

## **CHAPTER I**

### **INTRODUCTION**

This chapter is an introductory part of the research. Some explanations include in this chapter, they are background of the problem, setting of the problem, limitation of the problem, formulation of the research, purpose of the research, significance of the research, and defenition of keyterm. The researcher will disscuss all of the section that have been explained above.

#### **A. Background of The Problem**

English is divided into four skills which are as follows: listening, speaking, reading, and writing; therefore, speaking is the second skill and has an important role in communication. According to Hornby (2000:20), speaking comes from word “speak” it means to talk somebody else about something to have a conversation with somebody. Besides the role it plays in communication, speaking can also facilitate language acquisition and developepment. Moreover, Goh (2007:1) in situation when the target language is also a language for instruction across the school curriculum, speaking is a crucial tool for thinking and learning. In addition, Amanda & Donal (2019) indicates that speaking shows individual skill in mastering a language. It also can be a measurement of how deep students comprehending in applying a good sentence. Then, Boonkit (2009:1306) states that while reading and listening are considered to be the two receptive skills in language learning and use, writing and speaking are the other two productive skills necessary to be integrated in the development of effective

communication. In reality, the teaching and learning process, English at schools more focus on the reading and writing skills rather than the speaking skill. In fact, the purpose of teaching students English does not only help them to pass national examination, but it also makes them to be able using this language in real life communication.

English is one of the subject education in the school. Students learn about some expressions, texts, and functional texts. All of those subjects have their own role in learning English. For example, expression is the subject for students in speaking English. Based on the interview with English teacher of MAN 1 Rokan Hulu, the researcher found that students are difficult to speak English especially in giving expression. There are some problems faced by the students. Firstly, the students are difficult to start a speaking and to find the topic. The teacher said that the students always think too far. The students think about difficult topic such as politic, economic, etc. The students always think that speaking is difficult because they do not think a simple topic. Secondly, the students have less of vocabulary. It makes the students can not practice speaking, because they do not know what is the english of the words. Thirdly, the students are difficult to arrange the sentences. Sometimes the students start to speaking by using Bahasa. As a result, in asking and giving opinion, the students will be study more in speaking. Then the problems above have to be fixed. One of the way is by using appropriate learning technique.

Based on the test result of students' score on Asking and Giving Opinion Course of MAN 1 Rokan Hulu class MIA 1 and MIA 2 found that students'

speaking skill on Asking and Giving Opinion was not achieve the target of learning. The test result can be seen in the table 1.1.

**Tabel 1.1 The Test Result of Students' score on Asking and Giving Opinion  
Course of Students of MAN 1 Rokan Hulu Class MIA 1 and MIA 2**

Class	Total	Lowest Score	Highest Score	Average
11 MIA 1	22 students	0	100	45,45
11 MIA 2	21 students	0	100	47,61

From the table, it can be known that the average of two classes still low with the highest average is 47,61 from the maximum score which every student should be get 100 on the test. In conclusion, students' speaking skill on Asking and Giving Opinion was still low.

However, achieving speaking skill is not easy. Those problems would be a challenge for the eleventh grade students of MAN 1 Rokan Hulu. To solve those problems, especially in giving expression, an interested learning teaching process should be applied. In MAN 1 Rokan Hulu, The teacher primally applied the conventional method in teaching English. According to Pariati (2018:107) conventional method has the following characteristics such as the students do the task individually, the instruction is teacher-oriented class, the teacher presents the material based on the book, the instruction focuses on the result, not on the process, and it does not take much time to conduct this method because there are not many activities to do in this technique. Finally, the teacher should evaluate the learning teaching process by using various methodology and techniques.

Regarding the problems above, the cooperative learning technique becomes one of the solutions that could minimize the problems found in the eleventh grade students of MAN 1 Rokan Hulu. In line with recent educational movement reforms that demand to impart oral communication skills to students, teachers should implement teaching techniques that provide learners with deep knowledge and encourage them to practice speaking. In order to engage students in learning, Alamri (2018:66) suggests to use the student-centred approach such as the cooperative learning. Jigsaw technique is cooperative learning technique that reduces racial conflict among schoolchildren, promotes better learning, improves student motivation, and increases enjoyment of the learning experience (Aronson, *The Jigsaw Classroom*, 2000-2020)

Based on the explanation above, the reseracher needed to conduct a research entitled: *The Effect Of Using Jigsaw Technique on Students' Speaking Skill at 11<sup>th</sup> Grade Science Students of MAN 1 Rokan Hulu.*

## **B. Setting of The Problem**

Based on the background of the problem explained above, it was found several problems in students' speaking skill, as follows: (1) the students were difficult to start a speaking and to find the topic; (2) the students had less of vocabulary; (3) the students were difficult to arrange the sentences. Sometimes the students started to speaking by using Bahasa.

### **C. Limitation of The Problem**

In this study, it was necessary to limit the present study because the problem relate to teaching speaking of eleventh grade in MAN 1 Rokan Hulu. Therefore, the discussion of the study must be restricted. This study focused on the students' speaking skill in MAN 1 Rokan Hulu of science students at grade eleventh.

### **D. Formulation of The Problem**

The formulation of the Research is “Is there any significant effect of using Jigsaw Technique on students' speaking skill at the eleventh grade science students of MAN 1 Rokan Hulu?”

### **E. Purpose of The Research**

The purpose of the Research is to find out the effect of using Jigsaw Technique on students' speaking skill at the eleventh grade science students of MAN 1 Rokan Hulu.

### **F. Significance of The Research**

These findings of the research were expected to give contributions to the following:

1. Students.

This research is expected to give contribution to the eleventh grade of MAN 1 Rokan Hulu to improve their skills in speaking by using Jigsaw Technique.

2. Teachers.

This research could be a reference to the English teacher especially those who teaching speaking.

3. Readers.

This research is expected useful for the readers to get information about how to teach speaking by using Jigsaw Technique.

## **G. Definition of Key Term**

### **1. Jigsaw Technique**

Jigsaw technique means a cooperative learning technique that reduces racial conflict among schoolchildren, promotes better learning, improves student motivation, and increases enjoyment of the learning experience (Aronson, The Jigsaw Classroom, 2000-2020). In this research, Jigsaw is a cooperative learning that the researcher will apply in teaching speaking. The members of the group have their own responsibility, each of the members rely on one another. It means that the students have to focus with the task. The researcher will conduct Jigsaw Technique to know the effect of it toward student's speaking skill.

## **2. Speaking Skill**

Speaking is important for language learners. According to Hornby (2000:20) speaking comes from word “speak” it means to talk somebody else about something to have a conversation with somebody. Besides the role it plays in communication, speaking can also facilitate language acquisition and development. According to Goh (2007:1) in situation when the target language is also a language for instruction across the school curriculum, speaking is a crucial tool for thinking and learning. In this research, the researcher will teach about expression which is one of the English speaking material in school. In giving expression, the students will be measured by their ability to express their feeling, thought, and idea.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

This chapter focuses on the theoretical framework of the research. There are several points in this chapter which elaborate the theories as the foundation in conducting the research. This chapter consists of review of related theories, review of related findings, and conceptual framework.

#### **A. Reveiw of Related Theories**

##### **1. The Nature of Speaking**

###### **1.1 Definition of Speaking**

There are a lot of definitions of the word “speaking” that have been suggested by the researchers in language learning. According to Hornby (2000:20) speaking comes from word “speak” it means to talk somebody else about something to have a conversation with somebody. Speaking is important for language learners. Besides the role it plays in communication, speaking can also facilitate language acquisition and development. Then, Goh (2007:1) states in situation when the target language is also a language for instruction across the school curriculum, speaking is a crucial tool for thinking and learning. Then, Speaking is one of the most important skills to be developed and enhanced as means of effective communication. Moreover, Leong & Ahmadi (2016:34) states that speaking skill is regarded one of the most difficult aspects of language learning. Many language learners find it difficult to express themselves in spoken



language. They are generally facing problems to use the foreign language to express their thoughts effectively.

Speaking is productive skill. According to Boonkit (2009:1306) while reading and listening are considered to be the two receptive skills in language learning and use, writing and speaking are the other two productive skills necessary to be integrated in the development of effective communication. Meanwhile, (Hidayati & Niati:2019) states that speaking is the process of producing sound and constructing meaning from someone to another one and can give information and state what they want. Nunan (2003:48) indicates that many people feel that speaking in a new language is harder than reading writing, or listening for two reasons. First, unlike reading or writing, speaking happens in real time; usually the person you are talking to is waiting for you to speak right then. Second, when you speak, you can not edit and revise what you wish to say, as you can if you are writing. Furthermore, Leong & Ahamadi (2016:35) states that speaking is the most important skill because it is one of the abilities that is needed to perform a conversation. English speaking is not an easy task because speakers should know many significant components like pronunciation, grammar, vocabulary, fluency, and comprehension.

In other words, speaking can be concluded as one of the important English skill that people use in daily conversation. Speaking also the way to express our thought, feeling, and idea with each other. Furthermore, there are five components of speaking, they are pronunciation, grammar, vocabulary, fluency, and comprehension.

According to Goh (2007:4), to speak effectively learners need to have a reasonable command of the basic grammar of the target language and a working vocabulary, but language knowledge alone is not sufficient. They must also develop a range of skills in four key areas of speaking competence. These are the explanation: (1) phonological skills, produce accurate sounds of the target language at the phonemic (vowels and consonants) and prosodic (stress and intonation) levels; (2) speech function skills, use spoken words to perform communicative functions, such as request, demand, decline, explain, complain, encourage, beg, direct, warn and agree; (3) interaction management skills, manage face-to-face interactions by initiating, maintaining and closing conversations, regulating turn-taking, changing topics, and negotiating meaning; (4) extended discourse organisation skills, establish coherence and cohesion in extended discourse by using established conventions to structure different types of spoken text.

Based on the explanation above, the researcher can take the conclusion that speaking is significant to make a good communication. In speaking, people express themselves directly, that makes speaking the most difficult among the other skills (listening, writing, reading). Based on the explanation of Goh (2007) about speaking competence, the researcher will focus on the point number 2. The material relates with speech function skill. The material is about expression of Asking and Giving Opinion.

## **1.2 Component of Speaking**

To mastering English, especially in speaking, the students have to practice as much as possible. According to Antoni (2014), in order to have good English communication skill, every student needs to practice their English both in and outside their classroom. By seriously practicing such activities, their English will get better and improved. Then, Rahayu (2015) states that speaking is a language skill or a means of communication in which one can express his ideas or information in a good logical order and master the convention mechanics of speaking (pronunciation, grammar, vocabulary, fluency, and comprehension). According to Hughes (2003:130) there are five aspects that the students have to know to achieve a good speaking skill. They are accent, grammar, vocabulary, fluency and comprehension. Furthermore, these are the explanation: (1) According to Richard and Schmidt (2010:3) accent is greater emphasis on a syllable so that it stands out from the other syllables in a word. For example, in English the noun import has the accent on the first syllable im- while the verb import has the accent on the second syllable –port; (2) Harmer (2001:12) states that grammar of the language as the description of the way in which words can change their forms and can be combined into sentence at that language; (3) Language consists of word. According to Linse (2005:121) vocabulary is the collection of words that an individual knows (Linse, 2005); (4) Richards & Schmidt (2010:222) states that fluency is the features which give speech the qualities of being natural and normal, including native-like use of pausing, rhythm, intonation, stress, rate of speaking, and use of interjections and

interruptions; (5) According to Richard and Schmidt (2010:108) comprehension is the identification of the intended meaning of written or spoken communication. Contemporary theories of comprehension emphasize that it is an active process drawing both on information contained in the message (bottom-up processing) as well as background knowledge, information from the context and from the listener's and speaker's purposes or intentions (top-down processing).

These five components of speaking are important in learning English speaking. The quality of students' speaking skill can be seen from the components. Therefore, the researcher will use these components to measure students' speaking skill in this research.

### **1.3 Type of Speaking**

Speaking as the most difficult skill has types. Furthermore, types of speaking will be explained by Brown (2004:141). These are the explanation:

First, imitative. At one end of a continuum of types of speaking performance is the ability to simply parrot back (imitate) a word or phrase or possibly a sentence. While this is a purely phonetic level of oral production, a number of prosodic, lexical, and grammatical properties of language may be included in the criterion performance. We are interested only in what is traditionally labeled "pronunciation"; no inferences are made about the test-taker's ability to understand or convey meaning or to participate in an interactive conversation. The only role of listening here is in the short-term storage of a

ptionlpt, just long enough to, allow the speaker to retain the short stretch of language that must be imitated.

Second, Intensive. A second type of speaking frequently employed in assessment contexts is the production of short stretches of oral language designed to demonstrate competence in a narrow band of grammatical, phrasal, lexical, or phonological relationships (such as prosodic elements-intonation, stress, rhythm, juncture). The speaker must be aware of semantic properties in order to be able to respond, but interaction with an interlocutor or test administrator is minimal at best. Examples of intensive assessment tasks include directed response tasks, reading aloud, sentence and dialogue completion; limited picture-cued tasks including simple sequences; and translation up to the simple Sentence level.

Third, Responsive. Responsive assessment tasks include interaction and test comprehension but at the somewhat limited level of very short conversations, standard greetings and small talk, simple requests and comments, and the like

Fourth, Interactive. The difference between responsive and interactive speaking is in the length and complexity of the interaction, which sometimes includes multiple exchanges and/or multiple participants. Interaction can take the two forms of transactional language, which has the purpose of exchanging specific information, or interpersonal exchanges, which have the purpose of maintaining social relationships.

Fifth, Extensive (monologue). Extensive oral production tasks include speeches, oral presentations, and story-telling, during which the opportunity for oral interaction from listeners is either highly limited (perhaps to nonverbal

responses) or ruled out altogether. Language style is frequently more deliberative (planning is involved) and formal for extensive tasks, but we cannot rule out certain informal monologues" such as casually delivered speech (for example, my vacation in the mountains, a recipe for outstanding pasta primavera, recounting the plot of a novel or movie).

## **2. Teaching Speaking Skill**

In teaching speaking, there some foundations that the teacher must know. In order to make the learning process can achieve the goal, the teacher have to apply the principles in teaching speaking. These are principles for teaching speaking according to Nunan (2003:54):

First, Be aware of the differences between second language and foreign language learning contexts. A foreign language (FL) context is one where the target language is not the language of communication in the society (e.g., learning English in Japan or studying French in Australia). A second language (SL) context is one where the target language is the language of communication in the society (such as English in the UK or Spanish in Mexico).

Second, Give students practice with both fluency and accuracy. Accuracy is the extent to which students' speech matches what people actually say when they use the target language. Fluency is the extent to which speakers use the language quickly and confidently, with few hesitations or unnatural pauses, false starts, word searches, etc.

Third, Provide opportunities for students to talk by using group work or pair work, and limiting teacher talk. Research has repeatedly demonstrated that teachers do approximately 50 to 80 percent of the talking in classrooms. It is important for us as language teachers to be aware of how much we are talking in class so we don't take up all the time the students could be talking. Pair work and group work activities can be used to increase the amount of time that learners get to speak in the target language during lessons. One further interesting point is that when the teacher is removed from the conversation, the learners take on diverse speaking roles that are normally filled by the teacher (such as posing questions or offering clarification).

Fourth, Plan speaking tasks that involve negotiation for meaning. Research suggests that learners make progress by communicating in the target language because interaction necessarily involves trying to understand and make yourself understood. This process is called negotiating for meaning. It involves checking to see if you've understood what someone has said, clarifying your understanding, and confirming that someone has understood your meaning. By asking for clarification, repetition, or explanations during conversations, learners get the people they are speaking with to address them with language at a level they can learn from and understand.

Fifth, Design classroom activities that involve guidance and practice in both transactional and interactional speaking. When we talk with someone outside the classroom, we usually do so for interactional or transactional purposes. Interactional speech is communicating with someone for social purposes. It

includes both establishing and maintaining social relationships. Transactional speech involves communicating to get something done, including the exchange of goods and/or services.

When the students learn about speaking, the important thing to do is practice and active. To make the students active in the class, the teacher can give any kind of tasks that can make the students practice speaking a lot. According to Harmer (2000), there are three basic reasons why it is good idea to give students speaking tasks which provoke them to use all and any language at their command: 1) Rehearsal: getting students to have a free discussion gives them a chance to rehearse having discussions outside the classroom; 2) Feedback: speaking tasks where students are trying to use all and any language they know provides feedback for both teacher and students; 3) Engagement: speaking activities can and should be highly motivating.

### **3. The Nature of Cooperative Learning**

#### **3.1 The Defenition of Cooperative Learning**

Cooperative learning is one of the best way in teaching learning. Gillies (2016:40) indicates that cooperative learning (CL) involves forming groups that allow learners to work together to incentivize learning. According Evcim & Ipek (2012:1652) “Cooperative learning, requiring students to work together in small, fixed groups on a stuctured task, is an instructional technique”. In addition, Adams (2013:64) states that cooperative learning, students work together in small groups on a structured activity. They are individually accountable for their work



and the work of the group as a whole is also assessed. In this study, the “Expression” subject will be taught to students using this technique.

In other words, cooperative learning make student more aware with the learning material because they can share it with each other. The students will work together in group, but they are still controlled by the teacher. Therefore, the researcher will apply cooperative learning in this research. Type of cooperative learning that the researcher using is Jigsaw technique

### **3.2 Basic Element of Cooperative Learning**

There are several elements that make cooperative learning more productive than individual learning. According to Huda (2015), there are five elements of cooperative learning, they are positive interdependence, promotive interaction, individual accountability, interpersonal skill and small group, and group processing.

First, positive interdependence. In the atmosphere of cooperative learning, students must be responsible for two things: 1) studying the material assigned, and 2) ensuring that all members of the group also study the material. this technical terms of them is called positive interdependence.

Second, promotive interaction. Promotive interaction can be defined as an interaction in group where each member encourages each other and helps other members in their effort to achieve, completion, and produce something for a common goal.

Third, individual accountability. Cooperative learning, beside its purpose to building positive interaction, it also to cerating individual who has a great personality and responsibility. For this reason, individual accountability is the key to ensuring that all gorup members can truly be strengthened by learning to work together. After participating in gorup tasks, each member should be better equipped to face the next tasks that must be completed individually.

Fourth, interpersonal skill and small group. The higher social skill that students have, and the more intense the teacher teaches and gives reward for these skills, then the greater achievement that cooperative groups can be obtain.

Fifth, group processing. In cooperative learning, group processing can be defined as group refelction in: 1) describing what actions are helpful and not very helpfil, 2) making decisions about what actions can be continued or need to be changed. The purpose of group processing is to clarify and improve the effectiveness of cooperation among members to achieve group goals.

#### **4. The Nature of Jigsaw Technique**

##### **4.1 The Definition of Jigsaw Technique**

Jigsaw is one of the activities in the cooperative learning. The jigsaw classroom was first used in 1971 in Austin, Texas. Jigsaw was first designed by Elliot Aronson (1971) as an effective way of engaging students both with course material and with each other. According to Slavin (1980), in Jigsaw, students are assigned to small heterogeneous teams. Therefore, Farahnaz, Parviz, & Nazila (2013:316) indicates that it can be one of the best techniques to be used in the

classroom because it creates opportunities for the classroom community to develop knowledge and skills in authentic contexts.

Jigsaw is one of cooperative learning. According to Aronson, E. & Bridgeman, D. (1979), the jigsaw technique involves children working in groups of six. Each child has one-sixth of the material about the subject which is being taught. The task requires children to share all their bits of information with one another in order to understand the whole lesson; in other words they have to fit the information together like a jigsaw. Jigsaw technique in teaching English has its purposes. “A goal of a jigsaw classroom is to decrease competition and increase cooperation and so competitive students can create difficulties” (Adams, 2013). Similarly, Pariati (2018:104) indicates that the purpose of Jigsaw is to develop teamwork and cooperative learning skills for all students. Furthermore, according Şahin (2010:778) Jigsaw technique allows students to actively participate in learning process. By being constantly subjected to this method, they should feel more comfortable about their roles. In Jigsaw technique, each student prepares a part of the assignment outside the classroom. Later they turn to their groups and peer-teach other members. Whereas all groups can take the same subject, different groups can take different parts of it as well. Jigsaw technique supports cooperative learning by giving each student the responsibility to teach a part of the subject.

In the application of Jigsaw technique, Aronson (2002:215) states that “Jigsaw is a specific type of grup learning experience where in each student most cooperate with his or her peers to achieve his or her individual goals”. Nunan (2003:56) states that in Jigsaw technique, each person in a pair or group has some

information the other persons need. Similarly, Mackey & Gass (2005:71) in a jigsaw task, which is a two-way task, individuals have different pieces of information. In order to solve the task, they must orally interact to put the pieces together. In addition, Şahin (2010:778) indicates that students separate from their own groups and form new groups with the other students who are responsible for preparing the same subjects. These groups, called “groups of experts” try to make other students understand the subject; they make plans about how they can teach the subject to their friends, and prepare a report. Afterwards, they turn to their own groups and teach their subjects to them with the help of the reports they have prepared. In the last stage, stage of completing, teachers can perform some activities with individuals, small groups or the whole class in order to unify students’ learning. For instance, she/he can make one of the home groups or individual students make presentations in the classroom on their subjects. Then, Slavin (1980) states that the students study their sections with members of other teams who have the same sections. Then they return to their teams and teach their sections to the other team members. Finally, all team members are quizzed on the entire unit. The quiz scores contribute to individual grades.

#### **4.2 The Procedure in Using Jigsaw Technique**

Jigsaw is one of cooperative learning technique. Jigsaw was first designed by Elliot Aronson (1971) as an effective way of engaging students both with course material and with each other. According to Huda (2015), in this technique,

teacher have to understand skill and experience of students and help students to actively in order to the material learning to be more meaningful.

There are several steps applying Jigsaw technique, These are ten steps of Jigsaw technique by Aronson (Aronson, *The Jigsaw Classroom*, 2000-2020). They are: 1) Students are divided into 5 or 6 people's jigsaw group. The group should be diverse in terms of ethnicity, gender, ability and race. 2) One student should be appointed as the group leader. This person should initially be the most mature student in the group. 3) The day's lesson is divided into 5-6 segments (one for each member). 4) Each student is assigned one segment to learn. Each student should only have direct access to their own segment. 5) Students should be given time to read over their segment at least twice to become familiar with it. Students do not need to memorize it. 6) Temporary experts groups should be formed in which one student from each jigsaw group joins other students assigned to the same segment. Students in this expert group should be given time to discuss the main points of their segment and rehearse the presentation they are going to make to their jigsaw group. 7) Students come back to their jigsaw group. 8) Students present their segment to the group, other members are encouraged to ask question for clarification. 9) The teacher needs to float from group to group in order to observe the process. Intervene if any group is having trouble such as member being dominating or disruptive. There will come to a point that the group leader should hand this task. Teachers can whisper to group leader as to how to intervene until the group leader can effectively do it themselves. 10) A quiz on the material

should be given at the end so students realize that the sessions are not just for fun and games but they really count.

From the explanation above, there is no specific time about applying Jigsaw technique, in other words, the use of time is flexible. It depends on the teacher her/his self. The steps apply only in experimental class. Those begin with forming the students into some groups. Then, the teacher gives the part of material to each students in the group. Next, the students will discuss with their expert group. Finally, the students return to their jigsaw group and the teacher will evaluate the students' understanding by giving quiz. Quiz is given to know about student's understanding of the material.

### **4.3 The Advantages of Jigsaw Technique**

Jigsaw is a cooperative learning technique appropriate for students from 3rd to 12th grade. Adams (2013:65) states there are several benefits of jigsaw technique in teaching. Teacher is not the sole provider of knowledge because most of the work is done by the students themselves which makes it an efficient way to learn. Students take ownership in the work and achievement and therefore students are held accountable among their peers. Jigsaw technique is beneficial in teaching because learning revolves around interaction with peers, students are active participants in the learning process and thereby help to build inter-personal and interactive skills among students. The use of this technique also makes teachers find it easy to learn, enjoy working with it, it can be used in conjunction

with other teaching strategies and it can be effective even if it is used for just an hour per day.

In addition, in other study from Astane & Berimani (2014:116) states that using jigsaw technique benefits for its being cooperative. One of the primary advantages of the Jigsaw and most other cooperative learning strategies is that they tend to eliminate competition in the classroom and increase the cooperation among the students. Moreover, The benefit of jigsaw according to Slavin (2009:237) can be seen that first and foremost, it is a remarkably efficient way to learn the material. However, even more important, the jigsaw process encourages speaking, listening, engagement, and empathy by giving each member of the group an essential part to play in the academic technique. Group members must work together as a team to accomplish a common goal; each person depends on all the others. No student can succeed completely unless everyone works well together as a team.

## **B. Review of related Finding**

There are many studies that related to this research. First, Widoyoko (2013) entitled “The Effect Of Using Jigsaw Technique On Students’ Reading Comprehension Ability Of Smk Muhammadiyah Bawang”. This research was aimed to find out whether there is a significant difference in the reading comprehension ability between the students taught using the Jigsaw technique and those taught without using it. The research design of this reserach was a quasi experimental reserach type pre-test and post-test design. From the data, it can be

said that the alternative hypothesis (H1) is accepted and the null hypothesis (Ho) is rejected. In other words, there is any significant difference in terms of the reading comprehension ability of the students who were taught using Jigsaw technique and those who were not at the significant level of 0.00.

Second, Mayrina (2011) entitled "*Using Jigsaw Technique to Improve Students' Narrative Writing*". Based on the result students' writing product, it was found out that the students' writing in narrative text was gradually improving. It meant that the use of Jigsaw technique could increasingly help and motivate them to learn for better writing a narrative text. Thus, most of them gradually gained good score at the end of each cycle. The students' average score in preliminary study was 56.3; in the first cycle the average was 65.2; and the average score in the second cycle was 77.2.

Third, a study by Zahra (2013) entitled "*The Use Of Jigsaw Technique In Improving Students' Ability In Writing A Descriptive Text*". The use of Jigsaw technique increased the interaction among the students. The technique also enabled them to correct each other. It was indicated from the students' participation during the whole process which instructed them to work in two kinds of groups which were home group and expert group. Basically, all the given tasks would never be done and their writing skill would never be improved if the students did not participate during the whole process

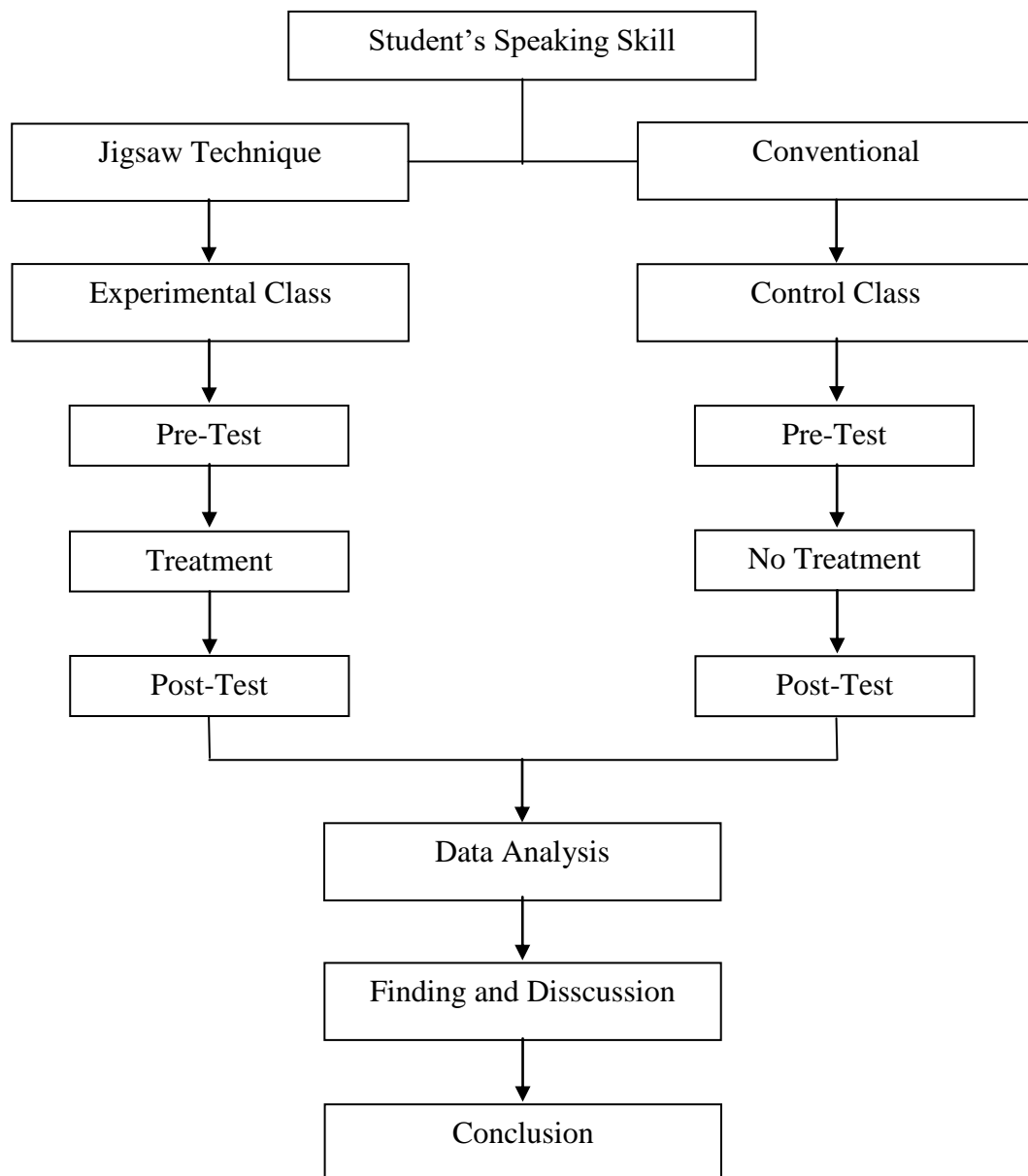
Based on the the contribution of the studies above, Jigsaw technique was a good technique in teaching English skill. Therefore, the researcher positive to conduct the research about Jigsaw Technique in speaking skill. In this research,



the researcher try to find out the significant effect of using Jigsaw Technique toward students' speaking skill at 11<sup>th</sup> grade student MAN 1 Rokan Hulu. The reseracher interested to apply Jigsaw Technique in teaching speaking in MAN 1 Rokan Hulu. The difference between the researcher's study with the researchers' above is the material. in this research, the material is about expresion of Asking and Giving Opinion.

### C. Conceptual Framework

In this research, the conceptual framework of the research explains about how the researcher will collect the data from school about the effect of using Jigsaw technique on student's speaking skill. The conceptual framework of this research is on the following figure:



**Figure 2.1 Conceptual Frame Work of The Research**

The figure above shows the step that the researcher haven been done when conducted the research. The researcher started to find out some problems in students' speaking skill by doing interview. To conduct this research, the researcher used quasi experimental design which consist of experimental class and control class. Experimental class gave treatment by using Jigsaw Technique, otherwise control class did not. Before applying the technique, the researcher measured students' speaking skill by giving pre-test. Then, the researcher conducted the research in 2 meetings. After that, the researcher measured the students' sepaking skill by giving post-test. Then, after the reseracher got the data, the next step was analyzing the data with formula and description of a speaking skill for the raters. Finally, the researcher got the findings, disscussion, and conclusion.

#### **D. Hypothesis**

1. The research Hypothesis ( $H_1$ ) = There is significant effect of using Jigsaw Technique on students' speaking at 11<sup>th</sup> grade science students of MAN 1 Rokan Hulu.
2. The Null Hypothesis ( $H_0$ ) = There is no significant effect of using Jigsaw Technique on students' speaking at 11<sup>th</sup> grade science students of MAN 1 Rokan Hulu

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter discusses about research methodology. It consists of research design, setting of the research, instrument of the research, procedure of the research, technique of collecting the data, and technique of analyzing the data. This chapter also discusses about the population and sample of the research.

#### **A. Research Design**

The type of this research is an experimental research. It means this research aimed to see effect of the research variable and measure hypothesis (Eripuddin and Kasyulita 2019). Experimental and quasi-experimental research designs examine whether there is a causal relationship between independent and dependent variables. Simply defined, the independent variable is the variable of influence and the dependent variable is the variable that is being influenced (Loewen & Plonsky, 2015). In other words, the independent variable is expected to bring about some variation or change in the dependent variable.

The design of this research was a quasi experimental. Niati, Mukhaiyar, and Rozimela (2014) states that quasi-experimental research is a research that aimed to investigate cause and effect of the research variable, observes effect of treatments, and measure hypothesis. The research type pre-test and post-test design. It consists of two groups. They were experimental and control groups. The experimental group was given a treatment. Both of the groups were given pre-test

and post test. Post-test score was compared to determine the effectiveness of the treatment. In brief, the research can be designed by following table

**Tabel 3.1**

**Research Design**

Class	Pre-Test	Treatment	Post-test
Control	$O_1$	-	$O_2$
Experiment	$O_3$	X	$O_4$

(Sugiyono, 2018)

**B. Research Variable**

According to Sugiyono (2018:39), research variable is an attribute or nature or value of people, objects or activities have certain variations determined by researchers to be studied and then drawn conclusion. This research consisted of two variables; the independent variable symbolized by “X” that was jigsaw technique and the dependent one as “Y” refers to students’ speaking skill

**C. Time and Location**

This research was conducted at MAN 1 Rokan Hulu which is located at Tuanku Tambusai Street, Rambah sub District of Rokan Hulu Regency on Mei 23<sup>th</sup> - 30<sup>th</sup> 2020.

**D. Population and Sample**

**1. Population**

Population is the whole participants in the research. According to Sugiyono (2018:90) “population is generalization area that consist of object or

subject that have certain qualities and characteristic'. The population of this research was all the science students of grade eleventh MAN 1 Rokan Hulu with the total 43 students. Furthermore, the total population could be seen from the table below.

**Tabel 3.2**

**Population of The Research**

No	Class	The Number of The Students		Total population
		Male	Female	
2	XI MIA 1	4	18	22
3	XI MIA 2	5	17	21
TOTAL		9	35	43

*Source: (Document of MAN 1 Rokan hulu 2019/2020 academic year)*

In table 3.2 it can be known that there were 43 students. There are two classes, those are XI MIA 1 and XI MIA 2. All the students of two classes became the population of the research.

**2. Sample**

Sample is more specific than population. According to Sugiyono (2018:81) sample is part of the characteristic number possessed by the population. To take the sample in this study, the researcher will use total sampling. According to Sugiyono (2018:85) total sampling is a sampling technique when all members of a population are used as samples. Because the population of the research were two clases, then the two classes will become the sample of the research. The sample of this research consisted of two classes, experimental class and control

class which have been chosen by using lotterey. There are 43 students as the sample of the research. But, there was no activity of learning at school because of Covid-19, then the researcher only took a few students to participate in this research..

**Tabel 3.3**  
**The Sample of The Research**

No	Class	The Number of Students	Sample
1	11 MIA 1	8	Control class
2	11 MIA 2	8	Experiment class

The sample was 16 students, 8 students for control class, and 8 students for experimental class. The classes joined as the participants in this research were class 11 MIA 1 and 11 MIA 2. After using lotterey, the researcher got 11 MIA 1 as the control class and 11 MIA 2 as the experiment class.

### **E. Instrument of The Research**

The instrument is used to measure students' understanding in a particular subject to be observed. According to Scrheiber & Asner-Self (2011:126) an instrument is anything used to collect data, the researcher could be administering a test or survey. In this research, the researcher measured students' speaking skill through Jigsaw Technique. The researcher conducted the treatment in two times. Jigsaw Technique is a cooperative learning, but to measure the students' understanding about the material, the students have been tested indivudially at the end. to assessing students' speaking skill, the researcher used speaking test. It

gave pre-test and post-test. The teacher instructed students to practice dialogue about the topic. The tests aimed to measure the students' progress and result of teaching learning activities. Moreover, the post test giving after the treatment in learning teaching process in the class.

## **F. Procedure of The Research**

### **1. The Procedure of Research for Control Class**

#### **1.1 Pre-Test**

The researcher gave the Pre-test to the control class. Pre-test was given to know the previous students' speaking skill. In Pre-test, the students practiced expressions of "Asking and Giving Opinion". The topic was about school facilities. It was similar with pre-test in the experimental class.

#### **1.2 No Treatment (Conventional)**

There was no treatment in control class. Students learn expression of Asking and Giving Opinion by conventional teaching. In other word, control class did not use Jigsaw Technique. the material and topics in control class were as same as in experimental class. It was about Asking and Giving Opinoin.

#### **1.3 Post-Test**

The post-test was done after doing the the pre-test. It was purposed to know if there is significant effect. The topic in post-test was school rules. It was also applied to the experimental class.



**Tabel 3.4**

**List of Meeting in Control Class**

Meeting 1	Meeting 2-3	Meeting 4
Pre-test (Asking and Giving Opinion about school facilities)	Conventional teaching Learning Material about Asking and Giving Opinion Asking and Giving Opinion about school uniform	Post-test (Asking and Giving Opinion about school rules)

**Tabel 3.5**

**Teaching Activities in Control Class**

No	Activities	Teacher's Activities	Students' Activities
1	Pre-activities	<ul style="list-style-type: none"><li>- Greeting</li><li>- Praying</li><li>- Attendance</li><li>- Apperception (telling the purpose of learning material)</li></ul>	<ul style="list-style-type: none"><li>- Greeting</li><li>- Praying</li><li>- Attendance</li><li>- Open the book</li></ul>
2	Whilst-teaching	<ul style="list-style-type: none"><li>- The teacher gives the material</li><li>- The teacher explains about the defenition, geberic structure, and phrases of expression Asking and Giving Opinion</li><li>- The teacher gives the example of Asking and Giving Opinion</li><li>- The teacher explains the example of Asking and Giving Opinion</li></ul>	<ul style="list-style-type: none"><li>- Students read the material</li><li>- Students responses actively</li><li>- Disscussion</li></ul>
3	Post-activities	<ul style="list-style-type: none"><li>- The teacher instruct students to conclude the material</li><li>- The teacher gives excercise</li></ul>	<ul style="list-style-type: none"><li>- Students try to conclude the material by their own word</li><li>- Students done the excercise</li></ul>

**2. The Procedure of Research for Experimental Class**

**2.1 Pre-Test**

The researcher gave pre-test to experimental class to measure students' speaking skill before getting the treatment. The technique using in this class was

Jigsaw Technique. The students practiced expressions of “Asking and Giving Opinion”. It was similar with pre-test in the experimental class. The topic was about school facilities.

### 2.2 Treatment (Jigsaw Technique)

The treatment that the researcher used in the experimental class was Jigsaw Technique. the students learnt expression of Asking and Giving Opinion by using this technique. The topic of learning material in experimental class was same as in control class.

### 2.3 Post-Test

The post-test was done after applying the Jigsaw Technique. The researcher gave the speaking test as same as in the pre-test. The topic was about School Rules.

**Tabel 3.6**

**List of Meeting in Experimental Class**

Meeting 1	Meeting 2-3	Meeting 4
Pre-test (Asking and Giving Opinion about school facilities)	Conventional teaching Leraning Material about Asking and Giving Opinion Asking and Giving Opinion about school uniform	Post-test (Asking and Giving Opinion about school rules)

**Tabel 3.7**

**Teaching Activities in Experimental Class**

No	Activity	Teacher's Activity	Students' Activity
1	Pre-activities	<ul style="list-style-type: none"> <li>- Greeting</li> <li>- Praying</li> <li>- Attendance</li> <li>- Apperception (telling the purpose of learning material)</li> </ul>	<ul style="list-style-type: none"> <li>- Greeting</li> <li>- Praying</li> <li>- Attendance</li> <li>- Open the book</li> </ul>
2	Whilst-teaching	<ul style="list-style-type: none"> <li>- Students are divided into 4 people's jigsaw group. The group should be diverse in terms of ethnicity, gender, ability and race</li> <li>- One student should be appointed as the group leader. This person should initially be the most mature student in the group.</li> <li>- The day's lesson is divided into 4 segments (one for each member)</li> <li>- Each student is assigned one segment to learn. Each student should only have direct access to their own segment</li> <li>- Students should be given time to read over their segment at least twice to become familiar with it.</li> </ul>	<ul style="list-style-type: none"> <li>- Students read the material</li> <li>- Students responses actively</li> <li>- Discussion</li> </ul>

		<p>Students do not need to memorize it</p> <ul style="list-style-type: none"> <li>- Temporary experts groups should be formed in which one student from each jigsaw group joins other students assigned to the same segment. Students in this expert group should be given time to discuss the main points of their segment and rehearse the presentation they are going to make to their jigsaw group</li> <li>- Students come back to their jigsaw group</li> <li>- Students present their segment to the group, other members are encouraged to ask question for clarification.</li> <li>- The teacher needs to float from group to group in order to observe the process. Intervene if any group is having trouble such as member being dominating or disruptive. There will come to a point that the group leader should hand this task. Teachers can whisper to group leader as to how to</li> </ul>	
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		<p>intervene until the group leader can effectively do it themselves.</p> <ul style="list-style-type: none"> <li>- A quiz on the material should be given at the end so students realize that the sessions are not just for fun and games but they really count.</li> </ul>	
3	Post-activities	<ul style="list-style-type: none"> <li>- The teacher instructs student to conclude the material</li> <li>- The teacher tells about the next material</li> </ul>	<ul style="list-style-type: none"> <li>- Students try to conclude the material by their own word</li> </ul>

### G. Technique of Collecting Data

The data collecting was the successive step to conduct. The researcher wanted to know about the students' speaking skill after giving the treatment of Jigsaw Technique to the experimental class and no treatment to the control class. The treatments applied two times in meeting two and three. Both of the control class and experimental class have been given a pre-test to collect the information about their speaking skill at the beginning. Then, the researcher gave treatment to experimental class and no treatment to control class. To find out the effect of Jigsaw Technique, the researcher gave a post-test to the students. Then to measure student's speaking skill, the researcher used speaking test. The rubric is adapted from Hughes (2003). There are five points and to rate them on a six-point scale

for each of the following: accent, grammar, vocabulary, fluency, and comprehension.

## **H. Technique of Data Analysis**

The researcher giving a test, those were speaking pre test and post test. The next step was checking the results of their test by using speaking rubric that was adapted from Huhges (2003). Rubric can be seen from appendix 6 page 86-91. Then, the rater analyzed the data. Finally, the researcher computed the hypothesis significant. It is for knowing whether the  $H_1$  is accepted or not. To measuring the data, the researcher used SPSS application. Some formulas was used to get the result of the reserach as follow:

### **1. Normality Data**

Misbahuddin & Hasan (2013:278) sates that normality test is aimed to see whether the data normally distribute or not.

Statistical Hypothesis:

$H_0$  : The data of pre-test in control class and experiment class are normally distributed

$H_1$  : The data of pre-test in control class and experiment class are not normally distributed

This used to determine the slope formula. If  $\text{sig} \geq 0,05$ , then the data is normal and  $H_0$  is accepted. But, if  $\text{sig} \leq 0,05$ , then the data is not normal and  $H_0$  is rejected.

## 2. Homogeneity Variance Data

According to Zarkasyi (2017), if the data is normally distributed, then a variance homogeneity test will be performed. Homogeneity test is used to see whether two sets of data have homogeneous variance or not.

$H_0$  = Both variance is homogeneous

$H_1$  = Both variance is not homogeneous

If both of the samples are normal, then continue to the second test of homogeneity of variance. If  $\text{sig} \geq 0,05$ , then the data homogeneous and  $H_0$  is accepted. But, if  $\text{sig} \leq 0,05$ , then the data is not homogenous and  $H_0$  is rejected.

## 3. Hypothesis Test

To analyzed the data, the researcher used T-test. It used to examine the significant effect between Jigsaw Technique and without Jigsaw Technique. The researcher used the independent sample T-test to measure the data. Provisions  $\text{sig} \leq 0,05 = H_0$  is accepted and  $H_1$  is rejected and  $\text{sig} \geq 0,05 = H_0$  is rejected and  $H_1$  is accepted, or  $t\text{-value} > t\text{-table} = H_0$  is rejected and  $H_1$  is accepted. But if  $t\text{-value} < t\text{-table} = H_0$  is accepted and  $H_1$  is rejected.

Hypothesis test is done to know whether there is significant effect of Jigsaw Technique on students' speaking skill at eleventh grade of MAN 1 Rokan Hulu. this is the hypothesis:



$H_1$  = There is significant effect of Jigsaw Technique on students' speaking skill at 11<sup>th</sup> grade science students of MAN 1 Rokan Hulu

$H_0$  = There is no significant effect of Jigsaw Technique on students' speaking skill at 11<sup>th</sup> grade science students of MAN 1 Rokan Hulu

$$H_0 : \mu_1 = \mu_2$$

$$H_1 : \mu_1 \neq \mu_2$$

$\mu_1$  dan  $\mu_2$  are the average of the students; speaking skill of experimental and control class. There are some possibilities that will happen in testing hypothesis, they are:

- 1) If sample is normally distributed with homogeneous variance, then used t test with the formula:

$$t_{hitung} = \frac{\bar{X}_1 - \bar{X}_2}{S_{gabungan} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad \text{With} \quad S_{gabungan} = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}}$$

$\bar{X}_1$  = The mean score/average of students' experimental class

$\bar{X}_2$  = The mean score/average of students' control class

$n_1$  = Number of students in experimental class

$n_2$  = Number of students in control class

$S_1^2$  = Standard deviation of experimental class

$S_2^2$  = Standard deviation of control class

(Sundayana, 2010)

Test criteria use significant level  $\alpha = 0,05$  ; terima  $H_0$  jika  $t_{hitung} > t_{table}$  and refuse  $H_0$  if  $t$  has another prices,  $t_{table}$  is gained from the list of  $t$  distribution with degree of freedom  $(dk) = (n_1 + n_2 - 2)$  with opportunity  $\frac{\alpha}{2}$

- 2) If the data are normally distributed but not homogeneous, then the hypothesis test used is  $t'$  test. The steps of  $t'$  test according to Sundayana (2010):

a. Calculate value  $t'_{hitung} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$

- b. Calculate hypothesis testing criteria:  $H_0$  is accepted if:

$$-\frac{w_1 t_2 + w_2 t_1}{w_1 + w_2} < t'_{hitung} < \frac{w_1 t_2 + w_2 t_1}{w_1 + w_2}$$

Dengan  $w_1 = \frac{S_1^2}{n_1}$  ;  $w_2 = \frac{S_2^2}{n_2}$  ;  $t_1 = t \frac{\alpha}{2} (n_1 - 1)$ ;  $t_2 = t \frac{\alpha}{2} (n_2 - 1)$

- 3) If the data is not normally distributed, then the test used is the Mann Whitney test. The steps of Mann Whitney test Sundayana (2010) are as follows:

- a. Make statistical hypothesis
- b. Combine all observational values from the first sample and second sample in one group.
- c. Give rank starting with rank 1 for the smallest observation value, until the largest rank for the largest observation value or opposite.  
If there is the same value
- d. Add up the rank value, then take the smallest rank

e. Calculate nilai U with the formula:

$$U_1 = n_1 \cdot n_2 + \frac{n_2(n_2+1)}{2} - \sum R_2$$

$$U_2 = n_1 \cdot n_2 + \frac{n_1(n_1+1)}{2} - \sum R_1$$

Dari  $U_1$  dan  $U_2$  choose the smallest value for  $U_{hitung}$

f. For  $n_1 \leq 40$  dan  $n_2 \leq 20$  ( $n_1$  dan  $n_2$  may be reverse) value  $U_{hitung}$ , then compare with  $U_{table}$  with criteria  $H_0$  accepted if  $U_{hitung} \leq U_{table}$ . If  $n_1$  and  $n_2$  big enough then continue with step 7

g. Determine average with formula:

$$\mu_u = \frac{1}{2} (n_1 \cdot n_2)$$

h. Determine standard deviation

a) For data there is no repetition

$$\sigma_u = \sqrt{\frac{n_1 \cdot n_2 (n_1 + n_2 + 1)}{12}}$$

b) For data there is repetition

$$\sigma_u = \sqrt{\left(\frac{n_1 \cdot n_2}{N(N-1)}\right) \left(\frac{N^3 - N}{12} - \sum T\right)}$$

$$\sum T = \sum \frac{t^3 - t}{12}$$

With t is same one

i. Determine transformation z with the formula:

$$Z_{hitung} = \frac{u - \mu_u}{\sigma_u}$$

j. Then value  $Z_{hitung}$  is compared with  $Z_{table}$  with criteria accept  $H_0$  if:

$$- Z_{table} \leq Z_{hitung} \leq Z_{table}$$

**Table 3.8 Scoring Rank**

Range of the score	The level of the skill
81 – 100	Excellent
61 – 80	Good
41 – 60	Average
21 – 40	Fair
0 – 20	Poor

(Harris, 1968)

To find out many students who got the percentage poor, fair, average, good and excellent the researcher using formula;

$$P = \frac{F}{N} \times 100\%$$

P = Percentage of students

F = Number percentage of each letter case

N = Number of students