media, the communication will not occur and the process of learning as a process of communication will not be able to take

place optimally. Learning Media is an integral component of the learning system.

From the above opinion concluded that instructional media is anything that can deliver the message, to stimulate thoughts, feelings, and the willingness of students so as to encourage the creation of learning to self-learners. In education, the use of instructional media often uses the principle of Cone Experience, which requires media such as textbooks, learning materials created by teachers and "audio-visual".

d. Kinds of Instructional Media

There are several types of media, including:

1) Visual Media: graphs, diagrams, charts, charts, posters, cartoons, comics
2) Audio Media: radio, tape recorders, language laboratories, and something alike.
3) Projected still media: slides; over head projector (OHP), in focus and something alike.
4) Projected motion media: film, television, video (VCD, DVD, VTR), computers, and the like.

In essence, instead of learning media itself that determines learning outcomes. Apparently the successful use of instructional media in the learning process to enhance learning outcomes depend on

(1) the content of the message, (2) how to explain the message, and (3) the characteristics of the message recipient. Thus in selecting and using media, three factors need to be considered. When all three factors are presented in the media capable of learning course will provide maximum results.

2. Tape Recorder

1) Definition of Media audio Tape Recorder

Audio Media is a media-related hearing loss, the message will be delivered poured in symbols. According Djamarah, "audio media is a media that relies on noise auditory abilities, such as radios, Tape Recorder, and LPs." Audio media set usually found to be composed of two parts that differ in function and operation. Both parts are radio and Tape Recorder (Tape Cassette).

Audio Media is related to hearing where the information is organized as symbols of audio signal. Audio media recording device is often called Audio cassette or Tape Recorder. Definition Audio Tape Recorder by Sudjana is “an instructional materials that contain messages in the form of auditory (sound tape or disc), which can stimulate the mind, feelings, concerns and willingness of students, resulting in the learning process”.

Tape Recorder is one of electronic audio media consisting of hardware and software. Hardware is such as Tape Recorder, while its software is a tape that contains the message. It is kind of hardware, where according to Jack C. Richard hardware is the physical equipment which may be used in an educational system, such as a computer, video cassette player, film projector, tape-recorder, cassette or record player.[2] In this research, the writer tries to take tape recorder as a media. Tape Recorder is perfect for learning to listen. But also it does not mean learning other skills such as speaking, writing, literature, and language cannot use this medium.

2) Function of Tape Recorder as instructional Media

There are some of benefit of using tape recorder in education field, they are:

(1) Improve audio communication,

(2) Creating an atmosphere of learning more effective and communicative,

(3) Develop an appreciation and imagination of the students on the things that are presented,

(4) to stimulate active participation of the audience,

(5) It is appropriate to the material of music and language,

[2] Jack C. Richard, *Longman Dictionary of Language Teaching & Applied Linguistics Forth Edition*, (Great Britain : Pearson Limited Edition, 2010), p. 258

(6) Overcoming the limits of time and space.

The other benefits that can get by using tape recorder in learning specially in teaching Listening comprehension are:

(1) The teacher can prepare the former material before teaching

(2) Teacher is able to check the stuff whether it is good or not before teaching

(3) By using tape recorder, teacher is possible to repeat conveyed material and stop it whenever they want.

(4) It is very effective and efficient in teaching language specially in teaching listening comprehension.

(5) It can be reinstalled and refilled by new lesson.

3. Listening Comprehension

a. Definition of Listening Comprehension.

Listening is a process of listening to verbal symbols with caring, understanding, appreciation, and interpretation for obtaining information, catch the content or the message and understand the meaning of communication submitted by the speaker through speech or spoken language.[3]

[3] Henry Guntur Tarigan, *Berbicara Sebagai Suatu Keterampilan Berbahasa*, (Bandung: Angkasa, 2009), p. 28.

Listening comprehension is a primary process in understanding the words of the speaker. It is a complex communication process which requires instant thought and individual ability to construct the meaning. The development of listening comprehension varies depending on the personal, social, and cultural experiences of the student.[4] A comprehension approach can work as long as the material presented for comprehension in fact consists of 1) sufficient, 2) language instances, 3) whose meaning can be inferred by students and 4) who are paying attention.[5]

Effective listeners are able to recognize the speaker's main points or ideas and identify the supporting details and examples. Comprehensive listening is the ability to identify and understand what others and saying. This involves understanding a speaker's accent, pronunciation, grammar, vocabulary and meaning (Howatt and Dankin 1974).

Listening comprehension is influenced by the listener's world knowledge, linguistic knowledge, text structure knowledge, and met cognitive knowledge.

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[4] Chandra Bose, *Testing Listening Comprehension of Engineering Students in Tamil Nadu India*, Retrieved from http://www3.telus.net/linguisticsissues/testinglistening, on February 21st, 2014

[5] Jonathan Newton, *Teaching ESL/EFL Listening and Speaking*, (Ney work: Routledge, 2009), p. 38

b. The Process of Listening Comprehension

Listening is an activity which is a process. Of course in this process there are stages as follows:

a) Phase heard, in this stage we just heard everything put forward by the speaker in the speech or speaking. So we're still in the stage of hearing.

b) Stage of understanding, after we hear there is a desire for us to know or understand well the content of the talks delivered by the speaker. So we come to the stage of understanding.

c) Phase interpretation, a good listener, thorough and meticulous, yet be satisfied if only to hear and understand the speech of the speaker, he wants to construe or interpret the contents, opinions beads contained and implied in that speech. Thus, the listener has arrived at the stage of interpreting.

d) Evaluate phase, after understanding and be able to interpret or interpret the contents of the conversation, the listener even start to assess or evaluate the opinions and ideas of the speaker, where the advantages and disadvantages, where kindness and shortcomings of the speaker. So thus it came to the Evaluating stage.

e) Phase response, is the last stage in listening activities, imbibe, absorb and accept the idea or ideas expressed by the speaker in

the speech or conversation. The listener also came on stage (responding).

c. Listening In Real Life

In real life, there are two ways in which we often listen to, they are:

a) *'Casual' listening*: Sometimes we listen with no particular purpose in mind, and often without much concentration. Examples of this kind of listening are: listening to the radio while doing some housework; chatting to a friend. Usually we do not listen very closely, unless we hear something that particularly interest us, and afterwards we may not remember much of what we heard.

b) *'Focus'* listening: At others time we listen for a particular purpose in mind, to find out information we need to know. Examples of this kind of listening are:

1. Listening to a piece of important news on the radio.
2. Listening to someone explaining how to operate a machine. In these situations, we listen much more closely.
3. But we do not listen to everything we hear with equal concentration- we listen for the most important points or for particular information. Usually, we know beforehand

what we are listening for (the things we want to know), and this helps us to listen.[6]

We just listen to a bit information that enough for our need and we do something more important afterward.

d. The Listening Difficulties

To make English learning about listening easier, we must know what the listening difficulties are. According to Brown that there are eight factors which make listening difficult as follows.

a) Clustering

Attending to appropriate "chunks" of language – phrases, clauses, constituents.

b) Redundancy

Recognizing the kinds of repetitions, rephrasing, elaborations, and insertions that unrehearsed spoken language often contains, and benefiting from that recognizing

c) Reduced forms.

Understanding the reduced forms that may not have been a part of English learners past learning experiences in classes where only formal "textbook" language has been presented.

[6] Adrian Doff, *Teach English: A training Course for Teachers*, (New York: Cambridge Press, 1990), p. 198-199.

d) Performance variables

Being able to "weed out" hesitations, false starts, pauses, and corrections in natural speech.

e) Colloquial language

Comprehending idioms, slang, reduced forms, shared cultural knowledge.

f) Rate of delivery

Keeping up with the speed of delivery, processing automatically as the speaker continue

g) Stress, rhythm, and intonation

Correctly understanding prosodic elements of spoken language, which is almost always much more difficult than understanding the smaller phonological bits and pieces.

h) Interaction

Managing the interactive flow of language from listening to speaking and listening, etc.[7]

By knowing those difficulties of listening we at least can minimize the tough listening itself. We directly can solve these diifficulties by going toward learning of aspects mentioned above.

[7] H. Douglas Brown, *Language Assessment and Classroom Practice*, (San Francisco: Longman, 2004), p. 122.

e. Indicators of Listening Comprehension

To know indicators about student skill in listening skill, Students must comprehend about it, as follows:

1) The Students understanding English oral conversation upon listening to recorded English conversational dialogues.
2) The students understand English conversational dialogues by means of answering a set of given questions after a dialogue in English is heard.
3) To understand English oral conversation in the form of recorded dialogues.[8]

In assessing levels of listening achievement, special attention was students' skills to listen effectively as required by the formal school environment;

1) The Students' skills to understand and explain the main themes, ideas and points of view expressed in spoken texts; and
2) The Students' awareness of the relationship between the medium and the message in spoken text.[9]

[8] *http://www.dest.gov.au.mla.NSELS* 35 LISTENING.html
[9] http://www.scribd.com/doc/BAHASA-INGGRIS-SMA

B. Review of Related Finding

Beside of theory study above the writer found some researches related to this research. The first research had been done by Berry Parlindungan Lubis, a Student of STKIP Tapsel Padangsidimpuan his thesis was about The Effect of Audio Visual Media on Teaching Listening Descriptive Text (a Study to the ninth grade students of SMP N 1 Ulupungkut).[10] He told that there was significant effect of Audio Visual Media on Teaching listening Descriptive Text. Then, the second research conducted by Ahmadin Azhar entitled "The Effect of Using Media Video Dora the Explorer Students' Vocabulary Mastery at SD Negeri 200201/4 Padangsidimpuan.[11] He tried to investigate the extent to which media video affects on students' vocabulary and he got the result that there was a significant effect of using media video Dora the Explorer to students' vocabulary mastery.

From the research above, the writer took time to investigate how Media Tape Recording affects on Student's Listening Comprehension at Grade VIII SMP Negeri 5 Sihapas Barumun.

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[10] Berry Parlindungan Lubis, *The Effect of Audio Visual Media on Teaching Listening Descriptive Text* (a Study to the ninth grade students of SMP N 1 Ulupungkut), Skripsi STKIP Tapsel,

[11] Ahmadin Azhar, *The Effect of Using Media Video Dora the Explorer Students' Vocabulary Mastery at SD Negeri 200201/4 Padangsidimpuan*, Skripsi STAIN Padangsidimpuan, 2013

C. Conceptual Framework

Success of teaching English depends on many factors, such as: teaching method that is used, English Material quality, circumstances, qualification of the teacher, student's passion, using of instructional media and many more.

Listening is one of teaching English field that must be taught with a good way. It includes using effective method and using media. By that way, students are expected to be easier to get along their listening comprehension.

The use of instructional media especially tape recorder is considered as an effective way to improve students' listening comprehension by the reason the can get the real English source that is spoken by Native Speaker. Moreover, they can re-listen to the audio files more often.

It affects their capability to catch each word spoken by Native Speaker and Students normally face and encounter listening problems especially in foreign languages such as in Indonesia. English is spoken across the world with different dialects and accents; therefore, the foreign learners encounter difficulty in understanding this language.

So, it carried out a further investigation about the extent to which media tape recorder affected to the students' listening comprehension by this research.

D. Hypothesis

The hypothesis is an idea suggestion answer to the problem or a case which is its fact would be proved by getting the result of a study. The hypothesis is an important component in the research problems. As Suharsimi said that "Hypothesis is can be meant as a provisional answer to the research problem, until the valid data is collected." The hypothesis of this research is stated that

H_a: "there was a significant effect of using media Tape Recording on students' listening comprehension."

H_0: "there was no significant effect of using media Tape Recording on students' listening comprehension."

CHAPTER III

RESEARCH METHODOLOGY

A. Research Methodology

1. Method of Research

The method of research used in this research was quantitative method, where the data were collected and analyzed through statistical analysis. While, the type of the research was experiment research. In this research, the writer had wanted to find the effect of using media tape recording on students' listening comprehension.

In this research, the students had been given pre-test, to find their listening comprehension before being given treatment. After treatment, the students had been given a post-test, to find the effect of the treatment toward their listening comprehension. There were two variables in this research; they were using media tape recording as independent variable and the students' listening comprehension as dependent variable.

Table 1

Research Design

Class	Pre-test	Treatment	Post-test
Experimental	✓	✓	✓
Control	✓	×	✓

2. Time and Place of the research

This research took place in SMP Negeri 5 Sihapas Barumun. Then, Time of this research occurred in 2014.

3. Population and Sample of the Research

a. Population

The researcher need the population to conduct the research, because it is an important aspect in a research. Ranjit Kumar says that "Population is the class, families living in the city or electorates from which you select your sample."[1] In line with a statement of scientist Ari and Sukardi, they say that "Population is all members of well defined class of people, event, or objects."[2] The last, Burhan Bungin said that "Population is the entire research object that can be a human, animals, plants, air, phenomenon, value, etc." So that, the population of the research was the Grade VIII-A students of SMP N 5 Sihapas Barumun as experiment class and Grade VIII-B students of SMP N 5 Sihapas Barumun as control class. It is showed like below:

[1] Ranjit Kumar, *Research Methodology a step by step guide for beginner*, (New Delhi : Sage Publication Ltd)n p. 194

[2] Sukardi, *Metodologi Penelitian Pendidikan*,(Jakarta : Bumi Aksara, 2003),p.53.

Table 2:

Population of research

NO	Class	Population
1	VIII-A	25
2	VIII-B	22
Total		47

Population is a set or collection of all elements possessing one or more attributes of interest. The population of this research was students grade VIII of SMPN 5 Sihapas Barumun. They consist of forty seven students.

b. Sample

Sample is the small group of students, families or electors from whom you collect the required information to estimate the average age of the class, average income or the election outcome.[3] For the efficiency and practicality of thus research, the large number of the sample is limited. Population of the research is as many as 47 students, consist of two classes, they were VIII-A and VIII-B. That number is smaller than a hundred. By using cluster sampling technique in this study, forty seven students were chosen as the sample.

[3] *Ibid*.

B. Research Design

1. Homogeneity Test

Homogeneity variant test was used to know whether control class and experimental class have the same variant or not. If the both of classes is same, it is can be called homogeneous. To test it, it was used formula, that:

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

Criteria of the test with hypothesis were used, that:

$$H_0 : \sigma_1^2 = \sigma_2^2$$
$$H_1 : \sigma_1^2 \neq \sigma_2^2$$

Where:

σ_1^2 = Variant of experimental class

σ_2^2 = Variant of control class

H_0 is accepted if $F \leq F_{\frac{1}{2}\,(n_1-1)(n_2-1)}$ while if $F_{count} > F_{table}$. So, H_0 is rejected with significant level 5 % (0,05) and dk numerator is $(n_1\text{-}1)$ while dk denominator is $(n_2\text{- }1)$.

Where:

n_1 = Total of the data that bigger variant

n_2 = Total of the data that smaller variant[4]

[4]Sudjana, *Metoda Statistika*, (Jakarta: Tarsito, 2002), p. 250.

After doing the calculation, researcher found that F_{count} = 1,31 with α 5 % and dk = 23;22 from the distribution list F, researcher found that F_{table} = 2,07, because $F_{count} < F_{table}$ (1,31 < 2,07). So, there is no difference the variant between the both classes (homogeneous).

2. Normality Test

To know whether data of research has normal pamphlet. So, it was used Liliefors formula, that:

.[5]

$L_0 < L$, the items are normal and the hypothesis is accepted

Where:

L_0 = the highest score of the normality result from all items

L = the standard of normality from table

From the above table it is got the highest value that is Lo=0.1667 with n=23 and α=0.05 from the Liliefors Table L=0.190. Since Lo < L, (0.1667 < 0,190), null hypothesis is accepted and the population distribution is normal.

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

C. Instrument of Collecting Data

In this research, test is used as an instrument. "Test can be defined as a sample of behavior."[6] The students were given a test to know and to get the data about students' listening comprehension (variable y) that consists of 20 questions. The test is multiple choices test with four alternatives a, b, c, d. the Question and answer is fully based on the audio on Tape Recorder that will be played.

The students is given time 45 minutes. If the students can answer all the questions correctly, the score was 100. It means that the correct answer will be given score 5 while the wrong answer will be given 0.

D. Validity of Instrument

The validity of the test that was analized in content validity. To validate the test, the reseacher constructed the test based on the curriculum, syllabus and material that the researcher use while teaching students as treatment. In addition, Tuckman defines validity as the extent to which a test measure what it should measure. Various methods can be assess the validity of a test, one of which is content validity is prominent

[6]Sandra J. Savignon, *Communicative Competence Theory and Classroom Practice* (Massachusetts: Addison- Wesley publishing company, 1983) p.232.

in the achievement test with this type of examination, test content is essential.[7]

To analyses the reliability of the test, the researcher used correlation biserial formula as follows: $r_{pbi} = \frac{Mp - Mt}{SDt}\sqrt{\frac{p}{q}}$ .8

Where:

r_{pbi} = Number of index Correlation Point Biserial

M_p = Reaverage of the score of the students answer correctly

M_t = Reaverage of the total score total that achieved successly by member of the test

SD_t = Standard of deviation

p = Proporsition of the students answer correctly

$$p = \frac{Total\ of\ the\ student\ answer\ correctly}{Total\ of\ the\ Student}$$

q = Proporsiton of the incorrect answer student

(q = 1 – p)

1. Result of calculation by coefficient of correlation biserial is determined if $r_{pbi} > r_{table}$ with the significant level 5 % (0,05) with the tabel r product moment. From each items, they are bigger than the r_t that is 0.367. So, that the items are tested valid.

[7]Tuckman, B.W, *Conducting Educational Research* (New York: Harcourt Brace Jovanovich Publisher ,1988), p. 45.

[8]Anas Sudijono, *Pengantar Statistik Pendidikan*, (Jakarta: Raja Grafindo Persada, 2008), p. 258.

E. Technique of Data collection

To get the data, the writer collected it by giving test. Test is some of question used for measure skills, knowledge, and intelligence. The process of collecting data is divided into three phases, they are:

a. Pre-Test

Before the treatment, pre-test was given to both experimental and control class. It aimed at measuring the students' ability before applying the treatment and also to find out if they were same level at the starting point.

b. Treatment

After doing a test in both classes, the writer gave a treatment to an experimental class only by teaching the students listening comprehension by using media tape recorder. Meanwhile, the control class or class VIII-B is not being given any treatment or teaching process of listening comprehension by using media tape recorder is not run there.

c. Post-test

After conducting the treatment, a post test was given to the both classes. Post test is the same with pre test. The administrating

of the post test was mean to find out the differences in score of both control and experimental class before and after the treatment.

The procedures of collecting data will be conducted as follows:

1. Answer sheets were firstly distributed
2. Giving the instruction and explains how to do test to the students, and then they were asked to put their identity on the answer sheet.
3. Playing the audio files by using tape recorder three times for every category of question.
4. The students answer the question based on the audio they listen to.
5. Collecting the answer sheet after the students finishing the test.

F. Technique of analyzing the Data

The data was collected by pre-test and post-test and then it will be analyzed by applying t-test formula. The use of this formula aimed at finding out the difference of the result of the conducted the pre-test and post-test in both experimental and control class, before and after treatment. The writer used t-test formula:

$$T-test = \frac{M_1 - M_2}{\sqrt{\left[\frac{\sum X_1^{\,2} + \sum X_2^{\,2}}{n_1 + n_2 - 2}\right]\left[\frac{1}{n_1} + \frac{1}{n_2}\right]}}$$

Where:

T : The value which the statistical significance

M_1 : The average score of the experimental class

M_2 : The average score of the control class

X_1^2 : Deviation of the experimental class

X_2^2 : Deviation of the control class

n_1 : Number of experimental class

n_2 : Number of control class

According to Riduwan, the students' score classification could be seen the following table:

Table 3

The Students' Score Classification

Score	Category
80 – 100	Very high
70 - 79	High
60 - 69	Enough
50 - 59	Low
0 - 49	Very low

(Resource: Riduwan, Belajar Mudah Penelitian Untuk Guru, Karyawan Dan Peneliti Pemula)

CHAPTER IV

RESULT OF THE RESEARCH

A. Description of Data

This chapter presented description of data that had been collected and calculated after doing pre-test and post test. The writer used T-Test formula to test the hypothesis. Furthermore, the writer presented description of data as follow:

1. The Pre-test Score

   a. Pre-test Score in Experimental Class

The pre-test scores obtained in experimental class before giving treatments were as follows:

The score of pre-test in experimental class before teaching is as follows:

Table 4

The Score of Pre-Test in Experimental Class

Mean	59,92
Median	60,5
Modus	60 and 65
The lowest score	40
The highest score	75

Based on the table above the mean of score in experimental class was 59,92, modus was 60, and median was 60,5. The writer got the highest score was 70, and the lowest score was 40. Next, the calculation of how to get it can be seen in the appendix 6.

Table 5

The Frequency Distribution of Students' Score in Experimental Class

No.	Interval	Median	Frequency	Percentages
1.	40-46	43	4	16,6%
2.	47-53	50	1	4,1%
3.	54-60	57	8	33,3%
4.	61-67	64	5	20,8%
5.	68-74	71	4	16,6%
6.	75-81	78	2	8,3%
	Total		24	100 %

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

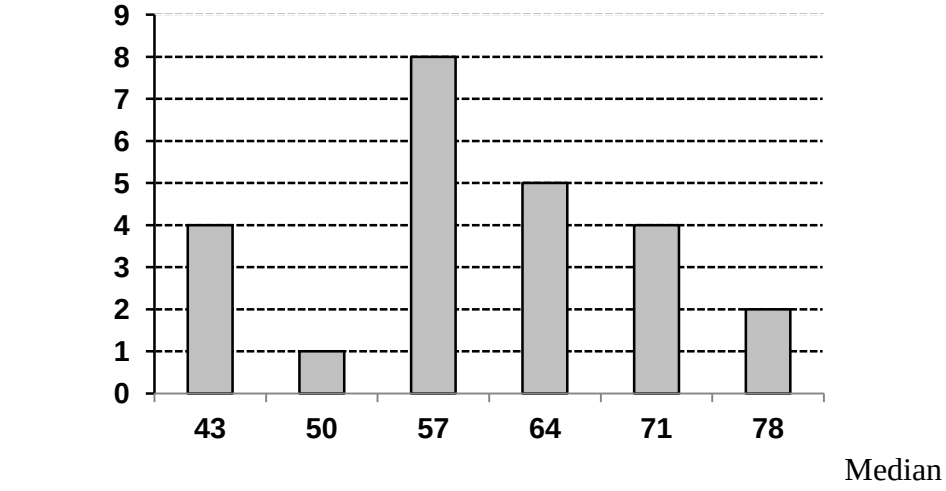

Figure 1

The Frequency Distribution histogram in Experimental Class

b. The Pre-test Score of Control class

The score of pre-test in control class is as follows:

Table 6

The Score of Pre-Test in Control Class

Mean	61,56
Median	58
Modus	60
The lowest score	40
The highest score	75

Based on the table above the mean of score in control class was 61,56, modus was 60, and median was 58. The writer got the highest score was 75, and the lowest score was 40. Next, the calculation of how to get it can be seen in the appendix 7.

Table 7

The Frequency Distribution of Students' Score in Control Class

No.	Interval	Median	Frequency	Percentages
1.	40-46	43	4	17,3 %
2.	47-53	50	2	8,6 %
3.	54-60	57	5	21,7%
4.	61-67	64	3	13%
5.	68-74	71	5	21,7%
6.	75-81	78	4	17,3%
	Total		**23**	**100 %**

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

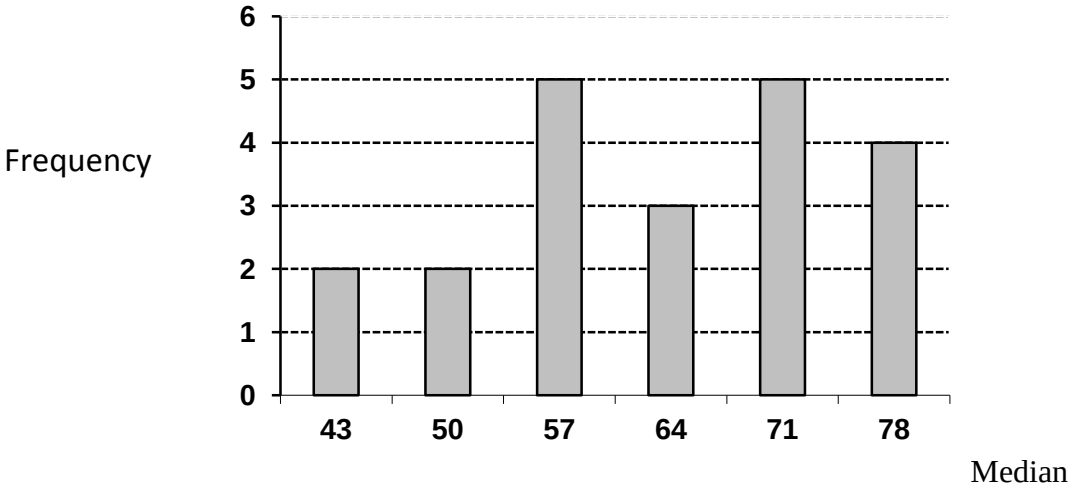

Figure 2
The Frequency Distribution histogram in Control Class

From the table above, the writer concluded the students' ability before treatment was low for 59,92 class (59,92) and enough for control class (61,56). It was measured based on table 3 the students' score classification.

2. Description Data of Post-Test

The post-test scores obtained after treatment in experimental class and control class is as follows:

a. The Post Test Score of Experimental Class

The score of post-test in experimental class after teaching is as follow:

Table 8

The Score of Post-Test in Experimental Class

Mean	66,35
Median	57,49
Modus	65
The lowest score	40
The highest score	80

Based on the table above the mean of score in experimental class was 66,35, modus was 65, and median was 57,49. The writer got the highest score was 80, and the lowest score was 40. Next, the calculation of how to get it can be seen in the appendix 8. Then, the computed of the frequency distribution of the student's score of class can be applied into table frequency distribution as follows:

Table 9

The frequency of Students' Score in Experimental Class

No.	Interval	Median	Frequency	Percentages
1.	40-47	43,5	1	4,1%
2.	48-56	-	-	-
3.	57-65	50,5	11	45,8%
4.	66-74	69,5	3	12,5%
5.	75-82	78,5	10	41,6%
	Total		24	100%

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

Frequency.

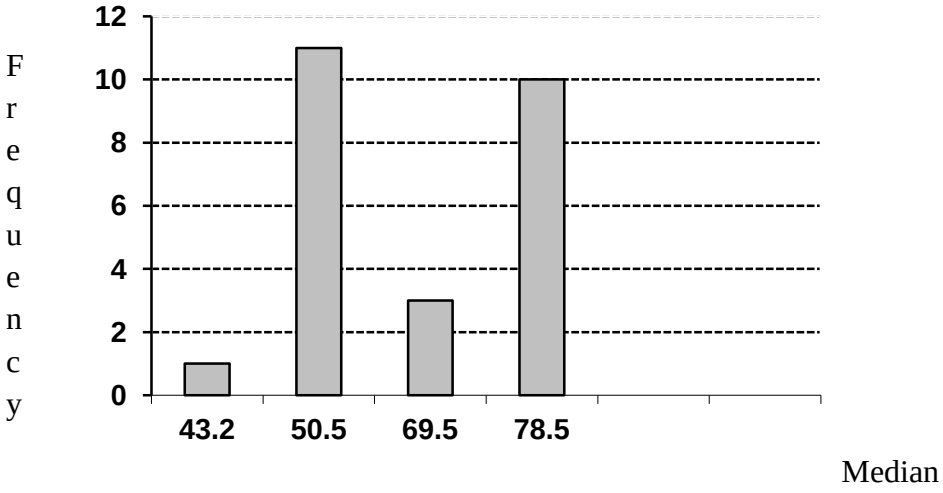

Figure 3:
The Frequency Distribution histogram in Experimental Class

b. The Post Test Score of Control class

The score of post-test in control class after treatment in the experimental class and control class was not given any treatment is as follows:

Table10

The Score of Post-Test in Control Class

Mean	59,92
Median	60,5
Modus	60
The lowest score	40
The high score	70

Based on the table above the mean of score in control class was 59,92, modus was 60, and median was 60,5. The writer got the highest score was 70,

and the lowest score was 40. Next, the calculation of how to get it can be seen in the appendix 9. Then, the computed of the frequency distribution of the student's score of class can be applied into table frequency distribution as follows:

Table 11

The Frequency Distribution of Students' Score in Control Class

No.	Interval	Median	Frequency	Persentages
1.	40-46	43	2	8,69%
2.	47-53	-	-	-
3.	54-60	57	6	26%
4.	61-67	64	5	21,7%
5.	68-74	71	2	8,69%
6.	75-81	78	8	34,78%
	Total		23	100 %

Based on the data above, it can be drawn at histogram as below:

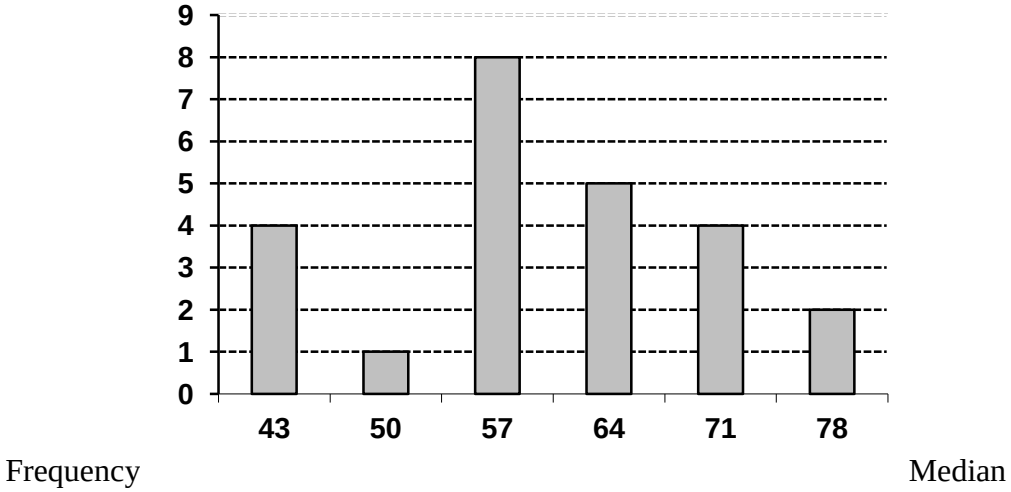

Figure 4 :
The Frequency Distribution histogram in Control Class

Next, from calculation above the writer concluded the students' ability after treatment increased slowly. It can be seen from the mean score of experimental class was bigger than control class (66,35> 59,92).

B. Hypothesis Testing

1. Homogeneity Test

Calculation of parameter to get variant used homogeneity test by using formula:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

Hypothesis:

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

H_5 : $\delta_1^2 \neq \delta_2^2$

A. variant of the experimental class VIII-A Post-test.

n = 24

$\sum xi$ = 1625

$\sum_{xi} 2$ = 111825

So:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

$$= \frac{24(111825) - (1625)^2}{24(24-1)}$$

$$= \frac{2683776 - 2640625}{552}$$

= 78, 17

B. Variant of the control class (VIII.B)

n = 23
$\sum xi$= 1505
$\sum_{xi} 2$ = 100725

So: $S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$

$= \frac{23(100725 - (1505)^2}{23(23-1)}$

$= \frac{2316675 - 2265025}{506}$

= 102, 07

The Formula was used to test hypothesis was:

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

So:

$F = \frac{102,07}{78,17}$

= 1,31

After doing the calculation, researcher found that F_{count} = 1.31 with α 5 % and dk = (n-1) / 23;22 from the distribution list F, researcher found that $F_{table(0.05;23;22)}$ = 2,07 , cause $F_{count} < F_{table}$ (1.31< 2,07). So, there is no difference the variant between the both classes (homogeneous).

2. Normality Test

After doing calculation it is got that the highest value is Lo=0.1667 with n=24 and α=0.05 from Liliefors table L=0.886. since Lo<L,

(0.1667<0.866), null hypothesis is accepted and the population distribution is normal.

Result of calculation by coefficient of correlation biserial is determined if $r_{pbi} > r_{table}$ with the significant level 5 % (0,05) with the tabel r product moment. From each items, they were bigger than the r_t that is 0.379. So, that the items are tested valid.

Hypothesis alternative (H_a) of research was there was a significant effect of using media Tape Recording on students' listening comprehension ($\mu_1 > \mu_2$) and Hypothesis null (H_0) of research was there was no significant effect of using media Tape Recording on students' listening comprehension ($\mu_1 = \mu_2$). Based on the data analysis, to prove hypothesis above used formula of t-test. The steps was started. It can be seen as follow:

There were many steps to analysis data, they were:

1. The first step, to find average score each class.
   - The average score of experimental class

$$M_1 = \frac{Y_1^2}{Y_1}$$

$$= \frac{4575}{175}$$

$$= 26,14$$

- The average score of control class

$$M_2 = \frac{Y_2^2}{Y_2}$$

$$= \frac{4450}{90}$$

$$= 49{,}44$$

2. The second step, to find deviation score each class

- The deviation score of experimental class

$$\sum X_1^2 = \sum Y_1^2 - \frac{\left(\sum Y_1\right)^2}{n_1}$$

$$= 4575 - \frac{(175)^2}{24}$$

$$= 4575 - \frac{30625}{24}$$

$$= 4575 - 1276,$$

$$= 3299$$

- The deviation score of control class

$$\sum X_2^2 = \sum Y_2^2 - \frac{\left(\sum Y_2\right)^2}{n_2}$$

$$= 4450 - \frac{(90)^2}{23}$$

$$= 4450 - \frac{8100}{23}$$

$$= 4450 - 352{,}17$$

= 4097

3. The third step, to use the formulation of t-test

Table 12

List of Score

No.	Symbol	Score
1.	M_1	66, 35
2.	M_2	59,92
3.	X_1^2	3299
4.	X_2^2	4097
5.	n_1	24
6.	n_2	23

$$T-test = \frac{M_1 - M_2}{\sqrt{\left[\frac{\sum X_1^{\,2} + \sum X_2^{\,2}}{n_1 + n_2 - 2}\right]\left[\frac{1}{n_1} + \frac{1}{n_2}\right]}}$$

$$= \frac{5.92 - 4.67}{\sqrt{\left[\frac{269.42 + 149.68}{24 = 23 - 2}\right]\left[\frac{1}{24} + \frac{1}{23}\right]}}$$

$$= \frac{1.25}{\sqrt{\left[\frac{419.1}{60}\right]\left[\frac{2}{31}\right]}}$$

$$= \frac{1.25}{\sqrt{[6.985]\left[\frac{1}{24} + 1/23\right]}}$$

$$= \frac{1.25}{\sqrt{0.45}}$$

$$= \frac{1.25}{0.67}$$

$$= 1.86$$

d.b = $(n_1 + n_2 - 2)$ = 24+ 23 – 2 = 47 – 2 = 45.

In the table (Appendix 10) the score t_s 0.05 = 1.67 and t_o = 1.86 (1.86 > 1.67). So that, from the calculation above, it was concluded that the result of experimental class was bigger than control class. Hypothesis alternative (H^a), that there was a significant effect of using media Tape Recording on students' listening comprehension ($\mu^1 > \mu^2$) can be accepted. While hypothesis null (H_0), that there was no significant effect of using media Tape Recording on students' listening comprehension So hypothesis null cannot be accepted.

Next, to know the category how far the effect of using media tape recording on students' listening comprehension was very low, it would be interpreted from the table below:

Table 12

The Table Coefficient Effect of Interpretation

Coefficient interval	Effect level
0.00 – 0.20	Very low
0.21 – 0.40	Low
0.41 – 0.60	Enough
0.61 – 0.80	High
0.81 – 1.00	Very high

To know the effect of using media tape recording on students' listening comprehension, to minimized t_s (1.86 – 1.67 = 0.19). Next, the value 0.19 based on the table is at very low column of coefficient interval that is 0.00 – 0.20.

So that, the effect of using media tape recording on students' listening comprehension at grade VIII SMP Negeri 5 Sihapas Barumun is very low.

C. Discussion

The results of this research were long journey to find out how the media affects such thing. In this case, the writer was successfully proved that media tape recording has positive contribution to improve students' listening comprehension especially for students of grade VIII SMP Negeri 5 Sihapas Barumun. Even though the effect that was given by media tape recording where found by the writer in the past did not give much value of significant effect; it could be taken as a proof to test an earlier hypothesis.

Some external interventions and human error even from the writer himself could influence the findings of this research. So that, the writer could call these findings as little findings of simple research.

Analysis results and hypothesis testing show that both these variables have the effect and hypothesis alternative (H_a) was accepted. This means that using tape recorder ($\mu_1 > \mu_2$). Hypothesis zero (H_0) was rejected. This means that using tape recording on students' listening comprehension achievement is better than conventional strategy ($\mu_1 > \mu_2$). So, from the calculation above, the writer appropriated that the result of research has related with the above theory, this fact can be seen from means score between the experimental class and control class. It is indicated that the score of experimental class was bigger than control class (66, 35> 59,92). Finally, the writer concluded that using tape recording strategy was effective for students' ability in Listening comprehension.

D. Threats of the Research

Whole series of research have been carried out in accordance with the steps set out in the research methodology. Nevertheless, these factors should be considered as important notification.

1. There is a probability that the research process was inappropriate.
2. The factors of students' interaction which can influence research result cannot be controlled so that there was a possibility for bias in the result of research.

3. By changing the teacher, it would be possible to affect students attitudes can influence the result of the research.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

Based on the result of the research and calculation of the data, the writer got the conclusion about the effect of media tape recording on students' listening comprehension. Based on the result of data analysis that has described in the previous chapter, the writer concluded as follows:

1. The students' achievement of Using Media Tape Recording on Students' Listening comprehension at Grade VIII SMP Negeri 1 Sihapas Barumun was 63,35. It can be seen from the mean score of experimental class.
2. The students' achievement of Using Media Tape Recording on Students' Listening comprehension at Grade VIII SMP Negeri 1 Sihapas Barumun was 59,92. It can be seen from the mean score of control class.
3. The use of media Tape recording gave low effect for grade VIII SMP Negeri 1 Sihapas Barumun students' listening comprehension. It could be seen from mean score of both experimental and control class was (63,35 > 59,92).

B. Suggestion

After the writer finished this research, the writer suggests as English teacher, it is expected to use appropriate method to explain or to teach English subject to the students. Then, from the result of the research using media tape recording is better than conventional starategy in teaching listening comprehension. Althought the effect only a little, but using of media tape recording at junior High School can be used in learning to increase their listening comprehension. Therefore, the writer has suggestion as follow:

1. the students of SMPN Sihapas Barumun especially for Grade VIII improve their listening comprehension by using media tape recording.
2. The students should add much time listening to authentic source of listening comprehension through media tape recording.
3. For the teacher, Using media tape recorder can be used as a media to improve students' listening comprehension.

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[1]Sandra J. Savignon, *Communicative Competence Theory and Classroom Practice* (Massachusetts: Addison- Wesley publishing company, 1983) p.232.

[1]Tuckman, B.W, *Conducting Educational Research* (New York: Harcourt Brace Jovanovich Publisher ,1988), p. 45.

[1]Anas Sudijono, *Pengantar Statistik Pendidikan*, (Jakarta: Raja Grafindo Persada, 2008), p. 258.

Appendix 1

PRE-TEST LISTENING

I. Choose the best answer by marking a, b, c or d.

Listen to this audio to answer questions no.1-5

My Family

My name is Randi. I am student of SMPN 1 PATI. I live on Jalan Panglima Sudirman no.23 Pati. My father is a doctor. My mother is a teacher.

My parents have 3 children. Ely, the eldest, works as a programmer in a private company. Wulan is my second sister. We are Students. She goes to SMA 3 PATI.

I really love my family.

1. Who is Randi?
   a. He is an SMA student's
   c. He is a doctor
   b. He is a teacher
   d. He is an SMP student
2. How many people are there in Mr .Rahman's family?
   a. Five
   c.Three
   b. Four
   d. Two
3. What is Randy's mother?
   a. She is a programmer
   c. She is a student
   b. She is a teacher
   d. She is a doctor
4. How many children does Mr. Rahman have?
   a. Two
   c. Four
   b. Three
   d. Five
5. The main idea of the second paragraph is about…..
   a. The children in the family
   c. The parents' job
   b. The jobs in the family
   d. The education
6. Amir : Hi, Jane how are you?
   Jane : …….. And you?
   Amir : I am fine too, thanks

a. How do you do? c. Good morning

b. Very good, thanks d. Yes, I am

7. Rahmad : Wawan, this is Dharma. Dharma this is Wawan

Dharma : How do you do, Wawan ?

Wawan : …….

a. How are you, Dharma? c. What do you do, Dharma?

b. How do you do, Dharma? d. Nice to meet you, too

8. Bejo : What's your ……?

Untung : My name is Untung

a. Job c. Phone number

b. Address **d. Name**

9. Michael : Where are you from?

Jordan : ……..

a. My name's Mike c. I am well, thanks a lot

b. I am from Sulawesi d. I am from my grand mother

10. Keisya : Hi, Kiera. Are you coming to the football game?

Keira : Hi, Kiesya. Yes, I am coming to the game

Keisya : O.K. See you there. Bye

Keira : ……

a. Good day c. Good afternoon

b. Good morning **d. Good bye**

Listen to Audio as follow to answer questions no.11-15

To : Annisa Cibi

Your Dad and I are visiting your grandma. Have your lunch and don't wait for us. Water the flowers at 5.p. m and don't forget to always lock the gate. We will be back in the evening. Just at home sweetie

Love,

Anisa's mother

11. Who is the sender of the message?

a. Grandma c. Dad

b. Nancy **d. Mummy**

12. Nancy must do the following things, except…..

a. Waiting for her parents for lunch c. Locking the gate

b. Watering the flowers d. Having lunch

13. "…….. to always lock "

The underlined word means……

a. To fasten something with a lock c. To make the gate open

b. To give a lock to some one d. To let someone in

14. Where are Anisa's parents?

a. At home **c. At grandma's house**

b. At school d. At the neighbor

15. Who is the message for…….

a. Nancy c. Dad

b. Grandma d. Mummy

16. Sani : Son, can I borrow your pencil, please?

Sonice : Sure. Here it is…..

Sani : Thank you

Sonice :…….

a. I am sorry c. Thank you very much

b. Don't mention it d. That's okay

17. Ivan : I don't have any pencils. ……, please?

Rehan : Sure. Here you are

a. Get me the pencil **c. May I borrow yours**

b. What is this d. Is this your pencil

18. Jokowi : ……explain it once more, Sir please? I am still confused?

Foke : Sure

a. Would you c. Shall be you

b. May d. Must I

19. Raffii : May I borrow your dictionary, Olga?

Olga : …….

a. All right c. Thank You

b. Sorry, I can't do it d. Yes, I am

20. Mr.Yusuf : Can you get me the red board marker, please?

Mr.Kalla : ……., Sir. Here it is

a. All right c. Tomorrow

b. Sorry, I can do it **d. Yes, you can**

Appendix 2

POST-TEST

Listen to the audio to answer questions no.11-13

Dear Yuki Kato,

I am afraid I will not be able to join our study club this afternoon. I have to see my dentist. I have got a problem with one of my teeth. Please send my best regard to Laila and Dinar

Your faithfully,

Raden Kian Santang

1. Why does the writer send the message?
   a. To send regards to Laila and Dinar
   b. To tell Yuki Kato that he cannot come to the study
   c. To ask the reader to join the study club
   d. To tell Yuki Kato that he has got problem with his dentist

2. From the message we know that the writer……
   a. Has a problem c. Does not know Laila
   b. Will join the study club d. Is a dentist

3. "……. See my <u>dentist…</u>."
   The underlined word means…..
   a. A person whose the job is to take care of people's teeth
   b. A person whose teeth are in a good condition
   c. A person who wants to visit a patient
   d. A person who likes to help people

4. Gading : Do know Rossa?

   Martin : Yes, I know. She is a popular singer in Indonesia. She has… hair

   a. Sharp
   c. Tall
   b. Young
   d. Straight

5. Buavita : Campina always get 1st rank since she we were in 7thgrade. She must study very hard every night.

   Walls : Yes, you are right. She is….

   a. Diligent student
   c. Happy student
   b. Angry student
   d. Strong student

6. Sunsilk : Mrs. Emeron is still strong although she is 70 years old

   Pantene : Yeah, you are right. She is …. But she is very healthy

   a. Young woman
   c. Old woman
   b. Young women
   d. Old women

7. Marsyanda is very …… actress (cantik)

   a. Beautiful
   c. Clever
   b. Smart
   d. Diligent

8. Agnes Monica has… hair (bergelombang)

   a. Straight
   c. Short
   b. Curly
   d. Wavy

Listen to the audio to answer questions no. 9-11

ANNOUNCEMANT

There will be a holiday camp next month. All scout members must join in this camp. The activity will take place at Bangun harjo camping sites and last for three days. For further information, please contact Mr.John Terry. Banyumas, twenty firsth October 2012.

The Chief of Scout Organization

Mr. Park Ji Sung

9. When will the activity be held?

a. In October c. In July

b. In June d. In August

10. If the camp starts in 21st October, when will it be end?

a. 24th October c. 24th August

b. 18th October d. 21st November

11. Who must join the activity?

a. All students c. All chiefs

b. All Banyumas students **d. All scouts members**

12. Aurell : Az, do you know where our father is?

Azriel : ……

Aurell : I ask you "Do you know where our father is "

a. With pleasure **c. Excuse me**

b. I do beg your pardon d. Wow, that's good idea

13. Ananda : Can I bring your bag?

Anandi : Okay…..

Anada : You are welcome

a. Thanks a lot for yesterday **c. Thank you very much**

b. Thanks for your money d. Many thanks for your book

14. I …… teacher of SMPN 1 KAYEN for VII GRADE

a. Is c. Are

b. Am d. Were

15. Cherry bell, 7 icons, Blink and Princess ….. girl bands in Indonesia now

a. Is **c. are**

b. Am d. Were

16. Indah Dewi Pertiwi…..popular singer

a. Is c. Am

b. Are d. Were

Listen to the audio to answer questions n0.17-20

ANNOUNCEMENT

This is a new school year and there are many new students around. Please be friendly and help them understand the rules of our school. Be good seniors

The Head Master

Mr. Sir Alex Fergusson

17. Where can you find this text?

a. At a school c. At a bank

b. At a bookstore d. At a park

18. Why does the head master make the announcement

a. To ask the students to be nice

b. To let the students know that they have new juniors and help them

c. To ask the students to contact their parents

d. To inform about the new school year

19. Who do you think reads the announcement?

a. New students c. Parents

b. Seniors students **d. Teacher**

20. ….”Please be friendly”……

What is the meaning of the underlined word?

a. Disturbing c. nice

b. Interesting d. rough

Data of Experimental Class VIII.A in Pre-test

Number of students	Number of Items																				X	X^2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	5	0	5	5	5	0	0	5	0	5	5	0	5	5	0	5	5	0	5	5	65	4225
2	0	0	5	5	5	0	5	0	5	5	0	5	5	0	5	5	5	5	0	0	60	3600
3	5	0	5	0	0	5	0	5	5	0	5	0	5	0	0	0	0	0	5	0	40	1600
4	0	5	5	5	0	5	5	0	5	0	5	5	0	5	0	5	0	5	5	5	65	4225
5	5	0	5	5	0	5	5	5	0	5	5	0	5	5	5	0	5	5	5	0	70	4900
6	5	0	5	5	5	0	5	0	5	5	0	5	5	0	5	5	0	0	0	5	60	3600
7	5	0	5	5	5	0	5	0	5	0	5	0	5	5	0	5	0	5	0	5	55	3025
8	5	5	5	0	5	0	5	5	0	5	0	5	0	0	5	0	5	0	5	0	55	3025
9	5	0	5	0	5	0	0	5	0	5	5	0	0	5	0	5	0	0	0	0	40	1600
10	5	0	5	5	5	0	5	0	5	0	0	5	0	5	0	0	5	0	5	0	50	2500
11	0	5	0	5	0	5	5	5	0	0	5	0	0	0	5	0	0	5	0	0	40	1600
12	0	5	0	5	0	0	5	0	5	0	5	5	0	5	0	5	0	5	5	5	55	3025
13	0	5	5	0	5	5	0	5	5	5	0	5	5	0	0	0	5	0	0	5	60	3600
14	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	5	65	4225
15	0	5	0	5	5	5	5	0	0	5	0	5	5	5	0	0	0	5	5	5	60	3600
16	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
17	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
18	5	0	0	0	5	5	5	5	0	5	5	0	0	0	5	5	5	5	5	0	60	3600
19	5	5	5	5	0	0	0	0	0	0	5	5	5	5	5	5	5	5	0	5	65	4225
20	0	0	0	0	5	5	5	5	5	5	5	0	5	5	5	5	5	0	5	0	65	4225
21	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	0	0	60	3600
22	5	0	5	0	5	0	5	0	5	5	5	5	5	5	5	5	5	0	5	0	70	4900
23	0	5	0	5	0	5	0	5	0	5	0	5	5	5	5	5	5	5	5	5	70	4900
24	5	0	5	0	5	0	5	0	5	5	5	5	5	5	5	0	5	5	0	5	70	4900
Total																					1450	89950

HOMOGENEITY TEST (PRE-TEST)

Calculation of parameter to get variant are used homogeneity test by using formula:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

Hypothesis:

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

$H_5 : \delta_1^2 \neq \delta_2^2$

A. variant of the experimental class VIII-A Pre-test.
n = 24

$\sum xi = 1450$

$\sum_{xi} 2 = 89950$

So:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

$$= \frac{24(89950) - (1450)^2}{24(24-1)}$$

$$= \frac{2158800 - 2102500}{552}$$

$$= 101.99$$

Data of Control Class VIII- B in Pre-test

Number of students	Number of Items																				X	X2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	5	0	5	5	5	5	5	0	5	5	0	0	0	5	5	0	0	5	5	0	60	3600
2	5	5	5	0	0	5	5	0	0	5	5	0	0	0	0	5	5	5	5	5	60	3600
3	0	0	5	0	5	0	5	5	5	0	0	5	0		5	0	5	0	5	0	45	2025
4	5	0	5	0	5	5	5	0	5	5	5	5	0	5	0	5	5	5	5	0	70	4900
5	0	5	5	5	5	0	5	0	5	5	5	5	5	5	5	5	0	0	0	0	65	4225
6	5	0	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0	5	0	5	65	4225
7	5	0	5	5	5	5	0	0	0	0	0	0	5	5	5	5	5	0	0	0	50	2500
8	5	5	5	0	5	0	5	5	5	5	5	5	0	5	5	0	0	0	0	0	55	3025
9	5	0	5	5	5	5	5	0	5	0	5	5	5	5	0	0	0	0	0	0	45	2025
10	5	0	5	0	5	5	5	0	0	5	0	0	0	0	0	5	5	0	5	0	45	2025
11	0	5	0	5	5	5	0	0	0	0	0	0	5	5	5	0	0	5	0	0	40	1600
12	5	0	0	5	0	5	0	5	0	5	5	0	0	5	0	5	0	5	0	5	50	2500
13	5	5	0	5	5	0	5	0	0	5	0	0	5	0	5	5	5	5	5	5	60	3600
14	5	0	5	5	5	5	0	5	0	5	5	5	0	5	5	0	5	5	0	5	70	4900
15	5	5	0	5	5	5	5	0	5	5	0	5	5	0	5	0	5	5	5	5	75	5625
16	5	0	5	5	0	5	5	5	5	0	5	5	5	0	5	5	5	5	5	0	75	5625
17	5	5	0	5	0	5	5	5	0	5	5	0	5	5	5	5	0	5	0	5	70	4900
18	5	5	5	5	5	0	0	0	5	5	5	5	5	0	0	0	5	5	5	0	65	4225
19	0	5	5	5	5	5	5	5	5	0	0	0	0	0	0	0	5	5	5	5	60	3600
20	5	0	0	5	5	0	0	5	5	5	5	5	0	5	5	0	5	5	5	5	75	5625
21	5	5	0	5	5	5	5	0	0	5	0	0	5	0	5	5	5	5	5	5	70	4900
22	0	5	5	5	0	5	0	5	5	0	5	0	5	5	5	5	5	5	5	5	75	5625
23	5	5	5	0	5	5	5	5	0	5	0	5	0	5	5	5	0	0	5	5	70	4900
Total																					1415	89775

Calculation of parameter to get variant are used homogeneity test by using formula:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

Hypothesis:

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

$H_5 : \delta_1^2 \neq \delta_2^2$

A. variant of the experimental class VIII-A Pre-test.

n = 24

$\sum xi = 1450$

$\sum_{xi} 2 = 89950$

So:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

$$= \frac{24(89950) - (1450)^2}{24(24-1)}$$

$$= \frac{2158800 - 2102500}{552}$$

$$= 101.99$$

B. Variant of the control class (VIII.B) Pre-test:

n = 23

$\sum xi$= 1415

$\sum_{xi} 2$ = 89775

So: $S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$

$= \frac{23(89775) - (1415)^2}{23(23-1)}$

$= \frac{2064825 - 2002225}{506}$

= 123,71

The Formula was used to test hypothesis was:

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

So:

$F = \frac{123,71}{101,99}$

= 1.21

After doing the calculation, researcher found that F_{count} = 1.21 with α 5 % and dk = (n-1) / 23;22 from the distribution list F, researcher found that $F_{table(0.05;23;22)}$ = 2,07 , cause $F_{count} < F_{table}$ (1.21< 2,07). So, there is no difference the variant between the both classes (homogeneous).

Data of Experimental Class VIII.A in Post Test

Number of students	Number of Items																				X	X^2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
2	5	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	5	80	6400
3	5	5	5	5	0	0	0	0	0	0	5	5	5	5	5	5	5	5	0	5	65	4225
4	0	0	0	0	5	5	5	5	5	5	5	0	5	5	5	5	5	0	5	0	65	4225
5	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	0	0	60	3600
6	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
7	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
8	5	0	5	0	5	0	5	0	5	5	5	5	5	5	5	0	5	5	0	5	70	4900
9	0	0	5	5	5	0	5	0	5	5	0	5	5	0	5	5	5	5	0	0	60	3600
10	5	0	5	0	0	5	0	5	5	0	5	0	5	0	0	0	0	0	5	0	40	1600
11	0	5	5	5	0	5	5	0	5	0	5	5	0	5	0	5	0	5	5	5	65	4225
12	5	0	5	5	0	5	5	5	0	5	5	0	5	5	5	0	5	5	5	0	70	4900
13	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
14	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
15	5	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	5	80	6400
16	5	5	5	5	0	0	0	0	0	0	5	5	5	5	5	5	5	5	0	5	65	4225
17	0	0	0	0	5	5	5	5	5	5	5	0	5	5	5	5	5	0	5	0	65	4225
18	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	0	0	60	3600
19	5	0	5	0	5	0	5	0	5	5	5	5	5	5	5	5	5	0	5	0	70	4900
20	0	5	5	0	5	5	0	5	5	5	0	5	5	0	0	0	5	0	0	5	60	3600
21	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	5	65	4225
22	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
23	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
24	5	0	5	5	5	0	5	0	5	5	0	5	5	0	5	5	0	0	0	5	60	3600
Total																					1625	111825

Calculation of parameter to get variant are used homogeneity test by using formula:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

Hypothesis:

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

$H_5 \quad : \delta_1^2 \neq \delta_2^2$

A. variant of the experimental class VIII-A Post-test.
n = 24

$\sum xi = 1625$

$\sum_{xi} 2 = 111825$

So:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

$$= \frac{24(111825) - (1625)^2}{24(24-1)}$$

$$= \frac{2683776 - 2640625}{552}$$

$$= 78, 17$$

Data of Control Class (VIII.B) in Post Test

Number of students	Number of Items																				X	X^2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	5	0	5	5	5	0	0	5	0	5	5	0	5	5	0	5	5	0	5	5	65	4225
2	5	0	5	0	5	0	5	0	5	5	5	5	5	5	5	5	5	0	5	0	70	4900
3	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
4	0	5	0	5	5	5	5	0	0	5	0	5	5	5	0	0	0	5	5	5	60	3600
5	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
6	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
7	5	0	0	0	5	5	5	5	0	5	5	0	0	0	5	5	5	5	5	0	60	3600
8	5	5	5	5	0	0	0	0	0	0	5	5	5	5	5	5	5	5	0	5	65	4225
9	0	0	0	0	5	5	5	5	5	5	5	0	5	5	5	5	5	0	5	0	65	4225
10	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	5	5	0	0	0	60	3600
11	0	5	0	5	5	5	5	0	0	5	0	5	5	5	0	0	0	5	5	5	60	3600
12	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
13	5	0	5	0	0	5	0	5	5	0	5	0	5	0	0	0	0	0	5	0	40	1600
14	5	0	5	5	5	0	0	5	0	5	5	0	5	5	0	5	5	0	5	5	65	4225
15	5	0	5	0	5	0	5	0	5	5	5	5	5	5	5	5	5	0	5	0	70	4900
16	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
17	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
18	5	0	0	0	5	5	5	5	0	5	5	0	0	0	5	5	5	5	5	0	60	3600
19	5	0	5	0	0	5	0	5	5	0	5	0	5	0	0	0	0	0	5	0	40	1600
20	0	0	0	0	5	5	5	5	5	5	5	0	5	5	5	5	5	0	5	0	65	4225
21	5	0	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	75	5625
22	5	0	0	0	5	5	5	5	0	5	5	0	0	0	5	5	5	5	5	0	60	3600
23	5	5	5	5	0	0	0	5	5	5	5	0	5	5	0	5	5	5	5	5	75	5625
Total																					1505	100725

Calculation of parameter to get variant are used homogeneity test by using formula:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

Hypothesis:

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

$H_5 : \delta_1^2 \neq \delta_2^2$

A. variant of the experimental class VIII-A Post-test.

n = 24

$\sum xi = 1625$

$\sum_{xi} 2 = 111825$

So:

$$S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$$

$$= \frac{24(111825) - (1625)^2}{24(24-1)}$$

$$= \frac{2683776 - 2640625}{552}$$

$$= 78, 17$$

B. Variant of the control class (VIII.B)

n = 23
$\sum xi$= 1505
$\sum_{xi} 2$ = 100725

So: $S^2 = \frac{n\Sigma xi^2 - (\Sigma xi)}{n(n-i)}$

$= \frac{23(100725 - (1505)^2}{23(23-1)}$

$= \frac{2316675 - 2265025}{506}$

= 102, 07

The Formula was used to test hypothesis was:

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

So:

$F = \frac{102,07}{78,17}$

= 1,31

After doing the calculation, researcher found that F_{count} = 1.31 with α 5 % and dk = (n-1) / 23;22 from the distribution list F, researcher found that $F_{table(0.05;23;22)}$ = 2,07 , cause $F_{count} < F_{table}$ (1.31< 2,07). So, there is no difference the variant between the both classes (homogeneous).

APPENDIX 4

The Score of Experimental Class

Number of students (n)	Initial	Pre-test	Post-test	Y_1	Y_1^2
1	AF	65	75	10	100
2	DD	60	80	20	400
3	DLM	40	65	25	625
4	ELN	65	65	0	0
5	IR	70	60	-10	100
6	LS	60	75	15	225
7	MLS	55	75	20	400
8	MYI	55	70	15	225
9	MSR	40	60	20	400
10	MRY	50	40	-10	100
11	MA	40	65	25	625
12	MDY	55	70	15	225
13	MR	60	75	15	225
14	MH	65	75	10	100
15	MA	60	80	20	400
16	MHD	75	65	-10	100
17	NJ	75	65	-10	100
18	NZ	60	60	0	0
19	NHS	65	70	5	25
20	NI	65	60	-5	25
21	PS	60	65	5	25
22	PLT	70	75	5	25
23	RFA	70	75	5	25
24	RS	70	60	-10	100
Total				175	4575

Appendix 5

The Score of Control Class

Number of students (n)	Initial	Pre-test	Post-test	Y_1	Y_1^2
1	AM	60	65	5	25
2	ADT	60	70	10	100
3	AA	45	75	30	900
4	ASW	70	60	-10	100
5	DP	65	75	10	100
6	EM	65	75	10	100
7	ES	50	60	10	100
8	FRI	55	65	10	100
9	IWN	45	65	20	400
10	JLA	45	60	15	225
11	KR	40	60	20	400
12	LM	50	75	25	625
13	MST	60	40	-20	400
14	MDA	70	65	-5	25
15	MH	75	70	-5	25
16	NLN	75	75	0	0
17	NN	70	75	5	25
18	NY	65	60	-5	25
19	NH	60	40	-20	400
20	PTL	75	65	-10	100
21	RS	70	75	5	25
22	RSM	75	60	-15	225
23	RJ	70	75	5	25
Total				90	4450

APPENDIX 6

THE PRE TEST EXPERIMENTAL CLASS

1. The score of experimental class from low score to high score

40	55	60	65	70
40	55	60	65	70
40	55	60	65	75
40	60	65	70	75
50	60	65	70	

2. High score : 75
3. Low score : 40
4. Range : High score –low score
: 75-40 = 35

5. The total of classes (Bk) : 1+3,3 log n
: 1+3,3(log 24)
: 1+3,3 (1.380)
: 1+4,554
: 5,554
: 6

6. Interval (i) : $\frac{R}{BK}$
: $\frac{35}{5}$
= 7

7. Mean score:

Interval	**f**	**x**	**f(x)**	x'	fx'	x'^2	fx'^2
40-46	4	43	172	3	12	9	144
47-53	1	50	50	2	2	4	4
54-60	8	57	456	1	8	1	64
61-67	5	64	320	0	0	0	0
68-74	4	71	284	-1	-4	1	16
75-81	2	78	156	-2	-4	4	16
i= 6	**N= 24**	**363**	**1438**	**3**	**14**	**19**	**244**

$$\text{Mx: } \frac{\Sigma fx}{N} \quad : \frac{1438}{24} \qquad = 59{,}92$$

8. Median

$$\text{Me} = \text{b} + \text{p} \left(\frac{\frac{1}{2}n - F}{f} \right)$$

$$= 60{,}5 + 8 \left(\frac{12 - 12}{8} \right)$$

$$= 60{,}5$$

9. Modus = 60 and 65

APPENDIX 7

THE PRE TEST CONTROL CLASS

2. The score of Controlclass from low score to high score

40	50	60	70	75
45	55	65	70	75
45	60	65	70	75
45	60	65	70	
50	60	70	75	

2. High score : 75
3. Low score : 40
4. Range : High score –low score
: 75-40 = 35

5. The total of classes (Bk) : 1+3,3 log n
: 1+3,3(log 23)
: 1+3,3 (1.36)
: 1+4,48
: 5,48
: 6

6. Interval (i) : $\frac{R}{BK}$
: $\frac{35}{5}$
= 7

7. Mean score:

Interval	**f**	**x**	**f(x)**	x'	fx'	x'^2	fx'^2
40-46	4	43	172	3	12	9	144
47-53	2	50	100	2	4	4	16
54-60	5	57	285	1	5	1	25
61-67	3	64	192	0	0	0	0
68-74	5	71	355	-1	-5	1	25
75-81	4	78	312	-2	-8	4	64
i= 6	**N= 23**	**363**	**1416**	**3**	**8**	**19**	**274**

$$\text{Mx: } \frac{\Sigma fx}{N} \quad : \frac{1416}{23} \qquad = 61.56$$

8. Median

$$\text{Me} = \text{b} + \text{p} \left(\frac{\frac{1}{2}n - F}{f} \right)$$

$$= \ 53{,}5 + 5 \left(\frac{11{,}5 - 7}{5} \right)$$

$$= 58$$

9. Modus = 70

APPENDIX 8

THE POST TEST EXPERIMENTAL CLASS

3. The score of experimental class from low score to high score

40	60	65	75	75
60	65	65	75	75
60	65	70	75	75
60	65	70	75	80
60	65	70	75	80

2. High score : 80
3. Low score : 40
4. Range : High score –low score
: 80-40 = 40

5. The total of classes (Bk) : 1+3,3 log n
: 1+3,3(log 24)
: 1+3,3 (1.380)
: 1+4,554
: 5,554
: 5

6. Interval (i) : $\frac{R}{BK}$
: $\frac{40}{5}$
= 8

7. Mean score:

Interval	**f**	**x**	**f(x)**	x'	fx'	x'^2	fx'^2
40-47	1	43,5	43,5	2	2	4	4
48-56	-	-	-	1		0	0
57-65	11	50,5	555,5	0	0	0	0
66-74	3	69.5	208,5	-1	-3	1	9
75-82	10	78,5	785	-2	-20	4	400
i= 6	**N= 24**	**242**	**1592,5**	**-1**	**-21**	**9**	**413**

Mx: $\frac{\Sigma fx}{N}$ $\frac{1592,5}{24}$ = 66, 35

8. Median

$$\text{Me} = b + p\left(\frac{\frac{1}{2}n - F}{f}\right)$$

$$= 56{,}5 + 11\left(\frac{12-11}{11}\right)$$

$$= 57{,}49$$

9. Modus = 75

APPENDIX 9

THE POST TEST CONTROL CLASS

4. The score of experimental class from low score to high score

40	60	65	75	75
40	60	65	75	75
60	60	65	75	75
60	65	70	75	
60	65	70	75	

2. High score : 75
3. Low score : 40
4. Range : High score –low score
: 75-40 = 35

5. The total of classes (Bk) : 1+3,3 log n
: 1+3,3(log 24)
: 1+3,3 (1.380)
: 1+4,554
: 5,554
: 6

6. Interval (i) : $\frac{R}{BK}$
: $\frac{35}{5}$
= 7

7. Mean score:

Interval	**f**	**x**	**f(x)**	x'	fx'	x'^2	fx'^2
40-46	2	43	86	3	6	9	18
47-53	-	-	-	-	-	-	-
54-60	6	57	342	1	6	1	6
61-67	5	64	320	0	0	0	0
68-74	2	71	142	-1	-2	1	2
75-81	8	78	624	-2	-16	4	32
i= 6	**N= 23**	**363**	**1514**	**3**		**19**	**58**

$$\text{Mx: } \frac{\Sigma fx}{N} \quad : \frac{1514}{24} \qquad = 63{,}1$$

8. Median

$$\text{Me} = \text{b} + \text{p} \left(\frac{\frac{1}{2}n - F}{f} \right)$$

$$\text{Me} = \frac{1}{2}n = \frac{1}{2}(31) = 15.5$$

$$= 60{,}5 + 8 \left(\frac{12 - 12}{8} \right)$$

$$= 60{,}5$$

9. Modus = 75

APPENDIX 10

Tabel Harga Kritik dari r Product Moment

N	Interval Kepercayaan		N	Interval Kepercayaan		N	Interval Kepercayaan	
	95%	99%		95%	99%		95%	99%
(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
3	0.997	0,999	27	0,381	0,487	55	0,226	0,345
4	0.950	0,990	28	0,374	0,478	60	0,254	0,330
5	0,878	0,959	29	0,367	0,470	65	0,244	0,317
6	0.811	0,917	30	0,361	0,463	70	0,235	0,306
7	0,754	0,874	31	0,355	0,456	75	0,227	0,296
8	1,707	0,834	32	0,349	0,449	80	0,220	0,286
9	0,666	0,798	33	0,344	0,442	85	0,213	0,278
10	0,632	0,765	34	0,339	0,436	90	0,207	0,270
11	0,602	0,735	35	0,334	0,430	95	0,202	0,263
12	0,576	0,708	36	0,329	0,424	100	0,195	0,256
13	0,553	0,684	37	0,325	0,418	125	0,176	0,230
14	0,532	0,661	38	0,320	0,413	150	0,159	0,210
15	0,514	0,641	39	0,316	0,408	175	0,148	0,194
16	0,497	0,623	40	0,312	0,403	200	0,138	0,181
17	0,482	0,606	41	0,308	0,398	300	0,113	0,148
18	0,468	0,590	42	0,304	0,393	400	0,098	0,128
19	0,456	0,575	43	0,301	0,389	500	0,088	0,115
20	0,444	0,561	44	0,297	0,384	600	0,080	0,105
21	0,433	0,549	45	0,294	0,380	700	0,074	0,095
22	0,423	0,537	46	0,291	0,376	800	0,070	0,091
23	0,413	0,526	47	0,288	0,372	900	0,065	0,086
24	0,404	0,515	48	0,284	0,368	1000	0,062	0,081
25	0,396	0,505	49	0,281	0,364			
26	0,388	0,496	50	0,279	0.361			

N = Jumlah pasangan yang digunakan untuk menghitung r

APPENDIX 11

Daftar Nilai Persentil Untuk Distribusi t

V	$t_{0.995}$	$t_{0.99}$	$t_{0.975}$	$t_{0.95}$	$t_{0.90}$	$t_{0.80}$	$t_{0.75}$	$t_{0.70}$	$t_{0.60}$	$t_{0.55}$
1	63,66	31,82	12,71	6,31	3,08	1,376	1,000	0,727	0,325	0,158
2	9,92	6,96	4,30	2,92	1,89	1,061	0,816	0,617	0,289	0,142
3	5,84	4,54	3,18	2,35	1,64	0,978	0,765	0,584	0,277	0,137
4	4,60	3,75	2,78	2,13	1,53	0,941	0,741	0,569	0,271	0,134
5	4,03	3,36	2,75	2,02	1,48	0,920	0,727	0,559	0,267	0,132
6	3,71	3,14	2,45	1,94	1,44	0,906	0,718	0,553	0,265	0,131
7	3,50	3,00	2,36	1,90	1,42	0,896	0,711	0,549	0,263	0,130
8	3,36	2,90	2,31	1,86	1,40	0,889	0,706	0,546	0,262	0,130
9	3,25	2,82	2,26	1,83	1,38	0,883	0,703	0,543	0,261	0,129
10	3,17	2,76	2,23	1,81	1,37	0,879	0,700	0,542	0,260	0,129
11	3,11	2,72	2,20	1,80	1,36	0,876	0,697	0,540	0,260	0,129
12	3,06	2,68	2,18	1,78	1,36	0,873	0,695	0,539	0,259	0,128
13	3,01	2,65	2,16	1,77	1,35	0,870	0,694	0,538	0,259	0,128
14	2,98	2,62	2,14	1,76	1,34	0,868	0,692	0,537	0,258	0,128
15	2,95	2,60	2,13	1,75	1,34	0,866	0,691	0,536	0,258	0,128
16	2,92	2,58	2,12	1,75	1,34	0,865	0,690	0,535	0,258	0,128
17	2,90	2,57	2,11	1,74	1,33	0,863	0,689	0,534	0,257	0,128
18	2,88	2,55	2,10	1,73	1,33	0,862	0,688	0,534	0,257	0,127
19	2,86	2,54	2,09	1,73	1,33	0,861	0,688	0,533	0,257	0,127
20	2,84	2,53	2,09	1,72	1,32	0,860	0,687	0,533	0,257	0,127
21	2,83	2,52	2,08	1,72	1,32	0,859	0,686	0,532	0,257	0,127
22	2,82	2,51	2,07	1,72	1,32	0,858	0,686	0,532	0,256	0,127
23	2,81	2,50	2,07	1,71	1,32	0,858	0,685	0,532	0,256	0,127
24	2,80	2,49	2,06	1,71	1,32	0,857	0,685	0,531	0,256	0,127
25	2,79	2,48	2,06	1,71	1,32	0,856	0,684	0,531	0,256	0,127
26	2,78	2,48	2,06	1,71	1,32	0,856	0,684	0,531	0,256	0,127
27	2,77	2,47	2,05	1,70	1,31	0,855	0,684	0,531	0,256	0,127
28	2,76	2,47	2,05	1,70	1,31	0,855	0,683	0,530	0,256	0,127
29	2,76	2,46	2,04	1,70	1,31	0,854	0,683	0,530	0,256	0,127
30	2,75	2,46	2,04	1,70	1,31	0,854	0,683	0,530	0,256	0,127
40	2,70	2,42	2,02	1,68	1,30	0,851	0,681	0,529	0,255	0,126
60	2,66	2,39	2,00	1,67	1,30	0,848	0,679	0,527	0,254	0,126
120	2,62	2,36	1,98	1,66	1,29	0,845	0,677	0,526	0,254	0,126
∞	2,58	2,33	1,96	1.645	1,28	0,842	0,674	0,524	0,253	0,126

APPENDIX 12

NILAI NILAI UNTUK DISTRIBUSI F

V_2 = dk Penyebut	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50
1	161	200	216	225	230	234	237	239	241	242	243	244	245	246	248	249	250	251	252
2	18,51	19,00	19,16	19,25	19,30	19,33	19,36	19,37	19,38	19,39	19,40	9,41	19,42	19,43	19,44	19,45	19,46	19,47	19,47
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
4	7,71	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	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	4,48	4,44
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	3,98	3,92	3,87	3,84	3,81	3,77	3,75
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
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
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
10	4,96	4,10	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	2,07	2,64
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
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
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
14	4,80	3,74	3,34	3,11	2,96	2,85	2,77	2,70	2,65	2,80	2,58	2,53	2,48	2,44	2,39	2,35	2,31	2,27	2,24
15	4,54	3,68	3,29	3,06	2,90	2,97	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
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	2,15	2,13
17	4,45	3,59	3,20	2,96	2,81	2,70	2,82	2,55	2,50	2,45	2,41	2,38	2,33	2,20	2,23	2,19	2,15	2,11	2,08
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
19	4,38	3,52	3,13	2,80	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
20	4,35	3,39	3,10	2,87	2,71	2,60	2,52	2,45	2,40	2,35	2,31	2,28	2,23	2,18	2,12	2,08	2,04	1,99	1,96
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
22	4,30	3,44	3,05	2,82	2,66	2,55	2,47	2,40	2,35	2,30	2,28	2,23	2,18	2,13	2,07	2,03	1,98	1,93	1,91
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	1,98	1,91	1,88
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	1,98	1,89	1,88
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
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
27	4,21	3,35	2,98	2,73	2,57	2,48	2,37	2,30	2,25	2,20	2,10	2,13	2,08	2,03	1,97	1,93	1,88	1,84	1,80
28	4,20	3,34	2,95	2,71	2,58	2,44	2,38	2,29	2,24	2,19	2,15	1,12	2,06	2,02	2,96	1,91	1,87	1,81	1,78

29	4,18	3,33	2,63	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
30	4,17	3,32	2,92	2,60	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	1,78
31	4,15	3,30	2,90	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
32	4,13	3,28	2,88	2,85	2,49	2,38	2,30	2,23	2,17	2,12	2,08	2,05	2,00	1,95	2,89	1,84	1,80	1,74	1,71
40	4,08	3,23	2,84	2,81	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
60	4,00	3,15	2,76	2,52	2,37	2,23	2,17	2,10	2,01	1,99	1,95	1,92	1,86	1,81	1,75	1,70	1,63	1,59	1,56
200	3,89	3,04	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

APPENDIX 13

NILAI KRITIS L UNTUK UJI LILIEFORS

Ukuran Sample	0,01	0,05	0,10	0,15	0,20
N = 4	0,417	0,381	3,352	0,319	300
5	0,405	0,337	0,315	2,299	0,285
6	0,364	0,319	0,294	0,277	0,265
7	0,348	0,300	0,276	0,58	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	0,224	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	0,289	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
31	1,031	0,886	0,805	0,768	0,736
	n	n	n	n	n