# CHAPTER I INTRODUCTION

# 1.1 Background of the Study

Speaking English Skill is one of the language skills most needed by many people which must be practiced to communicate orally. People who have good speaking skills will find it easier to send and receive information to others. But in general, many people have difficulty practicing their speaking skills, due to many factors that make it difficult for many people to do their speaking skills, one of which is they do not know the meaning of the sentences they read or hear and besides, because they feel embarrassed, nervous and afraid in making mistakes and they do not know how to pronounce the words properly. According to Pollard (2003:33), speaking is one of the most difficult aspects for students to master. This is hardly surprising when one considers everything that is involved when speaking: ideas, what to say, language how to use grammar and vocabulary, pronunciation as well as listening to and reacting to the person in communication. Many learners of a foreign language especially English can confirm how difficult speaking is.

Brown (2004: 140) states that speaking is a productive skill that can be directly and empirically observed, those observations are invariably colored by the accuracy and effectiveness of a test-taker's listening skill, which necessarily compromises the reliability and validity of an oral production test. The ability to learn to speak in foreign languages is often considered one of the most difficult aspects of language learning, especially English for teachers to help their students. Helping students develop speaking skills is not only for students to be able pass exams from their school but so that it can be useful in the future, one of which is

when students want to use English as a way to communicate and express their ideas or when students want to continue their studies abroad. Therefore, speaking skills will help students communicate English in everyday life or for a better future.

Speaking is a productive skill that is practiced orally. In this skill, students are expected to be able to produce words and use them effectively in communicating as well as possible, including good fluency. Most of the students are expected to practice their speaking skills through school first, because from school students will get an understanding of the material related to speaking practice, especially in English. Students are expected to be able to practice their speaking skills well because when they want to get a job, one of the requirements needed by students is to have foreign skills, especially English. With high English proficiency in a job, it will make it easier for students to communicate related to foreign languages especially in English, considering that English is an international language that can be used in all fields of work in Indonesia and in other countries around the world. The ability to speak foreign languages, especially English will have a positive impact on students later in reaching their dreams in a job.

In teaching speaking, a teacher should be able to make an interesting topic and apply techniques that are in accordance with the material to be taught by the teacher. This aims to motivate students to practice their speaking skills more. With good students' abilities in practicing students speaking skills, it will make it easier for students later to understand learning material, especially in English. Topics that can be said to be interesting are topics that can be related to the environment and student life. Apart from that, a teacher must be able to educate students with full patience, the teacher can correct a mistake made by a student but the teacher must

not directly correct students' speaking ability, the teacher can provide a little input and good suggestions that can motivate students to the student is better in the future. It can be done so that students can be confident in exploring students' ideas so that students are not afraid to make mistakes in speaking in class. In teaching speaking, the teacher must also teach with meaning and clear emphasis so that students understand more easily. Therefore, teaching speaking must be focused on providing speaking opportunities to students in practicing students' English.

During the researcher's observation at SMP Negeri 3 Tampaksiring, the researcher found that the eighth grade had low speaking skills. Based on observations from researchers, the researcher found that students mostly experienced difficulties in pronunciation, fluency, comprehension, and grammar. This can happen because the teacher prioritizes explaining theory rather than giving students practice in speaking. In addition, in teaching students, teachers only use PPP techniques. PPP technique which stands for Presentation, Practice, and Production is a teaching method that is often used in teaching simple language at a lower level by a teacher. In this PPP technique, there are three main stages. The first activity the teacher presents the target language; students then practice the new language items; and finally, students use their own ideas to talk about themselves. From the information above, this technique requires students to learn individually without any collaboration with friends or other people so that smart students will become smarter and students with low abilities cannot develop themselves, and students who are lacking in speaking skills will be less confident. Of course, students will be more afraid if there are mistakes in practicing their speaking skills. This technique was not an effective technique to teach speaking. In this technique, the teacher only focused the students to make conversation, and the teacher does not always ask students to make students work in groups. Meanwhile, when the teacher instructs students to create conversations and asks students to share their conversations of course, the teacher also allows students to bring text when having a conversation. It will have an impact on students because students will be less confident. By letting students bring the text, students will naturally read without understanding what students are making. In addition, the teaching techniques used in the teaching and learning process can be said to be less motivating for students, and do not affect the improvement of students' speaking skills. Therefore, the learning that is followed by students will seem bored with the material and teaching techniques because of the lack of understanding from students and the teaching techniques used does not change of course, students become bored in participating in the lesson.

There are many techniques used by teachers to teach speaking skill, one of which is Role-play technique combined with pictures. This is one great technique for facilitating conversation and also to make students develop their ideas while speaking. Role-play combined with pictures is a teaching technique by forming students in pairs or groups. The purpose of implementing role-play combined with pictures is to produce opportunities for students to be more active in teaching-learning of speaking. Role-play combined with pictures allows students to practice students' speaking skills more in a different and fun way. The first way to play the role-play the teacher asks the students to form groups of three students and then the teacher gives the students a situation. Before students make short role-play, the

teacher first explains the instructions for playing role-play and arranging situations. Then, the teacher asks students to make a short role-play according to the existing situation related to the picture given. Finally, the teacher asks students to perform a role-play that has been discussed with their group in front of the class.

In the teaching and learning process through the implementation of learning using role-play combined with pictures, there are several advantages of role-play. The first advantage, it provides opportunities for students to practice their speaking skills in different social contexts and social roles. Apart from that, using role-play can encourage students to be creative as well as possible and bring out their creative ideas because this role-play is given the freedom to make short role-play based on predetermined situations later. Therefore, it also allows students to be confident and improve students' speaking skills and form creative ideas so that later students will present a good role-play. Teaching speaking through role-play combined with pictures makes students more active and creative during the learning process because students have the opportunity to express their ideas. By using role-play combined with pictures of course, make students enthusiastic about participating in the learning process. This is a very good technique to be applied in the classroom because students can contribute more during the learning program. In conclusion, the researcher hopes that the problems faced by students in learning can be solved through role-play combined with pictures.

Based on the description from the research above, the teaching and learning techniques that were used by the teacher may give a positive influence on these students, one of which is on student achievement and of course it can also increase learning motivation for the students themselves. Therefore, the selection and use of

appropriate technique is very important to improve students' achievement, the better the techniques used, the better the development of each student. One effective technique that is appropriate for improving speaking skills for students is Role-Play combined with pictures. In this study, the researcher was interested in conducting this research to find out how to improve the speaking skills of students. Researchers are interested in conducting a study entitled "Improving Speaking Skills of The Eighth-Grade Students of SMP Negeri 3 Tampaksiring in Academic Years 2021/2022 through Role Play Combine with Pictures."

#### 1.2 Research Problem

Based on the background described above by the researcher, speaking skills are still considered difficult skills to be mastered and understood by most students. In other words, the eighth-grade students of SMP Negeri 3 Tampaksiring in academic year 2021/2022 still face difficult obstacles in practicing students' speaking skills. Therefore, the problem should be solved and the way the students' speaking ability should be improved by using role-play techniques combined with pictures. With this technique, it can improve speaking skills and minimize errors in showing the speaking ability of each student. The formulation of the problem in this study can be formulated in the form of questions as follows: can speaking skills of the eighth-grade students of SMP Negeri 3 Tampaksiring in academic year 2021/2022 be improved through of role-play combined with pictures?

### 1.3 Objective of the study

The speaking skills of eighth-grade students of SMP Negeri 3 Tampaksiring needed to be improved. There are many techniques that teachers can be used and applied to improve students' speaking skills. One technique that is appropriate and

often used is to use role play technique combined with pictures. This present study is intended to find out whether or not the speaking skill of the eighth-grade students of SMP Negeri 3 Tampaksiring in academic year 2021/2022 can be improved through role-play combined with pictures.

# 1.4 Limitation of Study

The discussion of speaking skills is considered very broad and complex in the scope of the study and the time the researcher is limited to conducting the research. Therefore, to focus on specific areas of speaking skills and to avoid mistakes in conducting classroom action research, research should be limited. This research is limited to improving the speaking ability of the eighth-grade students of SMP Negeri 3 Tampaksiring in academic year 2021/2022 through role-play technique combined with picture. The curriculum used in this school is the 2013 curriculum, which basically focuses on composing very short and simple oral and written interpersonal interaction texts about expressing asking and giving information in accordance with the social function, text structure, and linguistic elements which are correctly and contextually. In addition, the use of pictures used in this study was downloaded from Google to provide students with an overview of the topics to be determined in making the role play. Student performance appraisal is speaking skills during the teaching and learning process which focuses on three aspects they are fluency, comprehension, and grammar; this is a basic essential component.

# 1.5 Significance of the Study

The present research was mainly intended to know how role-play technique combined with pictures can solve the problems faced by most students in applying speaking skills. Apart from that, this study aims to improve the speaking skills of the eighth-grade students of SMP Negeri 3 Tampaksiring through role play combined with pictures as an effective teaching technique. In this research, it is hoped that the research findings will give good results in the development of students' speaking skills, especially English and of course it is significant. Therefore, this research is expected to have more benefits both theoretically and practically in order to improve speaking skills and have a positive impact on students and teachers in the learning process. Thus, the findings of this study should be significant and should provide the following theoretical and practical importance.

Theoretically, the findings of this study are expected to be used as empirical evidence about the application of learning theory based on the problems faced which have been described above regarding the improvement of speaking skills through role-play technique combined with pictures. These findings are useful as theoretical evidence about the implementation of role-play combined with pictures. In addition, the results of this study are expected to enrich the theory and can be used as an additional reference for further studies related to role-play techniques combined with pictures in teaching speaking skills. Therefore, these findings can be used as empirical evidence that provides information to other researchers about role-play techniques combined with pictures.

Practically, the findings from this study are expected to be of use to both English teachers, students and other researchers. For English teacher, it is hoped that the findings of this study can be used as evidence that role-play technique combined with pictures are an effective technique to help improve students' speaking skill. This technique can provide positive things for students themselves such as being useful in implementing speaking skills, besides that the teacher can also modify these techniques with other techniques and can expand their knowledge to present new ideas and apply these techniques to improve student learning achievement. In addition, this technique can also make the atmosphere in the teaching and learning process more active and interesting so that students will be more focused on taking part in learning. For students, the results of this study are expected to solve students' problems in learning to speak and also improve their speaking skills to increase students' confidence in speaking English. Finally, for other researchers, the findings of this study can motivate further researchers to add better ideas or combine them with the media to make students more enthusiastic about learning to speak using role play techniques, and it is hoped that other researchers will be able to find weaknesses of this techniques so that the other researchers can be developed to be better in the future.

### 1.6 Definition of Key Term

The title of this research is "Improving Speaking Skills of the Eighth-Grade Students of SMP Negeri 3 Tampaksiring in Academic Year 2021/2022 Through Role-Play Combined with Pictures". During the research, the researchers used some specific key terms that were related to this study; the key terms were based on the research variables of the present research. Therefore, in order to make readers

clearly understand and avoid misunderstanding about this study, the researcher must provide some operational definitions of the key terms used in this study. So that, the key terms to be used in this study were speaking skills and role-play combined with pictures. The two key terms that were used in this study were clearly defined as follows:

#### 1.1.1 Speaking skill

Speaking skills are defined as the ability of the eighth-grade students of SMP Negeri 3 Tampaksiring in academic year 2021/2022 in constructing and performing a short role-play about asking and giving opinion and asking and giving information which was assessed based on fluency, comprehension and grammar.

# 1.1.2 Role-Play Technique Combined with Pictures

Role-play is one of the teaching techniques used by teachers to teach the eighthgrade students of SMP Negeri 3 Tampaksiring in speaking skills in the learning
process where the teacher begins to provide situations related to the material to
be taught and asks students to do role play. The application of this technique
begins with the introduction of the act of giving and asking for information.
Then the teacher gives some pictures of situations related to the material. In this
technique, it is combined with pictures as media to support learning, pictures
obtained through Google and gives the pictures to the students to be discussed
directly. Then several groups will be formed and asked to prepare their roleplay according to the pictures that have been given. Then they were asked to
perform their role-play in front of the class.

#### **CHAPTER II**

#### THEORETICAL AND EMPIRICAL REVIEW

### 2.1 Theoretical Review

Theory is more precisely defined as a series of interrelated concepts that represent a systematic view by giving relationships for the purpose of explaining and predicting the phenomena. The theoretical review is a review of the theories related to the study conducted and discussed in the present study. It is used to aid and build this study into making it more solid and more factual. The present study needs to be supported by theories already presented by the experts. There are several sources from various literatures that refer to and support this study. The present study is based on some theories that are formulated in the form of theoretical frameworks such as speaking skills, role play combined with images and assessment of speaking skills.

### 2.1.1 Speaking Skill

Speaking skill is a productive skill which is mentioned as one of the most difficult skills if it is compared with the other skill because in this case, the learners should produce utterance as clear as possible. In conveying their ideas to the audience, they must also speak clearly, fluently, and accurately to make a good speech in communication using English. Moreover, the four language skills such as listening, speaking, reading and writing are the main requirements that support each other. In learning a language, speaking is an ability that must be improved. Speaking is a way of showing, conveying, and verbally transferring information about ideas and thoughts from speaker to listener.

According to Turk (2005:1), speaking is productive skill in oral communication. Speaking is the direct route from one mind to another, and it is the way that is usually chosen to ask a question, or give an explanation. Speaking is also one of four basic skills in learning English beside listening, reading and writing. Through speaking, students can easily convey their ideas or thoughts to others. To speak in foreign language, learners must master the system of the language. They must also understand what is being said and be able to respond appropriately the speaking topic to maintain amicable relations to achieve the communicative goal especially in daily live and face to face interaction.

In addition, Richards (2008:20) states that speaking is an activity that someone uses to communicate each other. Meanwhile, Thornbury (2005:1) states that speaking is a speech production that becomes a part of daily activities. Furthermore, speaking skill seems very important because it influences daily life. On the other hand, speaking is the way for interacting with each other, expressing ideas, giving suggestions and comments, and sharing information. Therefore, the teacher should provide and give more opportunities and talking time for the students in speaking class, create the best environment for them, and motivate them in order to encourage them to be braver and feel confident to express their ideas and opinions in communicating process. In addition, it is also supported by looking at the aim of learning a language that is communicating using the language fluently. The teacher allows the students to express themselves freely without having interruption.

In learning speaking, students must master the component of speaking. The component is what aspect influencing how well people speak English. There are

three components of speaking skill that can be defined as follows: grammar, comprehension and fluency.

### 2.1.1.1 Grammar

Grammar is important to use when speaking because if students have good grammar, it automatically makes them feel confident to display their speaking skills in front of the class or elsewhere. Richards (2008:28) states that one of the skills involved in using speech as a performance is to use correct pronunciation and grammar.

### 2.1.1.2 Comprehension

Comprehension is the ability to know or capture ideas with the mind. Comprehension refers to the speaker's understanding of what they are saying to the listener, to make it easier for the listener to get information from the speaker, it is necessary to have a good understanding that is captured by the listener, so that it will be easier to convey the information obtained. In relation to this research, speaking skills are students' ability to describe and understand topics based on the pictures given, by having a good understanding, it will make it easier for students to capture learning material.

#### **2.1.1.3 Fluency**

Richards (2006: 14) states that fluency is the use of natural language that occurs when a speaker engages in meaningful interactions and maintains comprehensible and continuous communication despite limitations in his communicative competence. Fluency is developed by creating classroom activities in which students have to negotiate meaning, using

communication strategies. Fluency is one of the important components in speaking ability, because with the fluency in students it will make it easier for students to communicate with people around them.

From all statements above, it can be concluded that speaking skill is an important skill to be mastered when students learn about language especially foreign languages. Speaking skill becomes the most important skill since students have a belief that language mastery is able to be judged by how well someone speak. In language teaching, language is essentially speech. The students in their daily life need to be able to use English as well as possible in order to make a comprehensible situation in speaking. In addition, the language function should also be involved in this skill which involves the use of fluency, comprehension, grammar should be used appropriately in social interaction.

# 2.1.2 Role-Play Technique

Role-play is very important in teaching speaking because it provides opportunities for students to practice communication, social interaction and different social roles. It also allows students to be creative and active. In addition, role play can improve students' speaking skills. In many situations, this technique can help students to interact. In addition, the use of role play is fun and most of the students agree that fun can lead to better learning. When students feel learning and the classroom atmosphere is very fun, students will be much more focused and capture the learning material better. In addition, students can also share experiences about the roles and situations they have experienced. Therefore, role-play is an activity that can develop students' abilities, especially speaking skills.

Broughton et al. (2003:82) states that role-play is a flexible technique which can be used in more structured and predictable way to the controlled stage, or alternatively with less guidance at a later stage where the continued practice is turning into active production. Furthermore, through role-play activities or techniques, the students learn how to express ideas, opinions, or feelings to others by using utterances in target language. The student also gets the changes to speak in an interesting way and they may also act as someone else's by doing this technique. Therefore, role-play can improve learner's speaking skill. Role-play also gives some time for the student to think about what they are going to say; thus, their conversation can be prepared well and it is understandable.

Nunan (2003:57) also states that the students will be given a particular rule in the target language. In applying role-play, the students will be nervous when they have to perform in front of the other, especially the teacher. However, the time will have the students familiarize and more practice their speaking skill by using role-play. Besides, role-play gives an opportunity for the students to practice their speaking skill in the target language before facing real conversation in a real environment. Students may feel less anxiety when they do the real conversation by using the target language because the topic in role-play will be set on real-life situation. Thus, students are easier when making a conversation.

In addition, Brown (2004:174) states that role-playing is a popular pedagogical activity in communicative language-teaching classes. In some versions, role play allows someone rehearsal time so that students can map out what they are going to say. Students find a good chance how to improve their speaking skills because they are allowed to speak up in interesting ways. Students also need

clear guidance through sharply defined scenarios, roles, and events. The teacher sets up the situation in teaching learning process. It means the teacher should give the topic or situation to the students and allow them to make their own dialogue. Finally, the students perform their dialogue and the teacher pay attention and assess the students' ability according to their performance.

#### 2.1.3 Pictures as Teaching Media

To make the atmosphere of the teaching and learning process interesting for students, in this study the researchers used pictures to support the learning process. Using pictures as a media will certainly help students imagine a short role play based on the situation that has been given by the researcher. Using pictures may encourage enthusiastic students to follow in the role and help students find it easier to make short role plays with their groups. In addition, Larsen-Freeman (2000:127) states that teachers are responsible to establish a situation that allow communication. Therefore, researchers use pictures as a media in this study to help the teaching and learning process in order to create a learning activity situation that involves real communication.

Moreover, Harmer (2007:177) state that teachers have always used picture or graphic whether drawn, taken from book, newspaper, and magazines, or photographed to facilitate learning. Picture can be in the form of flashcard, large wall picture (big enough for everyone to see details), cue card (small cards which students use in pair or group work), photograph or illustration (typically in a textbook). Some teachers also used projected slides, images from an overhead projector, or computer images.

Besides, role-play is a speaking activity which is defined as a technique in teaching speaking which involves the imagination of being another person in a certain situation for a while, improvising dialogue and creating the real world in a scenario. It aims for students to encourage students' thinking and creativity, enabling them to develop and practice language skills. Of the many speaking techniques in class, the researcher decided to use role play combined with pictures as a technique to be applied in class. There are several steps that must be considered by teachers in teaching speaking through role play combined with pictures, as follows:

- 1) The teacher shares pictures related to the material.
- 2) The teacher asks the students to observe a picture which is related to the learning material to help them imagine the situation of short role play that will be carried out and choose a role based on the picture.
- 3) The teacher asks students to make groups of 3 students to discuss and prepare their role play.
- 4) The teacher asks students to do a role play based on the picture that has been given and the teacher asks students to perform the role-play in front of the class.

# 2.1.4 Assessment of Speaking Skill

Assessment is the process of collecting and analyzing the data to measure the result of student' achievement. Assessment is an important thing in the teaching and learning process. Assessment activities are applied to achieve, analyze, and interpret data on the results of student progress in the teaching and learning process systematically. With an assessment for students, the teacher can measure the extent to which students understand the material that has been given in the teaching and learning process. The results of the assessment can be used as a reflection to the teacher whether the technique is effective or not. Assessing speaking has many factors that affect the impression of how well a person can speak a language in communication.

According to Harmer (2001:100), the teacher gives the students the assessment of how well they have done. The teacher will give the assessment based on the activity which they have to learn. The assessment of the performance can be explicit or implicit. Explicit here refers to comments after which given by the teacher after the assessment is done by the learners. On the other hand, implicit means if the teacher does not give any comments after the students' performance is conducted. Furthermore, the teacher may also assess the students by using rubric from some sources with the criteria which will be assessed.

The students need to be prepared with sufficient pronunciation, vocabulary, and language functions to be used in communication before students are assessed. According to Brown (2004:142-143), there are sixteen components that are used to draw up criteria for assessing students' speaking skills. Because of the statement, it is expected that students can speak fluently and accurately during their speaking activity and their achievements in speaking can be assessed optimally. From the explanation above, the researcher carried out the explanation of assessing speaking by adapting Brown's scoring rubric which only focuses on three aspects or criteria; those are fluency, comprehension, and grammar.

Assessment refers to a variety of ways of collecting information on a learner's language ability of the learner's achievement (Brindley in Carter and

Nunan, 2001:137). It can be used to monitor or record the students' learning process such as observation, stimulation, or project work. In the context of assessing student's speaking skill, it may be seen from the understanding of the listeners about what the speaker says as Hughes (2003:113) states that the objective of teaching spoken language includes comprehension as well as production. In assessing the student's ability, it may be seen not only from the process but also the product as speaking cannot be mastered in a short time. It needs some steps in doing the activity.

Assessment, on the other hand, is a process that encompasses a much wider domain. According to Brown (2004:4), assessment is a popular and sometimes misunderstood term in current educational practice. Whenever a student responds to the questions, offers a comment, or tries out a new word or structure, the teacher subconsciously makes an assessment of the student's performance. Moreover, Luoma (2004:29) claims that in assessing the students' speaking skill, teacher guides the examinees' talk by the task that teacher gives them. In addition, task design is a very important element in developing assessments. It defines what students take to be important, how they spend much of their academic time, and in many ways how they value themselves.

McCulloch (2007:4) states that assessment can be used to provide feedback, promote learning, to diagnose (at commencement, during or at end, readiness to proceed, strengths and weakness), to motivate, and to provide a profile of what has been learned. In addition, assessment in this purpose for assessment methods which can be reliable, in that they are comparable across different schools and indeed

across the country as a whole and also valid in that they give the users what they really need to know about each student (Black et al.,2003:1).

From those statements above, in the present study, the researcher investigated and measured the eighth-grade students' speaking skill in order to know students speaking achievement. The data needed in this study were acquired by administering the assessment of speaking skill in the form of performance to the students. Therefore, the researcher asked the students to construct and perform a short role play in front of the class with their group based on the situation and role that were provided by the researcher.

### 2.2 Empirical Review

Empirical verification is the way to get information and theories about previous research that is still available. Also, to gain a deep understanding of the theories in this research, consider the advantages or disadvantages of the previous study in terms of the implementation of the technique. To support the research, it is important to review some empirical evidence from previous studies. In conducting this research, the researcher wanted to improve students' speaking skills by using role-playing games combined with pictures. There were two previous research done by other researchers by implementing role-playing games in combination with images to improve speaking skills. These studies were empirically worked out as follows.

The first research was conducted by Wati (2016) entitled "Improving Speaking Skill of the Eighth-Grade Students of SMPN 2 Abiansemal in Academic Year 2015/2016". The objective of the study was planned to figure out the effectiveness of role-play technique in teaching speaking to the eighth-grade

students of SMPN 2 Abiansemal. The results showed that students' speaking skill can be improved after they were taught by implementing role-play. The improvement of the students' achievement also could be seen from two cycles conducted. Furthermore, in this study, the role-play technique contributed positive things to improve students' interest in performing their speaking skill.

The second similar research was conducted by Supardika (2018) entitled "Improving Speaking Skill of the Tenth-Grade Students of SMAN 1 Ubud in academic Year 2017/2018 through Role-Play". The objective of the study was to figure out the effectiveness of role play technique in teaching speaking to the tenth-grade students of SMAN 1 Ubud in academic year 2017/2018. In addition, the researcher found that the findings showed that the students' speaking skill of the tenth-grade students of SMA N 1 Ubud in Academic Year 2017/2018 can be significantly improved by implementing the role play technique.

The researcher above gained the same results in which the findings showed that after conducting two cycles there were constant improvements after the researcher applied role-play technique, the students had a positive response. Furthermore, there was not only strength but there was also the weakness. Both of the researchers did not used a media and did not explain the correct theory and the steps to implementing role-play. As a result, it made the students confused during the implementation of the technique. The researcher explained clearly about the theory and it was completed with the procedural steps. It made the teachers more confident when implementing the teaching technique to the students and they would be easier to understand the theory when doing the activity during the learning process.