

THE CORRELATION BETWEEN EXTRINSIC MOTIVATION AND ENGLISH ACHIEVEMENT AT THE EIGHTH GRADE STUDENTS OF SMP N 2 PADANGSIDIMPUAN

A THESIS

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

Written by:

ADE YANTI Reg. Number. 13 340 0002

ENGLISH EDUCATION DEPARTMENT

TARBIYAH AND TEACHER TRAINING FACULTY STATE INSTITUTE FOR ISLAMIC STUDIES (IAIN) PADANGSIDIMPUAN

2017



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ADVISOR I

Dr. FITRIADI LUBIS, M.Pd NIP. 19620917 199203 1 002 ADVISOR II

SOJUANGON RAMBE, S.S., M.Pd NIP. 197908 \$ 200604 1 003

ENGLISH EDUCATION DEPARTMENT

TARBIYAH AND TEACHER TRAINING FACULTY STATE INSTITUTE FOR ISLAMIC STUDIES (IAIN) PADANGSIDIMPUAN 2017 Term : Munaqosyah a.n. ADE YANTI Item : 7 (seven) examplars Padangsidimpuan, 09 June 2017

To:

Dean Tarbiyah and Teacher Training Faculty In-

Padangsidimpuan

Assalamu 'alaikum wr.wb.

After reading, studying and giving advice for necessary revision on the thesis belongs to ADE YANTI, entitled "The Correlation Between Extrinsic Motivation and English Achievement at The Eighth Grade Students of SMP N 2 Padangsidimpuan". We assumed that the thesis has been acceptable to complete the assignments and fulfill the requirements for graduate degree of Education (S.Pd) in English Education Department, Tarbiyah and Teacher Training Faculty in IAIN Padangsidimpuan.

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

Wassalam 'alaikum wr.wb.

Advisor I

Dr. Fitriadi Lubis, M.Pd NIP. 19620917 199203 1 002 **Advisor II**

Sojuangon Rambe, S.S., M.Pd NIP. 19790815 200604 1 003

DECLARATION LETTER OF WRITING OWN THESIS

The name who signed here:

Name	: ADE YANTI
Registration Number	: 13 340 0002
Faculty/Department	: Tarbiyah and Teacher Training Faculty/ TBI-1
The title of the Thesis	: THE CORRELATION BETWEEN EXTRINSIC MOTIVATION AND ENGLISH ACHIEVEMENT AT THE EIGHTH GRADE STUDENTS OF SMP N 2 PADANGSIDIMPUAN

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Padangsidimpuan, June 9th 2017 Declaration Maker

mmm

ADE YANTI Reg. No. 13 340 0002

AGREEMENT PUBLICATION OF FINAL TASK FOR

ACADEMIC CAVITY

As academic cavity of the State Institute for Islamic Studies Padangsidimpuan, the name

who signed here:

Name	: ADE YANTI
Nim	: 13 340 0009
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The Signed

ERAL NPEL 5ADF495816137 MMME $\mathbf{00}$

ADE YANTI Reg. No. 13 340 0002

EXAMINERS

SCHOLAR MUNAQOSYAH EXAMINATION

Name Reg. Number Faculty/Department : ADE YANTI : 13 340 0002 : Tarbiyah and Teacher Training Faculty/English Education Department CORRELATION BETWEEN EXTRINSIC : THE

MOTIVATION AND ENGLISH ACHIEVEMENT AT THE EIGHTH GRADE STUDENTS OF SMP N 2 PADANGSDIMPUAN

Chief

Thesis

Ryflubi

Rayendriani Fahmei Lubis, M.Ag NIP. 19710510 200003 2 001

Secretary

Zainuddin, S.S., M.Hum NIP/19760610 200801 1 016

Members

Ryfluli

Rayendriani Fahmei Lubis, M.Ag NIP. 19710510 200003 2 001

Dr. Fitriadi Lubis, M.Pd NIP. 19620917 199203 1 002

Proposed :

Place Date Time Result/Mark : 84.75 (A) IPK Predicate

: Padangsidimpuan : June, 15th 2017 : 09.00 until 11.00 : 3.78 : Cumlaude

Zainuddin, S.S., M.Hum NIP/19760610 200801 1 016

Sojuangon Rambe, S.S., M.Pd NIP. 197908 5 200604 1 003



RELIGION MINISTRY REPUBLIC OF INDONESIA THE STATE INSTITUT FOR ISLAMIC STUDIES PADANGSIDIMPUAN TARBIYAH AND TEACHER TRAINING FACULTY Jalan. T. Rizal Nurdin Km. 4,5 Sihitang, Padangsidimpuan 22733 Telepon. (0634) 22080 Fax. (0634) 24022

LEGALIZATION

Thesis

: THE CORRELATION BETWEEN EXTRINSIC MOTIVATION AND ENGLISH ACHIEVEMENT AT THE EIGHTH GRADE STUDENTS OF SMP N 2 PADANGSIDIMPUAN

Written By Reg. Number Faculty/Department

: ADE YANTI : 13 340 0002 : FTIK/TBI-1

The Thesis has been accepted as a partial fulfillment of the requirement for the Degree of Graduate Education (S.Pd) in English Program.

Padangsidimpuan, June 9th 2017 Dean Hj. ZULETIMIMA, S.Ag., M.Pd NIP. 19720702 199703 2 003

Name	: Ade Yanti
Reg. No	: 13 340 0002
Faculty	: Tarbiyah and Teacher Training Faculty
Department	: English Education (TBI-1)
Title of Thesis	:The Correlation Between Extrinsic Motivation and English
	Achievement at The Eighth Grade Students of SMP N 2
	Padangsidimpuan.

ABSTRACT

This research focused on the correlation between Extrinsic motivation and English achievement at the eighth grade students of SMP N 2 Padangsidimpuan. The students problems in this research were : 1) English is very strange language for students, 2) Students can't understand what the teacher said when using English, 3) Students are afraid to speak in English class, 4) Students have a lack vocabulary and grammar mastery. The purpose of this research was to know of how significant the correlation between extrinsic motivation and English achievement at the eighth grade students of SMP N 2 Padangsidimpuan.

The kinds of this research was quantitative research with correlational method. 76 students were gotten by Slovin formula and chosen randomly from 12 classes as the sample. They were 7 students from VIII 1, 9 students from VIII 2, 4 students from VIII 3, 9 students from VIII 4, 8 students from VIII 5, 5 students from VIII 6, 5 students from VIII 7, 2 students from VIII 8, 9 students from VIII 9, 4 students from VIII 10, 11 students from VIII 1 and 3 students from VIII 12.

To analyze the data, the researcher used Product Moment formula. After analyzing the data, the researcher found that mean score of variable X was 96.57 and mean score of Variable Y was 87.2. besides, the score of r_{xy} was higher than r_{table} (0.357 > 0.200). The result showed that there was correlation between two variables but in low category. It means the hypothesis (H_a) was accepted. It was concluded that there was a correlation between extrinsic motivation and English achievement at the eighth grade students of SMP N 2 Padangsidimpuan in low category.

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Firstly, the researcher would like to convey his grateful to Allah SWT. The most Creator and Merciful who has given researcher the health, time and chance for finishing the thesis entitled "*The Correlation Between Extrinsic Notivation and English Achievement at The Eighth Grade Students of SMP N 2 Padangsdidimpuan*". Besides, Shalawat and Salam be upon to the prophet Muhammad SAW that has brought the human from the darkness era into the lightness era.

It is a pleasure to acknowledgement the help and contribution to all lecturers, institution, family and friends who have contributed in different ways. Therefore, in this chance the writer would like to express the deepest gratitude to the following people:

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Hope, all of them given health always and all the kindness will be replied by Allah Swt. This thesis is still so far from being perfect based on the weakness of the research. Therefore, the researcher aspects the constructive criticisms and suggestions from the readers in order to improve this thesis.

Padangsidimpuan, June 09th 2017 Writer,

<u>ADE YANTI</u> Reg. No. 13 34 0 0002

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CHAPTER I

INTRODUCTION

A. Background of The Problem

English is one of important language which is studied by students at schools, collage and university. English is very important in this globalization era, because English is one of the human languages in the world that has important role in communication. It has been international language and almost practice in every aspects of human life. English is used in many aspects, such as in business, information technology, government, especially in education.

In the school, there are many subjects that have to be learnt by students based on the curriculum. Students have to master all the lesson to achieve competency standard that has been explained by teacher in the beginning of learning process. English as one of the compulsory subjects should be learnt in many schools in Indonesia begins from primary school, junior high school, senior high school, even in university. In the English Curriculum 2007, there are the special objectives why English as compulsory subject, they are :

- For students, become more familiar with their environment and also their socio – culture background.
- 2. For students, to have knowledge, ability and skill about their region that are relevant with their needs and interests and also the community around.

1

3. or students, demonstrate their attitude and behavior that exhibit their culture values, preserve, and develop these value to support national development.¹

In English curriculum, there are four language skills that should be mastered by students in English, they are listening, speaking, reading, and writing. The first is listening, which shows the ability to make sense of what we heard and connect it to other information already known. Listening is the first skill that is gotten by human in their lives. After that speaking is the ability to communicate orally and to express idea and feeling. The third is reading, it is the ability to get messages or information that comes from the author that can be understood and comprehended by reader easily. The last is writing, which express the ideas to the printed material.

In mastering the fourth English skill, the students will get the result as we called English Achievement. English achievement is the result or what we get of what we have learnt in English. The effort that students have done will be expressed in a form of letter or number or score as the result of what students have learnt in English.

There are some essential of English Achievement. The first is to measure students mastery in learning English. Second, as the feedback for students of what they have learnt in English. The third, teacher can group the students based

¹ Siti Jamilah, *English in Indonesia Primary School Bagian Kurikulum*, (<u>http:///re</u> – searchengines.com/siti.html.), accessed at August 8th, 2016 on 08.20 a. m.

on their ability, and the fourth is to know about English learning strategy that is used suitable or not.

Many efforts has teacher done to increase students English Achievement, begin from manage the classroom be comfortable so students can be focus in learning English, grouping the students to make them get more interaction with others, until use the various strategy in teaching English for fun English class.

Sometimes English learning process can not do successfully. Students' English achievement in SMP N 2 is low. It is based on private interview and information from the teacher and one of students Yeni Novrisah says that her score in English is low. She just get 81, meanwhile the passing grade in Junior High School is 80 for English subject². From the interview with the teacher, Mrs. Surya Sagiro researcher describes that Students' English achievement is low because of some problems below ;

Firstly, English is very strange language for students. They have to learn the language and the structure that they have not used yet.

Secondly, students can't understand what the teacher said when using English. Students do not understand the meaning of what teacher said.

Thirdly, students are afraid to speak in English class. Moreover, it is found that the students are afraid of making mistake in speaking. There are still

 $^{^2}$ Private Interview with Yeni Novrisah, the student of SMP N 2 PSP class VIII 10, $20^{\rm th}$ August 2016, at 3 p. m

many students tend to keep silent when the teacher invites them to speak using English.

Fourthly, students have a lack vocabulary and grammar mastery. There are still many vocabulary that can not master by students even the vocabularies around them.³

Furthermore, the problems above occur because of some factors. There are some factors that influence students English Achievement, such as motivation, intelligence, attitude, interest, dream, health, cognate ability, and school.

One of the factors that has big effect to Students English Achievement is motivation. Motivation is mental encouragement as an activator to do something. By having motivation students will get more enthusiasm in doing action.

Motivation is divided into two parts, Intrinsic motivation that comes from students itself and Extrinsic Motivation that comes from outside or around the students. Extrinsic is believed has big effect in affecting students learning achievement especially in learning English.

Extrinsic motivation has important role to add students spirit in learning English. The efforts that students do is useless without encouragement from outside, like teacher, parents, and friends. Here are some examples about the role of extrinsic motivation toward students English achievement.

 $^{^3}$ Private Interview with Mrs. Surya Sagiro, the English teacher of SMP N 2 PSP, 24 $^{\rm th}$ August 2016, at 3 p. m

The first is teacher. Teacher is one of factor that will make students interested in learning English. Students usually like to learn the subject if they like the teacher. Teacher attitude and the technique that is used in teaching affect the students to give a feedback in learning process. For example teacher that teaches with a various technique will make class more fun and composed. Furthermore when teacher give some actions such as smile, giving applause, giving praise, and etc, the students will give a good feedback for that. But when teacher seldom to respect the students, coming to class with a bad mood and often to be angry, it will cause students do not interested in learning English even they will hate English.

Next is parents. Parents support is very important for growing the students motivation. Paid for English private and take English course is one of efforts that parents can do to enhance motivation of their son in learning. But when parents give no attention about what their son has done or often mock them with a word such as " stupid", " idiot ", it will make the students down.

The last is environment. Friends are belong to this part. When students are surrounded by good and diligent friend, it will influence students attitude. Contradiction, if students are surrounded by bad friends and un-education people, students will be lazy to learn. Not only that, the situation of class and home will also influence students motivation in studying. A condusive situation and not noisy will be a good environment to grow up students motivation in learning process.

Based on the statements above, so the researcher is interested to conduct a correlation research which entitle " *The Correlation Between Extrinsic Motivation and English Achievement at The Eighth Grade Students Of SMP N 2 Padangsidimpuan*"

B. The Identification of The Problem

English achievement is the result of what students have learnt in English in the form of letter, number, or score and anc express reached result of certain someone within.

Based on background of the problem there are some factors that influence students English achievement. Those are motivation, intelligence, attitude, interest, dream, health, cognate ability, and school.

C. Limitation of the Problem

As mentioned above, there are some factors that influence students English achievement such as motivation, intelligence, attitude, interest, dream, health, cognate ability, and school.

The problem of this research can be a very large discussion. Based on above identification, the researcher limits the discussion into one factor only that is motivation especially in extrinsic motivation. Extrinsic motivation is everything from outside the students that encourage the spirit and enthusiasm in learning something.

There are some reasons why the researcher choose extrinsic motivation in this discussion. The first is most of the research that discuss about students motivation, dominantly discuss about intrinsic motivation only. The second, researcher believes that external motivation like teacher, parents, and friend have a big role in creating students motivation.

D. Formulation of the Problems

In conducting the research, researcher describes the formulation of the problems as follows :

- How is extrinsic motivation of learning at the eighth grade students of SMP N 2 Padangsidimpuan ?
- How is English learning achievement at the eighth grade students of SMP N
 2 Padangsidimpuan ?
- 3. Is there any significant correlation between extrinsic motivation of learning and English learning achievement at the eighth grade students of SMP N 2 Padangsidimpuan ?

E. Purposes of the Research

Based on above formulation of the problems, the researcher determined that the purposes of the research can be stated as follows :

 To describe extrinsic motivation of learning at the eighth grade students of SMP N 2 Padangsidimpuan.

- To describe the English learning achievement at the eighth grade students of SMP N 2 Padangsidimpuan.
- To examine the significant correlation between extrinsic motivation of learning and English learning achievement at the eighth grade students of SMP N 2 Padangsidimpuan.

F. Significances of the Research

The result of this research will give the benefit to some categories below :

 Theoretically, the result of the research can contribute useful information for the future classroom research with the similar problem of Students' motivation

2. Practically

a. For the English Teacher

This research can give additional contribution to English teachers in growing students' motivation especially in learning English.

- b. For the Headmaster
- c. Through this research the headmaster can develop support the teacher to teach English better.
- d. For other researchers

This research can give additional information for other researchers to do a further research.

G. Outline of Thesis

The systematic of this research is divided in to five chapters. Each chapter consisted of some sub chapters with detail as follow:

Chapter I, discusses of introduction: consist of background of the problem, identification of the problem, limitation of the problem, formulation of the problem, the purpose of the research, the significance of the research and outline of thesis.

Chapter II, contains about theoretical description with some sub theory about extrinsic motivation, English achievement, related findings, conceptual framework and hypothesis.

Chapter III, is about methodology of the research that consist of place and schedule of the research, research design, population and sample, definition of operational of variables, the instrument of collecting the data, technique of collecting the data and technique of data analysis.

Chapter IV, is the result of the research talking about the analysis of data. This chapter four, here the researcher also has found that there are the significant correlation between Extrinsic motivation and English achievement.

Chapter V, is giving conclusion about the result of the research and suggestion which is given to students and teacher by researcher.

CHAPTER II

LITERATURE REVIEW

A. Theoretical Description

1. Extrinsic motivation

a. Definition of extrinsic motivation

Motivation has been a familiar word in education. According to Woodwort stated "a motive is a set predisposes the individual of certain activities and for seeking certain goals".¹ Motivation is seem as mental encouragement to actuate human behavior, include learning action.²

Students need something that motivate them from outside that is called Extrinsic motivation. There are some definitions how it is called as extrinsic motivation.

According to Brophy, extrinsic motivation is a reward for learning that is not learned.³ According to Dimiyati Mudjiono in her book "Belajar dan Pembelajaran", extrinsic motivation is encouragement of someone action that comes from outside.⁴

⁴ Dimyati Mudjiono, Op. Cit,, p. 85

¹ Wina Sanjaya, *Kurikulum dan Pembelajaran: Teori dan Praktek Pengembangan KTSP* (Jakarta : Kencana , 2011), p. 250

² Dimyati Mudjiono, *Belajar dan Pembelajaran*, (Jakarta : Rineka Cipta , 2009), p. 80

³ Robert E. Slavin, *Psikologi Pendidikan*,9th Edition, Jilid II, (Jakarta : Permata Putri Media, 2011), p.121

Extrinsic motivation can be also doing something for something else. Extrinsic Motivation is fueled by the anticipation of a reward from outside and beyond the self.⁵

Based on some definitions above, it can be concluded that extrinsic motivation is Extrinsic motivation is one of kind of motivation that comes from outside of someone to do particular action.

b. The essential of extrinsic motivation

Extrinsic motivation is important for teacher and students. There are some essentials of extrinsic motivation for students:

- As a differentiate of position at the beginning, mid, and the end of learning.
- 2) To inform of the result of learning and compared with his peers.
- 3) As a learning activity direction
- 4) Growing learning stimulus
- 5) To inform that there is a relation between learning process and the next stage to work.⁶

Meanwhile, there are some essentials of extrinsic motivation for teacher :

- 1) Growing up students spirit in learning
- 2) To know and to comprehend a various students motivation

⁵ John W. Santrock, *Educational Psychology*, (Jakarta : Salemba Humanika , 2009), p.204

⁶ Dimyati Mudjiono, *Op.Cit*, p.86

3) To help teacher to choose one of role, as a facilitator, instruktur,

advisor, etc.

4) As a chance for teacher " showing action" in pedagogic.⁷

According to Ausebel, he identified six needs undergirding the construct of motivation :

- 1) The need for exploration
- 2) The need for manipulation
- 3) The need for activity
- 4) The need for stimulation
- 5) The need for knowledge
- 6) The need for ego enhancement⁸

Based on explanations above there are some essentials of extrinsic motivation weather for students, for teacher, and generally for human being, they are : As a differentiate of position, to inform of the result of learning and compared with his peers, to know and to comprehend a various students motivation, to help teacher to choose one of role, as a facilitator, instructor, advisor, the need for exploration, the need for manipulation, the need for activity, the need for stimulation, the need for knowledge, the need for ego enhancement.

On this discussion researcher limits the essential of extrinsic motivation into six points

⁷ Ibid

⁸ John W. Santrock, *Op.Cit*, p.206

The first, as a differentiate of position, it means we can differentiate the position of students ability in beginning, mid, or the end of learning activity. The second, choosing role, by giving extrinsic motivation teacher will know as what he should be, as facilitator, advisor, and instructor. The third, need for manipulation, for operating the environment and causing change. The fourth, the need for activity, as a learning activity direction. The fifth, the need for stimulation, the need to be stimulated by environment, by other people, or by ideas, thoughts and feelings. The sixth, the need for ego enhancement, for the self to be known and to be accepted and approved of by others.

c. Function of extrinsic motivation

A successful learning depends on students learning motivation. Motivation has important role to encourage students spirit in learning. There are three functions of motivation :

- 1) As an activator to do something.
- 2) Deciding deed direction.
- 3) Select the activity.⁹

From Omrod on his book Education psychology, extrinsic motivation has some functions :

1) Giving direction for certain purpose

 ⁹ Sardiman, *Interaksi dan Motivasi Belajar Mengajar*, Jakarta : RajagrafindoPersada. 2004),
 p. 85

- 2) To increase efforts and energy in learning
- 3) To increase activity initiation
- 4) To influence students cognitive process
- 5) To decide whether motivation as a support or as punishment
- 6) To increase students $performance^{10}$

From combining explanation above it can be concluded that there are three functions of extrinsic motivation : as an activator in doing something, deciding deed direction, select the activity, increasing efforts and energy in learning, to influence students cognitive process and to increase students performance.

On this discussion researcher limits the purposes of extrinsic motivation into three points :

The first as an activator in doing something, It means that motivation as an activator for everything that we will do, to increase efforts and energy in learning and to increase activity initiation.

The second is deciding deed direction, It means that motivation can give a direction of what will we do base on the purpose, to decide whether motivation as a support or as punishment.

The third is select the activity. It means that students can select the activity that they will do and leave activity that useless.

¹⁰ Jeanne Ellis Ormrod, *Psikologi Pendidikan*. (Jakarta : Erlangga, 2009) p. 58

d. Principle of extrinsic motivation

There is no one who study without motivation. Motivation means encouragement that comes from someone by conscious or unconscious to do something with the certain purposes. There are some principles of motivation :

- 1) Motivation is basic of learning activity.
- Intrinsic motivation dominantly influenced than extrinsic motivation.
- 3) Motivation such a reward is better than a punishment.
- 4) Motivation has a big relation with learning needs.
- 5) Motivation builds learning optimism
- 6) Motivation creates learning achievement¹¹

These are some principle of extrinsic motivation from another source :

- 1) Praise is more effective than punishment
- 2) Every students have a need that must be fulfilled
- 3) Intrinsic motivation is more effective than extrinsic motivation
- 4) Result needs reinforcement
- 5) External rewards sometimes needed for stimulus
- 6) A various technique of teaching increase students interested
- 7) Peers give a big role in influence students motivation

¹¹ Syaiful Bahri Djamarah, *Psikologi Belajar*, (Jakarta : Rineka Cipta, 2011), pg. 152

- 8) A difficult task will make students frustrated
- 9) Every students has a different level of tolerant and frustration 12

From explanation above it can be concluded that extrinsic motivation has some principles : motivation is basic of learning activity, Intrinsic motivation dominantly influenced than extrinsic motivation, motivation such a reward is better than a punishment, motivation creates learning achievement, every students have a need that must be fulfilled, result needs reinforcement, a various technique of teaching increase students interested, peers give a big role in influence students motivation, every students has a different level of tolerant and frustration

On this discussion researcher limits the principle of extrinsic motivation into five main point.

The first, motivation is basic of learning activity. It means that every activity that students do based on the motivation that they have. Every students have a need that must be fulfilled, so it will be a motivation to do activity to fulfill their needs.

The second, motivation such a reward is better than a punishment. A good motivation will give a good effect, a bad

¹² Aditya W.P, *Tujuan, Fungsi dan Prinsip –Prinsip Motivasi Menurut Para Ahli,* (<u>http://dunia-belajar.blogspot.co.id/2015</u>.) Accessed on March 10th 2017, at 10.00 am

motivation will give a bad effect and for resulting a good effect it needs reinforcement.

The third, a various technique of teaching increase students interested. Teacher center strategy often makes students feel bored or not interested in learning. So, teacher needs to apply various learning strategy.

The fourth, peers give a big role in influence students motivation. Peers or environment have a big role in influencing students motivation.

The last is every students has a different level of tolerant and frustration. Teacher has to be smart in choosing the types of extrinsic motivation, so it will be suitable with students frustration level.

e. Factors that influence extrinsic motivation

Below is some of extrinsic motivation elements that influence students learning achievement :

- 1) Teacher
- 2) Parents
 - a) Home condition
 - b) Family financial
- 3) Environtment
 - a) Social environment
 Social environment is divided to :
 (1) Family
 - (2)Teacher and staff
 - (3) Society
 - (4) Friends
 - b) Nonsocial environment Nonsocial environment is divided to :

- (1) Home
- (2) School
- (3) Equipments
- (4) nature¹³

In another source, said that there are six factors that influence

extrinsic motivation :

- 1) dreams and students aspiration
- 2) students ability
- 3) students condition
- 4) students environtment
- 5) dynamic unsure in learning process
- 6) teacher role in learning process¹⁴

From explanation above it can be summarized that extrinsic motivation is influenced by some factors such as teacher, parents, environment, dreams and students aspiration, students ability, and dynamic unsure in learning process.

In this discussion researcher limits the factor into three main points, they are teacher, parents and environment

1) Teacher

Teacher is person who has an important role in teaching and learning activity to socialize and shaping motivation among students. Teacher is not only a person who transfers the knowledge to students, but also as a motivator who always motivates and supports the

 ¹³ Muhibbin Syah, *Psikologi Belajar*, (Jakarta : Raja Grapindo Persada, 2013)., p. 157
 ¹⁴ Dimiyati Mudjiono, *Op.Cit*. p. 97

students in teaching and learning. Teacher has responsibility to make teaching and learning process successfully.

A spirit in learning shows an implementation of motivation that students have. A teacher who just teach without keeping attention to the students comprehending about what he teach will get negative reaction from the students, and of course the feedback will not happen.

Eccles stated that students in high school have an enhancement in their score at their match examination when they have the teacher that they think give them much supports.¹⁵

2) Parents

Parents are the closest people with the students at home. It is sure that parents have a big role in affecting and motivating students. Parents that is not care for the students learning process, does not manage the students learning time, can not complete the facilities, will cause the students learning activity is not running well.¹⁶ Jeremy Harmer stated that " if the parents are very much against the culture of the language this will probably affect his or her motivation in negative way. If they are very much in favor of the language this

¹⁵ John W. Santrock, *Op. Cit*, p.203
¹⁶ Slameto, *Belajar dan Faktor – Faktor yang Mempengaruhi*, (Jakarta : Rineka Cipta, 2013), p. 61

might have the opposite effect⁷¹⁷ This statement means that parents have an important role to motivate their children. Giving a support is the main point of growing the students motivation in learning especially in English learning. Contradiction, giving many homework or mocking the student is one of thing that will decrease students self confidence.

Parents attitude, family management, family tension and home demography, all of that can give good or bad effect for students learning activity and students learning achievement.¹⁸

a) Home condition

Home condition means the situations or cases that often happen in that home. Home condition that full of crowd and full of noisy will not be comfortable place for students to study. It usually happens in the family that has many occupants in it and for family that is not harmony. A bad family management practice is not only make students are lazy to learn but also they will do some divergent even in heavy case such as antisocial

 ¹⁷ Jeremy Harmer, *The Practical of English Language Teaching*, (New York : Longman, 2000) p. 4
 ¹⁸ Muhibbin Syah, *Op. Cit*, p. 154

b) Family financial

Family financial has a big relation with students learning process. If students live in poor family, students primer need is disturbed, the health is disturbed, so learning process is also disturbed.

When the students live in luxury, also often be a problem, because parents usually spoil their son, fulfill their needs, waste money, and finally the students can not focus for learning.

But, when the students live in luxury the parents can give more facility to enhance students learning process by giving English private or take English course.

A research in America shows that the children that the parents are educated people get a higher score in reading NAEP that the children whom the parents are uneducated people.¹⁹

3) Environment

There're are so many aspects that belong to environment, such as, society, friends, equipment, home even covers both of teacher and parents. To grow up the stimulus of students to learn is not easy. There are so many thing that caused how difficult to change someone behavior. One of them is support from the environment. Every

¹⁹ Robert E. Slavin, Op.Cit., p. 129

human being always want to be responded and received by their environment.²⁰

Environment as the factor that influence students learning motivation is divided in two items, they are social environment and nonsocial environment.

The most often part of environment that has big effect in influencing students motivation is peer. Peer can influence students motivation by comparing with the social competency, learning with peer the influence of peer group.²¹

If students surrounded by smart and diligent friends, it will make a good competition between them, learning together and often do discussion. But when students surrounded by lazy and naughty friends it will be a reason why she or he is not motivated to learn.

f. Types of extrinsic motivation

There are some efforts that teacher can do to encourage students motivation, such as giving score, giving prize and praise, giving assignment, giving test, giving punishment, and body movement.

- 1) Giving score
- 2) Prizes
- 3) Praises
- 4) Body movement
- 5) Giving assignment
- 6) Giving examination

²⁰ Slameto, *Op.Cit*, p. 190
²¹ Robert E. Slavin, *Op. Cit*, p.226

- 7) Knowing result
- 8) $Punishment^{22}$

Meanwhile, Sardiman in his book " Interaksi dan motivasi Belajar Mengajar" said that there are 11 motivations at the school, they are :

- 1) Giving score
- 2) Prize
- 3) Competition
- 4) Ego involvement
- 5) Giving examination
- 6) Knowing result
- 7) Praise
- 8) Punishment
- 9) Desire for learning
- 10) Interest
- 11) Admitted purpose²³

Based on both of explanation it can be concluded that on Syaiful Bahry book there are eight types of extrinsic motivation; Giving score ,Prizes, Praise, Giving assignment, Body movement, Giving examination, Knowing result, Punishment. Meanwhile in sadirman book there are eleven types of extrinsic motivation; Giving score, Prize, Competition, Ego - involvement, Giving examination, Knowing result, Praise, Punishment, Desire for learning, Interest, Admitted purpose.

²² Syaiful Bahri Djamarah, Strategi Belajar Mengajar, (Jakarta : Rineka Cipta, 2006), p.149 ²³ Sardiman, *Op.Cit*, p. 87

In this this discussion researcher limits the types of extrinsic motivation in eight points.

1) Giving score

Score here as a symbol of the result of students learning activity. Score is a good motivation tool to hold or even to improve students learning achievement. A good score will be a motivation for students to learn. If the score of others students is better than one students, so it will be a motivation for him to learn more.

2) Prizes

Prize is something that given by someone as reward or souvenir. Giving prizes can be done at school. Teacher can give prizes to students as reward for finishing the task, correctly in answering the questions, or be a first rank in the class.

The prize is useful for; 1) control students behavior 2) to convey the information about the ability to master something.²⁴

3) Praise

Praise is positive motivation tools. Everyone is happy getting praise. Someone that gets praise will be proud of his work result. In learning process, a praise can be used as motivation tool. The words such as : " good job ", "excellent", " how diligent you are",

²⁴ *Ibid.* p.209

or "fantastic" will grow up the motivation of students to learn more and more.²⁵

4) Body movement

Body movement such as smiling, nodding, giving thumb up, giving applause, greeting, lifting shoulder, shaking of the head, raising hand, and many else are some of physical movement that can give feedback from the students.

The interaction between teacher and students means to reach learning purposes. The students will give the feedback for stimulus that teacher gives. For examples, teacher is silent in noisy class. It means that students have to be silent. Another example is teacher walk around the class, walk to right and left side of class, or go to back side of class will minimize the noisy that students make.

5) Giving assignment

Assignment is a task that obligated to do. Teacher can give assignment to the students in group forms or individual. By giving task, students will keep attention for what teacher explain to get the information about what students have to do. It will make students learning to finish the assignment.

²⁵ Slameto, Op. Cit. , p.177

6) Giving examination

Giving examination purposes to know how far the result of learning process that has been done (process evaluation) and to know how far the students mastery of material that given in certain time (product evaluation), and also to get feedback from students. Usually, by knowing examination, students will learn more and more. In learning process, examination can be used for growing students attention for material that given in the class.

7) Knowing result

Students have a desire to know something. Teacher has to take benefit from it for learning importance. By knowing the result of assignment that teacher gives, it will give a feedback from the students. If it is a good score it will make student to keep it. If it is a bad score it will make students study more and more.

8) Punishment

Punishment is a negative reinforcement, but it is needed in education. In learning process, students that make noisy can be given punishment like re-explain the lesson that given by teacher. Because of that, the students will try to keep attention to teacher explanation.²⁶

²⁶ Syaiful Bahri Djamarah, Op.Cit, p.149

g. Advantages and disadvantages of extrinsic motivation

Extrinsic motivation shows that it comes from external factors such as rewards and punishment. Extrinsic motivation that is developed by giving good stimulus for certain action that students like will automatically increase the action itself. There are some advantages and disadvantages of extrinsic motivation:

Advantages :

- 1) As a reinforcement that students that study hard will be appreciated by given something such a reward.
- 2) Reward is effective to give to young learners in 4 -6 years old.
- Environment can be a consequence of learning activity. A good Social condition will affect students to study comfortable.²⁷
- Extrinsic motivation can be a good choice when learning process is not interested.
- A good types of extrinsic motivation such as score, prise, reward will give a good affect for learning process.²⁸

²⁷ Fahmy Alaydroes, *Menumbuhkan Motivasi belajar siswa*, http://pendidikanumat.blogspot.co.id/2008/01/menumbuhkan-motivasi-belajar-siswa.html?m-1, accessed on Thursday, 29th December 2016, at 3.50 p.m

²⁸ Syaiful Bahri Djamarah, *Op.Cit.* p. 151

Disadvantages :

- 1) Rewards can decrease the quality of learning process If the students that is not interested with reward will spend many times for learning than students that interested with the reward.
- 2) Giving grades is not effective for some students in elementary school because they have not had score in grades yet.
- 3) Rewards can give negative effect for students that try to take difficult assignments. Students that interested in reward will do easy tasks
- 4) Rewards maintain students action or spirit in short time. After getting the rewards students will back to unmotivated one.²⁹
- 5) If teacher can not choose a suitable types of extrinsic motivation it will make students learn lazier.
- 6) A bad types of extrinsic motivation such as mocking and punishment usually give bad effect for learning process and student psychology.³⁰

Above explanation tells that extrinsic motivation not always give a good effect, but extrinsic motivation can also give a bad effect if the types of extrinsic motivation is given in a bad way.

²⁹ Fahmy Alaydroes, Op.Cit
³⁰ Syaiful Bahri Djamarah, *Op.Cit.* p. 152

h. Characteristic of students who has extrinsic motivation

Interested and motivated can be as the first vision of learning progress, because by the learner or students are interested and motivated those will make the students ready to receive the learning as well as possible and also give a good feedback. When it happened it means that the goals of the learning have reached and successful.

According to Hamzah B. Uno said that in Agus Suprijono book the characteristics of the students who motivated in learning as follow:

- 1) There is willing and wanting of success.
- 2) There is drive and need in learning.
- 3) There is appreciated in the learning.
- There is good learning environment that makes the students can learn well.³¹

As the additional, according Ormrod on his book Education Psychology said the characteristics of extrinsic motivation whose has by someone as below:

- 1) Desiring a good mark
- 2) Motivated by reward
- 3) Avoiding a punishment
- 4) There is admission from another people.³²

³¹ Agus Suprijono. Cooperative *Learning: Teori dan aplikasi paikem*, (Yogyakarta: Pustaka Pelajar, 2012), p. 163

If we combine both of expert opinion, there are eight characteristic of someone who has extrinsic motivation. They are There is willing and wanting of success, There is drive and need in learning, There is appreciated in the learning, There is good learning environment, Desiring a good mark, Motivated by money, and reward, Avoiding a punishment, There is admission from another people.

In this discussion researcher limits the characteristic into four parts :

The first, there is drive and need in learning. People around will give big influence in students motivation.

The second, there is good learning environment that makes the students can learn well. A comfortable condition makes student easier in getting focus on learning.

The third, motivated by reward. Students motivation will increase if they stimulated by given a reward such a good mark, praise, and gift.

The fourth, avoiding a punishment. Many students that study hard because of scare of accept a punishment. So they will do their task in many ways even cheating their friends task.

³² Jeanne Ellis Ormrod, Op. Cit, p. 60

2. English achievement

a. Definition of English achievement

Achievement is gain or reach something by effort and get something done.³³ Djaali at his book stated that achievement has a close relation with the expectation.³⁴

Achievement is activity result and assessment/effort which is expressed in the form of letter or number and express result that has been reached of certain someone within.³⁵

So, English achievement is the result that students have reached after learning English in a certain periodic

b. Purpose of English achievement

There are some purposes of English achievement :

- 1) Stimulate interest and individual develop
- To measure advancement English achievement include in a score report
- English achievement use as peed back to the teacher, as a correction for teaching learning process appropriate with ability, attitude and interest.³⁶

³³ A.S. Hornby, *Oxford Advanced Learners Dictionary*, (New York : Oxford University Press, 2000), p. 1344

³⁴ Djaali, *Psikologi Pendidikan*, (Jakarta : Bumi Aksara , 2011), p. 108

³⁵ Nana Sudjana, *Pembinaan dan Pengembangan Kurikulum di Sekolah*, (Bandung : Sinar Algesindo, 1996), p. 48

³⁶ Sardiman, *Op. Cit*, p. 26

c. Factors that influence English achievement

Every achievement has the factors that influence it. Those

factors will effect students learning process to achieve the achievement.

There are some factors that influence students achievement :

- 1) Internal factors
 - a) Physical
 - b) Psychological
- 2) External factors
 - a) Physical, of place learns, learning supply and medium, lesson items, condition of learning environment.
 - b) Social.³⁷

According to Syaiful Bahri Djamarah in his book "Psikologi

Belajar" said that there are some factors that influence English achievement:

- 1) Environment factor
 - a) Nature environment
 - b) Social environment
- 2) Instrumental factors
 - a) Curriculum
 - b) Program
 - c) Facility
 - d) Teacher
- 3) Physiology condition
- 4) Psychology condition³⁸

Above explanation clearly explain that English achievement is

depend on Internal and External factor, Nature environment,

Instrumental factors, Physiology condition, Psychology condition

³⁷ Johnson David W, The Social Psychology of Education, (New York: Holt Rinchart, 1970)

p.106

³⁸ Syaiful bahri djamarah, op.Cit, p. 176

In this discussin researcher agree limits the factor into:

1) Internal factors

Internal factors here belong to

a) Physiology condition

Study when body is sick will disturb learning process and makes student not focus. Oppositely, study whit fresh body and mind will make students easier in absorbing the lesson

b) Psychology condition

Interested, Intelligent, talent, cognitive ability and motivation belong to psychology condition that will be influenced learning process and its result. It comes from inside and outside of students³⁹

- 2) External factors
 - a) Social environment

Social environment means with whom students live. Society, friends are a concrete example for social environment.

- b) Instrumental factors
 - (1) Curriculum

A plan for learning as substance unsure in education

³⁹ Ibid

(2) Program

A successful education at school is depend on education program that has been arranged.

(3) Facility

More facilities will support a successful learning process

(4) Teacher

If students like the teacher it will make student be interested in studying⁴⁰

d. The materials in English subject

As mentioned above there are four skill in learning English. They are listening, speaking, reading and writing. Each part of them has the own material based on the curriculum that has to be learnt by students in grade VIII of junior high school.

1) Listening

Based on syllabus of English Subject at grade Eight of Junior High School, in listening, the students have to comprehend simple transactional and interpersonal conversation for interaction with the environment. The topics are responding of accepting and rejecting service, asking and refusing things, and responding of asking and giving opinion.

⁴⁰ Ibid.

2) Speaking

Based on syllabus of English Subject at grade Eight of Junior High School, in speaking the students have to utterance the meaning of short oral transactional and interpersonal conversation for doing interaction with others. The topics are asking and giving services, mention the utterances such as : *let me help you, thank you so much, can I have a bit, Did you break the glass ?*

3) Reading

Based on syllabus of English Subject at grade Eight of Junior High School, in reading students are ordered to comprehend a text in descriptive and recount text that has relation with the environment. The topics are reading fluency of short text, identify of the information in the text and identify the function of the text such as invitation message.

4) Writing

Based on syllabus of English Subject at grade Eight of Junior High School, in writing the students have to utterance the meaning of short oral transactional and interpersonal conversation in descriptive and recount text. The topics are completing the text, arranging the words becomes functional text, writing the text such as invitation, announcement, and short message.⁴¹

B. Review of Related Findings

There are some review of related finding towards this thesis as follows :

- 1. Pike Makharani did research about : The Correlation of students' motivation and students' English achievement at grade VIII SMP N 9 Padangsidimpuan. Based on the result of this thesis, she concluded that there was a correlation between learning motivation and learning achievement at Grade VIII SMPN 9 Padangsidimpuan. It is based on the data that showed r_{xy} was 0.381 while r_{table} was 0.279. It means that rcount > rtable (0.381 > 0.279) which means the hyphothesis was accepted.⁴²
- 2. Mely Gusnijar did the research about "The Influence of Students' Motivation toward Students' Achievement at SMP Negeri 1 Haholongan Paluta". It is based on the data that showed r_{xy} was 0.672 while r_{table} was 0.279. It means that rcount > rtable (0.672 > 0.279) which means the hyphothesis was accepted.⁴³

⁴¹ Syllabus of eighth grade of junior high school in curriculum KTSP

⁴² Pike Makharani, *The Correlation of students' motivation and students' English achievement at grade VIII SMP N 9 Padangsidimpuan*, (Padangsidimpuan : IAIN Padangsidimpuan , 2014)p. 51

²⁰¹⁴⁾ p. 51 ⁴³ Mely Gusnijar, *The Influence of Students' Motivation toward Students' Achievement at SMP Negeri 1 Haholongan Paluta*, (Padangsidimpuan : IAIN Padangsidimpuan , 2014)

3. Nurliani did the research about "The Correlation between Learning Motivation and English Achievement (A study to the grade VIII at SM Negeri 3 Siabu)". It is based on the data that showed r_{xy} was 0.89 while r_{table} was 0.279. It means that rount > rtable (0.89 > 0.279) which means the hyphothesis was accepted.⁴⁴

So, based on the related findings above, the researcher conclude that, there is a correlation between motivation and Students English Achievement.

C. Framework of Thinking

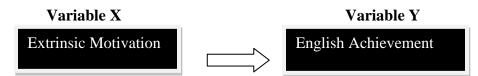
English achievement is students result or what students get after studying English subject. Many factors can influenced English achievement weather from inside or outside of student itself.

Extrinsic motivation is one of kind of English achievement factors that comes from outside of students. Extrinsic motivation is external drive of students to get what students want or need.

Extrinsic motivation has an important role in-successfulness of students. It means extrinsic motivation has a big role in increasing or decreasing students English achievement. If students want to have a good English Achievement, the students have to be supported by many things surround them. Students have to be given a good kind of extrinsic motivation. By having it, students will have an interested in learning something especially in English.

⁴⁴ Nurliani, *The Correlation between Learning Motivation and English Achievement (A study to the grade VIII at SM Negeri 3 Siabu)*, (Padangsidimpuan : IAIN Padangsidimpuan , 2014)

Oppositely if kind of extrinsic motivation that has been given is not suitable with students need it will give bad effect in students learning process. The systematic relation pictured as below:



Based on the explanation above, the researcher can make one assume that extrinsic motivation really gives important effect in students English Achievement.

D. Hypothesis

The hypothesis has purpose to answer a certain specific question. According to Suharsimi Arikunto, "hypothesis is a provisional answer of result problem in research."⁴⁵ Meanwhile, according to L.R Gay Peter Airaisan, " hypothesis is a tentative prediction result of the research finding".⁴⁶ So that, it can be concluded that hypothesis is a tentative answer or prediction for the result of research that we do.

⁴⁵ Suharsimi Arikunto, Prosedur Penelitian Suatu Pendekatan Praktik, (Jakarta : Rimeka Cipta, 2006), p. 172

⁴⁶ L.R Gay and Peter Airaisan, *Educational Research for Analysis and Application*, (America : Prentice Hall, 1992), p.71

Based on above explanation the writer formulate the hypothesis as follow :

- Ha : there is a significant correlation between Extrinsic Motivation and English achievement at the eighth grade students of SMP N 2 Padangsidimpuan
- Ho : There is no a significant correlation between Extrinsic Motivation and English achievement at the eighth grade students of SMP N 2 Padangsidimpuan

CHAPTER III

RESEARCH METHODOLOGY

A. Place and Time of the Research

The research will be conducted at SMP N 2 Padangsidimpuan. It is located at Jl. Kenanga, Kecamatan Padangsidimpuan Selatan. It is about 2 kilometres from the central town.

It is in the northeast from Padangsidimpuan town. The research will do from April until finish. The subject of research is at the eighth grade students of SMPN 2 Padangsidimpuan 2016/2017 Academic years. This research is done from January until April.

B. Method of the Research

The kind of this research is quantitative research with correlation method, where the data collected and done through statistical analysis. it was usually obtained from questionnaires, test, checklist and other formal paper and pencil instruments.¹

L.R Gay said that "correlation research attempted to determine whether, and to what degree, the correlation exist between two or more variables."²

¹ L.R Gay and Peter Airaisan, *Op. Cit*, p. 80 ² *Ibid*. p. 96

Surmardi Suryabrata said, "Correlation research is the research to the detect, how far the variation at a relation with the variation at one or more another factors based on correlation coefficient"³ So, researcher concluded that the correlation is research to detect how far the variation at the relation with the variation at one or more correlation coefficient

Based on previous chapter, the researcher wanted to describe a correlation between the X and Y variables. X variables is Extrinsic motivation (dependent variable) and Y variable is English achievement (independent variable).

C. Population and sample

1. Population

Population is all of the subject of research. According to Sumanto, "population is all of the subject in region research that is made into the subject of research"⁴ It means the population of this research is the whole of the students at eighth grade students of SMP N 2 Padangsidimpuan.

The population of the research consist of 12 classes with 325 students. It can be seen from the table below:

³ Suryabrata Surmardi, *Metodologi Penelitian*, (Jakarta: PT. Raja Grafindo Persada, 1994), p.

24

⁴ Sumanto, *Teori dan Aplikasi Metode Penelitian*, (Jakarta : CAPS, 2014), p.159

5 Mi 1 2 i adangsidin puan				
No	Class	Total students		
1	VIII – 1	26		
2	VIII -2	30		
3	VIII -3	27		
4	VIII -4	29		
5	VIII -5	24		
6	VIII -6	24		
7	VIII -7	21		
8	VIII -8	24		
9	VIII -9	32		
10	VIII -10	30		
11	VIII -11	30		
12	VIII -12	28		
	Total Of Students	325		

Table 1The Population of The Eighth Grade StudentsSMP N 2 Padangsidimpuan

(source : data of students SMPN 2 Psp)

2. Sample

Sample is selected from a larger group which consists of the individuals, items or events and referred to as a population. According to Saifuddin Azwar, sample is a part of population.⁵ It means that sample is a part of the population that used as the respondent of a research.

According to L.R Gay Peter Airaisan "for descriptive research, it is common to sample 10 to 20% of the population although this range will change with the size of the population"⁶ He also stated " the minimum sample size depends on the type of the research involved. Some cite a sample size of 30 as a guideline for correlational, causal – comparative, and

⁵ Saifuddin Azwar, *Metode Penelitian*, (Yogyakarta : Pustaka Pelajaran, 2004), p.79

⁶L.R Gay Peter Airaisan, Op. Cit. p. 134

experiment research. Thus, for correlational studies at least 30 participants are needed to establish the existence or nonexistence of a relationship"⁷. In this research, researcher use Slovin formula to take the sample :

$$n = \frac{N}{1 + Ne^{2}}$$

n = sample size

N = population

e = significant error (5% and 10%)

Based on above formula researcher use significant error 10% and the sample can be decide as follows :

$$n = \frac{325}{1+325.0.1^2}$$
$$n = \frac{325}{4.25}$$
$$n = 76.47$$
$$n = 76$$

From the calculation above researcher use 76 students as sample and it has fulfill the criteria of sample in correlational research.

In this research, researcher use simple random sampling in taking the sample. Random sampling is the process of selecting a sample in such a way that all individuals in define population have an equal and independent chance of being selected for the sample.⁸

⁷ Ibid.

⁸ *Ibid*, p. 123

So, the researcher's reason uses simple random sampling technique is because of all the sample has the same chance to be chosen and it is the best single way to obtain a representative sample.

Next, the researcher using a lottery technique to take the sample. All the members of population is written in a small paper based on member of each classroom. After that researcher select the members randomly from each class. The last researcher finds the sample 7 students from VIII 1, 9 students from VIII 2, 4 students from VIII 3, 9 students from VIII 4, 8 students from VIII 5, 5 students from VIII 6, 5 students from VIII 7, 2 students from VIII 8, 9 students from VIII 9, 4 students from VIII 10, 11 students from VIII 1 and 3 students from VIII 12.

No	Class	Total students
1	VIII – 1	7
2	VIII -2	9
3	VIII -3	4
4	VIII -4	9
5	VIII -5	8
6	VIII -6	5
7	VIII -7	5
8	VIII -8	2
9	VIII -9	9
10	VIII -10	4
11	VIII -11	11
12	VIII -12	3
7	Fotal Of Students	76

Table 2Sample of the Research

1) Normality Test

Normality test is used to know whether the data normal or not. The data can be tested by using Chi-quadrate, as follow:

$$x^2 = \sum \frac{f_0 - f_h}{f_h}$$

Where;

 x^2 = Chi-quadrate

 f_0 = Frequency is gotten from sample/result of observation (questioner).

fh = Frequency is gotten from sample as image from frequency is hoped from population. 9

To calculate the result of *Chi-Quadrate*, it is used significant level 5% (0,05) and degree of freedom as big as total of frequency is lessened 3 (dk= k-1). If result $x^{2}_{count} < x^{2}_{table}$, it can be concluded that data is distributed normal.

2) Homogeneity

Homogeneity test is used to know whether control class and experimental class have the same variant or not. If both of classes are same, it can be called homogenous. To test it, the researcher used formula as follow:

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

Hypothesis is accepted if $F_{count} \le F_{table}$

Hypothesis is rejected if F _{count} \ge F _{table}.

⁹ Mardalis, *Metode Penelitian: Suatu Pendekatan Proposal*, (Jakarta: Bumi Aksara, 2003), p.85.

D. Definition of Operational Variables

There are two variables in this research ; extrinsic motivation as variable X and English Achievement as variable Y.

1. Extrinsic Motivation

Extrinsic motivation is one of kind of motivation that comes from outside of someone to do particular action.

2. English Achievement

English achievement is the result that students have reached after learning English in a certain periodic.

E. Instrument of Collecting Data

Instrument is very important to support every research. This research makes questionnaire and documentation as the instrument to collect data. The instrument is chosen by researcher to collect the data in order to make research becomes systematically and easier. In this case, in order to get the data of this research, the researcher will prepare the available instrument . there were two instrument, they were questionnaire and documentation.

1. Questionnaire

Questionnaire is information about a particular issue of interest. The questionnaire is used to get information about learning motivation in English achievement. There are seven basic question types, they are quantity or information, category, list or multiple choice, scale, ranking, complex grid or table, and open-ended.¹⁰

The type of questionnaire that used in this research was scale, it is Likert Scale. The Likert –type scale response was level of frequency, in which there are five of alternative answer and score in using fositive form ; always = 5, often = 4, sometimes = 3, seldom = 2 and never = 1.¹¹

In continuation, each item of the questionnaire was developed from indicator that has been described in the following below:

No	Indicator	Sub Indicator	Number of	Total of
			Questionnaire	Questionnaire
1.	Drive in learning	1. Teacher	1,2,3	8
		2. Parents	4,5,6	
		3. Environment	7,8	
2	Good learning	1. Teacher	9,10	8
	environment	2. Parents	11,12	
		3. Environment	13,14,15,16	
3	Motivated by	1. Teacher	17,18,19	7
	reward	2. Parents	20	
		3. Environment	21,22,23	
4	Avoiding a	1. Teacher	24,25,26	7
	punishment	2. Parents	27,28	
		3. Environment	29,30]
	Total		·	30

 Table 3

 Indicators of Extrinsic Motivation (Variable X)

 ¹⁰ Lorain Blaxter, et, all, *How to research* (Buckingham: Open University press, 2001), p. 179
 ¹¹ Werge M. Vagias, *Likert – Type scale response anchors*", (http://www.clemson.edu/

centers-institutes/tourism/documents /sample-scales.pdf), accessed on October 7th 2016 retrieved at 10.00 a.m

2. Documentation

For measuring English achievement or variable Y researcher collect the data by cooperating with English teacher and vice class by taking a photo of students' mark report book. It is also called as DKN (Daftar Kumpulan Nilai).

F. Validity and Reliability Instrument

1. Validity

In this research, the researcher uses construct validity to establish validity of the instrument. *Construct validity* concerns the qualities that the task measures, how far it actually represents speaking abilities.

So in this research, the questioner was validated by checking the test to the expert person. The expert person is the English teacher of grade VIII students itself of SMP N 2 Padangsidimpuan and psychologist. Validator will check and recheck whether the item of questionnaire topic has been suitable or not.

2. Reliability

Reliability is also needed to create a good test because a test must be reliable as a measuring instrument. The instrument is said reliable when the instrument believable to use as an instrument of collecting data because the instrument is good.

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G. Techniques of Data Analysis

In correlation research, the most suitable analysis is using the statistical process. It means that the data were collected and analyzed by using formulation. In this research data processing stage, answering the question of who has been the formulating using certain stage are :

1. Descriptive Statistic Analysis

Descriptive statistic is a static function to describe or give a picture of the object being investigated trough the data sample and the population as its public.¹² Descriptive statistic are the ways of presenting the data analyzed by the following data :

a. Mean (Average)

The formula used is :

$$M_x = \frac{fx}{N}$$

Description:

 M_{x} = Mean (average)

fx = The sum of multiplication of each score with a frequency

= Number of students¹³ Ν

¹³ *Ibid.* p. 81

p. 80

¹² Sugiyono, Metode Penelitan Kuantitatif Kualitatif dan R&D, (Bandung : Alfabeta ,2008),

b. Median

The formula used is :

$$Median = l + \frac{1}{fi} \frac{2N - fkb}{fi} \times i$$

Description :

= Lower lmit of the real containing median score l

= Cumulative frequency lies below the median score fkb containing.

$$fi$$
 = Orgnal frequency (frequency of score containing median)

$$i = \text{class interval}^{14}$$

c. Modus

The formula used is :

$$\mathbf{M}_{\mathbf{o}} = l + \frac{fa}{fa+fb} \quad x \ i$$

Description :

 M_{0} = Mode = lower limit of the interval containing the real – mode l = frequency located at the interval that contains the mode fa = frequency located at below the interval containing mode fb = class interval¹⁵ i

¹⁴ *Ibid*. p. 82 ¹⁵ *Ibid*. p. 84

2. Hypothesis test

To determine whether there is a correlation between Extrinsic Motivation and English Achievement, used the formula of correlation "r" product moment as follows :

 $\mathbf{f}_{XY} = \frac{N \sum XY - \sum X (\sum Y)}{(N - X^2 - (-X)^2)(N - Y^2 - (-Y)^2)}$

Description :

- r_{xy} : coefficient of correlation
- N : the number of sample
- $\sum X$: the sum of scores in X distribution
- $\sum Y$: the sum of scores in Y distribution¹⁶

The result should been appropriated with interpretation to the index of

product moment of correlation.

The interpretation of the result could be seen in the following table.

Criteria score interpretation				
Percentage Criteria				
0,00- 0,20 Very low correlation				
0,20 – 0,40 Low correlation				
0,40 - 0,70	Enough correlation			
0,70 - 0,90	High correlation			
0,90 – 1,00 Very high correlation				

Table 4

(source : Anas Sudjiono in book Pengantar Statistik pendidikan)

¹⁶ Anas Sudjiono, Pengantar Statistik pendidikan, (Jakarta : Pt Raja Grapindo. 2005) p. 193

CHAPTER IV

THE RESULT OF RESEARCH

In this chapter, the researcher discussed the result of testing, in order to evaluate the correlation between extrinsic motivation and speaking mastery (at the eighth grade students of SMP N 2 PSP). The researcher has calculated the data by using descriptive method. Applying the quantitative analysis, the researcher used the formulation "r" Product Moment. Then the researcher described the data as follow:

A. The Description of Data

To facilitate understanding of the result of this study, then the data described by sequence of variables. Description of research result started from variable (X) was extrinsic motivation, and variable (Y) was English achievement.

1. Extrinsic motivation

In this part, the researcher shows the result of the research that has been done to the dependent variable that is learning motivation. In this research, the researcher present 30 items of questionnaires. For each number, the researcher gives 5 as maximal score for each statement.

After calculating then scores, it was found that the highest score was 119 and the lowest score was 66 (See Appendix III: Variable X Extrinsic Motivation). To complete this researcher, it was needed for the researcher to calculate the mean score was 96,57 the median score was 89,8 the mode was 92. Where mean was the score which represents the general value that was achieved by the students.

Meanwhile, median was the score in the middle or the score which divides a distribution of data into two equal part and mode is a score which has the most frequency. So, the specification calculation was described in the table below:

No	Statistic	Variable X
1	High Score	119
2	Low Score	66
3	Range	53
4	Interval	8
5	Mean score	96.57
6	Median score	89.8
7.	Mode	92
8	Standard Deviation	10.4

Table 5The Resume of Variable Score of Extrinsic Motivation

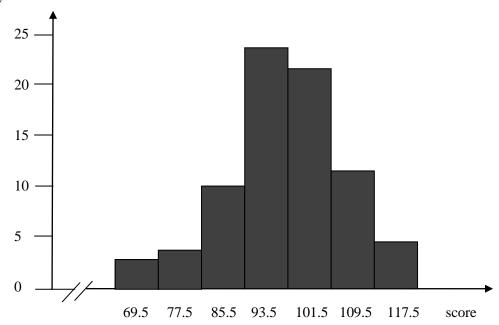
Based on the above table, it shows that mean is 96.57 it means that the students in learning motivation was in good predicate. To know revelation of data was done to grouped the variable score of learning motivation which the total classes 7 and interval 8.

Then, the computed of the frequency distribution of the student's score of group can be applied in to table frequency distribution as follows:

Interval	Mid Point	Frequency	Percentage
66 – 73	69.5	2	2.63%
74 - 81	77.5	3	3.95 %
82 - 89	85.5	10	13.16%
90 - 97	93.5	24	31.58%
98 - 105	101.5	22	28.95%
106 - 113	109.5	11	14.47%
114 - 121	117.5	4	5.26%
Т	otal	76	100 %

Table 6The Frequency Distribution of Extrinsic Motivation

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



frequency

Figure 1: Description Data of Extrinsic Motivation

Based on the above chart, it was known that the variable revelation of learning motivation shown that the respondent an interval 66-73 were 4

students (2.63%) interval 74-81 were 3 students (3.95%), interval 82-89 were 10 students (13.16%), interval 90-97 were 24 students (31.58%), interval 98-105 were 22 students (28.95%), interval 106-113 were 11 students (14.47%) and last interval 114-121 were 4 students (5.26%).

2. English achievement

The resume score of variable English achievement at the eight grade students of SMP N 2 Padangsidimpuan has been gotten as table below:

пек	The Resume of the variable Score of English Achievemen			
No	Statistic	Variable Y		
1.	High score	93		
2.	Low score	80		
3.	Range	13		
4	Interval	5		
5.	Mean score	87.2		
6.	Median score	86.92		
7.	Mode	87.42		
8.	Standard Deviation	4.71		

Table 7

The Resume of the Variable Score of English Achievement

Based on the above table, the researcher got high score was 93, low score was 80 mean score was 87.2, median score was 86.92, mode score was 87.42. The data could be seen in the appendix 6 (Variable Y : English Achievement).

Based on the calculation of means score, it was 87.2 it means that the students' English achievement was good predicate. To know the revelation of data was done to group the variable score of English achievement which the

total classes 7 and interval 2. Then, the computed of the frequency distribution of the student's score of group can be applied in to table frequency distribution as follows:

The Frequency Distribution of English Achievement				
Interval	Mid Point	Frequency	Percentages	
80 - 81	80.5	3	3.95%	
82 - 83	82.5	6	7.89%	
84 - 85	84.5	12	15.79%	
86 - 87	86.5	22	28.95%	
88 - 89	88.5	14	18.42%	
90 - 91	90.5	12	15.79%	
92 - 93	92.5	7	9.21%	
Το	tal	76	100 %	

Table 8The Frequency Distribution of English Achievement

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

researcher presents them in the histogram on the following figure:

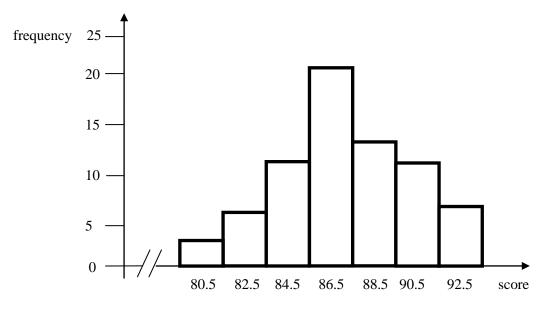


Figure 2: Data Description of English Achievement

Based on the above table, it was known that the variable revelation of English achievement shown that the respondent at interval 80-81 were 3 students (3.95%), interval 82-83 were 6 students (7.89%), interval 84-85 were 12 students (15.79%), interval 86-87 were 22 students (28.95%), interval 88-89 were 14 students (18.42%), interval 90-91 were 12 students (15.79%), the last interval 92-93 were 7 students (9.21%)

B. Testing of Hypothesis

Requirement Test

Class	Normality Test		Homogeneity Test	
	t _{count} t _{table}		f _{count}	f _{table}
Data X	6.54	12.592	1.112 < 1.980	
Data Y	2.144	12.592		

Table 9Normality and Homogeneity Data X and Data Y

Based on the table above, the score of data X = 6.54 < 12.592 with n = 76and Data Y = 2.144 < 12.592 with n = 76, and real level α 0.05. It means that data X and Y were distributed normal. It can be seen in appendix 7 and 8.

The coefficient of F_{count} = 1.112 was compared with Ftable=1.980. Where F_{table} was determined at real α 0.05, and the different numerator dk = N-1 = 76-1 = 75 and denominator dk N-1 = 76-1 = 75. So, by using the list of critical value at F distribution is got F0.05 = 1.980 It showed that F_{count} 1.112 < F_{table} .1.980. It

shows that both variable X and Y were homogeneous. The calculation can be seen on the appendix 7 and 8.

Hypothesis testing aims to determine the correlation between Extrinsic motivation and English achievement of SMP N 2 PSP by using the product moment formula. Before testing the hypothesis, first performed the calculation of the scores obtained by the respondents as below:

X	=	7328
Y	=	6623
X^2	=	714.576
Y^2	=	577.875
xy	=	634.667

By using the values above, calculated the value of correlation between variable X and Y.

r		$N \sum XY - \sum X \ (\sum Y)$
r _{xy}	=	$\overline{(N \ X^2 - (X)^2)(N \ Y^2 - (Y)^2)}$
		76x639451 - 7328 (6623)
	=	$\frac{(76\ 714576\ -(7328^2))(76\ 577875\ -(6623^2))}{48598276-48533344})$
	=	(54307776)–(53699584))(43918500)–(43864129)) 64932
	=	(608192)(54371) 64932
	=	33068007232 64932
	=	181846.1086523437
	=	0.35707115
	=	0.357

- H_a: there is a significant correlation between extrinsic motivation and English achievement at the eighth grade students of SMP N 2 Psp
- H_o : There is no significant correlation between extrinsic motivation and English achievement at the eighth grade students of SMP N 2.

. So, based on the above calculation between variable X and Y by r_{xy} , the researcher got 0.357. The calculating product moment by getting correlation coefficients $r_{xy} = 0.34$ was more than $r_{table} = 0.200$ on 5% and 1% = 0.265. The result showed that there was correlation between extrinsic motivation and English achievement at the eighth grade students of SMP N 2 Padangsidimpuan but in low category. It meant that Ha is accepted and H₀ is rejected. It had been written in the table of coefficient correlation interpretation.

No	Value of high r	Interpretation
1.	0.90 -1.00	Very Good
2.	0.70 -0.90	Good
3.	0.40 - 0.70	Enough
4.	0.20 -0.40	Low
5.	0.00 -0.20	Lowest

 Table 10

 Categories Value Correlation Coefficient and Strength Correlation

To look for the contribution of variable X and Y as follows:

- KP = The score of determine coefficient
- r = the score of the coefficient correlation
- $KP = r^2 \times 100\%$

 $= (0.357)^2 \times 100\%$ = 0.1274 × 100% = 12.74%

Based on X variable (extrinsic motivation) and Y variable (English achievement), the result of contribution was 0.357 belong to low category and contribution variable has KP 12.74% and 87.26% influenced by other variables.

Testing the truth of significant correlation, used the formulate t_{count} :

$$T_{\text{count}} = \frac{r \ \overline{n-2}}{1-r^2}$$
$$= \frac{0.357 \ \overline{76-2}}{1-0.357^2}$$
$$= \frac{0.357 \ \overline{74}}{1-0.357^2}$$
$$= \frac{0.357 \ 8.602}{0.872551}$$
$$= \frac{3.070914}{0.934}$$
$$= 3.288$$

Based on the calculative above, $t_{cout} > t_{table}$, namely t_{cout} : 3.288 and t_{taable} on significant 5 % = 2.000 and significant 1 % = 2.660. it meant that there was the significant correlation between two variables that it was said that the validity of the contribution of variable X to variable Y was "accepted".

C. The Discussion of Result

After did the research, the researcher discussed the result and compared it with result in research related findings:

First, the research done by Pike Makharani about "The Correlation of Students' Motivation and Students' English Achievement at grade VIII SMP N 9 Padangsidimpuan.", \mathbf{r}_{xy} was 0.381. The second, the research done by Mely Gusnijar about "The Influence of Students' Motivation toward Students' Achievement at SMP Negeri 1 Haholongan Paluta" \mathbf{r}_{xy} was 0.672, The third, the research done by Nurliani about "The Correlation between Learning Motivation and English Achievement (A study to the grade VIII at SM Negeri 3 Siabu)" \mathbf{r}_{xy} was 0.89. The fourth, the research done by researcher in this thesis about "The Correlation between Extrinsic Motivation and Students' English Achievement at The Eight grade Students of SMP N 2 Padangsidimpuan,", and researcher got \mathbf{r}_{xy} was 0.357.

Based on explanation above it was proved that this research about extrinsic motivation and students' English achievement was rather different with the other research, extrinsic motivation had a low correlation with English achievement.

In this research, researcher found that Extrinsic motivation of students was low. There are some assumptions of why it could be. The first intrinsic and extrinsic motivation couldn't be separated. Based on comparison with other researcher showed that extrinsic motivation gave lower correlation than intrinsic motivation. Logically, researcher got a high correlation when they correlate between Motivation and English achievement. Where, motivation here consisted of intrinsic and extrinsic motivation. Automatically when intrinsic and extrinsic motivation were separated, there would be distribution of significant level of both motivation. It means that, if researcher just focus of on one motivation only in this discussion focus on extrinsic motivation, the result of course would be not high as the result of integration of both of motivation. Additionally, by giving extrinsic motivation, it could change be intrinsic motivation because students realized that outside influence can be encourage for student it self to increase students self confidence.

The second, researcher assumed that those happened because of a little intensive of factor of extrinsic motivation such as parents, teacher, and environment in giving motivation to the students. Parents, teacher, and environments didn't give the motivation to the students every day or regularly. In fact they just give motivation and support the students in certain time such as in examination only or when students followed the competition. Meanwhile as we know that students had an unstable of interested and motivation, it can be higher even lower.

Explanation above doesn't mean that teacher, parents and environment were not needed. They were needed for guidance and director of students motivation. Without outside factor, students would not be able direct their intrinsic motivation

Oppositely, the researcher found that in this research student had a high English achievement although they had a low motivation. Researcher assumed that there are some factors that made it happen :

First, the facts in the field showed that standard score in English subject for Junior High School was high. In this research, students had to reach score 80 as the standard of English subject. Sure it would be teacher responsibility to make all the student could pass this score. But what happened in the field was not like what teacher hoped. There were many students still got low score or under standard score. Teacher had to make a requirement test to encourage students score pass the standard score. Teacher often made re-test(remedial) or another requirement to make it happen. So the score in DKN can be real or not. So, indirectly government law here also influenced of teacher giving score to students based on standard score.

The second, school also had a role in this problem. When teacher let students had a low score it will affect to school accreditation. When many students couldn't pass standard score it would decrease school accreditation. When school accreditation was low, it would be of course decrease interested of society to join and to register their son to that school. That is why teacher had to improve students score passed the standard score. Even the score is real or not, it had been researcher responsibility to believe that the score was real and formal. It will be teacher and school business if they do a deceitfulness in giving a score.

So, base on explanation above it can be stated that extrinsic motivation was needed and had the correlation with students' English achievement even in low category.

D. Limitation of The Research

The researcher found the threats of this research as follows:

- 1. The researcher didn't know how serious the students were in answering the questionnaire.
- 2. Some students asked the answer to their friends or only guest the answer.
- 3. There is no the original data from the teacher that showed the original score that students got for one semester.
- 4. Time was limited, because Junior high school at the time was doing examination for grade IX that caused researcher difficult to decide the appropriate time to do a research.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

After getting the result of research work, the research came to describe the data as follows:

- Students extrinsic motivation of learning at the eighth grade students of SMP N
 Padangsidimpuan was "enough" getting mean score were 96.57, that if calculated, the percentage was 64.38 %
- 2. English learning achievement at the eighth grade students of SMPN 2 Padangsidimpuan was "good" by getting mean score were 87.2.
- 3. So, based on the result of calculating data, the hypothesis H_a was accepted whereas H_o was rejected. It was gotten from the value of the correlation product moment r_{xy} between extrinsic motivation of learning and English learning achievement at the eighth grade students of SMPN 2 Padangsidimpuan and categories value correlation coefficient and strength correlation that showed the correlation in to low category. The calculating of product moment by getting correlation coefficients $r_{xy} = 0.357$. The significant correlation level was done by locking r_{table} (rt) on significant level 5% was 0.200 and on significant level 1% was 0.266. The hypothesis (H₀) in this research was accepted namely r_{count}

 $> r_{table}$ (0.357>0.200). It meant there was a correlation between extrinsic motivation and English achievement in low category.

B. Suggestion

Here, the researcher give information as follows:

- 1. Headmaster of SMP N 2 Padangsidimpuan was hoped to support all English teachers to teach well and provide facilities involves with learning English.
- 2. English teachers should give a positive stimulus to increase students Extrinsic motivation.
- 3. Parents and environment were hoped giving regular support to the students to grow up their motivation.
- 4. The researcher hopes that the others researchers who want to conduct a research related to this research to find the others influence of English achievement. in order to motivate readers more critics and consider whatever they read.

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APPENDIX I

ANGKET TENTANG HUBUNGAN MOTIVASI EXTRINSIK DENGAN HASIL BELAJAR BAHASA INGGRIS

Nama	:
Kelas/Semester	:

:

A. Pengantar

Hari/ Tanggal

- Angket ini diberikan kepada siswa hanya untuk mendapatkan informasi dari siswa sesuai dengan penelitian tentang "The Correlation Between Extrinsic Motivation and English Achievement at The Eighth Grade Students Of SMP N 2 Padangsidimpuan".
- 2. Informasi yang diperoleh dari anda sangat berguna bagi sipeneliti untuk menganalisis tentang hubungan motivasi extrinsic siswa dengan hasil belajar Bahasa Inggris.
- 3. Partisipasi anda memberikan informasi yang sangat kami harapkan.
- 4. Jawaban anda tidak mempengaruhi nilai bhasa Inggris anda, jawablah dengan jujur sesuai dengan keadaan anda.

B. Petunjuk Pengisian

- 1. Baca dan pahamilah setiap pernyataan dengan baik
- Pertimbangkan jawaban anda, dan pilihlah salah satu jawaban yang paling sesuai dengan keadaan anda dari setiap pernyataan, lalu berikan tanda ceklis (√) pada kolom yang tersedia.

Keterangan pilihan Jawaban :

- SL : Selalu
- SR : Sering
- KD : Kadang Kadang
- JR : Jarang
- TP : Tidak Pernah

No	Pernyataan	SL	SR	KD	JR	TP
1	Guru bahasa Inggris saya adalah sumber inspirasi					
	saya dalam belajar bahasa Inggris					
2	Saya sulit mengerti pelajaran bahasa Inggris					
	karena guru bahasa Inggris saya tidak pandai					
	menyampaikan materi pelajaran					
3	Saya tidak suka bahasa Inggris karena saya tidak					
	suka dengan gurunya					
4	Orangtua saya senang jika saya pandai berbahasa					
	Inggris					_
5	Orangtua saya mendorong saya belajar bahasa					
	Inggris dengan les privat					
6	Jika saya merasa sulit mengerjakan tugas bahasa					
_	Inggris, orangtua saya akan mengajari saya					
7	Saya merasa iri jika ada teman yang pandai					
0	berbahasa Inggris					
8	Saya belajar bahasa Inggris agar mudah masuk ke					
0	sekolah favorit setelah lulus					
9	Saya suka bahasa Inggris karena saya suka lagu –					
10	lagu bahasa Inggris					
10	Saya senang belajar bahasa Inggris jika guru					
11	membuat permainan dalam kelas					
11	Saya sulit memahami bahasa Inggris karena guru					
12	mengajar dengan suara pelan dan tidak jelasSaya suka menonton film – film berbahasa Inggris					
12	karena orangtua saya juga suka menontonnya					
13	Saya senang belajar bahasa Inggris jika suasana					
15	rumah aman dan tenang					
14	Saya punya banyak teman untuk di ajak berbahasa					
11	Inggris					
15	Saya tidak bisa belajar bahasa Inggris kalau tidak					
10	ada kamus					
16	Saya senang mengerjakan tugas bahasa Inggris					
	jika dikerjakan bersama – sama teman.					
17	Saya giat belajar bahasa Inggris agar mendapat					
	nilai yang bagus dari guru					
18	Saya belajar bahasa Inggris ketika akan ulangan			1	1	
	saja					
19	Guru saya memberikan pujian jika saya				1	
	menyelesaikan tugas bahasa Inggris dengan benar					
20	Orangtua saya memberi hadiah kepada saya jika				1	
	nilai bahasa nggris saya bagus					
21	Teman – teman akan memberi pujian jika saya					
	pandai berbahasa Inggris					

No	Indicator	Sub Indicator	Number of	Total of
			Questionnaire	Questionnaire
1.	Drive in learning	1. Teacher	1,2,3	8
		2. Parents	4,5,6	
		3. Environment	7,8	
2	Good learning	1. Teacher	9,10	8
	environment	2. Parents	11,12	
		3. Environment	13,14,15,16	
3	Motivated by	1. Teacher	17,18,19	7
	reward	2. Parents	20	
		3. Environment	21,22,23	
4	Avoiding a	1. Teacher	24,25,26	7
	punishment	2. Parents	27,28	
		3. Environment	29,30	
	Total			30

Table Indicators of Extrinsic Motivation (Variable X)

APPENDIX II

No	Initial														Nu	mber	of Q	uesti	onnai	ire												Total
	Intitut	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1 otur
1.	DAZ	3	1	3	3	3	3	3	5	3	3	1	3	2	1	2	4	3	2	1	1	1	1	5	5	5	4	5	5	2	4	87
2.	OAD	5	1	1	5	5	1	1	5	5	5	1	5	5	5	3	5	5	1	3	3	2	1	5	5	5	5	1	5	1	3	103
3.	RAF	5	1	1	5	1	5	3	5	5	1	1	5	5	5	3	3	5	3	3	3	2	1	5	5	5	5	5	5	1	5	107
4.	MIH	4	1	1	5	5	3	1	4	3	3	1	1	5	1	3	5	5	2	1	3	2	1	5	5	5	4	1	5	1	5	91
5.	RIV	3	3	1	5	2	1	3	2	5	1	1	5	5	3	3	3	3	2	1	1	3	1	5	5	4	5	3	5	5	4	93
6.	NSD	5	1	1	5	5	5	5	5	5	5	2	2	5	3	5	3	5	5	2	5	3	5	3	5	5	5	5	5	1	3	119
7.	RAY	5	1	1	5	5	5	2	5	5	5	1	2	5	5	2	5	5	2	5	3	3	2	5	5	4	4	5	4	3	3	112
8.	PAM	5	3	2	5	5	3	1	5	2	3	3	2	4	4	3	4	5	1	3	2	4	1	5	5	4	5	1	3	4	3	100
9.	NFH	5	1	1	5	5	1	3	5	3	3	1	3	5	4	5	5	5	1	1	1	2	1	5	5	5	5	1	5	2	5	99
10.	IFN	5	2	1	5	3	3	3	3	2	3	3	2	2	1	3	5	5	3	2	2	4	1	5	3	5	3	2	1	2	3	87
11.	FLO	3	1	2	5	2	1	2	5	2	3	1	3	4	2	5	5	3	2	5	3	1	2	3	5	3	4	5	2	2	4	90
12.	ARN	4	1	1	5	4	2	3	4	3	1	1	1	5	2	2	4	4	2	2	3	2	1	5	1	5	3	1	5	1	5	83
13.	SAL	4	2	1	5	3	3	2	5	3	2	1	3	4	1	1	4	4	2	3	3	3	3	5	5	5	5	1	4	3	3	93
14.	HSL	1	1	1	5	4	3	2	3	2	3	3	4	4	3	3	4	3	4	3	4	5	4	5	5	3	2	3	5	1	3	96

QUESSTIONNAIRE RESULT OF LEARNING MOTIVATION

No	Initial														Nu	mber	of Q	uesti	onnai	ire												Total
INU	muai	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	20	27	28	29	30	Total
15.	RST	5	2	1	5	2	5	1	5	3	3	1	1	5	3	2	5	4	1	1	1	2	1	4	5	5	3	1	5	3	5	90
16.	AAH	1	1	1	3	5	3	1	2	3	3	1	1	5	3	2	5	4	1	1	1	3	1	4	5	5	3	1	5	3	5	82
17.	ARP	5	3	1	5	4	5	1	5	1	3	1	2	4	3	3	4	5	1	4	2	5	1	5	5	4	5	5	4	3	5	104
18.	MAN	4	1	1	5	1	3	2	1	1	1	1	1	4	3	2	4	3	2	3	2	2	1	2	1	5	2	4	1	1	5	69
19.	BRN	5	2	1	5	4	3	2	4	2	3	2	1	4	4	1	5	5	2	2	2	3	1	4	5	4	3	4	5	2	3	93
20.	HFN	5	1	1	5	5	3	1	5	3	5	1	3	5	5	2	5	5	1	5	5	5	2	5	5	5	5	2	5	2	5	112
21.	ZSF	5	1	1	5	5	5	1	5	5	3	1	2	3	5	2	5	5	1	5	5	5	1	5	5	5	5	5	5	1	5	112
22.	SRY	5	1	1	5	5	3	3	5	3	1	1	3	4	2	5	5	5	2	5	1	1	1	5	5	5	5	1	5	1	5	99
23.	TFB	5	1	1	5	5	2	5	5	5	4	1	4	5	3	3	4	5	1	5	4	2	1	5	5	5	5	1	5	1	5	108
24.	RFH	5	2	1	5	3	2	1	5	3	5	1	1	5	5	5	5	4	3	3	4	3	5	4	3	5	3	1	1	4	1	98
25.	RHP	4	1	1	5	5	3	5	5	5	1	3	5	3	2	1	4	5	4	3	4	5	3	5	4	4	2	3	1	1	5	102
26.	OFN	5	4	3	4	3	4	3	5	5	4	4	3	4	5	4	4	4	5	5	4	4	5	4	4	1	1	5	2	5	1	114
27.	NAI	5	4	3	4	3	3	4	5	3	4	3	5	3	4	5	3	5	3	4	5	4	5	4	3	4	2	5	2	5	2	114
28.	SDY	5	3	5	4	5	1	1	3	4	5	4	5	3	2	5	4	5	4	3	2	1	5	4	5	2	3	4	3	4	3	107
29.	AAR	4	1	1	5	5	4	1	5	2	2	1	3	5	5	2	4	5	3	4	4	3	5	4	5	1	1	4	5	1	3	98
30.	ASN	5	1	1	5	5	1	1	4	1	1	1	2	2	3	3	4	4	1	5	3	3	1	4	2	5	5	1	5	1	3	83
31.	RNS	3	1	1	5	5	5	1	5	5	5	1	5	1	5	3	1	5	1	3	2	4	1	5	5	5	5	3	5	1	3	100

No	Initial														Nu	mber	of Q	uesti	onnai	ire												Total
INU	muai	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	20	27	28	29	30	TUtal
32.	APN	5	1	1	5	1	3	1	1	3	2	1	1	3	2	5	5	3	1	5	5	5	1	5	5	5	3	5	4	1	4	92
33.	LNN	3	4	2	5	4	2	1	3	5	1	3	2	4	3	4	3	3	1	4	3	4	3	2	3	5	5	4	4	1	4	95
34.	KHN	3	1	1	5	4	4	1	5	3	3	2	1	1	2	1	4	5	1	3	2	2	1	4	5	5	5	4	4	5	1	88
35.	ARA	5	2	1	5	4	3	1	5	5	4	1	5	5	5	4	4	5	1	4	5	3	1	5	4	5	5	2	5	1	4	109
36.	GHD	3	3	1	5	5	1	1	5	1	3	3	3	3	2	5	5	5	3	3	1	2	1	5	5	5	2	4	3	3	4	95
37.	RHH	5	1	5	5	5	1	5	5	5	5	1	1	1	1	5	5	5	1	3	1	1	1	5	5	5	3	5	3	1	3	98
38.	SAN	3	3	1	5	5	1	5	5	3	3	1	1	5	1	5	3	5	3	2	2	2	1	5	5	5	5	1	5	1	5	97
39	PRS	2	3	2	5	2	1	1	4	3	5	4	5	4	3	4	2	2	5	3	5	4	3	5	4	3	1	1	5	1	3	95
40	RTS	2	3	2	5	2	1	1	4	3	5	4	1	3	2	5	5	5	4	2	3	3	3	5	5	4	1	1	1	2	3	90
41	MHP	5	3	2	5	5	4	2	5	3	3	1	2	3	5	4	4	4	3	2	2	2	4	5	5	3	2	1	4	1	3	97
42	WGT	4	1	1	5	1	5	1	5	3	3	1	3	5	3	3	3	4	2	5	3	4	5	2	3	2	5	1	2	5	3	93
43	SDS	3	2	2	5	2	2	2	3	2	3	1	1	2	1	2	3	3	3	2	3	3	2	5	5	5	4	1	3	1	3	79
44	SDY	5	1	1	5	5	5	3	5	2	4	3	2	5	2	5	5	5	3	3	3	5	4	5	5	5	5	3	4	3	3	114
45	OWN	4	3	2	5	3	3	1	5	2	5	3	2	4	2	5	4	5	3	3	2	4	5	4	4	3	1	3	1	4	4	99
46	FHI	4	1	1	5	5	3	4	5	3	4	2	4	3	3	1	5	5	2	3	1	3	1	5	5	5	5	5	5	2	5	105
47	PJM	5	3	1	5	5	3	4	4	1	3	1	3	3	5	1	2	1	2	1	5	5	5	5	2	1	2	1	4	3	1	87
48	MED	5	1	2	5	5	2	3	5	3	5	1	5	5	1	5	5	5	1	2	1	4	1	5	5	3	5	1	5	1	5	102

No	Initial														Nu	mber	of Q	uesti	onnai	ire												Total
140	muai	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TUtal
49	ARG	5	1	1	5	3	5	2	5	5	5	1	4	4	2	2	5	4	2	3	2	2	2	4	5	2	4	1	5	1	5	97
50	SMH	4	3	1	5	5	3	2	4	5	4	1	2	5	4	2	2	5	2	4	3	4	2	5	2	4	5	1	5	2	5	101
51	HIP	3	2	5	5	5	3	3	4	3	5	5	2	3	3	5	5	3	5	3	2	1	1	3	5	3	1	1	3	3	2	97
52	AGG	3	3	2	5	1	4	1	5	2	3	3	4	5	3	3	4	3	1	3	1	1	2	3	3	5	5	2	5	1	4	90
53	ARG	2	2	1	5	1	2	5	5	2	4	2	1	3	1	3	5	5	3	2	1	1	1	5	5	5	4	5	5	1	3	90
54	TRB	3	3	3	5	1	2	3	3	2	4	3	2	3	2	5	4	3	5	3	2	3	3	4	5	5	3	4	5	3	3	99
55	DPE	4	1	2	5	5	4	3	4	2	1	1	2	5	2	2	5	5	1	5	3	3	1	4	5	5	4	1	5	1	3	94
56	TNI	5	3	2	5	5	1	5	5	3	2	3	2	4	2	2	2	3	3	3	4	5	5	5	5	4	5	2	5	3	5	108
57	DPB	5	1	1	5	3	5	5	5	3	1	1	3	4	2	2	2	5	1	5	1	3	1	5	5	5	5	4	4	2	5	99
58	CAG	2	3	3	4	2	3	2	4	3	1	1	3	2	1	5	5	4	1	4	3	3	1	3	4	5	5	2	5	1	5	90
59	YHB	5	2	4	5	5	2	3	4	3	2	5	5	5	5	2	5	1	4	2	5	5	4	5	1	3	4	2	1	5	5	109
60	LAP	5	2	1	5	3	3	5	5	3	3	1	1	3	4	1	3	5	1	4	5	4	5	5	4	5	5	3	2	1	5	102
61	YNY	3	3	3	5	2	5	5	2	1	4	1	3	5	1	5	5	5	3	5	1	1	1	5	5	5	3	3	5	1	3	99
62	ESH	3	1	1	5	2	2	1	5	2	3	5	2	5	1	2	3	5	1	5	3	4	1	5	5	3	2	2	1	1	2	83
63	FDY	5	1	1	5	4	3	1	2	3	4	1	2	5	1	1	4	5	1	4	2	3	1	2	5	5	5	4	5	1	5	91
64	ART	5	3	1	5	4	4	3	3	1	5	3	1	5	2	3	4	4	4	2	2	3	1	5	4	5	5	3	3	1	4	98
65	CDB	5	2	1	4	5	4	2	4	4	2	1	1	2	2	2	3	4	1	5	1	2	1	4	5	5	3	3	5	1	5	89

No	Initial														Nu	mber	• of Q	uesti	onnai	re												Total
110	Initial	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
66	GAS	3	2	2	5	5	2	1	5	1	3	1	3	3	5	3	5	5	3	3	3	5	3	5	5	5	4	5	1	5	1	102
67	MDW	3	5	3	5	3	5	5	5	1	1	1	4	5	4	5	5	4	4	5	3	3	4	5		5	5	5	1	1	4	109
68	YGR	3	3	1	5	1	1	1	1	2	2	3	1	4	1	3	5	3	1	3	1	1	1	5	5	5	5	1	5	1	5	79
69	PMS	5	2	1	5	5	3	4	5	2	5	3	5	5	2	5	4	5	2	3	3	2	3	5	5	4	3	3	2	2	3	106
70	AZD	4	2	1	4	1	2	1	3	4	5	3	1	3	1	2	5	5	2	2	1	2	2	3	3	5	5	2	5	3	3	85
71	YRS	3	2	1	3	2	2	1	3	2	1	1	2	3	2	2	4	3	1	3	1	1	1	1	2	5	2	2	5	1	4	66
72	AAR	5	2	1	5	5	5	1	3	4	5	2	5	1	1	5	5	5	1	1	1	3	2	3	5	5	5	1	1	1	5	94
73	VAM	4	1	3	5	1	1	3	1	2	2	3	5	4	3	3	2	3	5	2	1	1	1	2	3	5	2	3	5	1	1	78
74	ICP	4	4	1	5	3	1	3	5	4	3	1	2	5	3	2	4	5	1	4	3	4	1	5	5	5	5	1	4	2	5	100
75	ASR	4	1	1	4	5	1	1	3	4	4	2	3	3	2	3	3	5	3	3	1	2	1	5	5	5	4	1	5	1	5	90
76	YAM	3	3	3	5	1	5	3	5	5	3	3	4	5	4	1	5	5	3	3	4	2	5	3	1	5	5	3	4	1	1	103

APPENDIX III

THE SCORE OF RESPONDENT STUDENTS EXTRINSIC MOTIVATION

No	Initial of Students	Score of Students
1	FEA	87
2.	OAD	103
3.	RAS	107
4.	MIH	91
5.	RIR	93
6.	NSD	119
7.	RAS	112
8.	PAM	100
9.	NFH	99
10.	IFN	87
11.	FLO	90
12.	AAR	83
13.	SAL	93
14.	HSH	96
15.	INL	90
16.	RUS	82
17.	ARP	104
18.	MAN	69
19.	BRN	93
20.	HFN	112
21.	ZSF	112
22.	SRY	99
23.	TFB	108
24.	RPH	98
25.	RHP	102
26.	OFN	114
27.	NAI	114
28.	SDY	107
29.	AAA	98
30.	ASN	83
31	RNS	100
32	APN	92
33	DLM	95
34	KHN	88
35	ZAT	109
36	GHD	95
37	AAH	98
38	SAN	97
39	RWH	95

40	NPH	90
41	MHP	97
42	SAR	93
43	SDS	79
44	DEN	114
45	OWN	99
46	FHI	105
47	ALH	87
48	AKR	102
49	AZP	97
50	SMR	101
51	HIP	97
52	DEP	90
53	AGD	90
54	TRW	99
55	DPE	94
56	TNI	108
57	SMR	99
58	CHA	90
59	AHJ	109
60	LAP	102
61	DAS	99
62	ESH	83
63	FDH	91
64	AIE	98
65	TEP	89
66	IRH	102
67	MOH	109
68	YGS	79
69	MUY	106
70	AAL	85
71	YRS	66
72	ICP	94
73	RSO	78
74	ICP	100
75	ARS	90
76	DFS	103
	TOTAL	7328

APPENDIX IV

THE SCORE OF RESPONDENT ENGLISH ACHIEVEMENT

No	Initial of Students	Score of Students
1	FEA	88
2.	OAD	93
3.	RAS	93
4.	MIH	93
5.	RIR	83
6.	NSD	93
7.	RAS	90
8.	PAM	90
9.	NFH	90
10.	IFN	85
11.	FLO	87
12.	AAR	83
13.	SAL	93
14.	HSH	83
15.	INL	87
16.	RUS	85
17.	ARP	92
18.	MAN	83
19.	BRN	90
20.	HFN	90
21.	ZSF	90
22.	SRY	91
23.	TFB	92
24.	RPH	84
25.	RHP	89
26.	OFN	90
27.	NAI	89
28.	SDY	89
29.	AAA	89
30.	ASN	88
31	RNS	88
32	APN	85
33	DLM	85
34	KHN	88
35	ZAT	87
36	GHD	88
37	AAH	87
38	SAN	89
39	RWH	89

40	NPH	85
41	MHP	83
42	SAR	85
43	SDS	86
44	DEN	86
45	OWN	86
46	FHI	88
47	ALH	86
48	AKR	82
49	AZP	87
50	SMR	87
51	HIP	85
52	DEP	91
53	AGD	85
54	TRW	84
55	DPE	90
56	TNI	90
57	SMR	90
58	CHA	88
59	AHJ	86
60	LAP	80
61	DAS	80
62	ESH	80
63	FDH	84
64	AIE	86
65	TEP	87
66	IRH	86
67	МОН	86
68	YGS	84
69	MUY	86
70	AAL	86
71	YRS	86
72	ICP	87
73	RSO	86
74	ICP	86
75	ARS	88
76	DFS	87
	TOTAL	6623

APPENDIX V

VARIABLE X

(EXTRINSIC MOTIVATION)

1. Maximal and minimum core were gotten by setting the variable score from low score to

high score.

66	69	78	79	79	82	83	83	83	85
87	87	87	88	89	90	90	90	90	90
90	90	91	91	92	93	93	93	93	94
94	95	95	95	96	97	97	97	97	98
98	98	98	99	99	99	99	99	99	100
100	100	101	102	102	102	102	103	103	104
105	106	107	107	108	108	109	109	109	112
112	112	114	114	114	119				

- 2. High score = 119
- 3. Low score = 66
- 4. Range

 $R = High \ score - low \ score$

= 119-66 = 53

5. The total of the class (BK) = $1 + 3.3 \log n$

$$= 1 + 3.3 \log(77)$$

= 1 + 3.3 (1.886)
= 1+ 6.223
= 7.223
= 7

6. Interval (i)

$$I = \frac{Range}{Many \ Class} = \frac{53}{7} = 7,57 = 8$$

7. Mean score

No	Class Interval	F	Х	FX	F _{kb}	F _{ka}
1.	66 – 73	2	69.5	138	76= N	2
2.	74 - 81	3	77.5	231	74	5
3.	82 - 89	10	85.5	850	71	15
4.	90 - 97	24	93.5	2232	61	39
5.	98 - 105	22	101.5	2222	37	61
6.	106 - 113	11	109.5	1199	15	72
7.	114 - 121	4	117.5	468	4	76=N
Total		76		7340		

Mean (X)

$$X = \frac{FX}{F}$$
$$= \frac{7340}{76}$$
$$= 96,57$$

8. Median

No	Class Interval	F	Х	FX	F _{kb}	F _{ka}
1.	66 – 73	2	69	138	76= N	2
2.	74 - 81	3	77	231	74	5
3.	82 - 89	10	85	850	71	15
4.	90 - 97	24	93	2232	61	39
5.	98 - 105	22	101	2222	37	61
6.	106 - 113	11	109	1199	15	72
7.	114 - 121	4	117	468	4	76=N
	Total	76		7340		

$$Me = \ell + \frac{\frac{1}{2}n - fkb}{fi} x i$$

$$\ell = 89.5 \qquad i = 8$$

$$fi = 24 \qquad F_{kb} = 37$$

$$\frac{1}{2}n = 38$$

$$Me = \ell + \frac{\frac{1}{2}n - fkb}{fi} x i$$

Me =
$$89.5 + \frac{38-37}{24} \times 8$$

= $89.5 + (\frac{1}{24}) \times 8$
= $89.5 + 0.3$
= 89.8

9. Modus

No	Class Interval	F	Х	FX	F _{kb}	F _{ka}
1.	66 – 73	2	69	138	76= N	2
2.	74 - 81	3	77	231	74	5
3.	82 - 89	10	85	850	71	15
4.	90 - 97	24	93	2232	61	39
5.	98 - 105	22	101	2222	37	61
6.	106 - 113	11	109	1199	15	72
7.	114 - 121	4	117	468	4	76=N
	Total	76		7340		

$$Mo = \ell + \frac{fa}{fa+fb} x i$$

$$l = 89.5 \qquad i = 8$$

$$fa = 10 \qquad fb = 22$$

$$Mo = \ell + \frac{fa}{fa+fb} x i$$

$$= 89.5 + \frac{10}{10+22} X 8$$

$$= 89.5 + \frac{10 + 22}{10 + 22}$$
$$= 89.5 + 2.5$$
$$= 92$$

APPENDIX VI

VARIABLE Y

(ENGLISH ACHIEVEMENT)

1. Maximal and minimum core were gotten by setting the variable score from low score to

high score.

80	80	80	82	83	83	83	83	83	84
84	84	84	85	85	85	85	85	85	85
85	86	86	86	86	86	86	86	86	86
86	86	86	86	87	87	87	88	88	88
87	87	87	88	88	88	88	88	88	88
88	89	89	89	89	89	89	90	90	90
90	90	90	90	90	90	90	91	91	92
92	93	93	93	93	93				

- 2. High score = 93
- 3. Low score = 80
- 4. Range

 $R = High \ score - low \ score$

= 93 - 80 = 13

5. The total of the class (BK) = $1 + 3.3 \log n$

$$= 1 + 3.3 \log()$$

= 1 + 3.3 (1.880)
= 1 + 6.206
= 7.206
= 7

6. Interval (i)

$$I = \frac{Range}{Many Class} = \frac{13}{7} = = 1.85 = 2$$

7. Mean score

No	Class Interval	F	Х	FX	F _{kb}	F _{ka}
1.	80 - 81	3	3 80.5 241.5		76= N	3
2.	82 - 83	6	82.5	495	73	9
3.	84 - 85	12	84.5	1014	67	21
4.	86 - 87	22	86.5	1903	55	43
5.	88 - 89	14	88.5	1239	33	57
6.	90 - 91	12	90.5	1086	19	69
7.	92 - 93	7	92.5	647.5	7	76=N
Total		76		6626		

Mean (X)

$$X = \frac{FX}{F}$$
$$= \frac{6626}{76}$$
$$= 87.2$$

8. Median

No	Class Interval	F	Х	FX	F _{kb}	F _{ka}
1.	80 - 81	3	80.5	241.5	76= N	3
2.	82 - 83	6	82.5	495	73	9
3.	84 - 85	12	84.5	1014	67	21
4.	86 - 87	22	86.5	1903	55	43
5.	88 - 89	14	88.5	1239	33	57
6.	90 - 91	12	90.5	1086	19	69
7.	92 - 93	7	92.5	647.5	7	76=N
	Total	76		6626		

$$Me = \ell + \frac{\frac{1}{2}n - fkb}{fi} x i$$

$$\ell = 86.5 \qquad i = 2$$

$$fi = 22 \qquad F_{kb} = 33$$

$$\frac{1}{2}n = 38$$

$$Me = \ell + \frac{\frac{1}{2}n - fkb}{fi} x i$$

Me =
$$86.5 + \frac{38-33}{22} \times 2$$

= $86.5 + (\frac{5}{24}) \times 2$
= $86.5 + 0.42$
= 86.92

9. Modus

No	Class Interval	erval F X FX		F _{kb}	F _{ka}	
1.	80 - 81	3	3 80.5 241.5		76= N	3
2.	82 - 83	6	82.5	495	73	9
3.	84 - 85	12	84.5	1014	67	21
4.	86 - 87	22	86.5	1903	55	43
5.	88 - 89	14	88.5	1239	33	57
6.	90 - 91	12	90.5	1086	19	69
7.	92 - 93	7	92.5	647.5	7	76=N
Total		76		6626		

$$Mo = \ell + \frac{fa}{fa+fb} x i$$

$$l = 86.5 \qquad i = 2$$

$$fa = 12 \qquad fb = 14$$

$$Mo = \ell + \frac{fa}{fa+fb} x i$$

$$= 86.5 + \frac{12}{12+14} X 2$$

$$= 86.5 + 0.92$$

$$= 87.42$$

NORMALITY TEST

No	Class Interval	F	Х	x'	fx'	x' ²	fx' ²
1.	66 – 73	2	69.5	+3	6	9	18
2.	74 - 81	3	77.5	+2	6	4	12
3.	82 - 89	10	85.5	+1	10	1	10
4.	<u>90 - 97</u>	24	93.5	0	0	0	0
5.	98 - 105	22	101.5	-1	-22	1	22
6.	106 - 113	11	109.5	-2	-22	4	44
7.	114 - 121	4	117.5	-3	-12	9	36
	Total	76			-34		142

RESULT OF NORMALITY DATA X

$$SD_{t} = i \frac{fx'^{2}}{n} - \frac{fx'}{n}^{2}$$

$$= 8 \frac{142}{76} - \frac{-34}{76}^{2}$$

$$= 8 \overline{1.868} - -0.447^{2}$$

$$= 8 \overline{1.868} - 0.199$$

$$= 8 \overline{1.699}$$

$$= 8x 1.3$$

$$= 10.4$$

Table of Normality Data Test with Chi Kuadrad Formula

Interval of Score	Real Upper Limit	Z – Score	Limit of Large of the Area	Large of area	f_h	f_0	$\frac{(\underline{f_0}\underline{-}\underline{f_h})^2}{f_h}$
114 – 121	121.5	2.39	0.4916				
106 – 113	113.5	1.57	0.4418	0.05	3.8	4	0.01
98 – 105	105.5	0.85	0.3023	0.14	10,64	11	0.13 0.02
90 - 97	97.5	0.08	0.0319	0.28	21.28	22	0.02

00 00	00 5	0.60	0.04005	0.22	16.72	24	3.17
82 - 89	89.5	-0.68	0.24825	0.17	12.92	10	0.66
74 - 81	81.5	-1.44	0.07493				0.53
66 – 73	73.5	-2.21	0.01355	0.06	4.56	3	0.55
00 75	73.5	2.21	0.01555	0.01	0.76	2	2.02
	65.5	- 2.98	0.00144				
						X^2	6.54

Based on the table above,the reseracher found that $x_{count}^2 = 6.54$ while $x_{table}^2 = 12.592$. Because $x_{count}^2 < x_{table}^2$ (6.54 < 12.592) with degree of freedom (dk) = 7 - 1 = 6 and significant level $\alpha = 5\%$, distribution of data X (extrinsic motivation) is normal.

No	Class Interval	F	Х	x'	fx'	x' ²	fx' ²
1.	80 - 81	3	80.5	+3	9	9	27
2.	82 - 83	6	82.5	+2	12	4	24
3.	84 - 85	12	84.5	+1	12	1	12
4.	86 - 87	22	86.5	0	0	0	0
5.	88 - 89	14	88.5	-1	-14	1	14
6.	90 - 91	12	90.5	-2	-24	4	48
7.	92 - 93	7	92.5	-3	-21	9	63
Total		76			-26		188

RESULT OF NORMALITY DATA Y

$$= i \frac{fx'^{2}}{n} - \frac{fx'}{n}^{2}$$

$$= 2 \frac{188}{76} - \frac{-26}{76}^{2}$$

$$= 2 \frac{2.474 - 0.342}{2.474 - 0.117}$$

$$= 2 \times 2.357$$

$$= 4.71$$

Interval of Score	Real Upper Limit	Z – Score	Limit of Large of the Area	Large of area	$\mathbf{f}_{\mathbf{h}}$	f_0	$\frac{(\underline{f_0}\underline{-}\underline{f_h})^2}{f_h}$
92 - 93	93.5	1.34	0.4099	0.09	6.84	7	0.004
90 - 91 88 - 89	91.5 89.5	0.91 0.49	0.3186 0.1879	0.13	9.88	12	0.45
86 - 87	87.5	0.06	0.0239	0.16 0.33	12.16 25.08	14 22	0.28 0.38
84 - 85	85.5	-0.36	0.35942	0.33	10.64	12	0.17
82 - 83 80 - 81	83.5 81.5	-0.78 -1.21	0.21770 0.11314	0.10	7.6	6	0.33
	79.5	-1.63	0.05155	0.06	4.56	3	0.53
							2.144
						X^2	2.144

Table of Normality Data Test with Chi Kuadrad Formula

Based on the table above,the reseracher found that $x_{count}^2 = 2.144$ while $x_{table}^2 = 12.592$. Because $x_{count}^2 < x_{table}^2$ (2.144 < 12.592) with degree of freedom (dk) = 7 - 1 = 6 and significant level $\alpha = 5\%$, distribution of data Y (English achievement) is normal.

HOMOGENEITY TEST

$$S = \frac{\overline{n \quad Xi^2 - xi}}{n(n-1)}$$

Hypotheses:

$$\mathbf{H}_0 : \delta_1^2 = \delta_2^2$$

$$\mathbf{H}_1 : \delta_1^2 \neq \delta_2^2$$

A. Variant of data X

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	-	l UI uata A	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	No	Xi	Xi ²
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1	66	4356
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2	69	4761
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3	78	6084
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4	79	6241
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5	79	6241
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	6	82	6724
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7	83	6889
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8	83	6889
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	83	6889
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10	85	7225
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11	87	7569
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	12	87	7569
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	13	87	7569
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	14	88	7744
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	15	89	7921
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	16	90	8100
19 90 8100 20 90 8100 21 90 8100 22 90 8100 23 91 8281 24 91 8281 25 92 8464 26 93 8649 27 93 8649 28 93 8649	17	90	8100
209081002190810022908100239182812491828125928464269386492793864928938649	18	90	8100
21 90 8100 22 90 8100 23 91 8281 24 91 8281 25 92 8464 26 93 8649 27 93 8649 28 93 8649	19	90	8100
22908100239182812491828125928464269386492793864928938649	20	90	8100
239182812491828125928464269386492793864928938649	21	90	8100
24 91 8281 25 92 8464 26 93 8649 27 93 8649 28 93 8649	22	90	8100
25 92 8464 26 93 8649 27 93 8649 28 93 8649	23	91	8281
26 93 8649 27 93 8649 28 93 8649	24	91	8281
27 93 8649 28 93 8649	25	92	8464
28 93 8649	26	93	8649
	27	93	8649
	28	93	8649
29 93 8649	29	93	8649

20		0026
30	94	8836
31	94	8836
32	95	9025
33	95	9025
34	95	9025
35	96	9216
36	97	9409
37	97	9409
38	97	9409
39	97	9409
40	98	9604
41	98	9604
42	98	9604
43	98	9604
44	99	9801
45	99	9801
46	99	9801
47	99	9801
48	99	9801
49	99	9801
50	100	10000
51	100	10000
52	100	10000
53	101	10201
54	102	10404
55	102	10404
56	102	10404
57	102	10404
58	103	10609
59	103	10609
60	104	10816
61	105	11025
62	106	11236
63	107	11449
64	107	11449
65	108	11664
66	108	11664
67	109	11881
68	109	11881
69	109	11881
70	112	12544
71	112	12544
72	112	12544
73	112	12996
73	114	12996
<i>г</i> т (117	12770

75	114	12996
76	119	14161
	7328	714576

n = 76
$$xi = 7328$$

 $\sum xi^2 = 714576$
So:

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

$$= \frac{\overline{76x714576 - 7328}}{76(76-1)}$$

$$= \frac{\overline{54307776 - 7328}}{76(75)}$$

$$= \frac{\overline{54300448}}{5700}$$

$$= \overline{9.526.39439}$$

$$= 97.6$$

B. Variant of data Y

No	Yi	Yi ²
1	80	6400
2	80	6400
3	80	6400
4	82	6724
5	83	6889
6	83	6889
7	83	6889
8	83	6889
9	83	6889
10	84	7056
11	84	7056
12	84	7056
13	84	7056
14	85	7225
15	85	7225
16	85	7225

17	85	7225
18	85	7225
19	85	7225
20	85	7225
21	85	7225
22	86	7396
23	86	7396
24	86	7396
25	86	7396
26	86	7396
27	86	7396
28	86	7396
29	86	7396
30	86	7396
31	86	7396
32	86	7396
33	86	7396
34	86	7396
35	87	7569
36	87	7569
37	87	7569
38	87	7569
39	87	7569
40	87	7569
41	87	7569
42	87	7569
43	87	7569
44	88	7744
45	88	7744
46	88	7744
47	88	7744
48	88	7744
49	88	7744
50	88	7744
51	88	7744
52	89	7921
53	89	7921
54	89	7921
55	89	7921
56	89	7921
57	89	7921
58	90	8100
59	90	8100
60	90	8100
61	90	8100

62	90	8100
63	90	8100
64	90	8100
65	90	8100
66	90	8100
67	90	8100
68	91	8281
69	91	8281
70	92	8464
71	92	8464
72	93	8649
73	93	8649
74	93	8649
75	93	8649
76	93	8649
	6623	577875

$$xi = 6623$$

$$\sum xi^2 = 577875$$

So:

$$S = \frac{\overline{n \ Xi^2 - xi}}{n(n-1)}$$
$$= \frac{\overline{76x577875 - 6623}}{76(76-1)}$$
$$= \frac{\overline{43918500 - 6623}}{76(75)}$$
$$= \frac{\overline{43905254}}{5700}$$
$$= \overline{7702.67614}$$
$$= 87.76$$

The formula was used to test hypothesis was:

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

$$F = \frac{97.6}{87.7} = 1.112$$

After doing the calculation, researcher found that $F_{count} = 1.112$ with α 5% and dk = 76 from the distribution list F, researcher found that $F_{table} = 1,980$ cause $F_{count} < F_{table}$ (1.112 < 1.980). So, there is no difference in variant between the X class and Y.It means that the variant is homogenous.

APPENDIX IX

No	Initial of Students	Variable X	Variable Y
1	FEA	87	83
2.	OAD	103	93
3.	RAS	107	93
4.	MIH	91	93
5.	RIR	93	83
6.	NSD	119	93
7.	RAS	112	90
8.	PAM	100	90
9.	NFH	99	90
10.	IFN	87	85
11.	FLO	90	87
12.	AAR	83	83
13.	SAL	93	93
14.	HSH	96	83
15.	INL	90	85
16.	RUS	82	84
17.	ARP	104	92
18.	MAN	69	83
19.	BRN	93	90
20.	HFN	112	90
21.	ZSF	112	90
22.	SRY	99	91
23.	TFB	108	92
24.	RPH	98	84
25.	RHP	102	89
26.	OFN	114	90
27.	NAI	114	89
28.	SDY	107	89
29.	AAA	98	89
30.	ASN	83	88
31	RNS	100	88
32	APN	92	84
33	DLM	95	84
34	KHN	88	88
35	ZAT	109	84
36	GHD	95	88
37	AAH	98	84
38	SAN	97	89

The Result of Variable X and Variable Y

39	RWH	95	82
40	NPH	90	84
41	MHP	97	83
42	SAR	93	83
43	SDS	79	86
44	DEN	114	83
45	OWN	99	86
46	FHI	105	88
47	ALH	87	84
48	AKR	102	83
49	AZP	97	85
50	SMR	101	90
51	HIP	97	85
52	DEP	90	85
53	AGD	90	85
54	TRW	99	85
55	DPE	94	90
56	TNI	108	90
57	SMR	99	90
58	CHA	90	88
59	AHJ	109	85
60	LAP	102	80
61	DAS	99	85
62	ESH	83	80
63	FDH	91	84
64	AIE	98	84
65	TEP	89	85
66	IRH	102	83
67	MOH	109	80
68	YGS	79	84
69	MUY	106	85
70	AAL	85	85
71	YRS	66	86
72	ICP	94	87
73	RSO	78	85
74	ICP	100	86
75	ARS	90	88
76	DFS	103	83
	TOTAL	7328	6623

APPENDIX X

TABLE

NO	Initial	X	Y	\mathbf{X}^2	Y^2	XY
1	FEA	87	88	7569	7744	7656
2.	OAD	103	93	10609	8649	9579
3.	RAS	107	93	11449	8649	9951
4.	MIH	91	93	8281	8649	8463
5.	RIR	93	83	8649	6889	7719
6.	NSD	119	93	14161	8649	11067
7.	RAS	112	90	12544	8100	10080
8.	PAM	100	90	10000	8100	9000
9.	NFH	99	90	9801	8100	8910
10.	IFN	87	85	7569	7225	7395
11.	FLO	90	87	8100	7569	7830
12.	AAR	83	83	6889	6889	6889
13.	SAL	93	93	8649	8649	8649
14.	HSH	96	83	9216	6889	7968
15.	INL	90	87	8100	7569	7830
16.	RUS	82	85	6724	7225	6970
17.	ARP	104	92	10816	8464	9568
18.	MAN	69	83	4761	6889	5727
19.	BRN	93	90	8649	8100	8370
20.	HFN	112	90	12544	8100	10080
21.	ZSF	112	90	12544	8100	10080
22.	SRY	99	91	9801	8281	9009
23.	TFB	108	92	11664	8464	9936
24.	RPH	98	84	9604	7056	8232
25.	RHP	102	89	10404	7921	9078
26.	OFN	114	90	12996	8100	10260
27.	NAI	114	89	12996	7921	10146
28.	SDY	107	89	11449	7921	9523
29.	AAA	98	89	9604	7921	8722
30.	ASN	83	88	6889	7744	7304
31	RNS	100	88	10000	7744	8800
32	APN	92	85	8464	7225	7820
33	DLM	95	85	9025	7225	8075
34	KHN	88	88	7744	7744	7744
35	ZAT	109	87	11881	7569	9483
36	GHD	95	88	9025	7744	8360

STATICAL ANALYSIS OF DATA

		= 7.328	= 6.623	= 714.576	= 577875	= 639.451
	TOTAL	X	Y	<i>X</i> ²	Y^2	XY
76	DFS	103	87	10609	7569	8961
75	ARS	90	88	8100	7744	7920
74	ICP	100	86	10000	7396	8600
73	RSO	78	86	6084	7396	6708
72	ICP	94	87	8836	7569	8178
71	YRS	66	86	4356	7396	5676
70	AAL	85	86	7225	7396	7310
<u>69</u>	MUY	106	86	11236	7030	9116
68	YGS	79	84	6241	7056	6636
67	MOH	102	86	11881	7396	9374
66	IRH	102	86	10404	7396	8772
65	TEP	89	87	7921	7569	7743
64	AIE	98	86	9604	7050	8428
63	FDH	91	84	8281	7056	7644
62	ESH	83	80	6889	6400	6640
61	DAS	99	80	9801	6400	7920
60	LAP	109	80	10404	6400	8160
59	AHJ	109	86	11881	7396	9374
58	CHA	90	88	8100	7744	7920
57	SMR	99	90	9801	8100	8910
56	TNI	108	90	11664	8100	9720
55	DPE	94	90	8836	8100	8460
54	TRW	99	84	9801	7056	8316
53	AGD	90	85	8100	7225	7650
52	DEP	90	91	8100	8281	8190
51	HIP	97	87	9409	7303	8245
50	SMR	101	87	10201	7569	8787
49	AKK	97	87	9409	7569	8439
48	ALII	102	80	10404	6724	8364
40	ALH	87	86	7569	7396	7482
46	FHI	105	88	11025	7390	9240
44	OWN	99	86	9801	7396	8514
43	DEN	114	86	12996	7396	9804
42	SAR SDS	93 79	86	6241	7225	6794
42	SAR	93	85	8649	7225	7905
40	MHP	97	83	9409	6889	8051
40	NPH	90	85	8100	7921	7650
39	RWH	97	89	9409	7921	8455
38	SAN	97	89	9409	7921	8633

The result was used to calculated the value of correlation between variable X and Y. This is the calculation of r_{xy} :

$$r_{xy} = \frac{N \sum XY - \sum X (\sum Y)}{(N X^2 - (X)^2)(N Y^2 - (Y)^2)}$$

$$= \frac{76x639451 - 7328 (6623)}{(76 714576 - (7328^2))(76 577875 - (6623^2))}$$

$$= \frac{48598276 - 48533344}{(54307776) - (53699584))(43918500) - (43864129))}$$

$$= \frac{64932}{(608192)(54371)}$$

$$= \frac{64932}{33068007232}$$

$$= \frac{64932}{181846.1086523437}$$

$$= 0.35707115$$

$$= 0.357$$

Appendix XI

dk			Significar	nt level		
	50%	30%	20%	10%	5%	1%
1	0,455	1,074	1,642	2,706	3,841	6,635
2	1,386	2,408	3,219	4,605	5,991	9,210
3	2,366	3,665	4,642	6,251	7,815	11,341
4	3,357	4,878	5,989	7,779	9,488	13,277
5	4,351	6,064	7,289	9,236	11,070	15,086
6	5,348	7,231	8,558	10,645	12,592	16,812
7	6,346	8,383	9,803	12,017	14,067	18,475
8	7,344	9,524	11,030	13,362	15,507	20,090
9	8,343	10,656	12,242	14,684	16,919	21,666
10	9,342	11,781	13,442	15,987	18,307	23,209
11	10,341	12,899	14,631	17,275	19,675	24,725
12	11,340	14,011	15,812	18,549	21,026	26,217
13	12,340	15,119	16,985	19,812	22,362	27,688
14	13,339	16,222	18,151	21,064	23,685	29,141
15	14,339	17,222	19,311	22,307	24,996	30,578
16	15,338	18,418	20,465	23,542	26,296	32,000
17	16,338	19,511	21,615	24,769	27,587	33,409
18	17,338	20,601	22,760	25,989	28,869	34,805
19	18,338	21,689	23,900	27,204	30,144	36,191
20	19,337	22,775	25,038	28,412	31,410	37,566
21	20,337	23,858	26,171	29,615	32,671	38,932
22	21,337	24,939	27,301	30,813	33,924	40,289
23	22,337	26.018	28,429	32,007	35,172	41,638
24	23,337	27,096	29,553	33,196	35,415	42,980
25	24,337	28,172	30,675	34,382	37,652	44,314
26	25,336	29,246	31,795	35,563	38,885	45,642
27	26,336	30,319	32,912	36,741	40,113	46,963
28	27,336	31,391	34,027	37,916	41,337	48,278
29	28,336	32,461	35,139	39,087	42,557	49,588
30	29,336	33,530	36,250	40,256	43,773	50,892

Chi-Square Table

Appendix XII

-3.9 0.00005 0.00004 0.00004 0.00004 0.00004 0.00004 0.00004 0.00003 0.00003 0.00003 0.00003 0.00003 0.00003 0.00005 0.000012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00013 0.00013 0.00013 0.00013 0.00013 0.00014 0.00013 0.00014 0.00014 0.00013 0.00014 0.00014 0.00013 0.00014 0.00013 0.00014 0.00013 0.00014 0.00013 0.00013 0.00013 0.00013 0.00013 0.00013 0.00013 0.00014 0.00013 0.00014						Z-Tabl	Z-Table										
-3.8 0.00007 0.00007 0.00007 0.00006 0.00006 0.00006 0.00006 0.00005 0.00012 0.00012 0.00012 0.00012 0.00012 0.00017 0.0001 -3.4 0.00034 0.00032 0.00031 0.00025 0.00021 0.00026 <th>Z</th> <th>0.00</th> <th>0.01</th> <th>0.02</th> <th>0.03</th> <th>0.04</th> <th>0.05</th> <th>0.06</th> <th>0.07</th> <th>0.08</th> <th>0.09</th>	Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09						
-3.7 0.00011 0.00010 0.00010 0.00010 0.00009 0.00008 0.00008 0.00008 0.00008 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00012 0.00013 0.00013 0.00013 0.000112 0.00012 0.00012 0.00012 0.00012 0.00012 0.00013 0.00014 0.00019 0.00019 0.00018 0.00017 0.0001 -3.4 0.00034 0.00032 0.00031 0.00030 0.00028 0.00027 0.00026 0.00026 0.00026 0.00026 0.00038 0.00038 0.00038 0.00038 0.00038 0.00038 0.00038 0.00038 0.00038 0.00076 0.00074 0.000 0.00066 0.00074 0.000 0.00076 0.00074 0.000 0.00076 0.00074 0.000 0.00076 0.00074 0.000 0.00164 0.00175 0.00169	-3.9	0.00005	0.00005	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00003	0.00003						
-3.6 0.00016 0.00015 0.00014 0.00014 0.00013 0.00013 0.00012 0.00012 0.00012 0.00013 -3.5 0.00023 0.00022 0.00022 0.00021 0.00020 0.00019 0.00019 0.00018 0.00017 0.000 -3.4 0.00034 0.00032 0.00031 0.00030 0.00029 0.00028 0.00027 0.00026 0.00025 0.000 -3.3 0.00048 0.00047 0.00045 0.00043 0.00042 0.00008 0.00039 0.00038 0.00025 0.000 -3.1 0.00099 0.00066 0.00062 0.00084 0.00082 0.00079 0.00076 0.00074 0.000 -3.0 0.00135 0.00131 0.00126 0.00122 0.00118 0.00111 0.00176 0.0004 0.00082 0.00079 0.00076 0.00074 0.000 -2.9 0.00187 0.00184 0.00184 0.00184 0.00111 0.00144 0.001 -2.9 0.	-3.8	0.00007	0.00007	0.00007	0.00006	0.00006	0.00006	0.00006	0.00005	0.00005	0.00005						
-3.5 0.00022 0.00022 0.00021 0.00021 0.00020 0.00019 0.00019 0.00019 0.00018 0.00017 0.000 -3.4 0.00034 0.00032 0.00031 0.00030 0.00029 0.00028 0.00027 0.00026 0.00025 0.000 -3.3 0.00048 0.00047 0.00045 0.00042 0.00040 0.00039 0.00038 0.00032 0.000 -3.1 0.00069 0.00064 0.00062 0.00060 0.00082 0.00079 0.00076 0.00074 0.000 -3.0 0.00131 0.00126 0.00122 0.00118 0.00111 0.00177 0.00104 0.001 -2.9 0.00187 0.00131 0.00126 0.00122 0.00144 0.00111 0.00170 0.00144 0.001 -2.9 0.00187 0.00181 0.00175 0.00164 0.00219 0.00212 0.00205 0.00199 0.001 -2.7 0.00347 0.00236 0.00237 0.00219 0.0	-3.7	0.00011	0.00010	0.00010	0.00010	0.00009	0.00009	0.00008	0.00008	0.00008	0.00008						
-3.4 0.00034 0.00032 0.00031 0.00030 0.00029 0.00028 0.00027 0.00026 0.00025 0.000 -3.3 0.00048 0.00047 0.00045 0.00043 0.00042 0.00040 0.00039 0.00038 0.00036 0.0006 -3.2 0.00069 0.00064 0.00062 0.00060 0.00058 0.00056 0.00054 0.00052 0.000 -3.1 0.00097 0.00094 0.00090 0.00087 0.00082 0.00079 0.00074 0.0007 -3.0 0.00135 0.00131 0.00126 0.00122 0.00118 0.00114 0.00111 0.00107 0.00144 0.001 -2.9 0.00187 0.00181 0.00175 0.00169 0.00129 0.00154 0.00144 0.001 -2.9 0.00256 0.00248 0.00240 0.00233 0.00226 0.00212 0.00205 0.00199 0.001 -2.7 0.00347 0.00336 0.00317 0.00307 0.00298 0	-3.6	0.00016	0.00015	0.00015	0.00014	0.00014	0.00013	0.00013	0.00012	0.00012	0.00011						
-3.3 0.00048 0.00047 0.00043 0.00042 0.00040 0.00039 0.00038 0.00036 0.0003 -3.2 0.00069 0.00066 0.00064 0.00062 0.00060 0.00058 0.00056 0.00054 0.00052 0.000 -3.1 0.00097 0.00094 0.00090 0.00087 0.00084 0.00082 0.00079 0.00076 0.00074 0.000 -3.0 0.00135 0.00131 0.00126 0.00122 0.00118 0.00114 0.00117 0.00104 0.001 -2.9 0.00187 0.00181 0.00175 0.00169 0.00164 0.00159 0.00154 0.00149 0.00144 0.001 -2.8 0.00256 0.00248 0.00233 0.00226 0.00219 0.00212 0.00205 0.00199 0.001 -2.7 0.00347 0.00336 0.00233 0.00226 0.00219 0.00280 0.00272 0.002 -2.6 0.00466 0.00453 0.00570 0.00554 0.	-3.5	0.00023	0.00022	0.00022	0.00021	0.00020	0.00019	0.00019	0.00018	0.00017	0.00017						
-3.2 0.00069 0.00066 0.00064 0.00062 0.00060 0.00058 0.00056 0.00054 0.00052 0.000 -3.1 0.00097 0.00094 0.00090 0.00087 0.00084 0.00082 0.00079 0.00076 0.00074 0.000 -3.0 0.00135 0.00131 0.00126 0.00122 0.00118 0.00114 0.00111 0.00107 0.00104 0.001 -2.9 0.00187 0.00181 0.00175 0.00169 0.00126 0.00219 0.00154 0.00149 0.00144 0.001 -2.8 0.00256 0.00248 0.00226 0.00219 0.00212 0.00205 0.00199 0.001 -2.7 0.00347 0.00336 0.00247 0.00317 0.00307 0.00288 0.00280 0.00272 0.002 -2.6 0.00466 0.00453 0.00570 0.00554 0.00539 0.00508 0.00664 0.00657 0.006 -2.4 0.00820 0.00776 0.00755 0.0	-3.4	0.00034	0.00032	0.00031	0.00030	0.00029	0.00028	0.00027	0.00026	0.00025	0.00024						
-3.1 0.00097 0.00094 0.00090 0.00087 0.00084 0.00082 0.00079 0.00076 0.00074 0.0007 -3.0 0.00135 0.00131 0.00126 0.00122 0.00118 0.00114 0.00111 0.00107 0.00104 0.0011 -2.9 0.00187 0.00181 0.00175 0.00169 0.00164 0.00159 0.00154 0.00149 0.00144 0.001 -2.8 0.00256 0.00248 0.00233 0.00226 0.00219 0.00212 0.00205 0.00199 0.001 -2.8 0.00256 0.00248 0.00240 0.00233 0.00226 0.00219 0.00212 0.00205 0.00199 0.001 -2.8 0.00256 0.00336 0.00326 0.00317 0.00307 0.00298 0.00289 0.00280 0.00272 0.002 -2.6 0.00466 0.00453 0.00440 0.00427 0.00415 0.00539 0.00523 0.00508 0.00494 0.004 -2.4 0	-3.3	0.00048	0.00047	0.00045	0.00043	0.00042	0.00040	0.00039	0.00038	0.00036	0.00035						
-3.0 0.00135 0.00131 0.00126 0.00122 0.00118 0.00114 0.00111 0.00107 0.00104 0.00114 -2.9 0.00187 0.00181 0.00175 0.00169 0.00164 0.00159 0.00154 0.00149 0.00144 0.001 -2.9 0.00187 0.00181 0.00175 0.00169 0.00164 0.00159 0.00154 0.00149 0.00144 0.001 -2.8 0.00256 0.00248 0.00240 0.00233 0.00226 0.00212 0.00205 0.00199 0.001 -2.7 0.00347 0.00336 0.00240 0.00233 0.00226 0.00219 0.00212 0.00205 0.00199 0.001 -2.7 0.00347 0.00336 0.00427 0.00415 0.00289 0.00280 0.00272 0.002 -2.6 0.00466 0.00453 0.00440 0.00427 0.00415 0.00539 0.00523 0.00588 0.00494 0.004 -2.4 0.00621 0.00604 0	-3.2	0.00069	0.00066	0.00064	0.00062	0.00060	0.00058	0.00056	0.00054	0.00052	0.00050						
-2.9 0.00187 0.00181 0.00175 0.00169 0.00164 0.00159 0.00154 0.00149 0.00144 0.001 -2.8 0.00256 0.00248 0.00233 0.00226 0.00219 0.00212 0.00205 0.00199 0.001 -2.8 0.00256 0.00248 0.00233 0.00226 0.00219 0.00212 0.00205 0.00199 0.002 -2.7 0.00347 0.00336 0.00326 0.00317 0.00307 0.00298 0.00289 0.00280 0.00272 0.002 -2.6 0.00466 0.00453 0.00440 0.00427 0.00415 0.00402 0.00391 0.00379 0.03680 0.003 -2.5 0.00621 0.00604 0.00587 0.00570 0.00554 0.00539 0.00523 0.00676 0.00657 0.006 -2.4 0.00820 0.00778 0.00775 0.00734 0.00714 0.00695 0.00676 0.00657 0.006 -2.3 0.01072 0.01044 0.0	-3.1	0.00097	0.00094	0.00090	0.00087	0.00084	0.00082	0.00079	0.00076	0.00074	0.00071						
-2.8 0.00256 0.00248 0.00240 0.00233 0.00226 0.00219 0.00212 0.00205 0.00199 0.001 -2.7 0.00347 0.00336 0.00326 0.00317 0.00307 0.00298 0.00289 0.00280 0.00272 0.002 -2.6 0.00466 0.00453 0.00440 0.00427 0.00415 0.00402 0.00391 0.00379 0.03680 0.003 -2.6 0.00621 0.00604 0.00587 0.00570 0.00554 0.00539 0.00523 0.00508 0.00494 0.004 -2.4 0.00820 0.00776 0.00755 0.00734 0.00714 0.00695 0.00676 0.00657 0.006 -2.3 0.01072 0.01044 0.01017 0.00990 0.00964 0.00939 0.00914 0.00889 0.00866 0.008 -2.2 0.01390 0.01355 0.01321 0.01287 0.01255 0.01222 0.01191 0.0160 0.01130 0.0114 -2.4 0.0	-3.0	0.00135	0.00131	0.00126	0.00122	0.00118	0.00114	0.00111	0.00107	0.00104	0.00100						
-2.7 0.00347 0.00336 0.00326 0.00317 0.00307 0.00298 0.00289 0.00280 0.00272 0.002 -2.6 0.00466 0.00453 0.00440 0.00427 0.00415 0.00402 0.00391 0.00379 0.03680 0.003 -2.6 0.00621 0.00604 0.00587 0.00570 0.00554 0.00539 0.00523 0.00508 0.00494 0.004 -2.4 0.00820 0.00798 0.00776 0.00755 0.00734 0.00714 0.00695 0.00676 0.00657 0.006 -2.3 0.01072 0.01044 0.01017 0.00990 0.00964 0.00939 0.00914 0.00889 0.00866 0.008 -2.2 0.01390 0.01355 0.01287 0.01255 0.01222 0.01191 0.01160 0.01130 0.0114 -2.1 0.01786 0.01743 0.01700 0.01659 0.01618 0.01539 0.01500 0.01463 0.014 -2.0 0.02275 0.	-2.9	0.00187	0.00181	0.00175	0.00169	0.00164	0.00159	0.00154	0.00149	0.00144	0.00139						
-2.6 0.00466 0.00453 0.00440 0.00427 0.00415 0.00402 0.00391 0.00379 0.03680 0.00379 -2.6 0.00621 0.00604 0.00587 0.00570 0.00554 0.00539 0.00523 0.00508 0.00494 0.004 -2.4 0.00820 0.00798 0.00776 0.00755 0.00734 0.00714 0.00695 0.00676 0.00657 0.006 -2.3 0.01072 0.01044 0.01017 0.00990 0.00964 0.00939 0.00914 0.00889 0.00866 0.008 -2.2 0.01390 0.01355 0.01287 0.01225 0.01222 0.01191 0.01160 0.01130 0.0114 -2.1 0.01786 0.01743 0.01700 0.01659 0.01618 0.01539 0.01500 0.01463 0.014 -2.0 0.02275 0.02222 0.02169 0.02118 0.02068 0.0218 0.01970 0.01923 0.01876 0.018 -1.9 0.02872 0	-2.8	0.00256	0.00248	0.00240	0.00233	0.00226	0.00219	0.00212	0.00205	0.00199	0.00193						
-2.5 0.00621 0.00604 0.00587 0.00570 0.00554 0.00539 0.00523 0.00508 0.00494 0.004 -2.4 0.00820 0.00798 0.00776 0.00755 0.00734 0.00714 0.00695 0.00676 0.00657 0.006 -2.3 0.01072 0.01044 0.01017 0.00990 0.00964 0.00939 0.00914 0.00889 0.00866 0.008 -2.2 0.01390 0.01355 0.01321 0.01287 0.01255 0.01222 0.01191 0.01160 0.01130 0.0114 -2.1 0.01786 0.01743 0.01700 0.01659 0.01618 0.01578 0.01539 0.01463 0.014 -2.0 0.02275 0.02222 0.02169 0.02118 0.02068 0.02018 0.01970 0.01876 0.01876 -1.9 0.02872 0.02807 0.02743 0.02680 0.02619 0.02559 0.02500 0.02442 0.02385 0.02385 -1.8 0.03593 <t< th=""><th>-2.7</th><th>0.00347</th><th>0.00336</th><th>0.00326</th><th>0.00317</th><th>0.00307</th><th>0.00298</th><th>0.00289</th><th>0.00280</th><th>0.00272</th><th>0.00264</th></t<>	-2.7	0.00347	0.00336	0.00326	0.00317	0.00307	0.00298	0.00289	0.00280	0.00272	0.00264						
-2.4 0.00820 0.00798 0.00776 0.00755 0.00734 0.00714 0.00695 0.00676 0.00657 0.006 -2.3 0.01072 0.01044 0.01017 0.00990 0.00964 0.00939 0.00914 0.00889 0.00866 0.008 -2.2 0.01390 0.01355 0.01321 0.01287 0.01255 0.01222 0.01191 0.01160 0.01130 0.0114 -2.1 0.01786 0.01743 0.01700 0.01659 0.01618 0.01578 0.01539 0.01500 0.01463 0.014 -2.0 0.02275 0.02222 0.02169 0.02118 0.02068 0.02018 0.01970 0.01923 0.01876 0.018 -1.9 0.02872 0.02807 0.02743 0.02680 0.02619 0.02559 0.02500 0.02442 0.02385 0.023 -1.8 0.03593 0.03515 0.03438 0.03362 0.03288 0.03216 0.03144 0.03074 0.03005 0.029	-2.6	0.00466	0.00453	0.00440	0.00427	0.00415	0.00402	0.00391	0.00379	0.03680	0.00357						
-2.3 0.01072 0.01044 0.01017 0.00990 0.00964 0.00939 0.00914 0.00889 0.00866 0.008 -2.2 0.01390 0.01355 0.01321 0.01287 0.01255 0.01222 0.01191 0.01160 0.01130 0.01110 -2.1 0.01786 0.01743 0.01700 0.01659 0.01618 0.01578 0.01539 0.01500 0.01463 0.014 -2.0 0.02275 0.02222 0.02169 0.02118 0.02068 0.02018 0.01970 0.01923 0.01876 0.018 -1.9 0.02872 0.02807 0.02743 0.02680 0.02619 0.02559 0.02500 0.02442 0.02385 0.023 -1.8 0.03593 0.03515 0.03438 0.03362 0.03288 0.03216 0.03144 0.03074 0.03005 0.029	-2.5	0.00621	0.00604	0.00587	0.00570	0.00554	0.00539	0.00523	0.00508	0.00494	0.00480						
-2.2 0.01390 0.01355 0.01321 0.01287 0.01255 0.01222 0.01191 0.01160 0.01130 0.01140 -2.1 0.01786 0.01743 0.01700 0.01659 0.01618 0.01578 0.01539 0.01500 0.01463 0.014 -2.0 0.02275 0.02222 0.02169 0.02118 0.02068 0.02018 0.01970 0.01923 0.01876 0.018 -1.9 0.02872 0.02807 0.02743 0.02680 0.02619 0.02559 0.02500 0.02442 0.02385 0.023 -1.8 0.03593 0.03515 0.03438 0.03362 0.03288 0.03216 0.03144 0.03074 0.03005 0.029	-2.4	0.00820	0.00798	0.00776	0.00755	0.00734	0.00714	0.00695	0.00676	0.00657	0.00639						
-2.1 0.01786 0.01743 0.01700 0.01659 0.01618 0.01578 0.01539 0.01500 0.01463 0.014 -2.0 0.02275 0.02222 0.02169 0.02118 0.02068 0.02018 0.01970 0.01923 0.01876 0.018 -1.9 0.02872 0.02807 0.02743 0.02680 0.02619 0.02559 0.02500 0.02442 0.02385 0.023 -1.8 0.03593 0.03515 0.03438 0.03362 0.03288 0.03216 0.03144 0.03074 0.03005 0.029	-2.3	0.01072	0.01044	0.01017	0.00990	0.00964	0.00939	0.00914	0.00889	0.00866	0.00842						
-2.0 0.02275 0.02222 0.02169 0.02118 0.02068 0.02018 0.01970 0.01923 0.01876 0.018 -1.9 0.02872 0.02807 0.02743 0.02680 0.02619 0.02559 0.02500 0.02442 0.02385 0.023 -1.8 0.03593 0.03515 0.03438 0.03362 0.03288 0.03216 0.03144 0.03074 0.03005 0.029	-2.2	0.01390	0.01355	0.01321	0.01287	0.01255	0.01222	0.01191	0.01160	0.01130	0.01101						
-1.9 0.02872 0.02807 0.02743 0.02680 0.02619 0.02559 0.02500 0.02442 0.02385 0.023 -1.8 0.03593 0.03515 0.03438 0.03362 0.03288 0.03216 0.03144 0.03074 0.03005 0.029	-2.1	0.01786	0.01743	0.01700	0.01659	0.01618	0.01578	0.01539	0.01500	0.01463	0.01426						
-1.8 0.03593 0.03515 0.03438 0.03362 0.03288 0.03216 0.03144 0.03074 0.03005 0.029	-2.0	0.02275	0.02222	0.02169	0.02118	0.02068	0.02018	0.01970	0.01923	0.01876	0.01831						
	-1.9	0.02872	0.02807	0.02743	0.02680	0.02619	0.02559	0.02500	0.02442	0.02385	0.02330						
-1.7 0.04457 0.04363 0.04272 0.04182 0.04093 0.04006 0.03920 0.03836 0.03754 0.036	-1.8	0.03593	0.03515	0.03438	0.03362	0.03288	0.03216	0.03144	0.03074	0.03005	0.02938						
	-1.7	0.04457	0.04363	0.04272	0.04182	0.04093	0.04006	0.03920	0.03836	0.03754	0.03673						
-1.6 0.05480 0.05370 0.05262 0.05155 0.05050 0.04947 0.04846 0.04746 0.04648 0.0454	-1.6	0.05480	0.05370	0.05262	0.05155	0.05050	0.04947	0.04846	0.04746	0.04648	0.04551						

Z-Table

-1.5	0.06681	0.06552	0.06426	0.06301	0.06178	0.06057	0.05938	0.05821	0.05705	0.05592
-1.4	0.08076	0.07927	0.07780	0.07636	0.07493	0.07353	0.07215	0.07078	0.06944	0.06811
-1.3	0.09680	0.09510	0.09342	0.09176	0.09012	0.08851	0.08691	0.08534	0.08379	0.08226
-1.2	0.11507	0.11314	0.11123	0.10935	0.10749	0.10565	0.10383	0.10204	0.10027	0.09853
-1.1	0.13567	0.13350	0.13136	0.12924	0.12714	0.12507	0.12302	0.12100	0.11900	0.11702
-1.0	0.15866	0.15625	0.15386	0.15151	0.14917	0.14686	0.14457	0.14231	0.14007	0.13786
-0.9	0.18406	0.18141	0.17879	0.17619	0.17361	0.17106	0.16853	0.16602	0.16354	0.16109
-0.8	0.21186	0.20897	0.20611	0.20327	0.20045	0.19766	0.19489	0.19215	0.18943	0.18673
-0.7	0.24196	0.23885	0.23576	0.23270	0.22965	0.22663	0.22363	0.22065	0.21770	0.21476
-0.6	0.27425	0.27093	0.26763	0.26435	0.26109	0.25785	0.25463	0.25143	0.24825	0.24510
-0.5	0.30854	0.30503	0.30153	0.29806	0.29460	0.29116	0.28774	0.28434	0.28096	0.27760
-0.4	0.34458	0.34090	0.33724	0.33360	0.32997	0.32636	0.32276	0.31918	0.31561	0.31207
-0.3	0.38209	0.37828	0.37448	0.37070	0.36693	0.36317	0.35942	0.35569	0.35197	0.34827
-0.2	0.42074	0.41683	0.41294	0.40905	0.40517	0.40129	0.39743	0.39358	0.38974	0.38591
-0.1	0.46017	0.45620	0.45224	0.44828	0.44433	0.44038	0.43644	0.43251	0.42858	0.42465
-0.0	0.50000	0.49601	0.49202	0.48803	0.48405	0.48006	0.47608	0.47210	0.46812	0.46414

Z-Table

Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753

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

3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3,1	0,4990	0,4991	0,4991	0.4991	0,4992	0,4992	0,4992	0,4992	0,4993	0,4993
3,2	0,4993	0,4993	0,4994	0,4994	0,4994	0,4994	0,4994	0,4995	0,4995	0,4995
3,3	0,4995	0,4995	0,4995	0,4996	0,4996	0,4996	0,4996	0,4996	0,4997	0,4997
3,4	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4997	0,4998
3,5	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998	0,4998
3,6	0,4998	0,4998	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999
3,7	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999
3,8	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999	0,4999
3,9	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000	0,5000

Appendix XIII

Percentage Points of the t Distribution

		r	Fwo Tail Test			
	0,50	0,20	0,10	0,05	0,02	0,01
			One Tail Test			
Dk	0,25	0,10	0,005	0,025	0,01	0,05
1	1,000	3,078	6,314	12,706	31,821	63,657
2	0,816	1,886	2,920	4,303	6,965	9,925
3	0,765	1,638	2,353	3,182	4,541	5,841
4	0,741	1,533	2,132	2,776	3,747	4,604
5	0,721	1,486	2,015	2,571	3,365	4,032
6	0,718	1,440	1,943	2,447	3,143	3,707

7	0,711	1,415	1,895	2,365	2,998	3,499
8	0,706	1,397	1,860	2,306	2,896	3,355
9	0,703	1,383	1,833	2,262	2,821	3,250
10	0,700	1,372	1,812	2,228	2,764	3,165
11	0,697	1,363	1,796	2,201	2,718	3,106
12	0,695	1,356	1,782	2,178	2,681	3.055
13	0,692	1,350	1,771	2,160	2,650	3.012
14	0,691	1,345	1,761	2,145	2,624	2,977
15	0,690	1,341	1,753	2,132	2,623	2,947
16	0,689	1,337	1,746	2,120	2,583	2,921
17	0,688	1,333	1,743	2,110	2,567	2,898
18	0,688	1,330	1,740	2,101	2,552	2,878
19	0,687	1,328	1,729	2,093	2,539	2,861
20	0,687	1,325	1,725	2,086	2,528	2,845
21	0,686	1,323	1,721	2,080	2,518	2,831
22	0,686	1,321	1,717	2,074	2,508	2,819
23	0,685	1,319	1,714	2,069	2,500	2,807
24	0,685	1,318	1,711	2,064	2,492	2,797
25	0,684	1,316	1,708	2,060	2,485	2,787
26	0,684	1,315	1,706	2,056	2,479	2,779
27	0,684	1,314	1,703	2,052	2,473	2,771
28	0,683	1,313	1,701	2,048	2,467	2,763
29	0,683	1,311	1,699	2,045	2,462	2,756
30	0,683	1,310	1,697	2,042	2,457	2,750
40	0,681	1,303	1,684	2,021	2,423	2,704
60	0,679	1,296	1,671	2,000	2,390	2,660
120	0,677	1,289	1,658	1,980	2,358	2,617
x	0,674	1,282	1,645	1,960	2,326	2,576

APPENDIX XIV

RESEARCH DOCUMENTATIONS



















CURRICULUM VITAE

A. Identity

Name	: ADE YANTI
NIM	: 13 340 0002
Place and Birthday	: Padangsidimpuan, January 15 th 1995
Sex	: Female
Religion	: Moeslem
Address	: Jl. Mgr, Maradat, Ujung Padang, Padangsidimpuan

B. Parents

1.	Father's name	: Sarju
2.	Mother's name	: Nur Aisyah Dalimunthe

C. Educational Background

1. Elementary School	: SDN 200218 Padangsidimpuan	(2007)
2. Junior High School	: MTsN 1 Padangsidimpuan	(2010)
3. Senior High School	: SMAN 1 Padangsidimpuan	(2013)
4. College	: IAIN Padangsidimpuan	(2017)