

**CORRELATION BETWEEN PSYCHOLOGICAL FACTOR AND SPEAKING
SKILL (A Descriptive Study at the Third Semester Students' of English
Department at Muhammadiyah University of Makassar)**



A THESIS

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ABSTRACT

Saniasa, 2018. *Students' Psychological factor and Their speaking skill (A Study at Third Semester Students' of English Department at Muhammadiyah University of Makassar).* Guided by Hj. Andi Tenri Ampa and Ratu Yulianti Natsir.

The research aimed to find out the correlation between students' psychological factor and their speaking skill. It included motivation and attitude to learn speaking skill.

The researcher used descriptive quantitative research. The population of this research were the Third Semester Students' of English Department at Muhammadiyah University of Makassar. It use random sampling technique were researcher took 60 students from 10 classes. The researcher used instruments were questionnaire for measuring students motivation and attitude while test oral for measuring students speaking skill.

The result of findings about correlation between students' motivation and their speaking skill compared prices count with r-r-table. With the (0.05) or 5% significance level of 0.2542 was obtained r_{hitung} at 0.3434. When compared both $r_{hitung} = 0.3434 > r_{table} = 0.2542$ while the correlation between students' attitude and their speaking skill compared prices count with r-r-table. With the (0.05) or 5% significance level of 0.2542 was obtained r_{hitung} at 0.3714. When compared both $r_{hitung} = 0.3714 > r_{table} = 0.2542$, so that H_0 accepted and H_1 rejected or the correlation between students' psychological and their speaking skill. This meant that correlation between them was not significant correlation.

Key words: Speaking Skill, Motivation, Attitude

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By reciting Bismillahirrahmanirrahim, the writer praises her highest gratitude to Allah SWT who has given her blessing and mercy in completing this thesis. Salam and Shalawat are due to the highly chosen Prophet Muhammad SAW, his families and followers until the end of the world.

The writer realizes that this thesis would have never been completed without the assistance of a number of people. Therefore, she would like to express her deepest appreciation and thanks to those people who have helped and involved in completing this thesis, particularly to:

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Makassar, September 2018

The writer

MOTTO & DEDICATION

“Ku olah kata, kubaca makna, kuikat dalam alinea, kubingkai dalam bab sejumlah lima, jadilah mahakarya, gelar sarjana kuterima, orangtua, calon suami dan calon mertua pun bahagia”

**“Sesungguhnya sesudah kesulitan ada kemudahan,
Maka apabila engkau telah selesai (dari suatu urusan),
tetaplah bekerja untuk urusan lain, Dan hanya kepada
Tuhanmulah engkau berharap...” (QS. 94:6,7,8)**

**“When someone say your dream is too big, you can say to him
that his think is too small”**

**“Do something different, something crazy, take the
risks, and you will come different as you wish”**

“Your duty as a child is lifting your family pride”

**This ordinary creation is dedicated for my extraordinary parents and sisters
who always pray the best for me, Sacrifice and give me their
sincere endless love and care which lead me to success,
And also all people who love and pray for me . . .**

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CHAPTER I

INTRODUCTION

A. Background

Psychology is scientific studies of individual activities relation to the environment and academic field that studies the human mind and behavior. Main Psychological Factors which hinder the EFL Students in English Speaking. It is obvious that psychological factors become important and influential elements which give a great impact on the students acquire second/foreign language particularly in speaking area. Therefore, it is important point for psychological factors toward attitude and motivation.

Speaking is one of core components in English language proficiency which is highly important to acquire by students. To acquire this ability, students need a special ability rather than only mastering a language in terms of grammatical rules.

Speaking is not merely opening mouth and say words and sentences, but it includes a cultural background of a target language which is speak to get meaningful interaction. Therefore, the students need to fight so hard to have a fluency in speaking. However, many teachers have try to apply various activities to have their students practice their speaking such as group presentation, peer friends conversation, while giving few chances for students to speak English. Speaking accuracy indicates “the extent to which the language produced conforms to target language norms” (Yuan & Ellis in

Wang (2014) which involves the correct use of pronunciation, vocabulary and grammar. Speaking fluency refers to the ability to produce the spoken language “without undue pausing or hesitation” Skehan in Wang (2014). Too many hesitations and pauses in speaking may obstruct the speaking fluency and also depress the speaker. The students will be Difficult of EFL students on speaking English probably cause psychological factors such as attitude and motivation. However, if the students with good psychological factor ability still have a difficulty on speaking.

Motivation is regarded as the desire of the students in learning a language. It is not enough when the students just have the desire to learn about language, the students also need to provide a great effort to reach their goal Ortega cited Nasaruddin (2015). The students will be motivated in learning second language because student needs to learn and communicate in a social large scale to support their professional ambition in the future. Therefore, they need to have a good attitude toward people who speak the target language because they need to have a contact with them.

Motivation is very important when the students want to study English and speech in front of the class they need motivation because sometimes the students doesn't give attention if the teacher describe about material especially if the student learn about English, so that the teacher need to give motivation for the students to learn English very important because English language is international language all of people need to learn English, so that

if the students are able to speaking English it will be help them to find the job in the future.

An attitude is a hypothetical construct that represents an individual's degree of like or dislike or something. Attitude is generally positive or negative view of a person, place, thing or event.

Wenden cited Tamimi and Shuib (2009) propose a broader definition of the concept "attitudes". He states that the term attitudes includes three components namely, cognitive, affective and behavioral. A cognitive component is made up of the beliefs and ideas or opinions about the object of the attitude. The affective one refers to the feeling and emotions that one has towards an object, 'likes' or 'dislikes', 'with' or 'against'. Finally, the behavioral component refers to one's consisting actions or behavioral intentions towards the object.

Attitude is very important when the students want to speak in front of the class because sometimes the students have idea in their mind but difficult to mention it. Attitude of the students will affect their speak, there are several factors that make the student difficult to speak in front of the class such as the students doesn't have confidence to speak, the students tend to feel anxious when performing their speaking because they are afraid of making mistakes, so that the students need a good attitude to build their confidence.

Therefore, the researcher formulates the title of this research "correlation between psychological factor and speaking ability at the third

semester students of English Department at Muhammadiyah University of Makassar”.

B. Research Problem

The problems of this research are formulated in the following question:

1. Is there correlation between motivation and speaking ability namely pronunciation, vocabulary and grammar at the Third Semester Students of English Department at Muhammadiyah University of Makassar?
2. Is there correlation between attitude and speaking ability namely pronunciation, vocabulary and grammar at the Third Semester Students of English Department at Muhammadiyah University of Makassar?

C. Research Objectives

Based on the problem statement above, the researcher intend to investigate as follows:

1. To know the correlation between students’ motivation and speaking ability at the Third Semester Students of English Department at Muhammadiyah University of Makassar?
2. To know the correlation between students’ attitude and speaking ability at the Third Semester Students of English Department at Muhammadiyah University of Makassar?

D. Significance of The Research

The researcher hope that this research would:

1. For the students to knowing the correlation between psychological factor and their speaking ability, so that the student can be motivated to speak in front of the class.
2. For Lecturer of speaking can be more creative to teach their students and make them motivate to learn English, without feel worry or anxious to perform their ability orally.
3. For the next researcher as a reference to know psychological factors affecting speaking English.

4. Scope of Research

The scope of this research are limited to analyze the psychological factors namely attitude toward behavioral, cognitive, emotional and motivation toward intrinsic motivation and extrinsic motivation while speaking ability are limited namely pronunciation, vocabulary and grammar of the third semester students of English Department at Muhammadiyah University of Makassar.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter divided into three main sections, namely previous related research findings, psychological factors, speaking ability and the conceptual framework.

A. Previous Related Research Findings

Yulis (2016) investigated the correlation between students' motivation and speaking ability at 8th grade in MTSN Rambah. To analyze the data that has been collected, the researcher used r product moment and also SPSS application. After analyzing and calculating the data, it was found that r calculated was 0,506 with level significance 0.05, and the degree of freedom ($df = n - 2$) was 18. It means that r calculated was higher than r-table ($0.515 > 0.404$). So, there is correlation between two variables above.

Singh (2014) investigated the respondents generally had a positive attitude towards learning English and were motivated to learn it regardless of their family backgrounds and proficiency levels.

Rosalina (2014) investigated the correlation between students' motivation and their English learning achievement at the second grade of SMAN 3 TANGSEL academic year of 2013/2014. The result from the calculation the value is 0.143. Then the researcher compared it with at the significant degree 5% (0.355), the correlation between students' motivation and their English learning

achievement is negative ($r = 0.143 < 0.355$). So, the alternative hypothesis which states that “ means that there is correlation between X variable and Y variable” is rejected.

Istianti (2013) investigated the correlation students' motivation in learning speaking and their speaking ability. The result of the research show that there is correlation between students' motivation in learning speaking and their speaking ability. it is provide by the r_{xy} (0.555) is bigger than r table in the degree significance 5% (0.349) and 1% (0.449). It is considered the null hypothesis (H_0). In this research is rejected students' motivation in learning speaking and their speaking ability is accepted. In Conclusion there is positive correlation between students' motivation in learning speaking and their speaking ability.

Based on the previous findings above the researcher explains the research findings are similarities from Yulis's finding, Rosliana' and Istianti's findings. Yulis's finding concern correlation between students' motivation and speaking ability at 8th grade in MTSN Rambah. Rosliana correlation between students' motivation and their English learning achievement at the second grade of SMAN 3 TANGSEL and Istianti's finding research the correlation students' motivation in learning speaking and their speaking ability and my research The Correlation between psychological factor and speaking ability.

B. Some Pertinent Ideas

1. Psychological Factors

According Ernest Hilgert cited Sobur (2016) psychology is defined the science that study of behavior of human and other animal. According Clifford T. Morgan cited sobur (2016), psychology is the science of human and animal behavior. According George A. Miller cited sobur (2016), psychology is the science that attempts to describe, predict, and control mental and behavioral events. According Robert S. Wood woth and marquis D. G cited sobur (2016), psychology is scientific studies of individual activities relation to the environment.

Sobur (2016) said that there are four psychological factors of students such as attitude, motivation, interest and intelligence. In this study the writer will limited two psychological factors such as attitude and motivation.

a. Motivation

Motivation plays a significant role in the process of learning a language. Language teachers cannot effectively teach a language if they do not understand the relationship between motivation and its effect on language acquisition. The core of motivation is what might be called passion, which relates to a person's intrinsic goals and desires. Successful learners know their preferences, their strengths and weaknesses, and effectively utilize strengths and compensate for weaknesses. Successful language learning is linked to the learner's passion.

Motivation comes from the word that can be interpret as a motive force contain within the individual, which causes the individual to actor do

(Uno cited Nasaruddin, 2015). Motivation cannot be observe directly, but behavior can be interpret in the form of stimulation., organerating the emergence of a certain behavior.

In learning second/foreign languages, motivation can be divided into two factor, they are communicative needs of the students and their attitudes towards the language community (Lightbrown&Spadacited Nasaruddin, 2001). In this case, the students will be motivated in learning a second/foreign language just because they need to learn and communicate it in a social large scale to support their professional ambition in the future. Therefore, they need to have a good attitude toward people who speak the target language because they need to have a contact with them.

Suryabrata 2011: 70) suggests the motive was personal circumstances those that encourage individuals to do specific activity in order to achieve a goal. Human motive is the impulse, the desire, wish and other driving force, which comes from within himself. The real motivation is the more general term to design at the whole process of the movement, including situations that encourage, encouragement a rise within the individual, the resulting behavior, and the purpose or the end of the movement or action. According to Mc. Donald cited Sardiman (2010:73) the motivation is the energy that change in a person who is characterized by the emergence of "feeling" the response to their destination from that sense, there are three important things: 1) the motivation is start the energy in each

individual human being, 2) the motivation is mark with the emergence of a sense of "feeling" or affection someone, and 3) the motivation will stimulate because of the goal. The motivation will lead to a change in existing energy in human beings related to feelings and also emotions can then determine human behavior, encouragement it arises because the objectives need or desire.

Based on the explanation above, can be conclude that the motivation is a force or impulse within the individual making the individual move, act to meet the needs and achieve its objectives.

1) Kinds of Motivation

There are several kinds of learning motivation in human beings, which classified according to expert opinion. Djamarah (2006: 115) in his book of psychology of learning, motivation divides into two kinds, namely intrinsic motivation and extrinsic motivation.

a) Intrinsic Motivation

The meaning of intrinsic motivation is motives become active or the functioning does not need to be stimulated from the outside, because inside very individual has no urged to do something. Intrinsic motivation inherent to the situation when the goal of learning and meet the needs and goals of the students to master values contained in the lesson. Students are motivated to control the values contained in the material, not because others like you want to get praise, high scores, or gifts, and so on.

The students who have intrinsic motivation will have the goal of becoming educated, knowledgeable, expert in a particular field of study. The only way to get to the goals want achieved is studying, without learning unlikely to get knowledge, no may be an expert. The impetus that drives it comes at a needs, needs which must contain to be people who educated and knowledgeable. So the motivation that emerges from consciousness themselves with essentially the goal, not just symbols and ceremonial.

Intrinsic motivation is concerned with factors affecting inside the class. It decides into four categories. According to Djamarah in Fitriani (2012: 14) :

1) Physical condition

This factor is one of the crucial factor that can influence the students motivation is a good mood or bad mood depend on this factor, the students without a good physical condition cannot interpret the lesson as a good as their friends with a good physical conditions.

2) Method

The method by which students are though must have much effect or their motivation. If they find it deadly boring they will probably become the motivated. They have confidence in the learning, they will found it motivating. It is also true that different students are more or less sympatric to any particular method depending upon their expectations.

3) Teacher

One of the most important elements, the teacher is the most effecting in the students confidence, interest classes, and quality of the students. The students will concern in additional important qualities of the teacher, such as:

- a) The teachers show sympathy for his pupils.
- b) The teacher is fair to all his students (whether good or bad at English).
- c) The teacher impresses confidence.

4) Success

Success or luck of it plays a vital part in the motivation drive of students. Both complete success maybe demodulation. It wills the teachers' job to set goals and task at which most of or her students can be successful or rather task which he or she could realistically aspect of students to be able achieve. The students' purpose in learning is going to be success; this can be motivating the students' means success.

b) Extrinsic Motivation

Extrinsic motivation is the opposite of intrinsic motivation. Extrinsic motivation is active and functioning motives because of the stimulant from outside. Extrinsic motivation is said when the students put the destination learning outside factors learning situations (resides in some outside factors of the learning situation). Students learn because they want to richthe purposes

which located outside of the study. For example, for achieving high degrees, honors, etc.

Extrinsic motivation does not mean it is not good and unimportant. In the teaching and learning activities remain important. Because most likely it is a dynamic situation of students, capricious and may also be other components in the learning process is no less appeal to students, so that the necessary extrinsic motivation.

Several kinds of motivation by Sardiman (2011: 86)

1) Innate motifs

What is meant by innate motive is the motive that brought since born, so there is no motivation to learn. For instance, for example: a boost to eat, the urge to drink, drive to work, to rest, sexual drive. These motifs are often called motifs required as biologically. Relevant to this, the Arden N. Frandsen gave Physiological Drives term kind motive.

2) The motifs are studied

That is the motives that arise due studied. As an example: encouragement to learn a branch of science, the urge to teach something in the community. These motifs are often referred to as motive socially implied motif. For human live in the neighborhood social with other human beings, so the motivation was formed. Frandsen defines with *affiliative needs*. Because even with the ability related, cooperation in society is reached self-satisfaction. Then, humans need to develop the properties of friendly,

cooperative, fostering good relationships with others, especially parents and teachers. In activity learning, it can help in achieving the feat.

c) Characteristic of Students Motivation

Naiman cited Nurakhirah (2014: 13) makes conclusions that there are certain typical characteristic in students' motivation, some of these are:

- a) Positive task orientation, the learner is willing to tackle task and challenges and has confidence on his or her success
- b) go-involvement, the learner finds it important to succeed in learning in order to maintain and promote his or her own (positive) self-image
- c) Need for achievement, the learner has a need to achieve to overcome difficulties and succeed in what he or she sets out to do;
- d) High aspiration, the learner is ambitious, goes for demanding challenges, high proficiency, top grades;
- e) Goal orientation, the learner is very aware of the goals of learning activities and directs his or her effort to word achieving them;
- f) Perseverance, the learner consistently invests a high level of effort in learning and is not discouraged by set back or apparent lack of progress;
- g) Tolerance of ambiguity, the learner disturbs or frustrate by situations involving a temporary lack of understanding of confusion.

3) The causes trouble learning of spiritual

Motivation can determine whether or not in achieving the goal so the greater the motivation will be the greater success of learning. A great motivation will work hard, looks teeth do not want to give up, diligently read a book to improve his performance and solve the problem. Conversely those whose motivations are weak, seem indifferent, easily discouraged, his attention is not directed to the lessons, likes to play in the classroom, often leaving lessons as a result of many learning difficulties.

b. Attitude

1) Definition of Attitude

There are many reasons why students' attitude toward language learning is important. Weinburgh cited Karaha (2017) believe that attitudes toward learning influence behaviors such as selecting and reading books, speaking in a foreign language.

Wenden cited Karahan (2017) sees attitudes as including three components: First, attitudes tend to have a cognitive component. This could involve beliefs or perceptions about the objects or situations related to the attitude. Second, attitudes have an evaluative or emotion component. This means that the objects or situations related to the attitude may generate like or dislike. Third, attitudes have a behavioral component, i.e. certain attitudes tend to prompt learners to adopt particular learning behaviors.

Wenden cited Tamimi and Shuib (2009) propose a broader definition of the concept “attitudes”. He states that the term attitudes includes three components namely, cognitive, affective and behavioral. A cognitive component is made up of the beliefs and ideas or opinions about the object of the attitude. The affective one refers to the feeling and emotions that one has towards an object, 'likes' or 'dislikes', 'with' or 'against'. Finally, the behavioral component refers to one's consisting actions or behavioral intentions towards the object.

Gardner cited Karahan (2007) Attitude is an evaluative reaction to some referent or attitude object, inferred on the basis the individual's beliefs or opinions about the referent. Attitudes towards the learning situation refer to the individual's reaction to anything associated with the immediate context in which the language is taught. There are many factors that need to be considered with respect to the learning attitudes, such as the evaluation of the teaching environment, the English class and classmates. Learning attitude is concerned with a learner's learning experiences, beliefs, values as well as a learner's educational background. The attitude of learning is one of the important individual factors that play a vital role in the learning behaviors. It has great effect on the learning process and learning outcomes. It determines a learner's success or failure to a great extent. Therefore, more attention should be paid to the problem of the students' attitude toward learning.

Attitude concept can be view from three dimensions regarding aspects of it. Each one of these dimensions has different features to bring out language attitude results, i.e. behavioral, cognitive, and emotional.

The behavioral aspect of attitude (BAA) deals with the way one behaves and reacts in particular situations. Kara cited Eshghinejad (2009) stated that positive attitude leads to the exhibition of positive behavior toward studying, absorbing themselves in it, and striving to learn more. Such students are also observed to show more enthusiasm to solve problems, to acquire what is useful for daily life, and to engage themselves emotionally.

Cognitive aspect of attitude (CAA) involves the beliefs of the language learners about the knowledge that they receive and their understanding of the process of language learning. The cognitive attitude could be classified into four steps of connecting the previous knowledge and the new one, creating new knowledge, checking new knowledge, and applying the new knowledge in many situations.

The affective component of social attitude refers to the emotional aspect of the attitude which is very often a deep rooted component and resists most to change. In other words, it indicates the direction and intensity of an individual's evaluation.

In further simple terms, it involves a kind of emotion experienced towards the object of attitude say love or hatred, like or dislike, palatable

or unpalatable feelings. The emotional component as already indicated it is quite strong normally stands on the way of attitude change.

Based on the explanation above, can conclude that the attitude is consider as an essential factor influencing language performance. It involves communicative performance, and other important elements, such as, behavioral aspect of attitude, cognitive aspect of attitude and emotional Aspect of Attitude. They should be taught in any language learning to make the learners able to use the target language to communicate.

2) Characteristics of Attitude

Baker cited Zhao (2015) summarize the main characteristics of attitude as follows:

- a) Attitudes are cognitive (i.e. are capable of being thought about) and affective (i.e. have feelings and emotions attached to them).
- b) Attitudes are dimensional rather than bipolar—they vary in degree of favorability / unfavorability.
- c) Attitudes predispose a person to act in a certain way, but the relationship between attitudes and actions is not a strong one.
- d) Attitudes are learnt, not inherited or genetically endowed.
- e) Attitudes tend to persist but they can be modified by experience.

3) Types of Attitude

Most of the research on attitudes with regard to language learning has tended to concentrate on attitude towards target language and their speakers. In the 1950s, Gardner and Lambert investigated a number of different attitudes which they consider relevant to L2 learning. Importance of Attitude

Reid cited Zhao (2015) declared, "Attitudes are important to us because they cannot be neatly separated from study." Attitude is considered an essential factor influencing language performance. Visser cited Zhao (2015). Achievement in a target language relies not only on intellectual capacity, but also on the learner's attitudes towards language learning. This means that learning language should be approached primarily as a social and psychological phenomenon rather than as a purely academic one.

c. Differences between motivation and attitude

At this point, we must talk about two initial distinctions: the literature on attitudes and that of motivation that are sometimes close, so we need to be clear how attitude and motivation differ as concepts. An attitude is a set of beliefs and motivation is a reason for doing something. This can be confused because a set of beliefs can be a reason for doing it. So you may be motivated to learn English because your attitude towards English culture, or towards your teacher. It is a common belief that you will not learn English if you dislike the English teacher. The second distinction is one made in much of motivation literature. It is between integrative and instrumental motivation. The former is related to the desire

to learn more about a culture, its language and people – to integrate more within the target language society. The latter relates to achieving some other goals. So if you learn English because you will get a better job if you speak this language, then your motivation is instrumental.

C. The Concept of Speaking

1. Definition of Speaking

English as international language has four common ability to learn, they are listening, speaking, reading, and writing. For students in language class speaking is the important ability for English language learning. From the oral speaking, teacher can measure the level of their understanding. Oral speaking ability is a big part due to in language class. Speaking has many different aspects including two major categories – accuracy, involving the correct use of vocabulary, grammar and pronunciation practiced through control and guided activities and fluency, consider to the ability to keep going when speaking spontaneously.

Penny Ur cited Mauludiyah (2014) argues that the speaking ability is the most important one since foreign language learners are most of all interested in becoming actual speakers of language.

A learner who speak a lot and practice her/his speaking will make fluency in speaking. However, they have not use correct structure in speaking English, but when the students have high self-confidence to

practice the foreign language it will help them to increase their ability. Because the speaking class, we do not concern on writing or grammar subject. The important think that have to remember is speak and speak, start from the little or easy word to easy sentence. By practicing the word, it will help students memorizing and self-confidence.

Based on the explanation above, can be conclude that Speaking is productive ability of language learning. It involves communicative performance, and other important elements, such as, pronunciation, grammar, vocabulary, etc. They should be taught in any language learning to make the learners able to use the target language to communicate.

1. The Goal of Speaking

Speaking is the way to communication from the speaker to the listener. Someone who speaks they should be able to express their feeling to get the target language/communication. By this communication means the people can interact to other by the language. As the writer said before speaking is the main point in the success of learning language. Harmer remarks, “Whatever activity the students is involved if it is genuinely communicative and if it is really promoting language use, the student should have a desire to communicate.” When using a communicate activity, it is important to strive from the

classroom in which students feel comfortable and confident, feel free to take a risk and have an opportunity to speak.

DonnByne cited Mauludiyah (2014) the main goal in teaching the productive ability of speaking will be oral fluency. This can be defined as the ability to express oneself intelligibly.

Bygate's cited Mauludiyah (2014) routines facilitate communication for first language speakers because they make the interactions more predictable, if language totally predictable. Then communication would be unnecessary. If it were totally unpredictable, effective communication would probably be impossible. When people have conversation, they work interactively to reduce unpredictability. For second language speakers, routines can be crucial in facilitating comprehension.

2. The Components of Speaking Ability

Speaking competence mainly covers speaking accuracy and fluency. Speaking accuracy indicates "the extent to which the language produced conforms to target language norms" Yuan & Ellis cited Wang (2014) which involves the correct use of pronunciation, vocabulary and grammar.

Accuracy is an ability to produce sentences or utterance with correct grammar as stated cited Longman Dictionary (2000: 204). The speakers need to follow the rules of the language such as grammar and

structure to be able to speak accurately. Accuracy involves the correct use of pronunciation, vocabulary and grammar.

1) Pronunciation

Pronunciation is the way for students to produce clearer language when they are speaking. It means that the student can communicate effectively when they have good pronunciation and intonation even though they have limited vocabulary and grammar.

English pronunciation does not amount to mastery of a list of sounds or isolated words. Moreover, pronunciation includes all those aspects of speech which make for an easily intelligible flow of speech, including segmental articulation, rhythm, intonation and phrasing, and more peripherally even gesture, body language and eye contact.

2) Grammar

Grammar is need for the students to arrange correct sentences in conversation both in written and oral forms. Grammar is defined as a systematic way of accounting for and predicting an ideal speaker's or hearer's knowledge of the language. The grammar of a language is the description of the ways in which words can change their forms and can be combine into sentences in that language (Harmer cited Febriwahyuni, 2015). Thus, from the statements above can be conclude that the function of grammar

is to arrange the correct meaning of sentences based on the context; in addition, it is used to avoid misunderstanding in each communicator Grammar refers to the fundamental principles and structure of the language, including clear and correct sentence construction and the proper forms of words Batko cited Mauludiyah (2014).

3) Vocabulary

Vocabulary is essential for successful second language use because without an extensive vocabulary, we will be unable to use the structure and function we may have learnt for comprehensible communicative. It can be said that one key the success in communicative, which is the power of words. Vocabulary means the appropriate diction or the most important thing in a language especially in speaking; furthermore, knowing many vocabularies we will be easier to express our ideas, feeling and thoughts both in oral or written form, the vocabulary used must be very familiar and it is used in everyday conversation in order to understand the spoken discourse. Vocabulary is a basic building block of language learning. Students need to know words, their meanings. Thus, when teaching vocabulary, the teachers have to make sure that they explain the meaning as well as the spelling and pronunciation. Vocabulary is the knowledge of meanings of

words. What complicates this definition is the fact that words come in at least two forms: oral and written. Oral vocabulary is the set of words for which we know the meanings when we speak or read orally. Write vocabulary consists of those words for which the meaning is known when we write or read silently. These are important distinctions because the set of words that beginning readers know are mainly oral representations.

D. Conceptual Framework

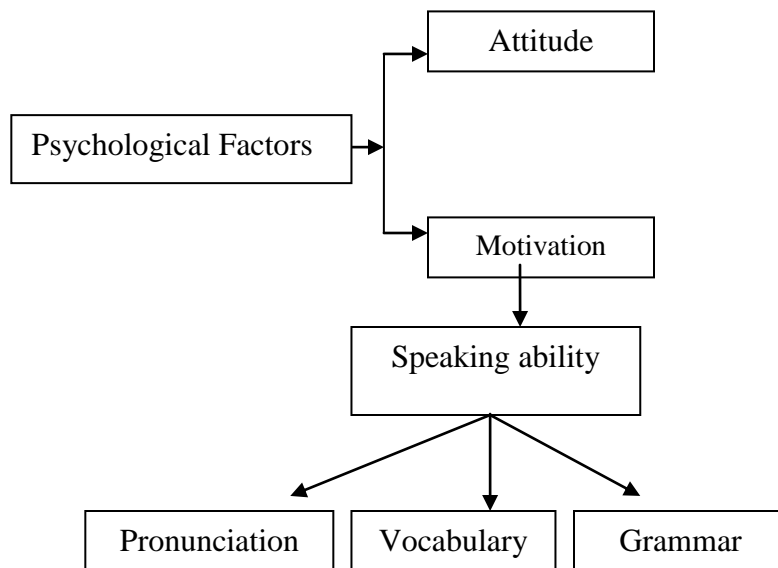


Figure 2.1 : Conceptual framework psychological factor and speaking ability

The conceptual framework above show the process of the research to look the students' correlation between psychological factor and speaking ability. In Descriptive Method, the researcher use questionnaire and test.

Questionnaire will use to know the students psychological factor, while Test used to know the students speaking ability toward pronunciation, vocabulary and grammar.

CHAPTER III

RESEARCH METHOD

This chapter deals with research design, variables and indicator, population and sample, research instruments, data collection and data analysis.

A. Research Design

In conducting the study, this research used descriptive quantitative research. It was aimed to describe between psychological factor and speaking English.

B. Variable and Indicator

1. Variable

This research was used two variables. The independent variable was the psychological factor toward attitude and motivation while the dependent variable was speaking ability toward pronunciation, vocabulary and grammar at the third semester students of English Department at Muhammadiyah University of Makassar.

2. Indicators

a. Indicators of psychological factors

- 1) Attitude
 - a) Behavioral
 - b) Cognitive
 - c) Emotional
- 2) Motivation

b. Indicators of speaking ability

- 1) Pronunciation
- 2) Vocabulary
- 3) Grammar

3. Hypothesis

To find the answer to the problem, the research proposes alternative Hypothesis (Ha) and Null Hypothesis (Ho). The hypothesis of the research was formulated as follows:

Ha : There is correlation between student's psychological factor and speaking ability to learn English at the third semester students of English Department at Muhammadiyah University of Makassar

Ho : There is no correlation between student's psychological factor and their speaking ability to learn English at the third semester students of English Department at Muhammadiyah University of Makassar

According to Gay, et, al. (2006:192), the existence of high correlation does permit prediction. There are some predictions of correlation between speaking ability and their psychological factors, they are:

- a. High speaking ability, and high psychology = Positive correlation
- b. High speaking ability, and low psychology = negative correlation
- c. Low speaking ability, and high psychology = Negative correlation
- d. Low speaking ability, and low psychology = Positive correlation

C. Population and Sample

1. Population

The population of this research was the third semester of English department at Muhammadiyah University of Makassar in academic year 2016/2017. It consists of 10 classes. The total numbers of population are 371 students.

2. Sample

The sample represented the whole population in this research. The numbers of the students taken as samples were 60 students by using random sampling technique. There were 6 students each class.

D. Research Instrument

1. Questionnaire

To fulfill the aims above, the study was carried out by descriptive methods of data collection. The instrument that used in this study was questionnaire. In this research, questionnaire was formed into close question. The numbers of questions were 40 questions: 20 questions to know students' motivation and 20 questions to know attitude.

2. Test

Test is used to know the students' speaking ability toward pronunciation, vocabulary and speaking. The researcher gave three topics for the students and then students chose one of them.

E. Data Collection

The data was collected from the questionnaire and test. Questionnaire was given to know the students' psychological factors toward motivation and attitude. It was analyzed by using Likert Scale and classify into five levels. Test was given to know the students speaking ability toward pronunciation, vocabulary and grammar. The researcher given three topics for the students and then students choose one of them. Each student has 30 seconds until 1 minute to speech and then researcher would be recorded. The test were be scored by using the rating scores of oral test.

F. Data Analysis

1. The data collected through questionnaire was to know their psychological factor and test was to know speaking performance. Questionnaire would be analyzed by using percentage as follows:

Table.3.1. The classification level of agreement

| No | Statement | Option | | | | |
|----|-------------|----------------|-------|-----------|----------|-------------------|
| | | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
| 1. | Favorable | 5 | 4 | 3 | 2 | 1 |
| 2. | Unfavorable | 1 | 2 | 3 | 4 | 5 |

$$P = \frac{Fq}{N} \times 10$$

Where:

P = Percentage of questionnaire

Fq = The frequency of items

N = Total students

(Sugiyono, 2013: 134)

In other determined the level of the students' motivation and attitude. The researcher used the classification as follows: Intensities motivation

Table 3.2. Classification level of psychological

| No | Score | Category |
|----|---------|--------------|
| 1 | 8 -10 | Very high |
| 2 | 6 – 7.9 | High |
| 3 | 4 – 5.9 | Intermediate |
| 4 | 2 –3.9 | Low |
| 5 | 0 – 1.9 | Very Low |

(Sujono cited Nasruddin, 2013: 33)

The researcher was analyzed the data of the frequency and the percentage of questionnaire items to find out the total. The result of the frequency in each item sum and used the formula;

$$X = \frac{\sum X}{N}$$

Where:

X = mean score

$\sum X$ = sum of all score

N = Total number of subject

(Gay cited Rahmawati, 2012; 29)

2. Test would be scored by using the rating scores of oral test

Table 3.3. Classification level of speaking

| No | Classification | Score |
|----|----------------|---------|
| 1 | Excellent | 8 -10 |
| 2 | Very good | 6 – 7.9 |
| 3 | Good | 4 – 5.9 |
| 4 | Very poor | 2 – 3.9 |
| 5 | Poor | 0 – 1.9 |

(Sujono cited Nasruddin, 2013: 33)

Table 3.4.Criteria of speaking

| No. | Criteria | Rating Score | Description |
|-----|---------------|--------------|---|
| 1 | Pronunciation | 5 | Pronunciation is only very slightly influenced by mother tongue. Two or three grammatical and lexical errors. |
| | | 4 | Pronunciation is lightly influenced by mother tongue. A few minor grammatical and lexical errors but most utterances are correct. |
| | | 3 | Pronunciation problem necessities concentrated listening and occasionally lead to misunderstanding. |
| | | 2 | Very hard to understand because of pronunciation problem, most frequently be asked to repeat. |
| | | 1 | Pronunciation problem to serve as to make speech virtually unintelligible. |
| 2 | Vocabulary | 5 | Speak without too great an effort with a fairly wide range of expression. Searches for words occasionally but |

| | | | |
|---|---------|---|---|
| | | | only one or two unnatural pauses. |
| | | 4 | Has to make an effort at time to search for words. Nevertheless, smooth delivery on the whole and only a few unnatural. |
| | | 3 | Although he has to make an effort and search for words, there are not too many unnatural pauses. Fairly smooth delivery mostly. Occasionally fragmentary but succeeds in conveying the general meaning. Fair range of expression. |
| | | 2 | Has to make an effort for much of the time. Often has to search for the desired meaning. Rather halting delivery and fragmentary. Range of expression often limited. |
| | | 1 | Vocabulary limitation so extreme as to make conversation virtually impossible. |
| 3 | Grammar | 5 | A few minor grammatical and lexical errors but most utterances are correct. |
| | | 4 | Make few noticeable errors of grammar and word order. |
| | | 3 | Make frequent errors of grammar and word order, which occasionally obscure meaning |
| | | 2 | Grammar and word order errors make comprehension difficult, must often rephrases sentence. |
| | | 1 | Errors in grammar and word order, so, severe as to make speech virtually unintelligible. |

$$\text{score} = \frac{\text{the result of score}}{\text{maximum score}} \times 10$$

David P. Harris cited Meilyaningsih (2015).

3. The Pearson r

The person product moment was used in the analysis of data between students' speaking ability and their motivation to learn English. The correlation technique to evaluate hypothesis concerning correlation between two variables that were examined statistically.

$$r = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{N}}{\sqrt{\left[\sum X^2 - \frac{(\sum X)^2}{N}\right] \left[\sum Y^2 - \frac{(\sum Y)^2}{N}\right]}}$$

r = correlation coefficient

N = number of respondents

X = distributions of students speaking ability

Y = distribution of their motivation

$\sum X$ = total score of students

$\sum X^2$ = the sum of the square from variables X

$\sum Y^2$ = the sum of the square from variables Y

$\sum XY$ = total number of X multiplied by Y

Significant critical value: 0.05

Criteria : if $r_0 > \pi$ means there is correlation accept, and H_a is accept, H_0 is reject

if $r_0 < \pi$ means there is no correlation accept, and H_a is accept, H_0 is reject

Ha : There is correlation between students' speaking ability and their psychological to learn English

Ho : There is no correlation between students' speaking ability and their psychological to learn English

(Gay, cited Istianti 2013: 35)

The result of correlation coefficient was determine by degree of person product moment and its interpretation

Table. 3.5 : Degree of person product moment

| "r" value of product moment | Interpretation |
|------------------------------------|---------------------------------|
| 0.90 - 1.00 | Very high / perfect correlation |
| 0.70 - 0.90 | High correlation |
| 0.40 - 0.70 | Medium correlation |
| 0.20 - 0.40 | Low correlation |
| 0.20 - 0.40 | Low correlation |

(Sudijono, cited Istianti 2013:36)

CHAPTER IV
FINDINGS AND DISCUSSION

A. Findings

1. Correlation between students' motivation and their speaking ability

In this case, both the students' speaking ability and students motivation related by using r formula. It means that score within a certain range on variable are associated with score within a certain range on the other variables. Person r formula to find out whether or not there was significant correlation between students speaking ability and their motivation to learn English through the data which have been obtained.

Table. 4.1: The significant correlation between students' speaking ability and their motivation to learn English

| Variable | Students' Mean Score | r_o | Classification |
|----------------------|----------------------|--------|-------------------------|
| Students' speaking | 7.45 | 0.3434 | significant correlation |
| Students' motivation | 7.25 | | |

After being calculate, the total mean score of students' speaking ability were (\bar{X}) 7.45 and students' motivation were (\bar{X}) 7.25. The correlation coefficient(r_o) was 0.3434. In other words there was not significant

correlation between students' speaking ability and their motivation to learn English.

To attest prove the result of calculation, degree of freedom and its significant critical value used. $Df = N - nr = 60 - 2 = 58$

From the data calculation, it was known that $r_o = 0.3434$ and $df = 58$, if we compare with “ r ” table values at the degree significance of 0.05, then the correlation between students speaking ability and their motivation to learn English score was not significant correlation : ($r_o : \pi = 0.3434 > 0.2542$).

Based on the table above, it can seen that correlation index ($r_o = 0.3434$), this means that the correlation belongs to “Low correlation”. In other words, there was positive correlation between variable X and Y.

As mentioned before, from the result of calculation, the value was 0.3434: df was 58, if it was compared with the r_t at the degree of the significance 5% (0.2542), the correlation students' speaking ability and their motivation to learn English was significant ($r_o : r_t = 0.3434 > 0.2542$). So the null hypothesis (H_0) of the research the rejected and alternative hypothesis (H_a) was accepted. The meaning of the statement was the students' speaking ability has not significant correlation with their motivation to learn English.

Therefore, students speaking ability as the first quantitative variable (X) was related to their motivation as the second variable (Y).

Table 4.2: Data of the correlation between students' motivation and their speaking ability to learn English.

| N | $\sum X$ | $\sum Y$ | $\sum X^2$ | $\sum Y^2$ | $\sum XY_1$ | r_o |
|----|----------|----------|------------|------------|-------------|--------|
| 60 | 446.8 | 434.7 | 3340.62 | 3169.67 | 3242.74 | 0.3434 |

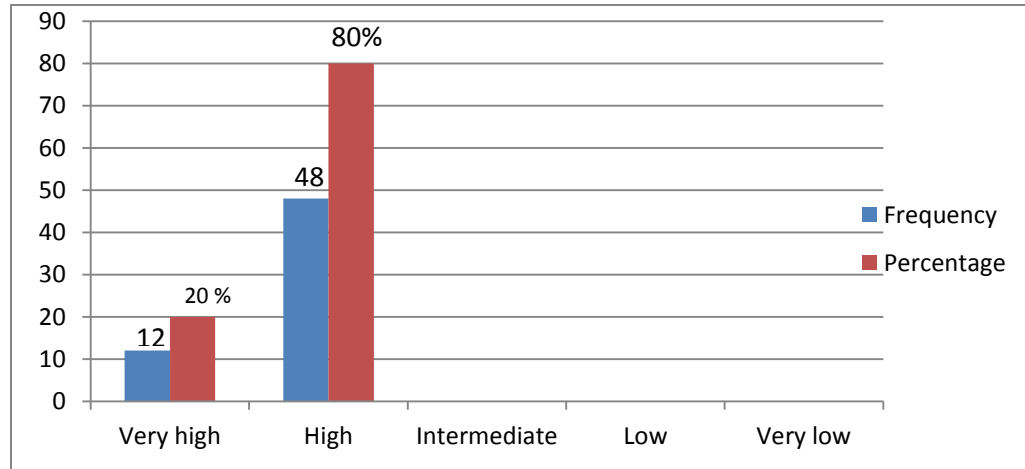
The data were served table which consisted of some forms of analysis namely classification, frequency and percentage.

Table 4.3 Data of students' motivation

| No. | Classification | Data Analysis | |
|--------------|------------------------|---------------|-------------|
| | | F | % |
| 1 | Very high (8 -10) | 12 | 20 % |
| 2 | High (6 – 7.9) | 48 | 80 % |
| 3 | Intermediate (4 – 5.9) | 0 | 0% |
| 4 | Low (2 – 3.9) | 0 | 0% |
| 5 | Very Low (0 – 1.9) | 0 | 0% |
| Total | | 60 | 100% |

Table 4.3 showed that there were 60 students, none of them got Intermediate (0%), low (0%) and very low (0%). There were 48 of them (80%) got high, 12 of them (20%) got Very high score. It was indicated students' motivation is high (with average value 7.25), because almost of respondents (48 respondents) were in high classification. So, the result could be shown those students in Muhammadiyah University of Makassar were high categorized.

Graphic 4.1. The students' score percentage of students' motivation



2. Correlation between students' attitude and their speaking ability

In this case, both the students' speaking ability and students attitude was related by using r formula. It means that score within a certain range on variable was associated with score within a certain range on the other variables. Person r formula to find out whether or not there was significant correlation between students speaking ability and their attitude to learn English through the data which have been obtained.

Table. 4.4: The correlation between students' speaking ability and their attitude to learn English

| Variable | Students' Mean Score | r_o | Classification |
|--------------------|----------------------|--------|-------------------------|
| Students' speaking | 7.45 | 0.3714 | significant correlation |
| Students' attitude | 7.57 | | |

After being calculated, the total mean score of students' speaking ability were (\bar{X}) 7.45 and students' attitude were (\bar{X}) 7.57. The correlation coefficient(r_o) was 0.3714. In other words there was significant correlation between students' speaking ability and their attitude to learn English.

To attest prove the result of calculation, degree of freedom and its significant critical value used. $df = N - nr = 60 - 2 = 58$

From the data calculation, it was known that $r_o = 0.3714$ and $df = 58$, if we compare with "r" table values at the degree significance of 0.05, then the correlation between students speaking ability and their attitude to learn English score was not significant correlation : ($r_o: \pi = 0.3714 > 0.2542$)

Based on the table above, it can seen that correlation index ($r_o = 0.3714$), this means that the correlation belongs to "Low correlation". In other words, there was positive correlation between variable X and Y.

As mentioned before, from the result of calculation, the value of r_o was 0.3714: df was 58, if it was compared with the r_t at the degree of the significant was 5% or 0.05 (0.2542), the correlation students' speaking ability and their attitude to learn English was not significant ($r_o : r_t = 0.3714 > 0.2542$). So the null hypothesis (H_0) of the research the rejected and alternative hypothesis (H_a) was accepted. The meaning of the statement was

the students' speaking ability has not significant correlation with their attitude to learn English.

Table. 4. 5 : Data of the correlation between students' attitude and their speaking ability to learn English.

| N | $\sum X$ | $\sum Y$ | $\sum X^2$ | $\sum Y^2$ | $\sum XY_1$ | r_o |
|----|----------|----------|------------|------------|-------------|--------|
| 60 | 446.8 | 454.1 | 3340.62 | 3456.27 | 3386.63 | 0.3714 |

The data were served table which consisted of some forms of analysis namely classification, frequency and percentage.

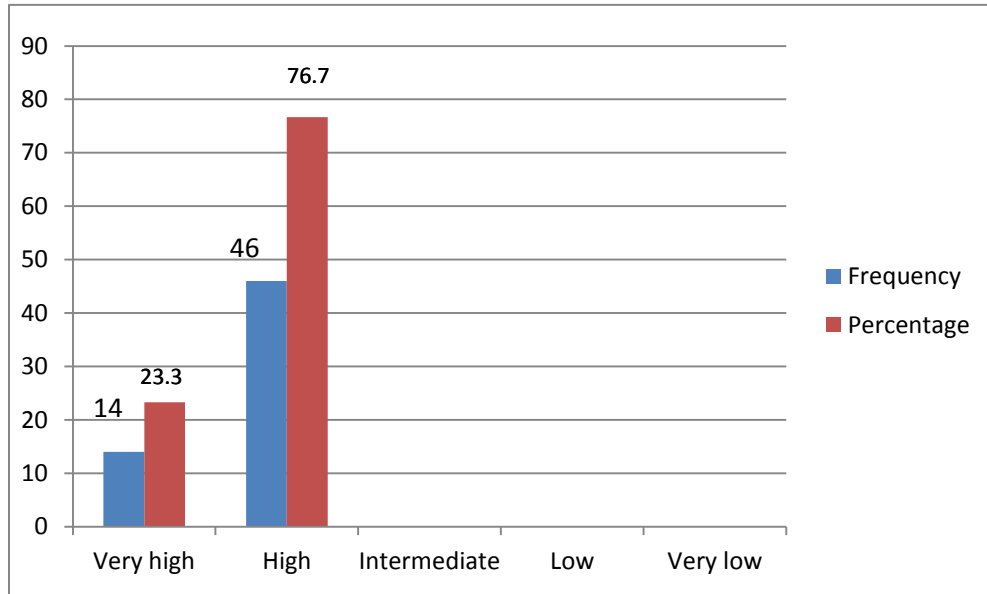
Table 4.6 Data of students' attitude

| No. | Classification | Data Analysis | |
|--------------|------------------------|---------------|-------------|
| | | F | % |
| 1 | Very high (8 -10) | 16 | 26.7 % |
| 2 | High (6 – 7.9) | 44 | 73.3 % |
| 3 | Intermediate (4 – 5.9) | 0 | 0% |
| 4 | Low (2 – 3.9) | 0 | 0% |
| 5 | Very Low (0 – 1.9) | 0 | 0% |
| Total | | 60 | 100% |

Table 4.6 showed that there were 60 students, none of them got Intermediate (0%), low (0%) and very low (0%). There were 44 of them (23.3%) got high, 16 of them (26.7%) got Very high score. It was indicated students' attitude is high (with average value 7.57), because almost of respondents (44

respondents) were in high classification. So, the result could be shown those students in Muhammadiyah University of Makassar were high categorized

Graphic 4.2. The students' score percentage of students' attitude



B. Discussion

1. Psychological Factors

a. Students' Motivation

Lightbrown & Spada in Nasruddin (2001) learning second/foreign languages, motivation is needed for communicative of the students and their attitudes towards the language community In this case, the students will be motivated in learning a second/foreign language just because they need to learn and communicate it in a social large scale to support their professional ambition

in the future. Therefore, they need to have a good attitude toward people who speak the target language because they need to have a contact with them.

Before gave the questionnaire, the researcher observed the class while the teacher teaching the students to look the students' enthusiasm in speaking, whether they have big motivation or not. The questionnaire has been given to the students and the researcher counted the data related with the students' answer. After analyzing the data, the data showed that out of 60 students, none of them got low, very low and intermeidate. There were 48 (80%) students got high score and 12 students (20%) got very high score. It was indicated the score percentage of students' motivation were high. So, the result showed that students in Muhammadiyah University of Makassar were high categorized.

b. Attitude

Reid cited Zhao (2015) declared, "Attitudes are important to us because they cannot be neatly separated from study." Attitude is consider an essential factor influencing language performance. Achievement in a target language relies not only on intellectual capacity, but also on the learner's attitudes towards language learning. This means that learning language should be approached primarily as a social and psychological phenomenon rather than as a purely academic one.

Before gave the questionnaire, the researcher observed the class while the teacher teaching the students to look the students' enthusiasm study English especially speaking subject, whether they like or dislike. The questionnaire has been given to the students and the researcher counted the data related with the students' answer. After analyzing the data, the data showed that out of 60 students, none of them got low, very low and intermeidate. There were 44 (73.3%) students got high score and 16 students (26.7%) got very high score. It was indicated the score percentage of students' attitude were high. So, the result showed that students in Muhammadiyah University of Makassar were high categorized.

2. Speaking Ability

Speaking is the way to communication from the speaker to the listener. Speaking competence mainly covers speaking accuracy and fluency. Speaking accuracy indicates "the extent to which the language produced conforms to target language norms" Yuan & Ellis cited Wang (2014) which involves the correct use of pronunciation, vocabulary and grammar.

a. pronunciation

Before gave the test, the researcher observed the class while the teacher teaching the students to look the students' enthusiasm study English especially speaking subject. The test has been given to the students, the

researcher gave three topic then the students chose one of them after that the researcher recorded the students' speech.

The researcher counted the data related with the students' recorded after analyzing the data of pronunciation, the data showed that out of 60 students. none of them got good, very poor and poor. There were 43 (71.7 %) students got excellent and 17 students (28.3 %) got very good. It was indicated the students' score percentage of students' pronunciation were very high. So, the result showed that students in Muhammadiyah University of Makassar were very high categorized.

b. Vocabulary

Before gave the test, the researcher observed the class while the teacher teaching the students to look the students' enthusiasm study English especially speaking subject. The test has been given to the students, the researcher gave three topic then the students chose one of them after that the researcher recorded the students' speech.

The researcher counted the data related with the students' recorded after analyzing the data of vocabulary, the data showed that out of 60 students. none of them got good, very poor and poor. There were 40 (66.7 %) students got excellent and 20 students (33.3 %) got very good. It was indicated the students' score percentage of students' vocabulary were very high. So, the

result showed that students in Muhammadiyah University of Makassar were very high categorized.

c. Grammar

Before gave the test, the researcher observed the class while the teacher teaching the students to look the students' enthusiasm study English especially speaking subject. The test has been given to the students, the researcher gave three topic then the students chose one of them after that the researcher recorded the students' speech.

The researcher counted the data related with the students' recorded after analyzing the data of grammar, the data showed that out of 60 students. None of them got good, very poor and poor. There were 37 (61.7 %) students got excellent and 23 students (38.3 %) got very good. It was indicated the students' score percentage of students' grammar were very high. So, the result showed that students in Muhammadiyah University of Makassar were very high categorized.

The students' speaking ability in terms pronunciation, vocabulary and grammar were very good categorized. It was indicated students' speaking ability were very good (with average value 7.4).

3. Correlation between psychological factors and speaking ability

a. Correlation between students' motivation and speaking ability

In this case, students' speaking ability is the first quantitative variable (X).The researcher obtained data from 60 students by giving the

students speaking test oral. After being calculated, types of data have been obtained, total scores of students' speaking ability ($\sum X$) are 446.8, sum of the square in students' students' speaking ability ($\sum X^2$) are 3340.62 and total number of students' speaking ability multiplied by their psychological($\sum XY$) are 3242.74.

In this case students' motivation is second quantitative variables (Y_1). To get the data, the researcher conducted by giving questionnaire about students' motivation to learn English to 60 students' as a sample. Total score of students' motivation to learn English ($\sum Y_1$) are 434.7 sum of the square in students' motivation ($\sum Y_1^2$) are 3169.67, and total number of students' motivation multiplied by their speaking ability ($\sum XY_1$) are 3242.74.

Table 4.3 showed the Data used product moment to find out whether or not there was correlation between students speaking ability and their psychological to learn English through the data which have been obtained. After being calculated, the correlation coefficient(r_o) is 0.3434 (low correlation).

Table 4.4 percentage of the data showed that there were 60 students, none of them got Intermediate (0%), low (0%) and very low (0%). There were 48 of them (80%) got high, 12 of them (20%) got Very high score. It was indicated students' motivation is high (with average

value 7.25), because almost of respondents (48 respondents) were in high classification. So, the result could be shown those students in Muhammadiyah University of Makassar were high categorized.

Graphic 4.1 indicated the score percentage of students' motivation, it was showed from 60 students that there were 12 students (20%) got very high score, 48 students (80%) got high score, none of them got intermediate (0%), low (0%) and very low(0%) related with the result of the questionnaire. It was indicated students' motivation is high (with average value 7.25), because almost of respondents (48 respondents) were in high classification.

The data showed that the correlation between students' motivation and speaking ability to learn English After being calculated. The result showed that students in Muhammadiyah University of Makassar were correlation coefficient(r_o) is 0.3434 (low correlation). There is not significant between students' motivation and speaking ability.

b. Students' attitude and their speaking ability

In this case, students' speaking ability is the first quantitative variable (X).The researcher obtained data from 60 students by giving the students a speaking test. After being calculated, types of data have been obtained, total scores of students' speaking ability ($\sum X$) are 446.8, sum of the square in students' students' speaking ability ($\sum X^2$) are 3340.62 and

total number of students' speaking ability multiplied by their psychological($\sum XY$) are 3386.63.

In this case students' attitude is the second quantitative variables (Y_2). To get the data, the researcher conducted by giving questionnaire about students' attitude to learn English to 60 students' as a sample. Total score of students' attitude to learn English ($\sum Y_2$) are 454.1 sum of the square in students' motivation ($\sum Y_2^2$) are 3456.27, and total number of students' motivation multiplied by their speaking ability ($\sum XY_2$) are 3386.63.

Table 4.4 showed the Data used product moment formula to find out whether or not there was correlation between students speaking ability and their psychological to learn English through the data which have been obtained. After being calculated, the correlation coefficient(r_o) is 0.3714 (low correlation).

Based on Table 4.5 percentage of the data showed that there were 60 students, none of them got Intermediate (0%), low (0%) and very low (0%). There were 44 of them (23.3%) got high, 16 of them (26.7%) got Very high score. So, the result could be shown those students in Muhammadiyah University of Makassar were high categorized.

Graphic 4.2 indicated the score percentage of students' attitude the graphic would be shown the result: score percentage of students' attitude, it

was showed from 60 students that there were 16 students (26.7%) got very high score, 44 students (73.3%) got high score, none of them got intermediate (0%), low (0%) and very low (0%) related with the result of the questionnaire. It was indicated students' attitude is high (with average value 7.57), because almost of respondents (44 respondents) were in high classification.

The data showed that the correlation between students' attitude and speaking ability to learn English After being calculated. The result showed that students in Muhammadiyah University of Makassar were correlation coefficient(r_o) is 0.3714 (low correlation). There is not significant between students' motivation and speaking ability.

The researcher findings was similar with Yulis's finding (2016) Istianti's finding (2013) and Rosalina's finding (2014). Yulis finding was After analyzing and calculating the data, it was found that r calculated was 0,506 with level significance 0.05, and the degree of freedom ($df= n-2$) was 18. It means that r calculated was higher than r -table ($0.515 > 0.404$). So, there was correlation between two variables above.

Istianti's finding, the result of the research is show that there was correlation between students' motivation in learning speaking and their speaking ability. It was provided by the Γ_{xy} (0.555) was bigger than r table in the degree significance 5% (0.349) and 1% (0.449). It was considered

the null hypothesis (H_0). In this research was rejected students' motivation in learning speaking and their speaking ability was accepted. In Conclusion there was positive correlation between students' motivation in learning speaking and their speaking ability.

Rosalina's finding was the result from the calculation, the value of was 0.143. Then the compared it with at the significant degree 5% (0.355), the correlation between students' motivation and their English learning achievement was negative ($r = 0.143 < 0.355$). So, the alternative hypothesis which states that “ means that there was correlation between X variable and Y variable” was rejected

CHAPTER V

CONCLUSION AND SUGGESTIONS

In this chapter consists of two sections. The first section deals with conclusion of the findings, and the second one deals with suggestion that cover recommendation concerning the implication of the findings and for further related researcher.

A. Conclusion

The researcher come to following conclusions:

1. The correlation between students' motivation and speaking ability was correlation coefficient (0.3434) in the interval value of 0.20 – 0.40 this means that the correlation in investigated as belongs to (“low correlation”).
2. The correlation between students' attitude and speaking ability was correlation coefficient (0.3714) in the interval value of 0.20 – 0.40 this means that the correlation in investigated as belongs to (“low correlation”).

The result indicated there was not significant correlation between students motivation and their speaking ability where correlation coefficient was (0.3434) in the interval value of 0.20 – 0.40, this means that belongs to (“low correlation”). while the correlation between students attitude and their speaking ability where correlation coefficient is (0.3714), So the null hypothesis (H₀) of the research was rejected and alternative hypothesis (H_a) was accepted. The meaning of the statement was the students' speaking ability

was not significant correlation with their level of motivation and attitude to learn English.

B. Suggestions

Based on the conclusion above, the researcher would like to offer suggestions as follows:

1. The teacher should pay attention more about students' motivation and attitude because motivation and attitude have significant roles for improving students speaking ability.
2. The teacher should also give higher motivation for students' to practice speaking ability and to know how important to speaking English.
3. The students of English Department at Muhammadiyah University of Makassar should have an English club to increase their motivation in speaking English.
4. Further researcher need to be conducted and explored more about the correlation between students' psychological and their speaking ability to learning English.

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APPENDICES

Appendix 1

RESEARCH QUESTIONNAIRE

(Students' Motivation)

Name :

Class :

Reg. Num :

There are questionnaire with several options below. Choose the correct one by giving mark (√) in the column.

Note: SA (Strongly Agree), A (Agree), U (Undecided), D (Disagree), and SD (Strongly Disagree)

| No. | Statement | SA | A | U | D | SD |
|-----|--|----|---|---|---|----|
| 1 | Saya termotivasi jika mendengarkan music pada saat proses pembelajaran <i>(I feel motivated, if I hear music while learning process)</i> | | | | | |
| 2 | Saya suka melihat teman saya ketika membawakan presentase di depan kelas <i>(I like to see to my friends who presents the material in front of class)</i> | | | | | |
| 3 | Saya merasa termotivasi ketika mendengar teman saya berbicara banyak <i>(I feel motivated when I hear my friend speaks much)</i> | | | | | |
| 4 | Saya lebih suka melihat penjelasan di papan tulis daripada mendengar penjelasan dari guru atau teman <i>(I like to see the explanation on whiteboard than I hear the explanation from the lecturerr or friend)</i> | | | | | |
| 5 | Pendengaran saya tidak focus, ketika berbicara dihadapan Teman kelas dan mereka sedang berbicara juga <i>(My listeningunfocus, when I speak in front of classmates and they do it also)</i> | | | | | |
| 6 | Sulit bagi saya berbicara, jika hanya melihat susana di kelas saja <i>(It's difficult for me to speak if the condition only in the class)</i> | | | | | |
| 7 | Saya senang jika sebelum berbicara, saya melihat contoh terlebih dahulu <i>(I am happy given example before speaking)</i> | | | | | |
| 8 | Ketika belajar di kelas, saya sering kali kehilangan | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| | konsentrasi/terganggu ketika mendengar keramaian dari luar kelas <i>(when study in the class, I often get lost concentration when I hear crowded out of class)</i> | | | | | |
| 9 | Jika teman bertanya, sayaberpura-pura tidak mendengarnya <i>(if my friend asks, I pretend as I don't hear him)</i> | | | | | |
| 10 | Saya senang mendengar dosen berbicara di depan kelas <i>(I am happy to hear thelecturer speaks in front of)</i> | | | | | |
| 11 | Sulit bagi saya berbicara, jika saya melihat keramaian diluar ruangan <i>(It is hard for me to speak, if I see a crowded outside of room)</i> | | | | | |
| 12 | Saya bersemangat berbicara, jika saya mendengarkan percakapan di tep. <i>(I feel motivate to speak, when I hear a conversation on teP)</i> | | | | | |
| 13 | Saya selalu bersemangat mendengarkan teman saya pada saat mereka presentase <i>(I feel very enthusiasm to hear my friend when they present a material)</i> | | | | | |
| 14 | Saya suka mendengarkan teman saya berbicara ketika belajar kelompok <i>(I like to hear to my friends when we study together)</i> | | | | | |
| 15 | Ketika belajar di kelas, saya lebih senang melihat buku daripada melihat teman saya saat berbicara di depan kelas <i>(when study in the class, I like more to to see my book than I see my friend speaks in front of)</i> | | | | | |
| 16 | Saya lebih tertarik belajar speaking ketika melihat motivator lebih dahulu <i>(I more interested study speaking when I see movie turn before)</i> | | | | | |
| 17 | Saya senang mendengar teman saya berbicara ketika bertanya kepada dosen <i>(I am happy to hear my friend ask to the lecturer)</i> | | | | | |
| 18 | Saya senang mendengarkan sebuah lagu sambil mengerjakan tugas <i>(I like to hear a song and do the task)</i> | | | | | |
| 19 | Sulit bagi saya menjelaskan jika ada teman yang bertanya <i>(it is hard for me to explain if there my friend asks me)</i> | | | | | |
| 20 | Sulit bagi saya berbicara, tanpa melihat teks <i>(I feel difficult to speak, without look into the text)</i> | | | | | |

RESEARCH QUESTIONNAIRE

(Students' Attitude)

Name :

Class :

Reg. Num :

There are questionnaire with several options below. Choose the correct one by giving mark (√) in the column.

Note: SA (Strongly Agree), A (Agree), U (Undecided), D (Disagree), and SD

(Strongly Disagree)

| Respondents' positive & negative | | | | | | |
|----------------------------------|--|----|---|----|---|----|
| No. | Statement | SA | A | NI | D | SD |
| 1 | Studying English helps me to have good relationships with friends <i>Belajar bahasa Inggris membantu saya untuk memiliki hubungan baik dengan teman.</i> | | | | | |
| 2 | Speaking English anywhere makes me feel worried <i>Berbicara bahasa Inggris di mana saja membuat saya merasa khawatir.</i> | | | | | |
| 3 | I am not interested in studying English <i>Saya tidak tertarik untuk belajar bahasa Inggris.</i> | | | | | |
| 4 | Studying English helps me to improve my personality <i>Belajar bahasa Inggris membantu saya memperbaiki kepribadian saya.</i> | | | | | |
| 5 | I am not relaxed whenever I have to speak in my English class <i>Saya tidak rileks kapanpun saya harus berbicara di kelas bahasa Inggris saya.</i> | | | | | |
| 6 | I feel embarrassed to speak English in front of other students <i>Saya merasa malu untuk berbicara bahasa Inggris di depan siswa lain.</i> | | | | | |
| 7 | I do not feel enthusiastic to come to class when we study about English <i>Saya tidak merasa antusias untuk datang ke kelas ketika belajar bahasa Inggris</i> | | | | | |

| | | | | | | |
|----|---|--|--|--|--|--|
| 8 | Being good at English will help me study other subjects well <i>Berpengetahuan bahasa Inggris akan membantu saya mempelajari mata pelajaran lain dengan baik.</i> | | | | | |
| 9 | I have more knowledge and more understanding when studying English <i>Saya memiliki lebih banyak pengetahuan dan lebih mengerti saat belajar bahasa Inggris.</i> | | | | | |
| 10 | Studying English helps me communicate in English effectively <i>Belajar bahasa Inggris membantu saya berkomunikasi dalam bahasa Inggris secara efektif.</i> | | | | | |
| 11 | In my opinion, people who speak more than one language are very knowledgeable <i>Menurut saya, orang yang berbicara lebih dari satu bahasa sangat berpengetahuan luas.</i> | | | | | |
| 12 | Frankly, I study English just to pass the exams <i>Terus terang, saya belajar bahasa Inggris hanya untuk lulus ujian.</i> | | | | | |
| 13 | I cannot apply the knowledge from English subject in my real life <i>Saya tidak bisa menerapkan pengetahuan dari subjek bahasa Inggris dalam kehidupan nyata saya</i> | | | | | |
| 14 | I am not satisfied with my performance in the English subject <i>Saya tidak puas dengan penampilan saya dalam pelajaran bahasa Inggris.</i> | | | | | |
| 15 | Studying English makes me able to create new thoughts <i>Mempelajari bahasa Inggris membuat saya mampu menciptakan pemikiran baru.</i> | | | | | |
| 16 | I am not satisfied with my performance in the English subject <i>Saya tidak puas dengan penampilan saya dalam pelajaran bahasa Inggris.</i> | | | | | |
| 17 | I don't get anxious when I have to answer a question in my English class <i>Saya tidak merasa cemas saat harus menjawab pertanyaan di kelas bahasa Inggris saya.</i> | | | | | |
| 18 | I feel proud when studying English language | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| | <i>Saya merasa bangga saat belajar bahasa inggris.</i> | | | | | |
| 19 | Studying English makes me have good emotions (feelings) Belajar bahasa Inggris membuat saya memiliki emosi (perasaan) yang baik. | | | | | |
| 20 | To be honest, I really have little interest in my English class Sejujurnya, saya benar-benar tidak tertarik dengan kelas bahasa Inggris saya. | | | | | |

Appendix 2

Data of the correlation between students' speaking skill and students' motivation

| No. | X | Y | X ² | Y ² | X Y |
|-----|-----|-----|----------------|----------------|-------|
| 1. | 8 | 7.1 | 64 | 50.41 | 56.8 |
| 2. | 6.7 | 6.6 | 44.89 | 43.56 | 44.22 |
| 3 | 7.3 | 7.9 | 53.29 | 62.41 | 57.67 |
| 4 | 8 | 7.4 | 64 | 54.76 | 59.2 |
| 5. | 8 | 7.8 | 64 | 60.84 | 62.4 |
| 6. | 8 | 8.1 | 64 | 65.61 | 64.8 |
| 7. | 7.3 | 7.8 | 53.29 | 60.84 | 54.75 |
| 8. | 8 | 8 | 64 | 64 | 64 |
| 9. | 7.3 | 7.5 | 53.29 | 56.25 | 54.75 |
| 10. | 8 | 6.8 | 64 | 46.68 | 54.4 |
| 11. | 6.7 | 6.1 | 44.89 | 37.21 | 40.87 |
| 12. | 7.3 | 6.6 | 53.29 | 43.56 | 48.18 |
| 13. | 8 | 7.4 | 64 | 54.76 | 59.2 |
| 14. | 8 | 8 | 64 | 64 | 64 |
| 15. | 7.3 | 7.7 | 53.29 | 59.29 | 56.21 |
| 16. | 8 | 8.2 | 64 | 67.24 | 65.6 |
| 17. | 8 | 7 | 64 | 49 | 56 |
| 18. | 7.3 | 7.3 | 53.29 | 53.29 | 53.29 |
| 19. | 7.3 | 7 | 53.29 | 49 | 51.1 |

| | | | | | |
|-----|-----|-----|-------|-------|-------|
| 20. | 8 | 7.2 | 64 | 51.84 | 57.6 |
| 21 | 8 | 7.1 | 64 | 50.41 | 56.8 |
| 22 | 6.7 | 6 | 44.89 | 36 | 40.2 |
| 23 | 8 | 8.1 | 64 | 65.61 | 64.8 |
| 24 | 8 | 7 | 64 | 49 | 56 |
| 25 | 7.3 | 8 | 53.29 | 64 | 58.4 |
| 26 | 6.7 | 6.6 | 44.89 | 43.56 | 44.22 |
| 27 | 7.3 | 8 | 53.29 | 64 | 58.4 |
| 28 | 6.7 | 7 | 44.89 | 49 | 46.9 |
| 29 | 7.3 | 8 | 53.29 | 64 | 58.4 |
| 30 | 8 | 7.2 | 64 | 51.84 | 57.6 |
| 31 | 6.7 | 6.5 | 44.89 | 42.25 | 43.55 |
| 32 | 7.3 | 6.6 | 53.29 | 43.56 | 48.18 |
| 33 | 7.3 | 7.6 | 53.29 | 57.76 | 55.48 |
| 34 | 8 | 8.2 | 64 | 67.24 | 65.6 |
| 35 | 8 | 7.5 | 64 | 56.25 | 60 |
| 36 | 7.3 | 6.9 | 53.29 | 47.61 | 50.37 |
| 37 | 7.3 | 6.6 | 53.29 | 43.56 | 48.18 |
| 38 | 7.3 | 7 | 53.29 | 49 | 51.1 |
| 39 | 7.3 | 8.1 | 53.29 | 65.61 | 59.13 |
| 40 | 6.7 | 6.6 | 44.89 | 43.56 | 44.22 |
| 41 | 8 | 6.9 | 64 | 47.61 | 55.2 |

| | | | | | |
|----|--------------|------------|----------------|--------------|-------------|
| 42 | 7.3 | 8.1 | 53.29 | 65.61 | 59.13 |
| 43 | 7.3 | 7.2 | 53.29 | 51.84 | 52.56 |
| 44 | 6.7 | 6.7 | 44.89 | 44.89 | 44.89 |
| 45 | 7.3 | 7.1 | 53.29 | 50.41 | 51.83 |
| 46 | 8 | 6.9 | 64 | 47.61 | 55.2 |
| 47 | 7.3 | 6.5 | 53.29 | 42.25 | 47.45 |
| 48 | 7.3 | 7.5 | 53.29 | 56.25 | 54.75 |
| 49 | 8 | 8.2 | 64 | 67.24 | 65.6 |
| 50 | 7.3 | 7.4 | 53.29 | 54.76 | 54.02 |
| 51 | 7.3 | 7 | 53.29 | 49 | 51.1 |
| 52 | 7.3 | 6.8 | 53.29 | 46.24 | 49.64 |
| 53 | 6.7 | 7.5 | 44.89 | 56.25 | 50.25 |
| 54 | 8 | 7.2 | 64 | 51.84 | 57.6 |
| 55 | 6.7 | 7 | 44.89 | 49 | 46.9 |
| 56 | 7.3 | 6.6 | 53.29 | 43.56 | 48.18 |
| 57 | 7.3 | 7.4 | 53.29 | 54.76 | 54.02 |
| 58 | 6.7 | 6.3 | 44.89 | 39.69 | 42.21 |
| 59 | 7.3 | 6.8 | 53.29 | 46.24 | 49.64 |
| 60 | 8 | 7.5 | 64 | 56.25 | 60 |
| N= | $\Sigma X =$ | ΣY | $\Sigma X^2 =$ | ΣY^2 | ΣXY |
| 60 | 446.8 | 434.7 | 3340.62 | 3169.67 | 3242.74 |

$$\frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{N}}{\sqrt{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N} \right] \left[\Sigma Y^2 - \frac{(\Sigma Y)^2}{N} \right]}}$$

$$\begin{aligned}
&= \frac{3242.74 - \frac{(446.8)(434.7)}{60}}{\sqrt{\left[3340.62 - \frac{(446.8)^2}{60}\right] \left[3169.67 - \frac{(434.7)^2}{60}\right]}} \\
&= \frac{3242.74 - \frac{194223.96}{60}}{\sqrt{\left[3340.62 - \frac{199630.24}{60}\right] \left[3169.67 - \frac{188964.09}{60}\right]}} \\
&= \frac{3242.74 - 3237.07}{\sqrt{[3340.62 - 3327.17] [3169.67 - 3149.40]}} \\
&= \frac{5.67}{\sqrt{[13.45] [20.27]}} \\
&= \frac{5.67}{\sqrt{272.63}} \\
&= \frac{5.67}{16.51}
\end{aligned}$$

$$r_o = 0.3434$$

Appendix 3

Data of the correlation between students' speaking skill and student's attitude

| No. | X | Y ₂ | X ² | Y ₂ ² | X Y |
|-----|-----|----------------|----------------|-----------------------------|-------|
| 1. | 8 | 7.3 | 64 | 53.29 | 58.4 |
| 2. | 6.7 | 6.7 | 44.89 | 44.89 | 44.89 |
| 3 | 7.3 | 8.3 | 53.29 | 68.89 | 60.59 |
| 4 | 8 | 7.7 | 64 | 59.29 | 61.6 |
| 5. | 8 | 7.8 | 64 | 60.84 | 62.4 |
| 6. | 8 | 8.1 | 64 | 65.61 | 64.8 |
| 7. | 7.3 | 7.8 | 53.29 | 60.84 | 56.94 |
| 8. | 8 | 8.7 | 64 | 75.69 | 69.6 |
| 9. | 7.3 | 8.1 | 53.29 | 65.61 | 59.13 |
| 10. | 8 | 7.6 | 64 | 57.76 | 60.8 |
| 11. | 6.7 | 6.3 | 44.89 | 39.69 | 42.21 |
| 12. | 7.3 | 8 | 53.29 | 64 | 58.4 |
| 13. | 8 | 7.7 | 64 | 59.29 | 61.6 |
| 14. | 8 | 7.6 | 64 | 57.76 | 60.8 |
| 15. | 7.3 | 8.1 | 53.29 | 65.61 | 59.13 |
| 16. | 8 | 8.1 | 64 | 65.61 | 64.8 |
| 17. | 8 | 8.2 | 64 | 67.24 | 65.6 |
| 18. | 7.3 | 7.9 | 53.29 | 62.41 | 57.67 |
| 19. | 7.3 | 7.2 | 53.29 | 51.84 | 52.56 |
| 20. | 8 | 7.4 | 64 | 54.76 | 59.2 |
| 21 | 8 | 7.8 | 64 | 60.84 | 62.4 |

| | | | | | |
|----|-----|-----|-------|-------|-------|
| 22 | 6.7 | 7 | 44.89 | 49 | 46.9 |
| 23 | 8 | 7.9 | 64 | 62.41 | 63.2 |
| 24 | 8 | 8.1 | 64 | 65.61 | 64.8 |
| 25 | 7.3 | 7.6 | 53.29 | 57.76 | 55.48 |
| 26 | 6.7 | 7 | 44.89 | 49 | 46.9 |
| 27 | 7.3 | 8 | 53.29 | 64 | 58.4 |
| 28 | 6.7 | 6.5 | 44.89 | 42.25 | 43.55 |
| 29 | 7.3 | 7.5 | 53.29 | 56.25 | 54.75 |
| 30 | 8 | 7.6 | 64 | 57.76 | 60.8 |
| 31 | 6.7 | 6.7 | 44.89 | 44.89 | 44.89 |
| 32 | 7.3 | 8.7 | 53.29 | 75.69 | 59.13 |
| 33 | 7.3 | 7.5 | 53.29 | 56.25 | 54.75 |
| 34 | 8 | 7.7 | 64 | 59.29 | 61.6 |
| 35 | 8 | 8.3 | 64 | 68.89 | 66.4 |
| 36 | 7.3 | 7.9 | 53.29 | 62.41 | 57.67 |
| 37 | 7.3 | 7.2 | 53.29 | 51.84 | 52.56 |
| 38 | 7.3 | 7 | 53.29 | 49 | 51.1 |
| 39 | 7.3 | 7.6 | 53.29 | 57.76 | 55.48 |
| 40 | 6.7 | 7 | 44.89 | 49 | 46.9 |
| 41 | 8 | 8.8 | 64 | 77.44 | 70.4 |
| 42 | 7.3 | 7.5 | 53.29 | 56.25 | 54.75 |
| 43 | 7.3 | 7.7 | 53.29 | 59.29 | 56.21 |
| 44 | 6.7 | 6.5 | 44.89 | 42.25 | 43.55 |
| 45 | 7.3 | 8 | 53.29 | 64 | 58.4 |

| | | | | | |
|----|--------------|------------|----------------|--------------|-------------|
| 46 | 8 | 7.3 | 64 | 53.29 | 58.4 |
| 47 | 7.3 | 7.5 | 53.29 | 56.25 | 54.75 |
| 48 | 7.3 | 7.2 | 53.29 | 51.84 | 52.56 |
| 49 | 8 | 7.6 | 64 | 57.76 | 60.8 |
| 50 | 7.3 | 7.3 | 53.29 | 53.29 | 53.29 |
| 51 | 7.3 | 8.5 | 53.29 | 72.25 | 62.05 |
| 52 | 7.3 | 6.6 | 53.29 | 43.56 | 48.18 |
| 53 | 6.7 | 7 | 44.89 | 49 | 46.9 |
| 54 | 8 | 7.2 | 64 | 51.84 | 57.6 |
| 55 | 6.7 | 6.7 | 44.89 | 44.89 | 44.89 |
| 56 | 7.3 | 7.6 | 53.29 | 57.76 | 55.48 |
| 57 | 7.3 | 7 | 53.29 | 49 | 51.1 |
| 58 | 6.7 | 7.4 | 44.89 | 54.76 | 49.58 |
| 59 | 7.3 | 7.2 | 53.29 | 51.84 | 52.56 |
| 60 | 8 | 8.3 | 64 | 68.89 | 66.4 |
| N= | $\Sigma X =$ | ΣY | $\Sigma X^2 =$ | ΣY^2 | ΣXY |
| 60 | 446.8 | 454.1 | 3340.62 | 3456.27 | 3386.63 |

$$\begin{aligned}
 r_o &= \frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{N}}{\sqrt{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N}\right] \left[\Sigma Y^2 - \frac{(\Sigma Y)^2}{N}\right]}} \\
 &= \frac{3386.63 - \frac{(446.8)(454.1)}{60}}{\sqrt{\left[3340.62 - \frac{(446.8)^2}{60}\right] \left[3456.27 - \frac{(454.1)^2}{60}\right]}} \\
 &= \frac{3386.63 - \frac{202891.88}{60}}{\sqrt{\left[3340.62 - \frac{199630.24}{60}\right] \left[3456.27 - \frac{206206.81}{60}\right]}} \\
 &= \frac{3386.63 - 3381.53}{\sqrt{[3340.62 - 3327.17] [3456.27 - 3436.78]}}
 \end{aligned}$$

$$\begin{aligned} &= \frac{5.1}{\sqrt{[13.45] 19.49}} \\ &= \frac{5.1}{\sqrt{262.14}} \\ &= \frac{5.1}{13.73} \\ ro &= 0.3714 \end{aligned}$$

Appendix 4

Mean score of students' speaking skill and their psychological factors

| No | Participants | Speaking skill (X) | Psychological factors (Y) | |
|----|--------------|-----------------------|---------------------------|-------------------------|
| | | | Motivation Y ₁ | Attitude Y ₂ |
| 1 | S1 | 8 | 7.1 | 7.3 |
| 2 | S2 | 6.7 | 6.6 | 6.7 |
| 3 | S3 | 7.3 | 7.9 | 8.3 |
| 4 | S4 | 8 | 7.4 | 7.7 |
| 5 | S5 | 8 | 7.8 | 7.8 |
| 6 | S6 | 8 | 8.1 | 8.1 |
| 7 | S7 | 7.3 | 7.8 | 7.8 |
| 8 | S8 | 8 | 8 | 8.7 |
| 9 | S9 | 7.3 | 7.5 | 8.1 |
| 10 | S10 | 8 | 6.8 | 7.6 |
| 11 | S11 | 6.7 | 6.1 | 6.3 |
| 12 | S12 | 7.3 | 6.6 | 8 |
| 13 | S13 | 8 | 7.4 | 7.7 |
| 14 | S14 | 8 | 8 | 7.6 |
| 15 | S15 | 7.3 | 7.7 | 8.1 |
| 16 | S16 | 8 | 8.2 | 8.1 |
| 17 | S17 | 8 | 7 | 8.2 |
| 18 | S18 | 7.3 | 7.3 | 7.9 |
| 19 | S19 | 7.3 | 7 | 7.2 |
| 20 | S20 | 8 | 7.2 | 7.4 |
| 21 | S21 | 8 | 7.1 | 7.8 |
| 22 | S22 | 6.7 | 6 | 7 |
| 23 | S23 | 8 | 8.1 | 7.9 |
| 24 | S24 | 8 | 7 | 8.1 |
| 25 | S25 | 7.3 | 8 | 7.6 |
| 26 | S26 | 6.7 | 6.6 | 7 |
| 27 | 27 | 7.3 | 8 | 8 |
| 28 | S28 | 6.7 | 7 | 6.5 |
| 29 | S29 | 7.3 | 8 | 7.5 |

| | | | | |
|-------|-----|-------|-------|-------|
| 30 | S30 | 8 | 7.2 | 7.6 |
| 31 | S31 | 6.7 | 6.5 | 6.7 |
| 32 | S32 | 7.3 | 6.6 | 8.7 |
| 33 | S33 | 7.3 | 7.6 | 7.5 |
| 34 | S34 | 8 | 8.2 | 7.7 |
| 35 | S35 | 8 | 7.5 | 8.3 |
| 36 | S36 | 7.3 | 6.9 | 7.9 |
| 37 | S37 | 7.3 | 6.6 | 7.2 |
| 38 | S38 | 7.3 | 7 | 7 |
| 39 | S39 | 7.3 | 8.1 | 7.6 |
| 40 | S40 | 6.7 | 6.6 | 7 |
| 41 | S41 | 8 | 6.9 | 8.8 |
| 42 | S42 | 7.3 | 8.1 | 7.5 |
| 43 | S43 | 7.3 | 7.2 | 7.7 |
| 44 | S44 | 6.7 | 6.7 | 6.5 |
| 45 | S45 | 7.3 | 7.1 | 8 |
| 46 | S46 | 8 | 6.9 | 7.3 |
| 47 | S47 | 7.3 | 6.5 | 7.5 |
| 48 | S48 | 7.3 | 7.5 | 7.2 |
| 49 | S49 | 8 | 8.2 | 7.6 |
| 50 | S50 | 7.3 | 7.4 | 7.3 |
| 51 | S51 | 7.3 | 7 | 8.5 |
| 52 | S52 | 7.3 | 6.8 | 6.6 |
| 53 | S53 | 6.7 | 7.5 | 7 |
| 54 | S54 | 8 | 7.2 | 7.2 |
| 55 | S55 | 6.7 | 7 | 6.7 |
| 56 | S56 | 7.3 | 6.6 | 7.6 |
| 57 | S57 | 7.3 | 7.4 | 7 |
| 58 | S58 | 6.7 | 6.3 | 7.4 |
| 59 | S59 | 7.3 | 6.8 | 7.2 |
| 60 | S60 | 8 | 7.5 | 8.3 |
| Total | | 446.8 | 434.7 | 454.1 |

a. Scores of means variables X

$$\bar{X} = \frac{\sum X}{N} = \frac{446.8}{60} = 7.45$$

b. Scores of means variable Y₁

$$\bar{X} = \frac{\Sigma Y}{N} = \frac{434.7}{60} = 7.25$$

c. Scores of means variable Y_2

$$\bar{X} = \frac{\Sigma Y}{N} = \frac{454.1}{60} = 7.57$$

Appendix 5

The students speaking skill

| No. | Pronunciation | Vocabulary | Grammar | X |
|-----|---------------|------------|---------|-----|
| 1 | 8 | 8 | 8 | 8 |
| 2 | 6 | 6 | 8 | 6.7 |
| 3 | 8 | 8 | 6 | 7.3 |
| 4 | 8 | 8 | 8 | 8 |
| 5 | 8 | 8 | 8 | 8 |
| 6 | 6 | 8 | 10 | 8 |
| 7 | 8 | 6 | 8 | 7.3 |
| 8 | 8 | 6 | 10 | 8 |
| 9 | 8 | 8 | 6 | 7.3 |
| 10 | 10 | 8 | 6 | 8 |
| 11 | 6 | 6 | 8 | 6.7 |
| 12 | 10 | 6 | 6 | 7.3 |
| 13 | 8 | 10 | 6 | 8 |
| 14 | 8 | 8 | 8 | 8 |
| 15 | 6 | 8 | 8 | 7.3 |
| 16 | 8 | 8 | 8 | 8 |
| 17 | 8 | 10 | 6 | 8 |
| 18 | 6 | 8 | 8 | 7.3 |
| 19 | 8 | 6 | 8 | 7.3 |
| 20 | 6 | 8 | 10 | 8 |
| 21 | 8 | 8 | 8 | 8 |
| 22 | 6 | 6 | 8 | 6.7 |
| 23 | 10 | 6 | 8 | 8 |
| 24 | 8 | 10 | 6 | 8 |
| 25 | 8 | 8 | 6 | 7.3 |
| 26 | 8 | 6 | 6 | 6.7 |
| 27 | 8 | 8 | 6 | 7.3 |
| 28 | 8 | 6 | 6 | 6.7 |
| 29 | 8 | 6 | 8 | 7.3 |
| 30 | 8 | 8 | 8 | 8 |

| | | | | |
|--------------|---|----|---|--------------|
| 31 | 6 | 8 | 6 | 6.7 |
| 32 | 8 | 6 | 8 | 7.3 |
| 33 | 8 | 8 | 6 | 7.3 |
| 34 | 8 | 8 | 8 | 8 |
| 35 | 8 | 8 | 8 | 8 |
| 36 | 8 | 6 | 8 | 7.3 |
| 37 | 6 | 8 | 8 | 7.3 |
| 38 | 6 | 8 | 8 | 7.3 |
| 39 | 8 | 8 | 6 | 7.3 |
| 40 | 8 | 6 | 6 | 6.7 |
| 41 | 8 | 8 | 8 | 8 |
| 42 | 8 | 8 | 6 | 7.3 |
| 43 | 8 | 6 | 8 | 7.3 |
| 44 | 6 | 6 | 8 | 6.7 |
| 45 | 8 | 8 | 6 | 7.3 |
| 46 | 8 | 8 | 8 | 8 |
| 47 | 8 | 6 | 8 | 7.3 |
| 48 | 8 | 8 | 6 | 7.3 |
| 49 | 8 | 10 | 6 | 8 |
| 50 | 8 | 8 | 6 | 7.3 |
| 51 | 6 | 8 | 8 | 7.3 |
| 52 | 6 | 8 | 8 | 7.3 |
| 53 | 6 | 8 | 6 | 6.7 |
| 54 | 8 | 8 | 8 | 8 |
| 55 | 8 | 6 | 6 | 6.7 |
| 56 | 8 | 6 | 8 | 7.3 |
| 57 | 8 | 8 | 6 | 7.3 |
| 58 | 6 | 6 | 8 | 6.7 |
| 59 | 6 | 8 | 8 | 7.3 |
| 60 | 6 | 10 | 8 | 8 |
| Total | | | | 446.8 |

Appendix 6

The students' motivation

| No | SA | A | N | D | SD |
|-----|----|----|----|----|----|
| 1. | 22 | 15 | 12 | 7 | 4 |
| 2. | 17 | 26 | 10 | 3 | 4 |
| 3. | 30 | 19 | 7 | 2 | 2 |
| 4. | 1 | 1 | 26 | 16 | 16 |
| 5. | 17 | 10 | 12 | 6 | 16 |
| 6. | 5 | 20 | 16 | 8 | 11 |
| 7. | 14 | 41 | 4 | 0 | 1 |
| 8. | 19 | 9 | 6 | 13 | 13 |
| 9. | 0 | 4 | 7 | 22 | 27 |
| 10. | 21 | 28 | 8 | 2 | 1 |
| 11. | 5 | 10 | 23 | 12 | 10 |
| 12. | 19 | 12 | 24 | 5 | 0 |
| 13. | 19 | 31 | 8 | 2 | 0 |
| 14. | 15 | 29 | 14 | 2 | 0 |
| 15. | 1 | 6 | 25 | 18 | 10 |
| 16. | 22 | 24 | 9 | 3 | 2 |
| 17. | 13 | 22 | 6 | 10 | 9 |
| 18. | 24 | 14 | 12 | 8 | 2 |
| 19. | 1 | 7 | 23 | 20 | 9 |
| 20. | 8 | 7 | 20 | 15 | 10 |

Appendix 7

The students' attitude

| No | SA | A | N | D | SD |
|-----|----|----|----|----|----|
| 1. | 21 | 25 | 11 | 3 | 0 |
| 2. | 1 | 2 | 7 | 29 | 21 |
| 3. | 0 | 0 | 8 | 23 | 29 |
| 4. | 15 | 19 | 19 | 6 | 1 |
| 5. | 7 | 12 | 22 | 7 | 12 |
| 6. | 3 | 5 | 17 | 21 | 14 |
| 7. | 1 | 9 | 14 | 22 | 14 |
| 8. | 16 | 13 | 20 | 9 | 2 |
| 9. | 19 | 22 | 14 | 2 | 3 |
| 10. | 12 | 12 | 16 | 19 | 1 |
| 11. | 21 | 24 | 8 | 7 | 0 |
| 12. | 15 | 21 | 21 | 1 | 2 |
| 13. | 0 | 2 | 4 | 16 | 38 |
| 14. | 0 | 1 | 3 | 26 | 30 |
| 15. | 19 | 20 | 19 | 2 | 0 |
| 16. | 0 | 4 | 11 | 22 | 23 |
| 17. | 12 | 15 | 14 | 11 | 8 |
| 18. | 12 | 21 | 17 | 9 | 1 |
| 19. | 18 | 25 | 10 | 5 | 2 |
| 20. | 6 | 5 | 14 | 16 | 19 |

Appendix 8

The analysis students' motivation

| No. | Students | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|-----|----------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| 1 | S1 | 3 | 5 | 5 | 3 | 3 | 3 | 5 | 2 | 4 | 4 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 2 | S2 | 3 | 3 | 4 | 3 | 5 | 2 | 4 | 1 | 4 | 4 | 3 | 3 | 4 | 4 | 3 | 4 | 2 |
| 3 | S3 | 5 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 5 | 4 | 2 | 5 | 3 | 5 | 5 | 3 | 4 |
| 4 | S4 | 3 | 1 | 5 | 5 | 5 | 1 | 4 | 1 | 4 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 1 |
| 5 | S5 | 5 | 5 | 4 | 4 | 1 | 3 | 3 | 2 | 5 | 4 | 3 | 4 | 5 | 4 | 5 | 5 | 1 |
| 6 | S6 | 5 | 4 | 5 | 5 | 2 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 3 | 2 | 4 | 5 |
| 7 | S7 | 5 | 4 | 3 | 5 | 3 | 3 | 4 | 5 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 5 | 3 |
| 8 | S8 | 3 | 4 | 3 | 4 | 5 | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 4 | 5 | 3 | 5 |
| 9 | S9 | 4 | 4 | 5 | 3 | 2 | 3 | 4 | 3 | 4 | 5 | 3 | 4 | 4 | 4 | 3 | 3 | 3 |
| 10 | S10 | 4 | 5 | 4 | 3 | 1 | 2 | 4 | 1 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 5 | 4 |
| 11 | S11 | 1 | 4 | 4 | 3 | 2 | 2 | 4 | 4 | 3 | 4 | 5 | 3 | 3 | 4 | 3 | 4 | 2 |
| 12 | S12 | 3 | 5 | 5 | 5 | 1 | 2 | 4 | 1 | 5 | 5 | 1 | 3 | 5 | 5 | 2 | 4 | 1 |
| 13 | S13 | 5 | 5 | 5 | 3 | 1 | 1 | 4 | 1 | 4 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 1 |
| 14 | S14 | 5 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 3 | 4 | 5 | 3 | 4 | 4 | 3 | 4 | 5 |
| 15 | S15 | 2 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 1 | 3 | 5 | 4 | 3 | 5 | 1 |
| 16 | S16 | 5 | 4 | 5 | 5 | 4 | 3 | 4 | 5 | 4 | 4 | 3 | 4 | 5 | 4 | 4 | 5 | 4 |
| 17 | S17 | 4 | 5 | 5 | 3 | 1 | 2 | 4 | 1 | 5 | 5 | 1 | 3 | 5 | 5 | 2 | 5 | 1 |
| 18 | S18 | 5 | 4 | 5 | 4 | 2 | 3 | 5 | 3 | 4 | 5 | 2 | 5 | 4 | 4 | 4 | 4 | 2 |
| 19 | S19 | 4 | 5 | 4 | 3 | 1 | 2 | 4 | 1 | 5 | 4 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 20 | S20 | 2 | 2 | 3 | 3 | 5 | 3 | 4 | 5 | 4 | 4 | 2 | 4 | 4 | 5 | 4 | 4 | 4 |
| 21 | S21 | 2 | 4 | 5 | 4 | 3 | 3 | 5 | 2 | 4 | 5 | 4 | 5 | 5 | 4 | 4 | 2 | 2 |
| 22 | S22 | 3 | 4 | 2 | 5 | 2 | 2 | 4 | 3 | 3 | 4 | 4 | 2 | 4 | 3 | 3 | 4 | 1 |
| 23 | S23 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 2 | 4 | 5 | 4 | 5 | 3 | 3 | 4 | 3 | 4 |
| 24 | S24 | 5 | 5 | 4 | 3 | 1 | 2 | 4 | 1 | 5 | 5 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 25 | S25 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 3 | 4 | 4 | 4 | 3 | 2 | 4 | 4 |
| 26 | S26 | 3 | 1 | 5 | 3 | 3 | 4 | 1 | 4 | 5 | 1 | 4 | 5 | 3 | 3 | 1 | 2 | 5 |
| 27 | S27 | 4 | 4 | 4 | 5 | 1 | 5 | 4 | 1 | 5 | 5 | 2 | 5 | 4 | 5 | 5 | 5 | 2 |
| 28 | S28 | 5 | 5 | 4 | 3 | 1 | 2 | 4 | 1 | 5 | 5 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 29 | S29 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 4 | 5 | 4 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 30 | S30 | 3 | 3 | 4 | 3 | 2 | 4 | 5 | 1 | 5 | 5 | 2 | 5 | 5 | 5 | 3 | 5 | 1 |
| 31 | S31 | 4 | 4 | 3 | 3 | 3 | 2 | 4 | 5 | 2 | 2 | 5 | 3 | 3 | 3 | 3 | 4 | 4 |
| 32 | S32 | 5 | 3 | 5 | 3 | 3 | 2 | 3 | 4 | 4 | 3 | 4 | 5 | 2 | 2 | 5 | 3 | 3 |

| | | | | | | | | | | | | | | | | | | |
|-----------------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | S33 | 5 | 4 | 3 | 3 | 3 | 3 | 4 | 5 | 3 | 4 | 5 | 5 | 4 | 4 | 3 | 4 | 3 |
| 34 | S34 | 4 | 4 | 5 | 5 | 3 | 2 | 4 | 5 | 5 | 5 | 5 | 3 | 5 | 5 | 3 | 5 | 5 |
| 35 | S35 | 5 | 5 | 5 | 4 | 5 | 4 | 4 | 2 | 4 | 4 | 2 | 2 | 5 | 4 | 4 | 4 | 2 |
| 36 | S36 | 5 | 5 | 4 | 3 | 1 | 2 | 4 | 1 | 5 | 4 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 37 | S37 | 2 | 2 | 5 | 2 | 3 | 2 | 4 | 5 | 4 | 5 | 5 | 3 | 5 | 5 | 3 | 1 | 1 |
| 38 | S38 | 1 | 4 | 1 | 5 | 4 | 1 | 5 | 4 | 5 | 3 | 4 | 5 | 5 | 3 | 2 | 4 | 4 |
| 39 | S39 | 4 | 4 | 4 | 3 | 2 | 5 | 4 | 2 | 5 | 5 | 3 | 5 | 4 | 3 | 4 | 4 | 5 |
| 40 | S40 | 4 | 3 | 5 | 3 | 2 | 4 | 5 | 1 | 4 | 5 | 2 | 4 | 4 | 3 | 3 | 5 | 1 |
| 41 | S41 | 4 | 3 | 4 | 5 | 3 | 5 | 3 | 4 | 5 | 3 | 5 | 4 | 3 | 3 | 2 | 1 | 5 |
| 42 | S42 | 5 | 4 | 4 | 3 | 2 | 5 | 4 | 2 | 5 | 5 | 3 | 5 | 4 | 3 | 4 | 4 | 5 |
| 43 | S43 | 1 | 4 | 5 | 5 | 5 | 2 | 4 | 5 | 5 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 2 |
| 44 | S44 | 2 | 4 | 3 | 5 | 5 | 3 | 4 | 3 | 3 | 4 | 2 | 5 | 3 | 4 | 3 | 4 | 2 |
| 45 | S45 | 4 | 4 | 4 | 4 | 2 | 2 | 4 | 4 | 4 | 5 | 2 | 4 | 4 | 4 | 4 | 4 | 2 |
| 46 | S46 | 5 | 5 | 4 | 3 | 1 | 2 | 4 | 1 | 5 | 4 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 47 | S47 | 3 | 2 | 2 | 4 | 3 | 3 | 4 | 3 | 2 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 3 |
| 48 | S48 | 5 | 5 | 5 | 4 | 1 | 1 | 5 | 1 | 4 | 3 | 3 | 5 | 5 | 5 | 4 | 5 | 1 |
| 49 | S49 | 5 | 3 | 5 | 4 | 5 | 3 | 4 | 5 | 3 | 5 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| 50 | S50 | 2 | 4 | 5 | 5 | 5 | 3 | 4 | 5 | 5 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 2 |
| 51 | S51 | 4 | 4 | 1 | 4 | 1 | 4 | 4 | 5 | 4 | 4 | 3 | 2 | 4 | 4 | 5 | 5 | 4 |
| 52 | S52 | 4 | 5 | 4 | 3 | 1 | 2 | 4 | 1 | 5 | 4 | 3 | 3 | 4 | 4 | 3 | 5 | 2 |
| 53 | S53 | 5 | 5 | 5 | 4 | 1 | 1 | 5 | 1 | 4 | 3 | 3 | 5 | 5 | 5 | 4 | 5 | 1 |
| 54 | S54 | 3 | 4 | 5 | 5 | 1 | 4 | 5 | 4 | 5 | 4 | 3 | 3 | 5 | 5 | 4 | 5 | 1 |
| 55 | S55 | 4 | 1 | 5 | 3 | 3 | 2 | 5 | 1 | 5 | 5 | 3 | 4 | 5 | 5 | 3 | 3 | 2 |
| 56 | S56 | 3 | 3 | 5 | 3 | 5 | 3 | 4 | 2 | 2 | 3 | 4 | 5 | 3 | 4 | 3 | 4 | 2 |
| 57 | S57 | 4 | 5 | 5 | 3 | 4 | 2 | 5 | 1 | 5 | 5 | 2 | 4 | 5 | 5 | 3 | 3 | 2 |
| 58 | S58 | 3 | 3 | 5 | 1 | 1 | 3 | 4 | 4 | 3 | 4 | 4 | 3 | 2 | 4 | 4 | 3 | 2 |
| 59 | S59 | 1 | 1 | 3 | 5 | 5 | 5 | 3 | 2 | 2 | 3 | 5 | 3 | 4 | 2 | 5 | 2 | 5 |
| 60 | S60 | 2 | 3 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 2 | 4 | 3 | 4 | 3 | 5 | 4 | 3 |
| Total | | | | | | | | | | | | | | | | | | |
| Ratarata | | | | | | | | | | | | | | | | | | |

Appendix 9

The analysis students' attitude

| No. | Students | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|-----|----------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| 1 | S1 | 3 | 4 | 3 | 4 | 3 | 3 | 5 | 4 | 1 | 4 | 3 | 3 | 5 | 5 | 3 | 4 | 2 |
| 2 | S2 | 2 | 2 | 4 | 4 | 2 | 3 | 4 | 4 | 3 | 4 | 4 | 1 | 4 | 4 | 3 | 3 | 3 |
| 3 | S3 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 3 | 4 | 5 | 5 | 4 | 3 | 3 | 4 |
| 4 | S4 | 5 | 4 | 4 | 3 | 2 | 4 | 3 | 2 | 5 | 3 | 4 | 4 | 5 | 5 | 4 | 4 | 4 |
| 5 | S5 | 5 | 5 | 5 | 4 | 3 | 4 | 5 | 3 | 3 | 2 | 4 | 4 | 5 | 4 | 4 | 4 | 2 |
| 6 | S6 | 4 | 5 | 4 | 3 | 3 | 3 | 4 | 5 | 5 | 3 | 3 | 5 | 4 | 4 | 4 | 4 | 5 |
| 7 | S7 | 5 | 4 | 4 | 5 | 3 | 2 | 3 | 3 | 4 | 3 | 5 | 5 | 5 | 5 | 4 | 4 | 4 |
| 8 | S8 | 5 | 3 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 3 | 4 | 4 | 5 | 5 | 4 |
| 9 | S9 | 4 | 5 | 4 | 5 | 4 | 4 | 2 | 4 | 5 | 5 | 3 | 3 | 4 | 4 | 4 | 2 | 5 |
| 10 | S10 | 5 | 5 | 3 | 4 | 3 | 3 | 5 | 4 | 1 | 4 | 3 | 3 | 5 | 5 | 3 | 4 | 2 |
| 11 | S11 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 3 | 4 | 4 | 5 | 4 | 4 | 3 | 2 | 2 |
| 12 | S12 | 5 | 4 | 5 | 4 | 3 | 1 | 4 | 3 | 5 | 4 | 3 | 3 | 5 | 5 | 5 | 5 | 3 |
| 13 | S13 | 4 | 4 | 5 | 3 | 2 | 4 | 3 | 2 | 5 | 3 | 5 | 4 | 4 | 5 | 4 | 4 | 1 |
| 14 | S14 | 4 | 5 | 5 | 3 | 2 | 5 | 3 | 4 | 5 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 1 |
| 15 | S15 | 5 | 4 | 4 | 3 | 5 | 5 | 3 | 3 | 5 | 5 | 3 | 4 | 5 | 4 | 3 | 3 | 5 |
| 16 | S16 | 4 | 4 | 4 | 3 | 5 | 3 | 5 | 5 | 4 | 2 | 4 | 4 | 5 | 5 | 3 | 5 | 5 |
| 17 | S17 | 3 | 4 | 5 | 3 | 2 | 4 | 5 | 5 | 4 | 3 | 4 | 3 | 5 | 4 | 5 | 5 | 4 |
| 18 | S18 | 4 | 4 | 5 | 4 | 5 | 2 | 4 | 5 | 3 | 2 | 3 | 5 | 5 | 5 | 5 | 5 | 3 |
| 19 | S19 | 3 | 3 | 3 | 4 | 3 | 3 | 5 | 4 | 1 | 4 | 3 | 3 | 5 | 5 | 3 | 4 | 2 |
| 20 | S20 | 5 | 4 | 5 | 3 | 1 | 3 | 3 | 2 | 5 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 2 |
| 21 | S21 | 4 | 4 | 5 | 5 | 5 | 1 | 4 | 4 | 2 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 2 |
| 22 | S22 | 4 | 4 | 4 | 4 | 3 | 4 | 2 | 3 | 3 | 2 | 4 | 4 | 5 | 4 | 4 | 4 | 2 |
| 23 | S23 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 4 | 4 | 3 |
| 24 | S24 | 5 | 5 | 4 | 4 | 3 | 4 | 2 | 5 | 5 | 2 | 4 | 4 | 5 | 4 | 4 | 4 | 5 |
| 25 | S25 | 5 | 5 | 4 | 1 | 3 | 3 | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 5 | 5 | 5 | 3 |
| 26 | S26 | 3 | 4 | 3 | 3 | 4 | 3 | 4 | 5 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 5 |
| 27 | S27 | 4 | 4 | 5 | 5 | 1 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 2 |
| 28 | S28 | 3 | 1 | 4 | 3 | 5 | 4 | 3 | 2 | 4 | 2 | 2 | 3 | 4 | 3 | 4 | 3 | 3 |
| 29 | S29 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 2 | 5 | 5 | 5 | 3 | 5 | 4 | 3 | 4 | 2 |
| 30 | S30 | 5 | 5 | 5 | 4 | 2 | 4 | 1 | 2 | 3 | 2 | 4 | 4 | 5 | 5 | 4 | 5 | 5 |
| 31 | S31 | 4 | 3 | 3 | 3 | 3 | 2 | 4 | 5 | 4 | 2 | 2 | 4 | 5 | 2 | 3 | 4 | 2 |

| | | | | | | | | | | | | | | | | | | |
|-----------------|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | S32 | 5 | 3 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 3 | 4 | 4 | 5 | 5 | 4 |
| 33 | S33 | 3 | 4 | 5 | 4 | 1 | 4 | 3 | 1 | 3 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 3 |
| 34 | S34 | 5 | 5 | 5 | 5 | 2 | 5 | 2 | 1 | 2 | 3 | 5 | 5 | 5 | 5 | 3 | 3 | 3 |
| 35 | S35 | 4 | 4 | 5 | 4 | 2 | 5 | 2 | 5 | 3 | 4 | 5 | 5 | 3 | 5 | 5 | 5 | 3 |
| 36 | S36 | 3 | 4 | 5 | 4 | 1 | 4 | 5 | 5 | 3 | 3 | 4 | 5 | 4 | 5 | 4 | 5 | 3 |
| 37 | S37 | 2 | 2 | 4 | 1 | 3 | 4 | 4 | 5 | 5 | 2 | 5 | 3 | 5 | 4 | 4 | 4 | 3 |
| 38 | S38 | 4 | 5 | 4 | 1 | 1 | 5 | 4 | 4 | 4 | 2 | 2 | 4 | 5 | 5 | 2 | 4 | 4 |
| 39 | S39 | 5 | 5 | 4 | 1 | 3 | 3 | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 5 | 5 | 5 | 3 |
| 40 | S40 | 4 | 4 | 5 | 4 | 2 | 2 | 2 | 2 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 2 | 4 |
| 41 | S41 | 4 | 5 | 5 | 3 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 3 | 4 | 4 |
| 42 | S42 | 4 | 4 | 4 | 1 | 3 | 5 | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 4 | 5 | 5 | 3 |
| 43 | S43 | 4 | 5 | 4 | 2 | 3 | 5 | 3 | 3 | 5 | 3 | 4 | 5 | 5 | 4 | 3 | 5 | 1 |
| 44 | S44 | 4 | 4 | 3 | 3 | 5 | 3 | 5 | 3 | 5 | 2 | 2 | 1 | 5 | 3 | 3 | 3 | 1 |
| 45 | S45 | 5 | 5 | 5 | 5 | 5 | 3 | 5 | 3 | 3 | 4 | 5 | 2 | 5 | 4 | 4 | 3 | 1 |
| 46 | S46 | 3 | 4 | 5 | 5 | 2 | 5 | 2 | 3 | 5 | 3 | 4 | 5 | 5 | 4 | 3 | 5 | 1 |
| 47 | S47 | 4 | 3 | 4 | 4 | 3 | 5 | 2 | 4 | 5 | 5 | 4 | 3 | 3 | 4 | 3 | 5 | 1 |
| 48 | S48 | 5 | 4 | 5 | 5 | 3 | 4 | 3 | 3 | 3 | 2 | 4 | 3 | 4 | 5 | 5 | 4 | 1 |
| 49 | S49 | 5 | 5 | 4 | 1 | 3 | 3 | 4 | 3 | 4 | 2 | 5 | 3 | 5 | 5 | 5 | 5 | 3 |
| 50 | S50 | 2 | 5 | 4 | 5 | 4 | 3 | 4 | 3 | 5 | 1 | 5 | 4 | 5 | 5 | 5 | 4 | 1 |
| 51 | S51 | 4 | 5 | 5 | 3 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 4 | 4 | 4 | 3 | 4 | 4 |
| 52 | S52 | 3 | 4 | 5 | 3 | 2 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 5 | 4 | 3 | 3 | 2 |
| 53 | S53 | 4 | 5 | 4 | 5 | 1 | 5 | 4 | 2 | 4 | 4 | 2 | 4 | 2 | 5 | 5 | 5 | 1 |
| 54 | S54 | 5 | 4 | 5 | 5 | 3 | 4 | 3 | 3 | 3 | 2 | 4 | 3 | 4 | 5 | 5 | 4 | 1 |
| 55 | S55 | 4 | 3 | 5 | 3 | 3 | 2 | 4 | 3 | 4 | 4 | 2 | 4 | 5 | 5 | 4 | 4 | 2 |
| 56 | S56 | 5 | 5 | 4 | 3 | 5 | 4 | 3 | 3 | 4 | 5 | 4 | 3 | 5 | 4 | 5 | 3 | 2 |
| 57 | S57 | 4 | 5 | 4 | 5 | 1 | 5 | 4 | 2 | 4 | 4 | 2 | 4 | 2 | 5 | 5 | 5 | 1 |
| 58 | S58 | 4 | 4 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 3 | 4 |
| 59 | S59 | 4 | 4 | 5 | 5 | 4 | 4 | 3 | 4 | 5 | 3 | 5 | 4 | 5 | 4 | 2 | 2 | 2 |
| 60 | S60 | 5 | 4 | 5 | 3 | 5 | 1 | 5 | 4 | 5 | 3 | 5 | 3 | 3 | 4 | 4 | 5 | 5 |
| Total | | | | | | | | | | | | | | | | | | |
| Ratarata | | | | | | | | | | | | | | | | | | |

Appendix 10

TABLE OF R TABLE

| <i>Df=N-2</i> | 0,1 | 0,05 | 0,02 | 0,01 | 0,001 |
|----------------------|------------|-------------|-------------|-------------|--------------|
| 1 | 0,9877 | 0,9969 | 0,9995 | 0,9999 | 1,0000 |
| 2 | 0,9000 | 0,9500 | 0,9800 | 0,9900 | 0,9990 |
| 3 | 0,8054 | 0,8783 | 0,9343 | 0,9587 | 0,9911 |
| 4 | 0,7293 | 0,8114 | 0,8822 | 0,9172 | 0,9741 |
| 5 | 0,6694 | 0,7545 | 0,8329 | 0,8745 | 0,9509 |
| 6 | 0,6215 | 0,7067 | 0,7887 | 0,8343 | 0,9249 |
| 7 | 0,5822 | 0,6664 | 0,7498 | 0,7977 | 0,8983 |
| 8 | 0,5494 | 0,6319 | 0,7155 | 0,7646 | 0,8721 |
| 9 | 0,5214 | 0,6021 | 0,6851 | 0,7348 | 0,8470 |
| 10 | 0,4973 | 0,5760 | 0,6581 | 0,7079 | 0,8233 |
| 11 | 0,4762 | 0,5529 | 0,6339 | 0,6835 | 0,8010 |
| 12 | 0,4575 | 0,5324 | 0,6120 | 0,6614 | 0,7800 |
| 13 | 0,4409 | 0,5140 | 0,5923 | 0,6411 | 0,7604 |
| 14 | 0,4259 | 0,4973 | 0,5742 | 0,6226 | 0,7419 |
| 15 | 0,4124 | 0,4821 | 0,5577 | 0,6055 | 0,7247 |
| 16 | 0,4000 | 0,4683 | 0,5425 | 0,5897 | 0,7084 |

| | | | | | |
|----|--------|--------|--------|--------|--------|
| 17 | 0,3887 | 0,4555 | 0,5285 | 0,5751 | 0,6932 |
| 18 | 0,3783 | 0,4438 | 0,5155 | 0,5614 | 0,6788 |
| 19 | 0,3687 | 0,4329 | 0,5034 | 0,5487 | 0,6652 |
| 20 | 0,3598 | 0,4227 | 0,4921 | 0,5368 | 0,6524 |
| 21 | 0,3515 | 0,4132 | 0,4815 | 0,5256 | 0,6402 |
| 22 | 0,3438 | 0,4044 | 0,4716 | 0,5151 | 0,6287 |
| 23 | 0,3365 | 0,3961 | 0,4622 | 0,5052 | 0,6178 |
| 24 | 0,3297 | 0,3882 | 0,4534 | 0,4958 | 0,6074 |
| 25 | 0,3233 | 0,3809 | 0,4451 | 0,4869 | 0,5974 |
| 26 | 0,3172 | 0,3739 | 0,4372 | 0,4785 | 0,5880 |
| 27 | 0,3115 | 0,3673 | 0,4297 | 0,4705 | 0,5790 |
| 28 | 0,3061 | 0,3610 | 0,4226 | 0,4629 | 0,5703 |
| 29 | 0,3009 | 0,3550 | 0,4158 | 0,4556 | 0,5620 |
| 30 | 0,2960 | 0,3494 | 0,4093 | 0,4487 | 0,5541 |
| 31 | 0,2913 | 0,3440 | 0,4032 | 0,4421 | 0,5465 |
| 32 | 0,2869 | 0,3388 | 0,3972 | 0,4357 | 0,5392 |
| 33 | 0,2826 | 0,3338 | 0,3916 | 0,4296 | 0,5322 |
| 34 | 0,2785 | 0,3291 | 0,3862 | 0,4238 | 0,5254 |
| 35 | 0,2746 | 0,3246 | 0,3810 | 0,4182 | 0,5189 |
| 36 | 0,2709 | 0,3202 | 0,3760 | 0,4128 | 0,5126 |
| 37 | 0,2673 | 0,3160 | 0,3712 | 0,4076 | 0,5066 |
| 38 | 0,2638 | 0,3120 | 0,3665 | 0,4026 | 0,5007 |

| | | | | | |
|----|--------|---------------|--------|--------|--------|
| 39 | 0,2605 | 0,3081 | 0,3621 | 0,3978 | 0,4950 |
| 40 | 0,2573 | 0,3044 | 0,3578 | 0,3932 | 0,4896 |
| 41 | 0,2542 | 0,3008 | 0,3536 | 0,3887 | 0,4843 |
| 42 | 0,2512 | 0,2973 | 0,3496 | 0,3843 | 0,4791 |
| 43 | 0,2483 | 0,2940 | 0,3457 | 0,3801 | 0,4742 |
| 44 | 0,2455 | 0,2907 | 0,3420 | 0,3761 | 0,4694 |
| 45 | 0,2429 | 0,2876 | 0,3384 | 0,3721 | 0,4647 |
| 46 | 0,2403 | 0,2845 | 0,3348 | 0,3683 | 0,4601 |
| 47 | 0,2377 | 0,2816 | 0,3314 | 0,3646 | 0,4557 |
| 48 | 0,2353 | 0,2787 | 0,3281 | 0,3610 | 0,4514 |
| 49 | 0,2329 | 0,2759 | 0,3249 | 0,3575 | 0,4473 |
| 50 | 0,2306 | 0,2732 | 0,3218 | 0,3542 | 0,4432 |
| 51 | 0,2284 | 0,2706 | 0,3188 | 0,3509 | 0,4393 |
| 52 | 0,2262 | 0,2681 | 0,3158 | 0,3477 | 0,4354 |
| 53 | 0,2241 | 0,2656 | 0,3129 | 0,3445 | 0,4317 |
| 54 | 0,2221 | 0,2632 | 0,3102 | 0,3415 | 0,4280 |
| 55 | 0,2201 | 0,2609 | 0,3074 | 0,3385 | 0,4244 |
| 56 | 0,2181 | 0,2586 | 0,3048 | 0,3357 | 0,4210 |
| 57 | 0,2162 | 0,2564 | 0,3022 | 0,3328 | 0,4176 |
| 58 | 0,2144 | 0,2542 | 0,2997 | 0,3301 | 0,4143 |
| 59 | 0,2126 | 0,2521 | 0,2972 | 0,3274 | 0,4110 |
| 60 | 0,2108 | 0,2500 | 0,2948 | 0,3248 | 0,4079 |

| F = n-2 | | | | | |
|---------|--------|--------|--------|--------|--------|
| | 0,1 | 0,05 | 0,02 | 0,01 | 0,001 |
| 1 | 0,9877 | 0,9969 | 0,9995 | 0,9999 | 1,0000 |
| 2 | 0,9000 | 0,9500 | 0,9800 | 0,9900 | 0,9990 |
| 3 | 0,8054 | 0,8783 | 0,9343 | 0,9587 | 0,9911 |
| 4 | 0,7293 | 0,8114 | 0,8822 | 0,9172 | 0,9741 |
| 5 | 0,6694 | 0,7545 | 0,8329 | 0,8745 | 0,9509 |
| 6 | 0,6215 | 0,7067 | 0,7887 | 0,8343 | 0,9249 |
| 7 | 0,5822 | 0,6664 | 0,7498 | 0,7977 | 0,8983 |
| 8 | 0,5494 | 0,6319 | 0,7155 | 0,7646 | 0,8721 |
| 9 | 0,5214 | 0,6021 | 0,6851 | 0,7348 | 0,8470 |
| 10 | 0,4973 | 0,5760 | 0,6581 | 0,7079 | 0,8233 |
| 11 | 0,4762 | 0,5529 | 0,6339 | 0,6835 | 0,8010 |
| 12 | 0,4575 | 0,5324 | 0,6120 | 0,6614 | 0,7800 |
| 13 | 0,4409 | 0,5140 | 0,5923 | 0,6411 | 0,7604 |
| 14 | 0,4259 | 0,4973 | 0,5742 | 0,6226 | 0,7419 |
| 15 | 0,4124 | 0,4821 | 0,5577 | 0,6055 | 0,7247 |
| 16 | 0,4000 | 0,4683 | 0,5425 | 0,5897 | 0,7084 |
| 17 | 0,3887 | 0,4555 | 0,5285 | 0,5751 | 0,6932 |

| | | | | | |
|----|--------|--------|--------|--------|--------|
| 18 | 0,3783 | 0,4438 | 0,5155 | 0,5614 | 0,6788 |
| 19 | 0,3687 | 0,4329 | 0,5034 | 0,5487 | 0,6652 |
| 20 | 0,3598 | 0,4227 | 0,4921 | 0,5368 | 0,6524 |
| 21 | 0,3515 | 0,4132 | 0,4815 | 0,5256 | 0,6402 |
| 22 | 0,3438 | 0,4044 | 0,4716 | 0,5151 | 0,6287 |
| 23 | 0,3365 | 0,3961 | 0,4622 | 0,5052 | 0,6178 |
| 24 | 0,3297 | 0,3882 | 0,4534 | 0,4958 | 0,6074 |
| 25 | 0,3233 | 0,3809 | 0,4451 | 0,4869 | 0,5974 |
| 26 | 0,3172 | 0,3739 | 0,4372 | 0,4785 | 0,5880 |
| 27 | 0,3115 | 0,3673 | 0,4297 | 0,4705 | 0,5790 |
| 28 | 0,3061 | 0,3610 | 0,4226 | 0,4629 | 0,5703 |
| 29 | 0,3009 | 0,3550 | 0,4158 | 0,4556 | 0,5620 |
| 30 | 0,2960 | 0,3494 | 0,4093 | 0,4487 | 0,5541 |
| 31 | 0,2913 | 0,3440 | 0,4032 | 0,4421 | 0,5465 |
| 32 | 0,2869 | 0,3388 | 0,3972 | 0,4357 | 0,5392 |
| 33 | 0,2826 | 0,3338 | 0,3916 | 0,4296 | 0,5322 |
| 34 | 0,2785 | 0,3291 | 0,3862 | 0,4238 | 0,5254 |
| 35 | 0,2746 | 0,3246 | 0,3810 | 0,4182 | 0,5189 |
| 36 | 0,2709 | 0,3202 | 0,3760 | 0,4128 | 0,5126 |

| | | | | | |
|----|--------|--------|--------|--------|--------|
| 37 | 0,2673 | 0,3160 | 0,3712 | 0,4076 | 0,5066 |
| 38 | 0,2638 | 0,3120 | 0,3665 | 0,4026 | 0,5007 |
| 39 | 0,2605 | 0,3081 | 0,3621 | 0,3978 | 0,4950 |
| 40 | 0,2573 | 0,3044 | 0,3578 | 0,3932 | 0,4896 |
| 41 | 0,2542 | 0,3008 | 0,3536 | 0,3887 | 0,4843 |
| 42 | 0,2512 | 0,2973 | 0,3496 | 0,3843 | 0,4791 |
| 43 | 0,2483 | 0,2940 | 0,3457 | 0,3801 | 0,4742 |
| 44 | 0,2455 | 0,2907 | 0,3420 | 0,3761 | 0,4694 |
| 45 | 0,2429 | 0,2876 | 0,3384 | 0,3721 | 0,4647 |
| 46 | 0,2403 | 0,2845 | 0,3348 | 0,3683 | 0,4601 |
| 47 | 0,2377 | 0,2816 | 0,3314 | 0,3646 | 0,4557 |
| 48 | 0,2353 | 0,2787 | 0,3281 | 0,3610 | 0,4514 |
| 49 | 0,2329 | 0,2759 | 0,3249 | 0,3575 | 0,4473 |
| 50 | 0,2306 | 0,2732 | 0,3218 | 0,3542 | 0,4432 |
| 51 | 0,2284 | 0,2706 | 0,3188 | 0,3509 | 0,4393 |
| 52 | 0,2262 | 0,2681 | 0,3158 | 0,3477 | 0,4354 |
| 53 | 0,2241 | 0,2656 | 0,3129 | 0,3445 | 0,4317 |
| 54 | 0,2221 | 0,2632 | 0,3102 | 0,3415 | 0,4280 |
| 55 | 0,2201 | 0,2609 | 0,3074 | 0,3385 | 0,4244 |

| | | | | | |
|----|--------|--------|--------|--------|--------|
| 56 | 0,2181 | 0,2586 | 0,3048 | 0,3357 | 0,4210 |
| 57 | 0,2162 | 0,2564 | 0,3022 | 0,3328 | 0,4176 |
| 58 | 0,2144 | 0,2542 | 0,2997 | 0,3301 | 0,4143 |
| 59 | 0,2126 | 0,2521 | 0,2972 | 0,3274 | 0,4110 |
| 60 | 0,2108 | 0,2500 | 0,2948 | 0,3248 | 0,4079 |