THE USE OF MODIFIED JIGSAW TECHNIQUE TO IMPROVE TENTH GRADE STUDENTS’ WRITING ABILITY

(A Thesis)

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ABSTRACT

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This true experimental design research was conducted based on the problems faced by the tenth-grade students of SMKN 1 Natar which were identified through the results of the pre-observation that was conducted by the researcher. The objectives of this research were to find out whether the modified jigsaw technique can be used to improve students’ writing ability better than the original jigsaw technique or not, the writing aspect that improved the most after the students received the treatments and students’ perception toward the implementation of the techniques and its correlation with their writing ability. The data of this research were collected through three instruments, writing test, questionnaire, and interview. After the data were collected, the researcher used SPSS version 25 to analyze the data. From the analysis, it was found that the original and modified jigsaw techniques were able to improve the students’ writing ability significantly. Besides, the analysis proved that the modified jigsaw technique enabled the students to improve their writing ability better than the original one. Then, this research found out that after the treatment, grammar was the most improved writing aspect in both of the classes. The last finding of this research was most of the students had positive perceptions toward the techniques but there was no correlation between students’ perception and their writing ability. Based on the research findings above, it can be concluded that the modified jigsaw technique is a learning technique that left positive perception on students and improved students’ writing ability better than the original one by improving the writing aspects, especially grammar. It was suggested that further researchers to pay more attention on mechanics aspect during the correction step in applying the modified jigsaw technique. Then, since the jigsaw technique can be used to teach integrated skills, the further researchers should collect the data of all skills that were taught in the jigsaw activities. Then, it was also suggested to try to modify jigsaw technique with other technique to make greater improvement in students’ language skills.

Keywords: true experimental, modifying jigsaw, writing ability, teaching writing, students’ perception.
THE USE OF MODIFIED JIGSAW TECHNIQUE TO IMPROVE TENTH GRADE STUDENTS’ WRITING ABILITY

By: Rifka Arina Ruantika

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Rifka Arina Ruantika was born on February 3rd, 1993 in Kalirejo. She is the second child of the greatest parents, Drs. Rumsin and Marhanah, S.Pd. She has one beloved brother named Denny Satriyawan, A.Md. and one sister in law Prisilia Anggun Larasati, S.Pd.

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DEDICATION

By offering my praise and gratitude to Allah SWT for giving His never-ending blessings to me, this thesis is proudly dedicated to:

فناد My beloved Father, Drs. Rumsin.
日夜 My beloved Mother, Marhanah, S.Pd.
日夜 My beloved Brother, Denny Satriyawan A.Md.
日夜 My beloved Sister in Law, Prisilia Anggun Larasati, S.Pd.
日夜 My beloved Niece, Mikhayla Adean Azzahra.
日夜 My beloved nephew, Syauqi Adean Mubarak
日夜 My Almamater, University of Lampung.
MOTTO

“Chase your dreams as far as possible, but never forget the path that will lead you home again”

(Rifka Arina Ruantika)
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Gratitude and honor are addressed to all people who have helped and supported the writer for the completion of this thesis. Since it is necessary to be known that this thesis will never come into its existence without any supports, encouragements and assistances from several outstanding people, here the writer would like to address her gratitude and honor to:

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Hopefully, this thesis will give a positive contribution to the educational development and also for those who want to carry out further research. The writer is completely aware that this thesis far from perfection. Therefore, constructive input and suggestion are expected to compose a better thesis in the future.

Bandar Lampung, October 2019

Rifka Arina Ruantika
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I. INTRODUCTION

This chapter explains the introduction which deals with several points: background of the research, identification of the problems, limitation of the problems, formulation of the research questions, objectives of the study, significances of the study, and definition of terms.

1.1. Background of the Research

Writing is one of four basic skills of language which is very important in language learning. Writing is considered as a productive skill whose goal is to assist the students in expressing their ideas in the written form. However, writing is still considered as a complex skill to be mastered by students since it requires complex thinking. Sometimes, it is hard for the students to express their words, opinions, ideas or feelings in written form. When students want to write about something, they must have a lot of ideas and information about something that will be written, so that they will be able to transfer those ideas into a written text.

Richard (2002) also states that writing is the most difficult skill to be mastered by L2 learners. He states that the difficulty of writing lies not only in generating and organizing ideas but also in translating the ideas into reliable text. That is why L2 learners need to pay attention to higher-level skills of planning
and organizing as well as the lower-level skill of spelling, punctuation, word choice and so on.

Besides that, writing needs to be supported by the right rules, Jacobs et al. (1981) state that there are five components of writing, namely content, organization, grammar, vocabulary, and mechanics. These components are related to each other to produce good results in writing. That is why writing is considered as the most complex language skill to be learned compared to the other language skills, namely speaking, listening and reading.

In doing this research, the researcher chose SMKN 1 Natar as the subject of the research. SMKN 1 Natar is a senior high school which is located in South Lampung, Lampung. Based on the pre-research that had been done by the researcher, it was found that the students of SMKN 1 Natar had poor ability in English especially in writing. In pre-observation, the researcher asked the students to write a text about personal recount and from the results of the test, it was found that 8 students out of 10 (80%) could not write their idea systematically.

Students’ poor writing ability could be proven by some mistakes that were made by the students in the writing test. The students did many mistakes in grammar, choosing appropriate words, developing main ideas and making concluding sentences. The first problem that the researcher found after analyzing students’ writing was in grammar, most of the students cannot use grammar correctly. For example, “Amel can’t to control motorcycle” in which the student made mistake in writing to-infinitive after a modal. Besides that, some of the students didn’t use past verbs even though they wrote about past event. The
second problem was in choosing appropriate words for example, *I went to IAIN Metro to take my sister*. In this sentence, the student misused the word “take” it should be “pick up”.

The third problem found by the researcher was in developing the main ideas. Most of the students could not develop the idea of their writing. Even, some students only wrote one or two sentences in the writing test. The next problem found by the researcher in the pre-research was in making concluding sentences. Most of the students could not make concluding sentences and some of them even did not write the concluding sentences. Based on the results of the pre-research it can be stated that the students had low ability in writing skill.

In order to help the students in mastering writing skill, the teacher needed to find a compatible technique that can be used in the writing class. In this case, the researcher focused on modifying a technique namely jigsaw technique by inserting the steps of peer-correction. Setiyadi et al (2018) state that, jigsaw technique is one of the techniques that can be used to teach integrated skills for students. Jigsaw technique is an effective way to increase student’s engagement in the teaching-learning process through group work that makes peer-to-peer learning easy to do (Shume, 2016). Through jigsaw technique, the students can develop the skills to work effectively in groups and it also encourages cooperation and collaboration between students which is important for achieving a better balance between competition and cooperation in students’ experience of education.
Besides jigsaw technique, the other technique that could be used to improve students’ writing skill is peer-correction. Peer-correction is a technique whereby the students or their peers correct the assignments or tests based on the teacher’s benchmarks. The practice was employed to save the teacher’s time and improve students’ understanding as well as their metacognitive skills. Peer-correction is a technique that enables the students to get feedback when the students correct their drafts in pairs. Kelly (2014) states that peer-correction is defined as a process of correcting someone’s work, research or idea by someone expert in the same field. Sackstein (2017) states that a side benefit of empowering students to provide feedback or correction to one another is the awareness they gain as learners. Providing students with regular opportunities to give and receive peer feedback enriches their learning experiences in powerful ways. Through this technique, the students were able to realize and correct the mistakes they made in their writing and finally improve their writing ability.

Good teaching techniques should be able to make the students have a positive perception on it. Perception can be defined as the process in which someone creates an impression about what happened around them. Besides, perception is influenced by our emotionality, expectation, personal preference as well as by current status and psychological processes. The researcher believed that students’ perception was an important aspect that should be considered by the teacher in choosing a teaching technique. The researcher believed that students’ perception was able to influence students’ attitudes and impressions in the teaching-learning process which finally affected their ability in learning. That was
why finding students’ perception is important for the teacher to achieve learning goals.

Some studies related to students’ perception of teaching technique had been done by some previous researchers, for example Campbell (2001), Ismail (2011), Tom (2013), and Ho (2017) who had done a research on students’ perception toward teaching techniques applied by the teacher in English language teaching class. The results of their researches showed that students’ perceptions were different from each other. Most of the students had positive perception toward the implementation of the technique.

In this study, the researcher modified a teaching technique, jigsaw, by inserting the steps of peer-correction technique. The researcher used jigsaw technique to help the students wrote their recount text, after the students finished it the researcher asked the students to do peer-correction to make them aware of their mistakes and finally they could correct those mistakes. The researcher believed that by modifying this technique the students could gain more benefits in the learning process and their writing ability could improve significantly. The effect of jigsaw and peer-correction on improving students’ language skill and achievement has been proven by some previous researches which were elaborated bellow.

The researches related to the effect of jigsaw technique toward students’ English achievement have been done by some researchers namely Evcim (2010), Al-Elaimat (2013), Al Salkhi (2015), and Sugianti (2016). In their research, they proved that jigsaw technique was an effective technique that could be used to
improve students’ English achievement. The other researchers, Sahin (2011), Kazemi (2012) and Hoerunisa (2017) did some researches about the effect of jigsaw technique in improving students’ reading comprehension. Form their research it was proved that there was a significant improvement on students’ reading comprehension after jigsaw technique was applied. The researches which proved that jigsaw technique was able to improve students’ writing also had been done by some researchers namely Sahin (2011) and Zahra (2014). Through their researches, they proved that jigsaw was an effective technique that could be used by the teacher to improve students’ writing ability.

The next previous researches are on the effect of peer-correction in improving students’ English achievement and skills. The researches on the use of peer-correction to improve students’ speaking ability, had been done by a researcher, Patri (2002), who focused on finding the effect of peer-correction on students’ speaking ability and the results showed that students’ speaking ability improved after the students did peer-correction. Many researchers investigated the effectiveness of peer-correction on improving students’ writing ability. Some of them are Moussoaui (2012), Ayachi (2017), and Gencha (2018) who found that peer-correction had a significant effect on students’ writing and the students that were taught by peer-correction had better writing competency than those who were assessed using conventional correction.

Based on the previous researches above the researcher was interested in conducting a research to find out the use of modified jigsaw technique in improving students’ writing ability. The researcher conducted this research because it had been proven by the previous researches above that the two
techniques namely jigsaw technique and peer-correction could be used to improve students’ writing ability but in the previous researches above the researchers only focused on one of the techniques. None of them tried to modify these techniques. Besides that, the researcher modified the technique because based on the previous research jigsaw technique was able to improve students’ aspects of writing namely content and organization. However, the other 3 aspects of writing had not been touched by jigsaw technique and it could be improved by inserting the steps of peer-assessment in the revising steps. So, in this research, the researcher modified jigsaw technique by inserting peer-correction steps in order to know whether the modified jigsaw would make better improvement on students or not compared to the original jigsaw.

1.2. Identification of the Problems

Based on the researcher’s interview with some of Senior High School students at SMKN 1 Natar, the researcher found that the students think that writing was the most difficult skill to be mastered by them. Some problems were mentioned by the students during the interview. The first problem was because to master this skill they needed to have many ideas in their mind so that they could make a meaning full written text from it. They did not know what to write because they had no ideas about what they want to write. The second problem was due to their lack of confidence in what they have written. They did not know whether its grammar was correct or wrong. Because of this problem, the students often felt anxious when they write a text. The third problem was because the students were not actively engaged in the teaching-learning process in the classroom. The
students felt bored with the task that was given by the teacher during their writing class because the teacher only asked them to write their ideas in their seat and collect the task after they finished it. The last problem that was mentioned by the students was students’ low attention toward the writing class. They gave low attention because they thought that the task was not interesting and they did other things instead of focus on their task.

1.3. Limitation of the Problems

After identifying the problems, the researcher limited the problems of the research that would be analyzed by the researcher which is improving students’ writing ability through modified jigsaw technique. This modified technique was applied in the tenth-grade students of SMKN 1 Natar. Hopefully, after applying the technique on students’ writing class, it could help the students to develop their ideas, increase their confidence, help them to actively engage in classroom’s activities, make the students paid attention to the teaching-learning process and finally improve their writing ability.

The researcher used jigsaw technique to help the students in developing their ideas in writing recount text and after that, the teacher asked the students to do peer-correction to make better improvements and increase their ability on writing. The materials that were used in this research are story sequence pictures that were given to the students during jigsaw activities and the materials were taken from the internet. The course that was taught in this research was recount text which was appropriate with the syllabus of the first grade of SMA in the K13
curriculum. Five aspects of writing were scored by the researcher they are content, grammar, organization, vocabulary, and mechanics.

1.4. **Formulation of the Research Questions**

In reference to the background, the researcher formulated the research questions as follows:

1. Can the modified jigsaw technique be used to improve students’ writing better than the original jigsaw technique?

2. What aspects of writing improved the most after being treated by the original and modified jigsaw technique?

3. How is students’ perception toward the implementation of the techniques in relation to their writing achievement?

1.5. **Objective of the Study**

Based on the research questions above, the writer formulated the objectives as follows:

1. To find out whether the modified jigsaw technique can be used to improve students’ writing better than the original jigsaw technique or not.

2. To find out the aspect of writing improved the most after being treated by the original and modified jigsaw technique.

3. To find out students’ perceptions toward the implementation of the techniques in relation to their writing achievement.
1.6. Significances of the Study

The results of this research are expected to be beneficial whether theoretically and practically:

a. Theoretical

The findings of this research were expected to support the existing theories on writing, jigsaw technique and peer-correction which were discussed in chapter two of this proposal. Besides that, this research might give an additional contribution in case of education especially in English writing and it might verify the previous findings of improving students writing ability through jigsaw technique and peer-correction. Moreover, this research could also be used as an additional reference for further research related to the use of jigsaw technique and peer-correction.

b. Practical

The researcher expected that this research’s findings could be useful for the researcher, teachers, and students which are elaborated below:

1. For the researcher: the researcher expected this research helped her to be a professional and creative teacher who was able to make an enjoyable class for the students while improving their English ability.

2. For the teachers: the results of this research might give new references and information to English teachers that jigsaw technique can be modified to improve students’ writing ability. Moreover, the teachers knew that by
modifying a teaching technique they could create an effective and fun writing class that could help the students to improve their writing ability.

3. For the students: through this research hopefully, the students could improve their writing ability, had enjoyable writing class, and be more active and confident in the learning activities in the classroom.

1.7. Definition of Terms

In order to specify the topic of the research, the writer provides some definition of terms which were related to the research. These are some terms which were related to the research:

1. Writing

Writing is an activity that is done by students to express their ideas by forming visible letters into meaningful words on a piece of paper or other media by using correct grammatical rules in English.

2. Writing Ability

Writing ability is an ability that is possessed by students in expressing their ideas in which the students can form visible letters into meaningful words on a piece of paper or other media by using correct grammatical rules in English.

3. Improvement

Improvement is a process of becoming better. In this research, the researcher intends to make students’ writing ability better by progressing students’ writing scores.
4. **Recount Text**

Recount text is a text which is used to tell about event or experience that already happened in the past.

5. **Jigsaw Technique**

Jigsaw technique is a discussion technique in which the students are divided into some groups and work on the different problems to solve a puzzle. After finishing the discussion in the main group, the students form different groups consist of one student from each member of the main group and do the discussion to complete the puzzle.

6. **Peer-Correction**

Peer Correction is a technique in which the students correct their work to each other, rather than the teacher correcting it. This technique can make the students aware of their mistakes and also have fun learning.

7. **Modified Jigsaw Technique**

Modified jigsaw technique is a teaching technique which modifies jigsaw technique based on peer-correction’s steps in which the students are asked to observe the pictures, discuss the content of the pictures and share the information they have about the pictures with other students, correct each other works (peer-correction) and make the final draft of the text in the revising step after the correction.
II. LITERATURE REVIEW

This chapter explains about some theories related to this research such as concept of writing, aspects of writing, teaching writing, recount text, jigsaw technique, peer correction, procedures of jigsaw technique in teaching writing, procedures of peer-correction in teaching writing, procedures of modified jigsaw technique in teaching writing, students’ perception, review of the previous researches, theoretical assumption, and hypotheses.

2.1. Concept of Writing

There are four skills that should be mastered in language learning; those are listening, speaking, reading, and writing. Theoretically writing skill requires the students to be able to express their idea, feeling and thought which are arranged in words, sentences, and text using eyes, brain, and hand (Raimes, 1983). Bell and Burnaby in Nunan (1989) define writing as an extremely complex cognitive activity in which the writer is required to demonstrate control of some variables simultaneously. At the sentence level, these include control of content, sentence structure, vocabulary, punctuation, spelling, and letter formation. Beyond the sentence, the writer must be able to structure and integrate ideas into a cohesive and coherent paragraph and text.
Writing is an active process of communication which uses graphic, symbol to send the message. To complete matters further, writing means communication, send the message, writing is also used to convey ideas, and feeling in a written form. It means that communication in the form of written will deal with letters, words, sentences, and punctuation, from those the reader can receive the information intended. Writing is also an action or a process of discovering, organizing ideas, putting them on a paper, reshaping and revising them. It means that, after writers organized their idea, they construct it in the written form and in order to make understandable writing, the writer should re-read and revise it so the reader can understand the information of the text.

According to Richards (2002), writing is the most difficult skill for second language learners to master. The difficulty is not only in generating and organizing ideas but also in translating the idea into readable text. Besides, Nagin (2006) states that writing is complex, even the most accomplished writers say that writing is challenging, most notably because there is no much uncertainty embedded in the process of doing it. The writer does no always know beforehand where to begin, much less how to proceed. The writer needs time to make good writing. It means that writing is not only to write something about what the writers want to tell but also writing is about how the writers can deliver information through the right words to express their idea about something without missing or reducing the sense.

Besides, the writers must follow some aspects of writing to make the readers understand the writing. The aspects of writing will guide the writers in making understandable writing because it is constructed through well organization,
content, language use, mechanics and vocabulary. The explanation about five aspects of writing will be elaborated in detail in the following sub-chapter.

2.2. Aspects of Writing

There are many things that should be considered by the writer to produce good writing. There are five aspects proposed by Jacobs et al (1981) that should be considered in the process of making a composition. Below are the explanations of five aspects of writing according to Jacobs et al:

1. **Content**
   
   It refers to the substance of writing, the experience of the main idea or unity. It is identified by seeing the topic sentence. The topic sentence should express the main idea and reflect the entire paragraph.

2. **Organization**
   
   It refers to the logical organization of content or coherence. It is related to the ideas that stick together so that ideas run smoothly within the paragraph.

3. **Grammar/Language use**
   
   It refers to the use of the correct grammatical forms and syntactical patterns. It is identified from the construction of the well-formed sentence. This aspect deals mainly with the use of grammatical and synthetic patterns on separating, combining and grouping ideas in words, phrases, clauses, sentences to bring out the logical relationship in texting writing.
4. **Vocabulary**

   It refers to the selection of words that are suitable for the content. It can be identified by seeing the word choice or diction to convey ideas to the reader. It begins with the assumption that the writer wants to express the ideas as clearly and directly. Choosing words that express meaning is precisely rather than skew it or blur it.

5. **Mechanics**

   It refers to the use of graphic conventional of the language. It is identified by seeing the usage of spelling, punctuation, and capitalization within the paragraph.

From the explanation above it can be stated that in the process of making a good written text there are some aspects that should be considered by the writer i.e. content, organization, grammar or language use, vocabulary, and mechanics. Those aspects of writing are the foundation of students’ writing corrections in this research. Moreover, by understanding the aspect of writing, hopefully, the students will be able to improve their writing ability because those aspects are the essential things in developing writing.

2.3. **Teaching Writing**

Teaching writing is to teach the students how to express the idea or imagination in written form. Teaching writing is more difficult than teaching other skills. In teaching writing, the teacher should teach the language structures at each point and make sure that the students understand the structure. Teaching writing needs a
long process to master the skill. Caswell and Mahler (2004) states that teaching writing provides opportunities for the students to develop clear thinking skills when students are granted time to write and process their thoughts, they develop a way to analyze their thinking.

There is a certain particular consideration that needs to be taken into account, such as sentence organization, paragraph arrangement, and coherence. Teaching writing requires the elements of writing including grammar, sentence organization, vocabulary, and mechanics. It can be said that teaching writing should guide the students not only to write a sentence but also to organize their ideas into written form. Then, the teacher must give appropriate guidance in which the students can express their ideas in written form properly. In practicing their writing, the students have to follow the steps to make their writing more effective.

Harmer (2004) describes that the writing process is the stage a writer goes through to produce something in its final written form. He states that there are four main elements in writing process. They are:

a. Planning

Writers plan what they are going to write. Before starting to write or type, they try and decide what they are going to say. For some writers, this may involve making detailed notes. For others, a few words may be enough.

b. Drafting

The teacher can refer to the first of a piece writing as a draft. This first ‘go’ at a text is often done on the assumption that it will be revised later. As the
writing process into editing, some drafts may be produced on the final to the final version.

c. **Editing (Reflecting and Revising)**

Once writers have produced a draft they then, usually, read through what they have written to see where it works and where it doesn’t work. Reflecting and revising are often helped by other readers (or editors) who comment and make suggestions. Another reader’s reaction to a piece of writing will help the author to make appropriate revisions.

d. **Final Version**

Once writers have edited their draft, making the changes they consider to be necessary; they produce their final version. This may look considerably different from both the original plan and the first draft because things have changed in the editing process.

Besides the stages explained by Harmer (2004), there are four main stages in the writing process by Rahayu and Prayitno (2016). They are:

a. **Pre-Writing**

In this stage, the writer chooses and narrows the topic to a particular aspect of the general one. Doing this will help the writer to make a clear and complete writing. The writer also can brainstorm in this stage.

b. **Planning**

The writer needs to plan what topic to write, when to start, and how to end at this stage. Making planning is important because from this point the writer will decide the writing.
c. **Writing and Revising Draft**

As soon as the writer has planned, the writer directly executes writing with all techniques that the writer has. After writing the draft, the writer should revise it.

d. **Writing the Final Copy**

Writing the final version takes some time, hence it should be done carefully. Sometimes, it is necessary to re-edit the work until the writing is ready to be published.

Based on the explanations above, the researcher will adopt the process approach in teaching English. The process approach consists of planning, drafting, editing (reflecting and revising), and final version.

2.4. **Recount Text**

Recount text is a written text that tells the reader about past events aiming at entertaining or informing the reader. Recount text is one of the text types that should be learned by the students. It also has been included in the 2013 Curriculum, especially for tenth-grade students of senior high school. According to Miner and Zitnay (2012), recount is a text tells about a specific person or event. It organized as a series through time. Recount text contain a series of events that pertain to the person or event that the text focuses on. Meanwhile, Napitupulu (2014) states that recount text is a text that tells about past events occurred in a sequence.
Recount text is a type of stories about what has happened. These stories can be in the form of casual convention about playing with friends, visiting relatives, traveling, and so on. In other words, recount text can be concluded as a piece of text that reconstruct past events in chronological order to tell the details of experience which happened. It related to a particular occasion. According to Keir (2009) and Napitupulu (2014) there are three generic structures of recount text. They are:

1. **Orientation**
   
   The orientation provides all the necessary background information to enable the audience to make sense of the text. To ensure that the orientation is detailed and thorough, use the words (who, what, when, where, and why). The writer or speaker needs to give information about what happened, who or what was involved, when and where the events occurred and why. An awareness of audience and purpose will assist the author in selecting the amount of detailed needed.

2. **Events**
   
   In the series of events, the writer writes the events chronologically. It begins from the first event, followed by the second event to the last event. The sum of events depends on the creativity of the writer. Events should be selected carefully to add to the audience’s understanding of the topic. Students should be prepared to discard events and details that are unimportant or uninteresting. A recount, in most cases, is more than a ‘shopping list’ of every possible detail. Students should be guided to select only those events that are relevant and that can be expanded through the inclusion of specific details.
3. Re-Orientation (Optional)

The final section concludes the recount by summarizing outcomes or results, evaluating the topic’s importance or offering personal comments or opinions. It can also look to the future by speculating about what might happen next. But, not all of recount closed by re-orientation

According to Derewianka in Yulianingsih (2017), there are five types of recount text. The explanation of those types will be elaborated below:

1. Personal Recount

A personal recount is retelling an event that the writer was personally involved in. For example personal experience, personal letter, diary, entries, journal, anecdotes, and postcard. A personal recount is usually written in the first person (I and we) and often to entertain and inform. The characteristics of this type are the use of first-person pronouns (I and we), personal responses to the events can be included, particularly at the end and details are often chosen to add interest or humor.

2. Factual Recount

A factual recount is concerned with recalling events accurately. It can range from everyday tasks such as accidents, structured research, science, news recording, and police report. The emphasis is on using language that is precise, factual and detailed so that the readers gain a complete picture of event, experience or achievement.

3. Imaginative Recount

Imaginative or literary recounts entertain the reader by recreating the events of an imaginary world as though they are real. “A day in my life as a family pet”, for
example, emotive language, specific detail, and first-person narration are used to
give the writing impact and appeal.

4. **Procedural Recount**

A procedural recount records the steps taken in completing a task or procedure.
The use of technical terms, an accurate time sequence and first-person narration (I
or we), give credibility to the information provided. Examples include a flow
chart of the actions required for making bread, a storyboard of videotaped script
or advertisement, the steps taken to solve a mathematical problem.

5. **Biographical Recount**

A biographical recount tells the story of a person’s life using a third-person
narrator (he, she, and they). In the case of an autobiography, first-person narration
(I, we) is used. It is usually factually accurate and records specific names, times,
places and events. A purely factual, informative biography, however, would lack
the appeal provided by personal responses and memorable anecdotes. There is
often an evaluation of the subject’s achievements in the final section.

From five types of recount text above, in this research, the researcher will focus
on personal recount text because it involves a personal story in which the students
can use their own experience to make a good story.

2.5. **Jigsaw Technique**

Jigsaw technique is an efficient way to learn the course material in a cooperative
learning style. The jigsaw process encourages listening, engagement, and empathy
by giving each member of the group an essential part to play in the academic
activity. 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. This "cooperation by design" facilitates interaction among all students in the class, leading them to value each other as contributors to their common task.

Nurhadi (2004) in Sugianti 2016 states jigsaw is one of the teaching techniques that is widely suggested and employed. Jigsaw consist of 4–5 students (home teams) are formed and each group is assigned a part of the material to learn and then to teach to the other members in the group. The Jigsaw technique is an efficient way to writing skill because it can help the students to develop their ideas in a short time and make the students actively engage in the teaching-learning activities. The students have already had the capability to get the knowledge and ready to share or contribute the knowledge. Students can get new knowledge from working together with their friends as a teamwork by sharing knowledge with others.

The Jigsaw strategy places great emphasis on cooperation and shared responsibility within groups. The success of each group depends on the participation of each individual in completing their task. This means the Jigsaw strategy effectively increases the involvement of each student in the activity. Setiyadi et al (2018) state that jigsaw technique is one of the techniques that can be used to teach integrated skills for students. Jigsaw technique is an effective way to increase student engagement in the teaching-learning process through group work that makes peer-to-peer learning easy to do (Shume, 2016).
Through jigsaw technique, the students can develop the skills to work effectively in groups and it also encourages cooperation and collaboration between students which is important for achieving a better balance between competition and cooperation in students’ experience of education.

2.6. Peer-Correction

In correcting students’ drafts, there is a technique that enables the students to get feedback on knowledge from their peers. The technique is peer-correction. Peer-correction is a technique that enables students to work in pairs. It gives opinions and suggestions so that the students can get feedback from their partner. This technique can give the students more chances to know about their mistakes and to make their writing better.

Peer-correction is a technique where the students correct their drafts in pairs. Each pair will check the draft and correct the mistakes based on what they have known. According to Jacobs (1989), peer-correction is a part of a large category of educational activity in which students work together in a group. This is positive that this addition of roles increases learners, insight into the writing process. Thus, peer work prepares them to write without a teacher there to correct their errors. This seems particularly important when learners are helping each other with the content and organization of their writing. It means that correcting in pair provides the students to be more selective in correction reminded the language used in the text and also help the students to correct their mistakes.
From some argumentations above, peer-correction offers opportunities for the students to be responsible for their learning. Consciously or unconsciously, they will more understand and more capable of writing. This technique will help the learner to be able to communicate with others to improve students’ writing ability in recount text because there is much feedback which is needed in their revision to construct good writing. Besides, it will also help the teachers to use the time as effective as they can.

2.7. Procedures of Jigsaw Technique in Teaching Writing

According to Setiyadi et al (2018), there are some procedures of jigsaw technique in teaching writing, those procedures are:

1. The students group themselves into small groups

2. The students of each group receive a discussion topic. In this research, the researcher used pictures as the discussion topic. The topic can be based on lecture topics that have been covered in class, or they can be based on other topics the teacher or students think are important.

3. The students listen to the instruction from the teacher which tells the students about how long they should work together (for example 10 minutes). The groups discuss their topics.

4. After the groups complete the discussions, the groups split up. The students form new groups. The new groups consist of the combination of the original group members.

5. In the new group, each group member takes turns and tell other members about what they have discussed earlier in the first group.
6. After each group member tells what they have discussed in the original group, the new groups have a short discussion together to make the story complete.

7. After the final discussion, the students back to their seats and make a recount text individually based on the results of their discussion.

From the explanation above, it could be stated that through jigsaw technique the students could gain more information about the topic being discussed and finish the story in a short time.

2.8. **Procedures of Peer-Correction in Teaching Writing**

According to Edelstain and Pival (1988) in Salma (2016), there are some stages of teaching writing through peer-correction as follows:

1. **Planning**

   In this stage, the students pay attention to the teacher’s explanation about how to get information or the data which is needed to develop a text.

2. **Drafting**

   In drafting, students’ writing results on the unity and coherence of their text will be emphasized.

3. **Revising & Re-writing**

   In revising, students should know about the mistakes they have made and how to correct their mistakes. In this step, the peer-correction is used. This technique allows the students to know their mistakes and the problem. Then they rewrite their text, following the results from the revising activity.

In teaching writing, it is not quite simple to correct the draft. It needs a technique to check the writing text. Peer-correction is useful to help the students to check
their draft in pair. Peer-correction gives more chances for the students to talk and give opinions about the writing. It is a technique that enables them to be responsible for their writing. The students also can be an expert to give comments and suggestions for each pair.

From the explanations above, it can be stated that peer-correction is the technique that helps the students to correct their own mistakes by pair and develop their writing better. Peer-correction also develops an ability to see the mistakes that occur in writing. When two or more students worked together on correcting each other’s work, the discussion helped each other to learn from his or her mistakes.

2.9. Procedures of Modified Jigsaw Technique in Teaching Writing

In this research, the researcher modified the jigsaw technique, by inserting peer-correction steps. In applying this modified technique, the researcher takes the procedure from Setiyadi et al (2018) about the procedures of the jigsaw technique and Edelstain and Pival (1988) in Salma (2016) about the procedures of peer-correction. The procedures of those two techniques are combined to modify the technique. The comparison between the procedures of original and modified jigsaw techniques can be seen in the table below:
Table 2.1. The Comparison between the Procedures of Original and Modified Jigsaw Techniques

<table>
<thead>
<tr>
<th>Original Jigsaw Technique</th>
<th>Modified Jigsaw Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The students group themselves into small groups</td>
<td>1. The students group themselves into small groups</td>
</tr>
<tr>
<td>2. The students of each group receive a discussion topic.</td>
<td>2. The students of each group receive a discussion topic.</td>
</tr>
<tr>
<td>3. The students listen to the instruction from the teacher about how long they should work together (10 minutes).</td>
<td>3. The students listen to the instruction from the teacher about how long they should work together (10 minutes).</td>
</tr>
<tr>
<td>4. After the groups finished the discussions, the groups split up. The students form new groups.</td>
<td>4. After the groups finished the discussions, the groups split up. The students form new groups.</td>
</tr>
<tr>
<td>5. In the new group, each group member takes turns and tell other members about what they have discussed earlier in the first group.</td>
<td>5. In the new group, each group member takes turns and tell other members about what they have discussed earlier in the first group.</td>
</tr>
<tr>
<td>6. After each group member tells what they have discussed in the original group, the new group have a short discussion together to make the story complete.</td>
<td>6. After each group member tells what they have discussed in the original group, the new groups have a short discussion together to make the story complete.</td>
</tr>
<tr>
<td>7. After the final discussion, the students back to their seats and make a recount text individually based on the results of their discussion.</td>
<td>7. After each group member told the story, the new group had a short discussion together to make the story complete.</td>
</tr>
<tr>
<td>8. After the final discussion, the students went back to their seats and made a recount text individually based on the results of their discussion.</td>
<td>8. After the final discussion, the students went back to their seats and made a recount text individually based on the results of their discussion.</td>
</tr>
<tr>
<td>9. After making the recount text individually, the students did peer-correction for 10 minutes.</td>
<td>9. After making the recount text individually, the students did peer-correction for 10 minutes.</td>
</tr>
<tr>
<td>10. After doing peer-correction, the students made the final revision of their story from the results of peer-correction.</td>
<td>10. After doing peer-correction, the students made the final revision of their story from the results of peer-correction.</td>
</tr>
</tbody>
</table>

As can be seen in the table above, the differences between the procedures of original and modified jigsaw techniques are in the last steps of the modified jigsaw technique. The 7th until 10th steps in the modified jigsaw technique are originally the steps of peer-correction which are inserted to jigsaw technique to modify it.
2.10. Students’ Perception

Perception is a term that is applied to the more complicated processing of complex, often stimuli like people encounter in everyday life. Perception is a process by which people regard, analyze, retrieve and react to any kind of information from the environment. People evaluate individual sensations in terms of additional information from other sensations, recently received or retained from past experience. Besides, Dewi (2014) states that perception is indeed some kinds of interaction between one as a person and his/her surrounding, which can involve not only objects but also situations, socializations, and role relations. Perception can be said as what someone thinks about what happened around him/her. Schunk and Meece (2009) state that students’ beliefs and interpretations of schooling can affect achievement in numerous ways. In other words, students’ perception about a teaching technique that is used by the teacher during teaching-learning activity can affect their achievement in learning.

According to Struvyen cited in Fatriana (2016), perception as the awareness of things that we have through our senses, especially the sense of sights, refers to the cognitive psychological movement. Learning is then described as a simple information processing model. The human memory is compared to the processing of information by a computer. A short-term working memory sorts out incoming perceptions and relates them to previous knowledge, and the long-term memory stores experience and conceptual knowledge. In this way, information processing conceptual hierarchies are developed. Memory involves logically ordered sets of concepts, stored in terms are increasing generality. This emphasis may apply to everyday objects whose defining features are readily deducted, but abstract
concepts or those which have no agreed formal definitions cannot be stored in this way. They are built up from sets of experiences which are only partially shared with others. Learning thus becomes a matter of personal construction of meaning.

Individual perceptions are frequently influenced or altered by individual acquired motives, values, expectations, or personality characteristics, which produce particular sets or perceptual tendencies within the individual. It means that in making a perception about something, it is influenced by an individual’s feelings which are contained by value, motives, and personality behavior. That is why one’s perception can be different from the others. It can be a positive or negative perception. As had been stated before, there are two kinds of perception, positive and negative. Below are the explanations of positive and negative perception:

1. Positive perception
Positive perception is a perception that describes all of the knowledge (known or unknown) and respond object that perceived positively. Positive perception makes the students are easy to adapt to a new teaching and learning situation.

2. Negative perception
Negative perception is a perception that describes all of the knowledge (known or unknown) and respond object that perceived negatively (not suitable with the object of perception).

In this research, the researcher uses a rating-scale questionnaire adapted from Fennel (1992) which will be used to collect the data of students’ perceptions toward the implementation of the techniques. The questionnaire consisted of 14
statements which are related to the teaching-learning process through cooperative learning technique. The statements were classified into statements of the usefulness and feeling. The statements are:

<table>
<thead>
<tr>
<th>No</th>
<th>Statements</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I can acquire valuable information through this learning technique.</td>
<td>Usefulness</td>
</tr>
<tr>
<td>2</td>
<td>I can share information and ideas with other students through this approach.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I can evaluate ideas and opinions and solve problems through this learning technique.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I can see how this learning technique is able to make students learning</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I listen to the thoughts and opinions of my classmates through this approach.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I can practice skills of listening, sharing and giving encouragement to classmates through this approach.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I can review information, check on my level of understanding, and get help through this approach.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Most of my classmates participate actively in these activities.</td>
<td>Feeling</td>
</tr>
<tr>
<td>9</td>
<td>I look forward to these learning activities</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I feel actively involved in these learning activities</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I feel patient in doing these activities</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>I didn’t get confused about doing these activities</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I feel my ability is improved through these learning activities</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>I feel closer to my classmates in these activities</td>
<td></td>
</tr>
</tbody>
</table>

2.11. Review of the Previous Researches

The previous studies related to the implementation of jigsaw technique and peer-correction in English language teaching have been done by some researchers they are Zahra (2014), Zhu (2016), Tahir (2012), Ayachi (2017), and Gencha (2018). In this research, two techniques were integrated by the researcher in order to help the students to improve their writing ability. Related to the first teaching technique, jigsaw, mostly the previous studies implemented this technique in students’ reading class. However, some researches related to the implementation of jigsaw technique in writing class have been done by the previous researcher. The first researcher is Zahra (2014) who investigated the effect of the jigsaw technique in improving students’ writing ability by comparing it with the
conventional technique. She employed a quasi-experimental design in her research with an experimental and control group of tenth-grade students as the subject of the research. Besides investigating the effect of jigsaw on students’ writing ability, she also investigated students’ attitudes and opinions about the jigsaw technique. In doing her research, she conducted writing tests to each group in order to know the difference of writing ability of the experimental group (treated using jigsaw) and control group (treated with conventional technique) and after that she distributed the questionnaire related to the implementation of jigsaw technique only to the experimental group to find out their opinion and attitude about the technique. After doing the treatment, she found that students’ writing ability from the experimental group improved significantly better than the control group did and the experimental group students also rated the used technique moderately positive.

The second researcher is Zhu (2016) who combined two techniques, jigsaw reading activity and semantic mapping activity, to investigate the effect on students’ writing and reading ability. Zhu applied these techniques to 20 students who were enrolled in the writing and reading course. In his research, Zhu used English reading-ability-test and English summary-writing-evaluation form as the instruments to measure students’ reading and writing ability after learning through jigsaw reading and semantic mapping activities. He found that students’ reading ability increased from the passed level to the good level and students’ English writing ability passed the pre-set criteria at a good level after learning through the combined techniques. So, it can be stated that jigsaw reading and semantic mapping activities are good techniques that can be combined by the teacher to
improve students reading and writing ability. The researches on the use of jigsaw technique to improve students’ writing ability are rarely done by the previous researcher. In which most of the previous researchers applied this technique to improve students’ reading ability.

The second technique that were used in this research besides jigsaw technique is peer-correction. There are many previous studies related to the implementation of peer-correction on English language teaching, especially to improve students’ writing ability. The first researcher who implemented peer-correction in the writing class is Tahir (2012). She investigated how content and form-based feedback from peer evaluation influences students’ writing and students’ perception of the benefits of peer evaluation. In doing the research, Tahir compared two kinds of peer-evaluation and found that more comments are given for form rather than content. For content-based feedback, it was found that students feel what they comment to their peers and what peers’ comment on the benefit in terms of grammar and also the content of the writings. For form-based feedback, it was found that it benefits in terms of spelling and grammar.

The second previous study is done by Ayachi (2017) who compared the effect of peer-correction and teacher correction toward students’ writing ability. In her research, she wanted to find out which technique will improve students’ writing the most and how students’ perception toward the technique. After conducting the research, she found that a significant difference between peer and teacher correction of the writing compositions. This was due to the participants’ lack of editing skill and lack of objectivity. The second finding showed a positive attitude of the participants towards peer correction. They reported that this method
helped them learn from the mistakes of their peers. The last finding revealed that most of the participants’ grades improved.

The last researcher who conducted a research on the use of peer correction on students’ writing ability is Gencha (2018) who investigate the interaction patterns among Basic English Language writing skills, the effects of peer-review on improving the students’ writing skills, and the inspiration aroused by writing in a peer reviewed writing environment. He chose 40 students randomly and divided them into two groups, experimental and control groups. In which the control group received teacher feedback, while, the experimental group received peer-feedback. The data of the research were collected using a pre-test and a post-test for language proficiency and performance skills and perception questionnaire towards peer feedback. The results showed that the writing performances of the students in the experimental group excelled those in the control group and highly positive perceptions towards the teaching technique were also found.

Based on the explanations above, it can be stated that jigsaw technique has been applied by some researchers to improve students’ writing skill. However, the researches on the use of the jigsaw technique to improve students’ writing ability are rarely found because this technique mostly used by the teacher to improve students’ reading ability. Because of this reason the researcher wants to apply jigsaw technique in writing class to prove that this technique can also be used to improve writing ability. The jigsaw technique is believed can improve students’ ability in developing main idea (content) and organizing their writing which are the aspects of writing. However, there are three other aspects of writing that have not been touched by jigsaw technique namely grammar, vocabulary, and
mechanics. In order to make all aspects of writing improve the researcher wants to modify jigsaw technique based on peer-correction which is believed can improve those three aspects. That is why the researcher modified jigsaw technique to make greater improvement which is never done by the previous researchers before.

2.12. Theoretical Assumption

Based on the previous researches above it can be stated that jigsaw technique and peer-correction are techniques that could help the students to improve their writing ability. In jigsaw technique, the students learned how to develop their ideas before making a written text. So that two aspects of writing, content and organization, could be improved after the students did jigsaw activities. This technique enabled the students to share their ideas in a short time and make the students actively engaged in classroom activities. In peer-correction, the students learned how to correct their own mistakes with help of their friend correction. Through peer-correction other aspects of writing, vocabulary, structure, and mechanics were also improving.

Since in the previous researches above there was no researcher who tried to modify jigsaw technique to improve students’ writing ability, the researcher conducted a research to find out the use of modified jigsaw technique in improving students’ writing ability. The researcher conducted this research because it had been proven by the previous researches above that the two techniques namely jigsaw and peer-correction could be used to improve students’ writing ability but in the previous researches above the researchers only focus on one of the techniques. None of them try to modify these techniques. So, in this
research, the researcher modified jigsaw technique by inserting peer-correction steps to know whether the modified jigsaw technique was able to significantly improve students’ writing ability or not.

From the explanation above, it could be stated that the two techniques that had been mentioned by the researcher above were good techniques that could help the students in improving their writing ability. Therefore, by modifying the techniques, hopefully, the students could achieve better improvement and be more active in the teaching-learning process.

2.13. Hypothesis

Concerning to the theories and assumption above, the researcher formulates the hypothesis as follow:

1. The modified jigsaw technique can improve students’ writing ability better than the original jigsaw technique.

2. The writing aspect that improved the most after the students received treatment is grammar or language use.
III. RESEARCH METHODS

This chapter discusses several points related to the methods that were used in this research namely: setting, population and sample, research design, data collecting techniques, research instruments, validity and reliability of the test, teaching and learning process, data analysis and hypothesis testing.

3.1. Setting

This research was conducted at SMKN 1 Natar which was located at South Lampung, Lampung province. SMKN 1 Natar was a vocational school whose students come from the rural area. The research was done in the second semester of the academic year 2018/2019.

3.2. Population and Sample

The population of this research was two groups of tenth-grade students who were studying in the second semester of the academic year 2018/2019 at SMKN 1 Natar. The tenth grade of SMKN 1 Natar consisted of six classes (2 accounting classes, 2 automotive engineering classes and 2 electrical engineering classes) and each class consisted of 20-25 students. The sample of this research was the students of class X accounting 1 and 2 which consist of 21 and 23 students each.

In choosing the sample, the researcher used purposive random sampling to make
sure that the members of the class were homogeneous in their skills and capacities before the treatment was done. Through pre-research, it was found that the students of class X accounting 1 and 2 had low ability in writing skill. Based on those reasons the researcher chose them as the subject of this research to help them in improving their writing ability and enjoying their writing class. There are 4 male students and 16 female students in class X accounting 1 and 3 male students and 20 female students in class X accounting 2. So, it could be concluded that there were 40 students who became the subjects of this research.

3.3. Research Design

This research was a mix method which research which was intended to find out whether the modified jigsaw technique can be used to improve students’ writing ability better than the original one or not. Then, in conducting this research, the researcher applied true experimental design, pretest-posttest control group design, which refers to Hatch and Farhady (1982).

Ary et al (2010) state that, the true experimental design is highly recommended for experimentation in education. They also state that in true experimental design the subjects are assigned to the experimental and control groups and the researcher administers a pretest on the dependent variable before the treatments. After the treatments, the researcher then administered a posttest on each group and compared the two groups’ scores on the posttest.

The true experimental design which refers to (Hatch and Farhady, 1982) that was applied in this research is illustrated below:
\[ G_1 : T_1 X_1 T_2 \]
\[ G_2 : T_1 O T_2 \]

Notes:

\[ G_1 \]: Group 1 (X Accounting 1)
\[ G_2 \]: Group 2 (X Accounting 2)
\[ T_1 \]: Pretest
\[ T_2 \]: Posttest
\[ X_1 \]: Treatment 1 (Modified jigsaw technique)
\[ O \]: Treatment 2 (Original jigsaw technique)

3.4. Data Collecting Technique

This research aimed to find out whether combined jigsaw technique and peer-assessment could be used to improve students’ writing ability better than the original ones. To collect the data of this research, the researcher needed some techniques to collect the data of the research. Those techniques are:

3.4.1. Writing tests

In this test, the researcher asked the students to write a recount text based on the teacher’s instructions in the pretest and posttest. The purpose of these tests was to collect the data of students’ writing ability.

3.4.2. Questionnaire

The questionnaire was distributed to the students to collect the data of students’ perception about the techniques that had been applied in students’ writing class. The researcher provided the students with some questions to answer in the form of Likert-scale questionnaire.
3.4.3. Interview

The Interview was administered to find out students’ perception toward the techniques that had been applied by the research. The interview was done by the researcher informally during the research. The researcher asked some questions related to the implementation of the techniques in their writing class.

3.5. Research Instrument

Instrument refers to the tool that is used by the researcher to collect the data of the research. Instrument is very important to make the activities in the research run smoothly and easily. There are three instruments that were used in this research i.e. writing test, perception questionnaire, and interview. The explanation of the instruments will be elaborated below:

3.5.1. Writing Test

The writing test was conducted twice for each class in this research, in the first and last meeting of the research. These tests were conducted to collect the data of students’ writing ability before and after the treatment were applied by the researcher. In the writing tests, the students were asked to write recount text in 90 minutes. In conducting the writing test in the pretest and posttest, the researcher used pictures in order to help the researcher in applying jigsaw technique. The writing tests were measured based on two principles, validity and reliability.
3.5.2. Students’ Perception Questionnaire

The questionnaire was used to find out students’ perception about the value of modified jigsaw technique which had been applied in their writing class. It was used to get the majority of the students’ opinions on whether or not modified jigsaw technique in writing class could be used to make them learn how to write in English. The questionnaires consisted of 15 questions with five Likert-scale related to the application of the cooperative learning strategy in writing class which were adapted from Fennel (1992). The questionnaire was originally written in English but to make the students understand the questions well; the researcher decided to put translation (Bahasa Indonesia) below the original questions.

3.5.3. Interview Questions

Interview questions were used to see students’ perception toward the techniques that had been applied by the researcher. It was used to gain the data of students’ perception in detail. The researcher asked the questions in Bahasa Indonesia during the interview with the students. The questions that were asked to the students were made based on the steps of jigsaw technique in the teaching-learning activities.

3.6. The Validity and Reliability

A good test must be valid and reliable. Based on Ary et al (2010) states two very important concepts that researchers must understand when they use measuring instruments are validity and reliability. The detail explanation of the validity and reliability of the instruments of the research is elaborated below:
3.6.1. Validity

Validity is the most important consideration in developing and evaluating measuring instruments. Validity was defined as the extent to which an instrument measured what it claimed to measure (Hatch and Farhady, 1982).

1. Validity of The Writing Test

According to Hatch and Farhady (1982), there are two basic types of validity, they are content validity and construct validity.

a. Content Validity

Content validity examined whether the test represents the material that needs to be tested or not. The test should contain the representative sample of the course, or it should be in line with the materials that have been taught by the teacher before. To get the content validity, the type of the test was chosen based on the current curriculum of the tenth grade of SMKN 1 Natar. This research used recount text writing test which was supposed to be comprehended by the first grade of senior high school students. The test is considered valid in content validity since it is suitable for the curriculum which was used by the tenth grade of SMKN 1 Natar, which is K13.

b. Construct Validity

Construct validity relates to whether or not the test is actually in line with the theory of what it means to the language that is being measured. It examined whether or not the test reflects what it means to know a language. In this research, the writing test was measured based on the five aspects of writing namely: content, organization, language use, vocabulary, and mechanics that
are suggested by Jacobs et al (1981). A test could be considered as valid in its construction if the test items measure every aspect of the written forms. Then, it can be concluded that the instrument of this research is valid because it measures every aspect of the written forms.

2. **Validity of the Questionnaire and Interview Questions**

The validity of the questionnaire and interview questionnaire used constructs validity. It is concerned with whether the questionnaire is actually in line with the theory. It means that the test items should test the students or the test items should measure the students’ perception of the applied techniques. Regarding construct validity, it measures whether the construction has already inferred the theories, meaning that the test construction has already been in line with the objectives of learning (Hatch and Farhady, 1982).

Besides, before the questionnaires were distributed and interviews were done to the students, the researcher tested the instruments to 3 English teachers to make sure that the statements and interview questions do not have multiple interpretations. The original questionnaire’s statements from Fennel (1992) about cooperative learning strategy and the adapted statements are presented in the table below:

**Table 3.1. The category of questionnaire statements**

<table>
<thead>
<tr>
<th>No</th>
<th>Original</th>
<th>Adapted</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I often acquire valuable information through this learning technique.</td>
<td>I can acquire valuable information through this learning technique.</td>
<td>Usefulness</td>
</tr>
<tr>
<td>2</td>
<td>I often share information and ideas with other students through this approach.</td>
<td>I can share information and ideas with other students through this approach.</td>
<td>Usefulness</td>
</tr>
<tr>
<td>3</td>
<td>I often engage in critical thinking (evaluating ideas and opinions and solving problems through this learning technique)</td>
<td>I can evaluate ideas and opinions and solve problems through this learning technique.</td>
<td>Usefulness</td>
</tr>
</tbody>
</table>
4. I often listen to the thoughts and opinions of my classmates through this approach.

5. I get a chance to see how ideas can be applied to teaching-learning process through this approach.

6. I often practice skills of listening, sharing and giving encouragement to classmates through this approach.

7. I can review information, check on my level of understanding, and get help through this approach.

8. I look forward to these learning activities.

9. I feel actively involved in these learning activities.

10. I get frustrated or impatient in these activities.

11. I feel intellectually challenged in these activities.

12. I feel closer to my classmates in these activities.

13. Most of my classmates participate actively in these activities.

14. I feel my ability is improved through these learning activities.

<table>
<thead>
<tr>
<th>Feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get frustrated or impatient in these activities</td>
</tr>
</tbody>
</table>

Beside the construct validity above, the researcher also measured the validity of the questionnaire using SPSS ver.25, the results of the calculation are presented in the table below:

**Table 3.2. The Validity of The Questionnaire Items in Control and Experimental Class**

<table>
<thead>
<tr>
<th>Item</th>
<th>Control Class (N=23)</th>
<th>Experimental Class (N=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>item_1</td>
<td>Pearson Correlation</td>
<td>.729**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>item_2</td>
<td>Pearson Correlation</td>
<td>.661**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td>item_3</td>
<td>Pearson Correlation</td>
<td>.755**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>item_4</td>
<td>Pearson Correlation</td>
<td>.751**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>item_5</td>
<td>Pearson Correlation</td>
<td>.661**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td>item_6</td>
<td>Pearson Correlation</td>
<td>.693**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>Item</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>item_7</td>
<td>0.755**</td>
<td>0.000</td>
</tr>
<tr>
<td>item_8</td>
<td>0.579**</td>
<td>0.004</td>
</tr>
<tr>
<td>item_9</td>
<td>0.661**</td>
<td>0.001</td>
</tr>
<tr>
<td>item_10</td>
<td>0.573*</td>
<td>0.004</td>
</tr>
<tr>
<td>item_11</td>
<td>0.665**</td>
<td>0.001</td>
</tr>
<tr>
<td>item_12</td>
<td>0.504*</td>
<td>0.014</td>
</tr>
<tr>
<td>item_13</td>
<td>0.657**</td>
<td>0.001</td>
</tr>
<tr>
<td>item_14</td>
<td>0.610**</td>
<td>0.003</td>
</tr>
</tbody>
</table>

From the table above it can be stated that all questionnaire items are valid which can be proven by the significance value (Sig. (2-tailed)) of each item which is lower than 0.05. Besides, it can also be proven by comparing the \( r \) value with \( r_t \) table. If the \( r \) value (Pearson correlation) is higher than the \( r_t \) table, the item is valid. In which for the control class with \( N=23 \) the \( r_t \) table is 0.413 and the experimental class with \( N=21 \), the \( r_t \) table is 0.433. From the table above, it can be seen that all \( r \) values for both classes are higher than the \( r_t \) table. Which can be stated, all items in the questionnaire are valid.

### 3.6.2. Reliability

Reliability deals with how far the consistency as well as the accuracy of the scores given by the raters to the students’ writing performance. The concept of reliability adapted from the idea that no measurement is perfect. Even if one goes to the
same scale there will always be differences in the weight which become the fact that measuring instrument is not perfect.

1. **Reliability of the Writing Test**

Since writing test was a subjective test, inter-rater reliability will be occupied to verify that both the scoring between raters and that the main rater herself was reliable and not. The data were computed into SPSS ver.25 and Pearson Product Moment Correlation was applied to measure the correlation between the pretest and posttest scores given by Rater 1 and Rater 2 (see Appendix 7). After the coefficient between raters was found, the coefficient reliability analyzed based on the standard of reliability bellow:

a. A very low reliability : ranges from 0.00 to 0.19

b. A low reliability : ranges from 0.20 to 0.39

c. An average reliability : ranges from 0.40 to 0.59

d. A high reliability : ranges from 0.60 to 0.79

e. A very high reliability: ranges from 0.80 to 0.100

Based on the results of the calculation in appendix 7, the results of inter-rater reliability test of the control and experimental class were presented in the table below:

<table>
<thead>
<tr>
<th></th>
<th>Reliability</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Class Pretest</td>
<td>0.969</td>
<td>Very high reliability</td>
</tr>
<tr>
<td>Control Class Posttest</td>
<td>0.957</td>
<td>Very high reliability</td>
</tr>
<tr>
<td>Experimental Class Pretest</td>
<td>0.941</td>
<td>Very high reliability</td>
</tr>
<tr>
<td>Experimental Class Posttest</td>
<td>0.863</td>
<td>Very high reliability</td>
</tr>
</tbody>
</table>
From the table above it can be concluded that the writing tests that had been conducted in the control and experimental are reliable and the reliability of each test is categorized as very high reliability.

2. Reliability of Questionnaire

The researcher used Cronbach Alpha because the questionnaire was Likert scale questionnaire. According to Setiyadi (2006), if the test is arranged by Likert scale; it is better use Alpha minimum 0.70.

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>Internal Consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\alpha \geq 0.9)</td>
<td>Excellent</td>
</tr>
<tr>
<td>(0.9 &gt; \alpha \geq 0.8)</td>
<td>Good</td>
</tr>
<tr>
<td>(0.8 &gt; \alpha \geq 0.7)</td>
<td>Acceptable</td>
</tr>
<tr>
<td>(0.7 &gt; \alpha \geq 0.6)</td>
<td>Questionable</td>
</tr>
<tr>
<td>(0.6 &gt; \alpha \geq 0.5)</td>
<td>Poor</td>
</tr>
<tr>
<td>(0.5 &gt; \alpha)</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

After the data were computed using SPSS ver.25 and the reliability tests were conducted, the results of the reliability test on the questionnaire for the control and experimental classes were presented in the table below:

<table>
<thead>
<tr>
<th></th>
<th>Reliability</th>
<th>Internal Consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Class</td>
<td>0.804</td>
<td>Good Reliability</td>
</tr>
<tr>
<td>Experimental Class</td>
<td>0.815</td>
<td>Good Reliability</td>
</tr>
</tbody>
</table>

From the table above it can be concluded that the questionnaire that was used to collect the data of students’ perception is reliable. The detail results of each questionnaire item’s reliability can be seen in appendix 8.
3.7. Teaching and Learning Process

This research was conducted to the tenth-grade students of SMK Negeri 1 Natar, South Lampung, in 2018/2019 academic year. There were two classes that were chosen by the researcher based on the pre-research results as the subjects of the research. The subjects of this research were X Ak1 and X Ak2 which consist of 21 and 23 students. The students in each class were given different treatment, the first-class X Ak1, experimental class, were taught using the modified jigsaw technique and X Ak2, the control class, were taught using the original jigsaw technique. The research was done by the researcher from April 20\textsuperscript{th}, 2019 to May 18\textsuperscript{th}, 2019. There were three instruments which were used in collecting the data of the research, the instruments were writing tests, which were used to collect the data of students’ writing ability, questionnaire and interview, which were used to collect the data of students’ perception toward the implementation of the technique in their writing class.

3.7.1. The Application of Original Jigsaw Technique

The original jigsaw technique was applied to the control group, XAK 2, which consist of 23 students. The research in the control class was conducted for five meetings, in which the pretest was conducted in the first meeting to find out students’ writing ability before the researcher conduct the treatment. Then, the second and third meeting was used to conduct the treatment using the original jigsaw technique. In the fourth meeting, posttest was conducted to find out students’ writing ability after the students received treatment. Then in the last meeting the researcher distributed the questionnaire and conducted the interview.
to collect the data of students’ perceptions about teaching-learning using the original jigsaw technique. The activities of those meetings were elaborated below.

1. **First Meeting (Pretest)**

The pretest was conducted in the first meeting on April 20th, 2019 the researcher distributed the writing sheet to the students and asked the students to make a recount text in 90 minutes based on the theme that they chose. In writing the text the students faced some difficulties in translating the text into English because they lack of vocabularies. Because of the lack vocabulary, the students need extra time to find the difficult words in their dictionary. The difficulties that were faced by the students affected students’ writing ability and made some students could not elaborate the paragraph well and only write one or two paragraphs on their writing sheet.

2. **Second Meeting (Treatment)**

The treatment in the control class was done by applying the original jigsaw technique in students’ writing activities. The teaching-learning process was divided into pre, whilst and post activities. In the pre-activities, the researcher explained about recount text briefly to the students and gave an example of recount text. In the whilst activities, the students grouped themselves into four groups consisted of five students in each group. Then, the researcher explained how to do jigsaw activities and after that the students discussed the story of a picture (each group got a different picture) that had been distributed by the researcher before.
In the discussion, some of the students asked about the difficult words to the researcher and some of them also looked for the difficult word in the dictionary after 10 minutes the discussion was done and the students were asked to split their group so that the new group had one member of each original group. After making a new group the students told the story from their original group one by one based on the order of their original group. After the students finished telling the story one by one, the students discussed the story together and make a full story by combining their story. After that, the students were asked to rewrite the story individually in their own language. In the post activities, the researcher and students discussed what they have done during the teaching-learning process.

3. Third Meeting (Treatment II)

In the third meeting, the second treatment was administered to the students. The procedures of the second treatment were similar to the procedures that were done in the second meeting of the control class. The researcher only used different picture in whilst activity to make the students wrote a different story from the second meeting. In the second treatment, the students looked more accustomed to the writing activities using original jigsaw technique because they knew what they have to do during the writing activities and it made them more comfortable in discussing and writing the story.

4. Fourth Meeting (Posttest)

In the fourth meeting of the control class, the researcher conducted the posttest after the students received treatments in their writing activities using the original jigsaw technique. In the posttest, the students were asked to write the recount text
by the topic which was chosen by them, but in the posttest the topic should be
different from the topic they had chosen in the pretest. The time that was given to
the students to finish their writing in the posttest was similar to the pretest, 90
minutes. In the posttest, the students looked more relax than in the pretest and
most of the students could finish their writing better which could be seen from the
development of their paragraph.

5. Last Meeting (Student’s Perception data collection)

In the last meeting of the control class, the researcher collected the data of
students’ perceptions through questionnaires and interviews. The researcher
started the class by recalling students’ memories about what they had done in the
previous meetings. Then the researcher distributed the perception questionnaire to
each student. After the students finished filling the questionnaire, the researcher
asked the students to collect the questionnaire one by one and while the student
collected the questionnaire the researcher interviewed the students to gather more
valid data of students’ perception.

3.7.2. The Application of Modified Jigsaw Technique

The application of the modified jigsaw technique was done in the experimental
class, XAK1, which consists of 21 students. In the experimental class, the
researcher did the research for five meetings. The first meeting was pretest, the
second and third meetings were treatment, the fourth meeting was done to conduct
the posttest and the last meeting was done to collect the data of students’
perception toward the application of the modified jigsaw in their writing activities.
The explanations of the application of the modified jigsaw technique in the experimental class are elaborated below.

1. **First meeting (Pretest)**

The research that was done in the experimental class was started by administering pretest on April 20\textsuperscript{th}, 2019 to identify students’ writing ability before the treatments using the modified jigsaw technique. In the first meeting, the researcher explained about recount text briefly to the students and gave a simple example of the text to the students. After giving short explanations and instructions to the students, the researcher distributed the writing sheets to each student and told the students that the time for doing the test was 90 minutes. The students were asked to choose one of the topics that have been given by the researcher on their writing sheet. During the test, similar to the control class, some of the students have some difficulties in translating and elaborating the ideas. These difficulties happen because of their lack of vocabulary, which made the students often check the dictionary to find the difficult word and it made the students need extra time in translating the text and finally made them unable to elaborate the paragraph well. After the students finished the test, the researcher asked the students to collect their writing sheets.

2. **Second Meeting (Treatment I)**

After administering the pretest on the first meeting, in the second meeting the researcher conducted the treatment using modified jigsaw technique to improve students’ writing ability. As have been mentioned in the previous chapter of this
thesis, peer-correction steps were inserted in the jigsaw technique to modify it and make better improvement on students’ writing ability.

Similar to the control class the teaching-learning activities were divided into three; pre, whilst and post activities. In pre-activity, the researcher told the students about what they had to do in that meeting and gave brief instructions to the students. After giving a brief explanation the researcher asked the students to form 4 groups which consist of 5-6 students. In whilst activities the researcher distributed a picture for each group (a different picture for each group) and asked the students to discuss the possible story that happens in the picture together with their group mates. While discussing the story, some students asked the researcher related to the vocabularies (difficult words) and some of them also asked whether the story they made was good or not.

The time that was given to discuss the picture was 10 minutes, after that the students were asked to form a new group based on the researcher’s instruction which should consist of one member of the original group. After the groups were formed, the students told the story of their original group one by one to their new group started from the member of group one to four. While one of the members told the story, the other members were listening to the story and after all members finished telling the story, the students were asked to go back to their seats and write the whole story by their own language.

After the students finished their writing, the researcher asked the students to collect the writing sheet and distributed those writing sheets randomly to the students. After all students got the writing sheet, the researcher explained that the
students should correct their friends’ writing based on the writing checklists that have been distributed by the researcher. Then the researcher gave a brief example of how to do peer-correction to the students. After all students understand what to do during peer-correction activities, the students did peer-correction for 15 minutes. After the students finished correcting their peer’s writing, the students gave the writing sheet to the owner and the researcher asked the students to read the correction that had been made by their friends. Then the researcher asked the students to revise their writing for 30 minutes based on the correction that had been made by their friends. During writing activities in the revision, the students looked more relax compared to the pretest. In the post-activity, the researcher and students discuss what they have done during the teaching-learning activities and some of the students shared their feeling after receiving the treatment.

3. Third Meeting (Treatment II)

After conducting the second meeting the researcher administered the third meeting to apply the modified jigsaw technique to the students for the second time. In the second treatment, similar to the first treatment of the experimental class, the researcher divided the meeting into three phases, pre, whilst and post activities. The procedures that were done in the second treatment were similar to the first treatment in each phase. The researcher only replaced the picture in discussion to make the students wrote a different story from the previous meeting. Peer-correction activities were also done in the third meeting of the experimental class as it also had been done in the second treatment. After all activities in the third meeting were done, in the posttest, the researcher and students discuss what
they have learned that day and shared what they felt during the teaching-learning process.

4. Fourth Meeting (Posttest)

After the modified jigsaw activities had been applied to students’ writing activities, the post-test was administered to measure students’ writing ability after the students received treatment. The post-test in the experimental class was administered on May 11th, 2019. Similar to the pretest, the researcher distributed the writing sheets to the students and gave 90 minutes to the students to finished the test and they had to choose one of the topics that had been written in their writing sheets but the topic should be different to the topic that they had chosen in the pretest. During the test, the students seemed more comfortable in writing compared to the pretest even though some of them still need extra time to open the dictionary. After 90 minutes, the students collected their writing sheet to the researcher and the teaching-learning process was finished.

5. Last Meeting (Data Collection of Students’ Perception)

After the data of students’ writing ability had been collected through the pretest and the posttest, the data of students’ perceptions were collected in the last meeting of the experimental class. The procedures of collecting the data of students’ perception toward the application of modified jigsaw technique in the experimental class were similar to the procedures that were done in the control class. The researcher used two instruments to collect the data of students’ perception, which were questionnaire and interview. Firstly, the researcher distributed the perception questionnaire to students and after the students finished
filling the questionnaire the researcher asked the students to collect the questionnaire one by one. While the students collect the questionnaire, the researcher interviewed the students related to their perception of the application of the modified jigsaw technique in their writing class. The interview was done to make sure that the data of students’ perceptions were valid.

3.8. Data Analysis

The results of students’ writing tests were evaluated based on content, grammar, organization, vocabulary, and mechanics. The results of students’ writing ability in pretest were compared with the results of their writing ability in the posttest to analyze the data gained from writing tests. The researcher treated the data through these following steps:

a. Scoring Pretest and Posttest

Scoring criteria adopted from Jacob et al (1981) were used in collecting the data of writing tests. In scoring students’ writing ability, the researcher and her partner scored the test based on five aspects of writing, content, organization, language use, vocabulary, and mechanics.

b. Calculating Students’ Total Scores

These are two formulas that were used in calculating students’ total scores:

1) Calculating the scores from 1st rater and 2nd rater

\[ R1 = C + O + L + V + M \]
R2 = C + O + L + V + M

Notes:

R1 = Score from 1st rater
R2 = Score from 2nd rater
C = Content
O = Organization
L = Language use/grammar
V = Vocabulary
M = Mechanics

2) Calculating the total score

\[ TR = \frac{R1 + R2}{2} \]

R1 = Score from 1st rater
R2 = Score from 2nd rater
TR = Total Score

c. Calculating the Significance Difference of the Tests

After the total scores were gained, the average scores between the two raters were taken to be the final scores that were analyzed statistically using Paired Sample t-test to show the differences between pretest and posttest in both classes. It was done in order to see the effect of the original and modified jigsaw technique toward students’ writing ability. The data was computed through the Statistical Package for Social Science (SPSS) version 25.0.
d. **Comparing the Significance Difference of the Test**

After the researcher calculated the significant difference of the tests, the results were compared in order to see which treatment making the best improvement on students’ writing ability. The data were inserted to SPSS version 25 to run *Independent Group t-test*.

e. **Drawing Conclusion from the data**

After the significant difference of the test was calculated, the researcher drew the conclusion from the calculation. It was done in order to know whether there was a significant difference between students of the control class and experimental class.

3.9. **Hypothesis testing**

The hypothesis testing is used to prove whether the hypotheses proposed in this research is accepted or not. The hypothesis is formulated as follows:

1. \( H_1 \): The modified jigsaw technique can be used to improve students’ writing ability better than the original jigsaw technique.

2. \( H_2 \): Grammar is the writing aspect that improved the most after the students received the treatment

From the explanations above, it can be concluded that this research used true experimental design. The researcher conducted a pretest and posttest to each group to collect the data of students’ writing ability and then distributed the perception questionnaires and administered interviews to collect the data of students’ perception. The instruments that were used in this research are writing
tests, interview and students’ perception questionnaires. In order to analyze the results, the researcher compared the mean of the posttest scores of the control and experimental group. The differences between the tests were analyzed using the *Independent Group t-test*. 
The last chapter of this thesis deals with conclusions of the results of the data analysis and suggestions. It presents the conclusions of this research and the suggestions for English teachers and further researchers.

5.1 Conclusions

In line with the results of the data analysis and discussion the following conclusions are drawn:

1. Modified jigsaw can be a helpful learning technique that can be used in teaching learning process of writing class. After being taught using modified jigsaw technique students’ writing ability is improved significantly which can be caused by the discussion during jigsaw activities which makes the students actively engage in the teaching learning process. In the control class, there is a significant improvement in the students’ writing ability after the researcher applied the original jigsaw technique. However, from the calculation, it can be concluded that there was a significant difference in the students’ posttest mean between the control and experimental class, in which the students’ posttest mean of the experimental class is higher than of the control class.

2. The original and modified jigsaw technique can be an effective learning technique that can be used to reduce the students’ problems in all writing
aspects. It is found that the most improved writing aspects for both control and experimental class is grammar or language use.

3. Both of the techniques, original and modified jigsaw, are able to leave a good/positive perception on students. Since most of the students in both the control and experimental group said that they could reach better learning after the researcher applied the original and modified jigsaw technique. So, the students can increase their learning activities and finally their learning product.

5.2 Suggestions

Given the conclusions above, the following suggestions are put forward:

1. **Suggestions for English Teachers.**
   
a. For the teachers who want to apply original and modified jigsaw techniques in their writing class, it is suggested that the teacher should prepare the number of materials that is suitable with the number of the group discussion during jigsaw activities. In order to make all students actively engage in the teaching-learning process.

b. In applying the technique, the teacher should act as the facilitator and make the students as the center of the learning process. The teacher should walk around the class during the teaching-learning process to make sure that the students are discussing the tasks that are given by the teacher. Besides, the teacher should be able to control the students and make sure that the
students focus on the discussion during jigsaw activities, so that the students will be able to get the benefit from doing jigsaw technique.

c. Original jigsaw technique is suggested for the class whose students need improvement in grammar and content aspects. Since it was proved that original jigsaw technique can be used to improve students’ grammar and content aspect in this research.

d. Modified jigsaw technique is highly suggested for the class whose students need bigger improvement in grammar aspect. Besides, grammar could improve from the jigsaw activities, it also can be enhanced through peer-correction in the modified jigsaw technique.

2. Suggestions for Further Researchers

a. During the implementation of the modified jigsaw technique, it is suggested to further researchers to pay more attention toward the correction of mechanics so that the mechanics aspect can also improve significantly like other writing aspects.

b. Jigsaw is a technique that can be used to teach integrated skills in which more than one skill was involved in the teaching-learning process for example in this research, speaking skill. So, it is suggested for further research to collect the data of students speaking ability too. In order to find out whether this learning technique will be effective or not if it is applied in the speaking class.
c. In modifying the jigsaw technique in this research, the researcher used the steps of peer-correction. However, the effect on students’ writing ability is not big. Therefore, it is suggested for further researchers to modify jigsaw technique with other learning techniques so it can give bigger effects on students’ learning process and product.
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