

**THE EFFECTIVENESS OF IMPLEMENTING JIGSAW TECHNIQUE TO IMPROVE
STUDENT'S ACHIEVEMENT IN READING REPORT TEXT AT THE SECOND GRADE
OF SMA AL-KAUTSAR BANDAR LAMPUNG**

(A Script)

**By
Gamal Adam Alharir**



**ENGLISH EDUCATION STUDY PROGRAM
DEPARTMENT OF LANGUAGE AND ARTS EDUCATION
FACULTY OF TEACHER TRAINING AND EDUCATION
UNIVERSITY OF LAMPUNG
2019**

ABSTRACT

THE EFFECTIVENESS OF IMPLEMENTING JIGSAW TECHNIQUE TO IMPROVE STUDENT'S ACHIEVEMENT IN READING REPORT TEXT AT THE SECOND GRADE OF SMA AL-KAUTSAR BANDAR LAMPUNG

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The aims of this study were to find out whether there was a significant improvement of students' reading comprehension achievement after the students were taught through jigsaw technique. In addition, this research also conducted to find out which aspect of reading improved the most after they are taught by using jigsaw technique.

The research was quantitative which used a one group pre test- post test design. The population of this research was the second grade students of SMA Al-Kautsar Bandar Lampung of academic year 2017/2018. The sample of this reseach was XI social studies 4 which consisted of 32 students. The research was conducted from 3rd August to 3rd September 2018. The instrument was reading tests.

The results of this research showed that there is a significant improvement of students' reading comprehension after the students are taught through jigsaw technique. It could be seen from the result which showed that the significance level of $p < 0.05$ ($p=.000$), in which the students' mean score in the pre test was 63.68 with an increase of 71.75 in post test. The data were analyzed by using t-test in which the significance was determined by $p < 0.05$. It can be concluded that that main idea is the aspect of reading which improves the most. It can be concluded that jigsaw technique improve students' reading ability of report text.

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A Script

**Submitted in a Partial Fulfillment of
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DEPARTMENT OF LANGUAGE AND ARTS EDUCATION
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BANDAR LAMPUNG**

Student's Name : Gamal Adam Alharir

Student's Number : 1413042024

Department : Language and Arts Education

Study Program : Teacher Training and Education

Advisor

Dr. Feni Munifatullah, M.Hum.
NIP 19740607 200003 2 001

Co-Advisor

Gede Eka Putrawan, S.S., M.Hum.
NIP 19850924 201404 1 001



**The Chairperson of
The Department of Language and Arts Education**

Dr. Nuriaksana Eko R., M.Pd.
NIP 19640106 198803 1 001

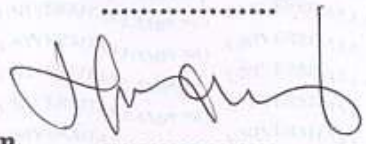
ADMITTED BY

1. Examination Committee

Chairperson : Dr. Feni Munifatullah, M.Hum.

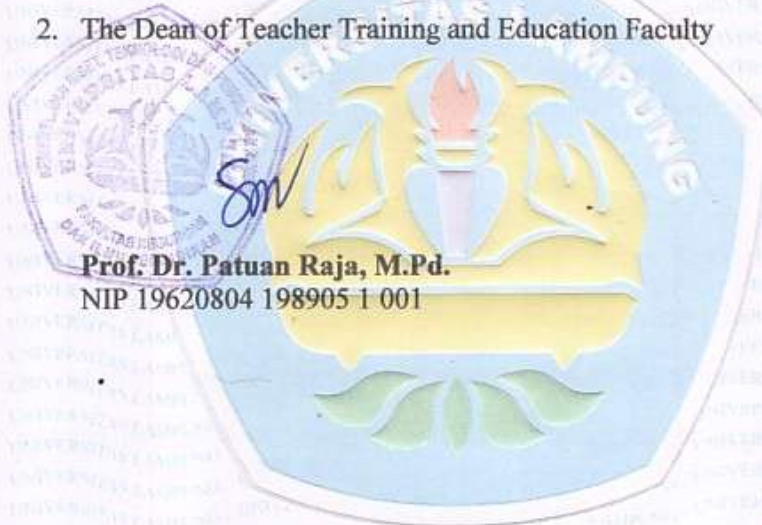


Examiner : Dr. Muhammad Sukirlan, M.A.



Secretary : Gede Eka Putrawan, S.S., M.Hum.

2. The Dean of Teacher Training and Education Faculty



Prof. Dr. Patuan Raja, M.Pd.

NIP 19620804 198905 1 001

Graduated on: May 3rd, 2019

LEMBAR PERNYATAAN

Yang bertanda tangan dibawah ini, saya:

Nama : Gamal Adam Alharir
NPM : 1413042024
Program Studi : Pendidikan Bahasa Inggris
Jurusan : Pendidikan Bahasa dan Seni
Fakultas : Keguruan dan ilmu pendidikan
Judul Skripsi : The Effectiveness of Implementing Jigsaw Technique to Improve Student's Achievement in Reading Report Text at The Second Grade of SMA Al-Kautsar Bandar Lampung

Menyatakan bahwa skripsi ini adalah hasil karya sendiri. Sepanjang pengetahuan saya, karya ini tidak berisi materi yang ditulis oleh orang lain, kecuali bagian-bagian tertentu yang saya ambil sebagai acuan. Apabila ternyata terbukti bahwa pernyataan ini tidak benar, sepenuhnya menjadi tanggung jawab saya.

Bandar Lampung, 13 Juni 2019

Penulis



CURRICULUM VITAE

The researcher's name is Gamal Adam Alharir. He was born on July 24, 1996 in Bandar Jaya. He is the oldest son of Hasan Hariri and Sri Rahayu. He has one younger sister named Inas Azzahra Alharir.

His educational background started at TK Al-Kautsar, Bandar Lampung in 2001. He continued his study at SD Al-Kautsar. After he graduated from the elementary school in 2008, he continued his study in SMP Al-Kautsar Bandar Lampung and graduated in 2011. Then, in 2011, he studied in SMA Al-Kautsar Bandar Lampung and graduated in 2014.

During his study in university, he actively took part in various students activities, UKM-U English Society (ESo). He became a TOEFL mentor of English extracurricular class especially on listening comprehension in Language Center, University of Lampung. He also became a master of ceremony in LP3M in 2018.

From August to September 2017, he carried out a KKN program in Belalau, West Lampung and he conducted PPL at SMPN 1 Kenali. To complete his study, he undertook a research related to students reading comprehension through jigsaw technique at SMA Al-Kautsar Bandar Lampung.

DEDICATION

With a huge relief, this undergraduate thesis is proudly dedicated to:
My beloved father, a silent watcher, who prays for me, the witness of my cheers and silences, Hasan Hariri. My beloved mother, who always supports me through her logical advice and shocking yells in order to keep me sane and prays for me regularly, she is Sri Rahayu.

My beloved sister, the most independent yet a sweet woman at the same time.
Inas Azzahra Alharir

English Department 2014

My almamater, University of Lampung

MOTTO

If you can do what you do best and be happy, you're further along in life than most people.

-Leonardo DiCaprio-

Quotes are breakable, it won't last on every situation. The most trusted quote that you can ever rely on is your own intuition.

-Gamal Adam Alharir-

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The researcher hopes that this research would be a positive contribution to the education development, readers, and other researchers.

Bandar Lampung, 31 May 2019

The researcher

Gamal Adam Alharir

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I. INTRODUCTION

1.1. Background of the Problems

Reading is one of basic language skills that a student needs to develop in learning English. Reading is also one of fundamental skills to exchange information, ideas and feelings. It is needed to promote comprehension skill by knowing the ideas and knowledge from the writer's mind. As stated by Sweet (2002), reading comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. Reading comprehension is the ability to read a text, process it, and understand its meaning. Although this definition may seem simple, it is not necessarily simple to teach, learn or practice. The meaning of the text would be easy to understand when they are expending the thoughts in writing. To achieve it, the comprehension ability in reading is needed. By comprehending the reading text, students will get more knowledge and they can apply it in their life.

As stated in Curriculum 2013 of senior high school, one kind of text types that students should achieve is report text. Report means information arranged narratively in specific periods of time. Report is a work which is used as informational texts, such as writing, television, film describing specific things for a particular intension of relaying information.

According to Gerot and Wignell (1994: 196), the social function of report is to describe the way things are, with reference to a range of natural, man-made and

social phenomena in our environment. Reports are used for finding specific things, which can bring facts and needs towards particular information. Written reports such as documents displayed, focused and detailed information to a specific audience, used in governmental places, business, education, science, and many other fields, are often to display the result of an experiment, investigation, or inquiry.

Mostly, the difficulty that students face when learning a report text is that they cannot understand the text because of the difficulties of comprehending the scientific vocabulary in it. The difficulties of comprehending several vocabularies that are found in report text makes them hard to develop ideas and transform them into a whole idea of report text. They also have limited vocabularies, sentence construction within paragraph, and difficulties in comprehending five aspects of reading. The five reading aspects are determining main idea, finding the specific information or part of text, finding reference, finding inference, and guessing meaning of vocabulary (Nuttal, 1982:109). Those aspects in reading must be comprehended deeply by the reader in order to fully understand the text. Because of those facts, a teacher needs to encourage students to improve their reading ability. A teacher should have a creative way to increase their reading ability by implementing jigsaw technique through report text.

Based on a short interview with one of the eleventh-grade students in senior high school of Al-Kautsar, the interviewee said that English lesson is still taught in a conventional way. Further explained, that the way the teacher gives a lesson is usually by asking the students to answer questions based on the book that has been provided by the school. This might cause students find a difficulty in acquiring English. Some students tend to get difficulty to find meaning and idea from the text, this caused the score of the students tends to get low. Based on the problems stated above, the students might need a cooperative learning strategy to

increase their reading skills. There are so many techniques that deal with cooperative learning, such as jigsaw, think-pair-share, three-step interview, round robin brain storming, three-minute review, numbered heads, team pair solo, circle the sage, partners, etc. One effective way that can be used to help students build up their ideas is through jigsaw technique. Jigsaw technique is a technique which organizes the classroom and makes students able to learn by themselves without only receiving information but more than that it creates a self learning in a conscious way by doing a task together with a group. Since reading takes a big role in a process of learning, therefore reading is important to be practiced. Jolliffe (2007) in her book, "Cooperative Learning in the Classroom", defines jigsaw technique as a technique in which students are distributed into groups and each member of group learns an essential part of a whole of a topic by working with a focus group and then helps the home group to combine the knowledge to complete the task.

Defined broadly, jigsaw is a grouping strategy in which the members of the class are organized into "jigsaw" groups. The students are then reorganized into "expert" groups containing one member from each jigsaw group. The members of the expert group work together to learn the material or solve the problem, then return to their "jigsaw" groups to share their learning. In this way, the work of the expert groups is quickly disseminated throughout the class, with each person taking responsibility for sharing a piece of the puzzle. Moreover, Slavin (2010) said that in jigsaw, the students study cooperatively in a team. According to Aronson (1978), jigsaw is an efficient way for students to become engaged in their learning, learn a lot of material quickly, share information with other groups, minimize listening time, and be individually accountable for their learning. Jigsaw maximizes interaction and establishes an atmosphere of cooperation and respects

other students. Teachers who listen to the discussion of the jigsaw groups can quickly hear what each of the original groups has been doing.

In jigsaw technique, students have the biggest responsibility in sharing and receiving knowledge. The purpose of jigsaw itself is to increase students teamwork and cooperative learning where every student has different capabilities in receiving knowledge. The procedures involve the students' activities in a small group. The group consists of 5-6 students and every student has their own responsibility to learn a particular case from the materials given and deliver those materials to others students. The first group in jigsaw technique is usually known as the home group, while the second group is called expert group. Each group in jigsaw technique consists of 5-6 students from various abilities. Each of the home group students merge in expert group to study material which is assigned to each group students. After discussion, they go back to their home group members and explain to his or her group members for material completeness.

Few studies on the effect of jigsaw technique on reading comprehension has been carried out in schools, and little is known about this topic investigated in Lampung schools. Sabbah (2016) from Community College of Qatar (CCQ) proved that he used a quasi-experimental method to prove the effectiveness of jigsaw technique to improve students' reading comprehension. The subjects which involved in this experiment were 26 ESL foundation female students enrolling in two Level 4 classes in the CCQ. The study revealed a significant effect of jigsaw technique on ESL student's reading achievement.

Another significant finding of jigsaw technique is from a study conducted by Kurnia (2002) for her script. The goal of this study is to make the students able to comprehend the passage in English as second language reader by activating all of the students' background knowledge using cooperative learning through jigsaw

activities. Based on the statistical calculation of posttest scores got by the writer from her research, the result of reading comprehension achievement of the students taught using cooperative learning through jigsaw activities is better than the result of the students taught using traditional technique. The results are significantly different.

In addition, a journal article written by Septami from University of Riau, Pekanbaru that was written in 2018, aims to find out the effectiveness of jigsaw techniques on the reading comprehension ability of the second-year students of SMAN 2 Pekanbaru. The researcher used pre-experimental research design of one-group-pretest-posttest. T-observation result shows that the student's mean score of posttest (67.0588) is higher than the pretest (53.0588).

Ummah (2017) has also proved a significant improvement of the students' reading comprehension using jigsaw technique. Firstly, the data shows that the use of jigsaw technique gives positive effect on the students' reading comprehension especially in narrative text. It was proved that the result of posttest was higher than pretest (72.08 > 63.58). Secondly, Alternative Hypothesis (H_a) was accepted since the value of t-test was higher than t-table (7.105 > 2.045).

Last, Hilda (2017) from Syarif Hidayatullah State Islamic University Jakarta conducted a study for her script. The researcher proved that using jigsaw technique is effective. It can be seen from the students' score who are taught using jigsaw technique is better than the students' who are not taught by using jigsaw technique. The result showed that in significance degree of 5%, the value of t-test (t_o) > t-table (t_t) (2.17 > 2.002). It could be concluded that t-observed value was higher than t-table value.

According to those previous statements, the researcher convinced that it is important to apply a more interesting teaching of reading by using jigsaw.

Therefore, the researcher was focused on improving students' report text ability through a research entitled "The Effectiveness of Implementing jigsaw Technique to Improve the Student's Achievement in Reading Report Text" at Senior High School of Al-Kautsar.

1.2. Research Questions

Based on the background discussed above, the researcher formulated the problems as follows:

1. Is there any significant improvement of students' report text reading comprehension after the implementation of jigsaw technique at Senior High School of Al-Kautsar?
2. What aspect of reading improves the most after the implementation of jigsaw technique?

1.3. Objectives of the Research

Based on the research questions above, the objectives of the research are:

1. to examine whether there is any significant improvement of students report text reading comprehension after the implementation of jigsaw technique.
2. to examine which of the aspect of reading that improves the most after the implementation of jigsaw technique.

1.4. Uses of the Reasearch

This research has some uses as follows:

1. Theoretically, the result of this research enriches the empirical studies on teaching reading through jigsaw.
2. Practically, it can be used as an alternative technique in teaching report text.

1.5 Scope of the Research

This research is a quantitative research that was conducted at Senior High School of Al-Kautsar Bandar Lampung in the first semester of 2018/2019. The research was intended to find out whether there was a significant improvement of students' reading comprehension of report text after the implementation of jigsaw technique. The researcher examined the improvement of students' aspects of reading after the implementation of jigsaw technique. Those five aspects are main idea, specific information, references, inferences and vocabulary. The materials were taken from an English book for senior high school, K13 which covers report texts and national exam questions. The researcher conducted this research in five meetings for four weeks. The students' improvement was found out by comparing the results of students' answers of pretest and posttest.

1.6. Definition of Terms

In order to make the same perceptions, the researcher listed the terms that are important to know as follows:

1. Reading comprehension is the process in which the readers construct meaning from a text connected to the background knowledge they have to get the clear understanding of the writer's message (Snow, 2002, Johnson, 2008).
2. Cooperative learning is a group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others (Olsen and Kagan, 1992).
3. jigsaw technique is a way for students to work cooperatively and help each other to learn new material (Brisk and Harrington, 2000).

4. Report text is a text which presents about something, as it is. It is as a result of systematic observation and analysis.
5. Effectiveness is the degree to which something is successful in producing a desired result (Oxford Dictionary, 2018).

II. LITERATURE REVIEW

This chapter is concerned about reading skill, the advantages and disadvantages of jigsaw technique and report text as the theoretical of framework underpin this study.

2.1. Concept of Reading

Reading is a basic skill of learning, which is very important to master. Reading helps the learning process to guess meaning accurately based on the words that is written by the author. By mastering reading, learners have the ability to understand “life” and have a higher level on interpreting “world”.

According to Nation (2009: 49), “reading is a source of learning and a source of enjoyment”. In short, the understanding of students affects their quality of learning. The main goal of reading is to understand. To catch the idea effectively the reader has to make reading as a source of enjoyment in order to understand.

There are several experts who proposed different kinds of reading. One of them is Brown et al. (1989) who explain intensive reading and extensive reading. Intensive reading "calls attention to grammatical forms, discourse markers, and other surface structure details for the purpose of understanding literal meaning, implications, rhetorical relationships, and the like." He draws an analogy to intensive reading as a "zoom lens" strategy. While extensive reading is carried out "to achieve a general understanding of a text."

Intensive Reading can be defined as a reading which is constructed by the teacher that focuses on grammatical, semantic and linguistic elements. It is relatively friendly in a matter of difficulties because students only have to find its literal meaning from the text.

Extensive Reading can be defined as a reading which is more complex than intensive reading. In extensive reading students are asked to understand the whole idea of the text by understanding its content and usually are asked to write the summary of the text. They have to be able to paraphrase the text that they have read.

From the definition above, reading comprehension can be defined as the process in which the readers construct meaning from a text connected to the background knowledge, they have to get the clear understanding of the writer's message.

According to Hutchins et. al. (2003) there are seven keys to get the meaning from the reading easily, they are:

1. Create mental images. Good readers create a wide range of visual, auditory, and other sensory images as they read, and they become emotionally involved with what they read.
2. Use background knowledge. Good readers use their relevant prior knowledge before, during, and after reading to enhance their understanding of what they are reading.
3. Ask questions. Good readers generate questions before, during, and after reading to clarify meaning, make predictions, and focus their attention on what is important.
4. Make inferences. Good readers use their prior knowledge and information from what they read to make predictions, seek answers to questions, draw

conclusions, and create interpretations that deepen their understanding of the text.

5. Determine the most important ideas or themes. Good readers identify key ideas or themes as they read, and they can distinguish between important and unimportant information.
6. Synthesize information. Good readers track their thinking as it evolves during reading, to get the overall meaning.
7. Use fix up strategies. Good readers are aware of when they understand and when they do not. If they have trouble understanding specific words, phrases, or longer passages, they use a wide range of problem-solving strategies including skipping ahead, rereading, asking questions, using a dictionary, and reading the passage aloud.

2.1.1. Purpose of Reading

People have their own purpose in reading a text. Some people are trying to read a text to find information, while others try to understand and to find pleasure from it. There are so many reading tools to fulfill our needs, such as newspaper, journals to find specific information and also, novels, comics, and magazines to entertain ourselves.

Mullis et al. (2006) state that there are two purposes from the reader to read a text. First is the reader who involves in imagined events, settings, actions, consequences, characters, atmosphere, feelings, and ideas; he or she brings an appreciation of language and knowledge of literary forms to the text. This is often accomplished through reading fiction. Second is the reader who engages with types of texts where she or he can understand how the world is and has been, and why things work as they do. Texts take many forms, but one major distinction is between those organized chronologically and those organized non-

chronologically. This area is often associated with information articles and instructional texts.

Clarke et al. (2014:09) state that reading can be a transformative experience influencing the thinking and learning of the reader. Reading is a necessary skill for students. It is an important thing for them to gain information, enrich their knowledge and learn many new things. On the other hand, reading without comprehending might cause misunderstanding. Comprehension is the key to reach maximum result in absorbing messages and information, since it cannot be separated with reading. Comprehension is an element to understand the implicit, the content, even though the result of the understanding may be depending on how far does the reader experiences and prior knowledge. New words, concepts and perspectives can be encountered that challenge and enhance existing knowledge. Consequently, reading is central to teaching and learning and it is vital to consider the circumstances in which the reader is required to extract and apply meaning derived from text.

It can be concluded that people read for different purposes. Some of them read novels, comics and magazines in order to entertain themselves, and some of them read newspaper, journal and textbook in order to gain information. In short, it can be assumed that people read to entertain themselves and to gain information.

2.2. Concept of Reading Comprehension

In this part, there will be some explanations about reading comprehension. They are the definition of reading comprehension and the aspects of reading comprehension

2.2.1. Reading Comprehension

Reading is a relatable activity for all of the people. Reading is mostly used in a daily activity consciously or subconsciously.

As Perfetti et al. (2012:01) state that reading comprehension is widely agreed to be not one, but many things. At least, it is agreed to entail cognitive processes that operate on many different kinds of knowledge to achieve many different kinds of reading tasks. Emerging from the apparent complexity, however, is a central idea. Comprehension occurs as the reader builds one or more mental representations of a text message.

Reading comprehension is a process of constructing meaning involving the written language by interpreting textual information in the light of prior knowledge and experiences using appropriate and efficient comprehension strategies (Snow, 2002; Mikulecky & Jeffries, 1990; Johnson, 2008). The process of constructing meaning is the process in which the reader combines their prior knowledge with additional information from a text, understand the meaning of words, and paraphrase it to reach clear understanding of the written text (Pang, et al., 2003: 14). In this process, the reader uses their prior knowledge about the topic, language structure, and text structure to understand the writer's message (Lenz, 2005:1). In the process of understanding the message which is stated or unstated in the text, the reader also needs to use various strategies such as predicting, clarifying, and confirming. Those are all strategies used by the reader for the negotiation of meaning. From the definitions above, reading comprehension can be defined as a process in which readers construct meaning from a text connected to the background knowledge they have to get clear understanding of the writer's message.

2.2.2. Aspects of Reading Comprehension

Urquhart and Weir (1998:91) report that “if reading itself is a skill, it must be possible to break this down into different level of component aspect categories.”

Learners need these aspects, focusing on which can help them get specific information from the reading texts. By means of the practice of each aspect, learners will achieve the utmost aim of improving reading skill. Basing on this approach, the teacher is required to teach aspects in detail and attempt to train learners to get familiar with them until they can use the aspects freely.

In fact, several experts have made attempt to divide reading aspects into component aspects. Nuttall (1982: 109) proposes five reading aspects that should be mastered by the readers in order to deeply comprehend a text. The first one is determining main idea. Main idea is the major point of information described in a text that provides a concept of a paragraph. According to Gallagher (2004), determining main idea is a skill to grasp and find the main point of a passage by summarizing it and looking for repetition of ideas/words. Secondly, another aspect of reading which the reader should master is finding the specific information or part of a text. It means that the readers should be able to look for the information in a text which is relevant to what they have in their mind and to ignore the irrelevant ones.

The third sub skill of reading is finding reference. Reference is the intentional use of one thing to indicate something else in which one provides the information to interpret the other. Finding reference means we interpret and determine one linguistic expression to another. The next short reading aspect stated by Nuttall is finding inference. Inference is an accurate guess or conclusion drawn based on the logic of a passage. Finding inference means the readers imply the sentences or passage, understand it and conclude it logically. Lastly, guessing meaning of difficult word is the final aspects of reading. It refers to comprehending what the

unfamiliar words mean by seeing its synonym related to the context. Besides, guessing meaning of difficult word can also be done by understanding one or two previous sentences in the text.

Concerning about the theories above, those five reading aspects stated by Nuttall are important to fully comprehend a text. Thus, the researcher used a reading instrument for developing a reading comprehension test in this research.

2.3. Report Text

Report means information arranged narratively in specific periods of time. Report is a work which is used as informational texts, such as writing, television, film describing specific things for a particular intension of relaying information.

According to Gerot and Wignell (1994: 196), the social function of report is to describe the way things are, with reference to a range of natural, man-made and social phenomena in our environment. Reports are used for finding specific things, which can bring facts and needs towards particular information. Written reports such as documents displayed, focused and detailed information to a specific audience, used in governmental places, business, education, science, and many other fields, are often to display the result of an experiment, investigation, or inquiry.

In short, it can be simply concluded that report is exposing detailed information narratively. Report is one way from the writer and speaker to deliver specific information in a certain topic so that the reader or listener can analyze for a particular purpose on a certain topic.

2.3.1 The Generic Structure of Report Text

According to Gerot and Wignell (1994: 196), generic structure of report text includes:

- a. Generic classification: tells what the phenomenon under discussion is.
- b. Description: tells what the phenomenon under discussion which is in terms of parts, qualities, habits or behaviors.

The grammatical features of report text are:

- a. Using simple present tense
- b. Using adjective
- c. Using conditional logical connection

The example of report text:

Generic Structure	Venice
Generic classification	Venice is a city in northern Italy. It is the capital of region Veneto. Together with Padua, the city is included in the Padua-Venice Metropolitan Area. Venice has been known as the “Queen of the Adriatic”, “City of Water”, “City of Bridges”, and “The City of Light”. The city stretches across 117 small islands in the marshy Venetian Lagoon along the Adriatic Sea in northeast Italy.
Description	Venice is world-famous for its canals. It is built on an archipelago of 117 islands formed by about 150 canals in a shallow lagoon. The islands on which the city is built are connected by about 400 bridges. In the old center, the canals serve the function of roads, and every form of transport is on water or on foot. You can ride gondola there. It is the classical Venetian boat which nowadays is mostly used for tourists, or for weddings, funerals, or other ceremonies. Now, most Venetians travel by motorized waterbuses (“vaporetti”) which ply regular routes along the major canals and between the city’s islands. The city also has many private boats. The only gondolas still in common use by Venetians are the traghetto, foot passenger ferries crossing the Grand Canal at certain points without bridges.

	<p>You can see the amusing city's landmarks such as Piazza San Marco, Palazzo Contarini del Bovolo, Saint Mark's Cathedral or villas of the Veneto. The villas of the Veneto, rural residences for nobles during the Republic, are one of the most interesting aspects of Venetian countryside. They are surrounded by elegant gardens, suitable for fashionable parties of high society. The city is also well known for its beautiful and romantic view, especially at night.</p>
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<https://shaniahumairaa.blogspot.com/2016/02/report-text.html>

2.4. Jigsaw Technique

Aronson (2000: 43) says that jigsaw technique is a technique which has a strong effect on student's attitude to learning, social relationship among students in the group. This means that jigsaw technique is dependable on each of the student's ability to complete the information by doing cooperative work. Jigsaw is a tiny puzzle connected between one onto another in order to be a whole unit and each part has a small picture in it. When complete, a jigsaw puzzle produces a complete picture. Each piece of puzzle is needed because the whole picture of the puzzle will not be able to be seen if a part is missing.

2.4.1. Principles of Jigsaw

According to Kagan (2009) in order to apply jigsaw technique in class, he agrees that to be truly cooperative, learning should consist of key elements as follows:

- a. Positive interdependence. This needs every student's participation to have a contribution in the learning process. Students are needed to work as fit as they take their part so each of them needs the other to complete task.
- b. Individual responsibility. This means each of the groups is responsible to complete his/her part. It is important to have a feeling of responsibility for

each student in the group in order to spread responsible energy to the others

- c. Small heterogeneous group. The group has to have students with varied abilities in order to have an optimum learning. Group needs to be small in order to have a maximum interaction between the others.
- d. Purposeful talk. The students need to spread the ideas in interaction in order to have the energies to make an idea.

2.4.2. Procedures of Teaching Reading through Jigsaw Technique

Harmer (1998:70) proposes six principles behind the teaching of reading. First, reading is not a passive skill. It is an incredibly active occupation. Second, students need to be engaged with what they are reading. The students, who are not engaged with the reading text, usually cannot get many benefits from the reading text. Third, students should be encouraged to respond to the content of a reading text. Students should have chances to respond to the meaning or the message from the text they read. They should also be allowed to express their feelings about the topic of the text. Fourth, prediction should be a major factor in reading. Teachers should provide the prediction activities to let the students predict what is going to happen as they read the text. Fifth, the task should be matched with the topic. The teachers need to choose good reading tasks which help the students become interested in reading the text. Last, good teachers should integrate the reading text into interesting class sequence, using the topic for discussion and further tasks.

While jigsaw technique is a combination of several important aspects of collaborative learning, such as listening, oral reading, reading comprehension, writing and oral presentation that require students to be actively participated. By implementing jigsaw technique in reading comprehension, students have a huge

capacity in engaging themselves with the reading text since jigsaw is an active learning which commands students to have a heavily interaction and cooperation by giving each number of the group an essential part to play in the academic activity. As a result, this teaching technique becomes an efficient way of teaching material that also encourages listening, engagement, interaction, and cooperation.

Kechnie and Svinicki (2013) demonstrate that this technique promotes students' critical reading practice (in the expert group) and summarization (in the teaching group), the two key strategies in improving reading comprehension. Having read the theories of Jigsaw Cooperative Learning Technique, the researcher chose and modified the procedure of teaching reading through jigsaw according to Crawford & Arronson (2005) with the following steps:

- a. The teacher assigns the students to home groups. Students should be assigned to home groups of four or five members.
- b. The teacher assigns a warm-up or team-building exercise for each home group.
- c. Students read the materials or otherwise experience the lesson. Each student should now be given a copy of the text to be read.
- d. The teacher shares study questions and assigns students to expert groups.
- e. The teacher asks the students to "count off" within the groups: "one, two, three, and four." The teacher points to different parts of the classroom where each expert group should meet.
- f. The teacher then appoints a discussion leader for each expert group.
- g. The teacher tells that group number one is to prepare to teach certain questions (The teacher names the questions), group number two is to take other questions, and so on until all of the questions are assigned.

- h. The expert groups read the text and answer the question. The leader leads the group to teach their portion of the questions.
- i. Experts return to their home groups and take turns leading discussions.
- j. The teacher gives students other questions, all students in group read the questions and try to answer together in the group

From the explanation above, there are some steps of implementing Jigsaw Cooperative Learning Technique that have to follow. The researcher applied this steps in teaching reading using jigsaw Technique.

2.4.3. Advantages and Disadvantages of Jigsaw Technique

According to Arronson (2000), the advantages of jigsaw technique are as follows.

- a. It is an efficient way to learn the material. Jigsaw provides an excellent learning environment for the acquisition of language through relevant content.
- b. It builds a depth of knowledge. Jigsaw activity allows teachers to use several texts or information sources at different level of linguistic or conceptual difficulty in one class.
- c. It discloses a student's own understanding and resolves misunderstanding. Jigsaw activity allows teachers to maintain the development of students' academic skills through carefully structured reading and writing activities.
- d. It builds on conceptual understanding. Jigsaw provides opportunities for students to work in racially and culturally mixed groupings.

Thus, every technique has its own strengths point and weaknesses, and these are some disadvantages of using jigsaw technique (Arronson:2000).

- a. Uneven time in expert groups. It requires long time to prepare students to be assigned to work in groups.
- b. Students must be trained in this technique of learning. It requires long time to arrange the seating, because in reading jigsaw activity, the teacher as

- facilitator has to be responsible for monitoring class activity. During activity, the teacher needs to float from group to group in order to observe the process.
- c. It requires an equal number of groups. Because there is one student as a leader, who is responsible for being fair and spreading participation evenly and in order to reduce a problem in their group.
 - d. Classroom management problem. To be responsible in their information, students work with other individuals from other groups working on the same segment on the report. Students might have a bad possibility to be classified with students who have a high and low ability either with an implicit or explicit gimmick and verbal.

2.5. Previous Research

There are several relevant studies that discuss the jigsaw technique particularly to improve reading comprehension.

First, Kazemi (2012) attempted to provide a comprehensive examination on the effects of jigsaw teaching method on the success of Iranian EFL learners in terms of their reading comprehension achievement. This research concludes that the use of jigsaw technique in Iranian EFL learners showed that the students' posttest reading scores improved significantly ($p= 0.000$) when compared with their pretest scores.

Second, another study conducted by Kurnia (2002) for senior high school. The goal of this study is to make the students able to comprehend the passage in English as second language reader by activating all of the students background knowledge using cooperative learning through jigsaw activities. The statistical calculation of posttest scores shows the result of reading comprehension achievement of the students taught using cooperative learning through jigsaw activities is better than the result of the students taught using traditional technique. The results are significantly different.

Third, Ummah (2017) has also proved a significant improvement of student reading comprehension using jigsaw technique in senior high school. Specifically, the findings of her study are as follows. First, The use of jigsaw technique gives positive effect on the students' reading comprehension especially in narrative text. It was proved that the result of posttest was higher than that of pretest ($72.08 > 63.58$). Secondly, Alternative Hypothesis (H_a) was accepted since the value of t-test was higher than t-table ($7.105 > 2.045$). It meant that there was a significant effect of jigsaw technique on reading comprehension of narrative text of the second year students in senior high school.

Fourth, Hilda (2017) proved that using jigsaw technique is effective to improve student reading comprehension in high school. Her study revealed that the scores of the who were taught using jigsaw technique were better than those of the students who were not taught using jigsaw technique with a significance level of less than 5%, the value of t-test (t_o) > t-table (t_t) ($2.17 > 2.002$). This indicates that t-observed was higher than t-table. So, the null hypothesis (H_o) was rejected. It means that the answer of research question was proven that there was a significant difference between students' reading of recount text in experimental class taught using jigsaw technique and in controlled class taught without using jigsaw technique.

Last, a journal that was written by Septami (2018). This study aimed to find out the effectiveness of jigsaw technique on the reading comprehension ability of the second year students in senior high school. The researcher used one group pretest posttest pre-experimental research design. The researcher used cluster random sampling technique to determine the sample of the research. T-observation result shows that the student's mean score of posttest (67.0588) is higher than the pretest (53.0588). Furthermore, the paired sample correlation shows 0.794 which is interpreted as strong. It can be concluded that there are good effects of jigsaw

technique and solved the second year students' problem on reading comprehension especially towards students' reading comprehension in senior high school.

With reference to the studies presented above, the similarity from all of the researches above with this present research is both to measure the effectiveness of jigsaw technique in reading in English language teaching. On the other hand, difference between this present research and the previous research is that this research also focused on which aspect of reading comprehension improved the most after the implementation of jigsaw technique on the students ability in reading report text.

2.6. Theoretical Assumption

Reading comprehension is not a passive skill, and based on many experts had studied, learning strategy is one of the most influential tool to give effect on students reading ability. Jigsaw technique is a potential option to be elaborated in the implementation, since jigsaw is a technique which the students are needed to participate and have a frequent interaction to learn the task collectively with their group. The goal of applying jigsaw technique is to increase the students' reading comprehension skills in order to have a new way in learning by doing and it motivates them to be more engaged with the text so that they have a maximum exposure in responding to the text. Therefore, the researcher believes that there is a positive correlation between jigsaw technique and students' improvement on their reading ability. Therefore, the researcher believes that there is a positive correlation between jigsaw technique and students' improvement on their reading ability.

2.7. Research hypotheses

This research is aimed to increase students' reading comprehension, and to investigate which aspect of reading that improves the most after the implementation of jigsaw technique. To accomplish the objective, two hypotheses are proposed to guide this research.

Ho: There is no improvement of students' reading comprehension achievement after being taught through jigsaw technique.

H₁: There is an improvement of students' reading comprehension achievement after being taught through jigsaw technique

III. METHODS

This chapter describes the design, subjects of the research, research instrument, validity and reliability, data collecting technique, data analysis, research procedure and hypotheses testing.

3.1. Design

This research was a quantitative research. Hatch and Farhady (1982: 22) state that quantitative is a kind of research in which the data are analyzed using statistics as measurement in deciding the conclusion. The researcher intends (1) to investigate whether there is any significant improvement of students' reading comprehension after the implementation of jigsaw technique, (2) to find out the aspect of reading that improves the most after the implementation of jigsaw technique.

This research design used a pretest and posttest design. The design of the research is as follows:

T1--- X ---T2

T1 = Pretest

X = Treatment (jigsaw technique)

T2 = Posttest

(Setiyadi, 2006:132)

This research is classified as a quasi-experimental research since it has some target population without random assignment which the target population of the research is two classes of Al-Kautsar Senior High School.

In brief, the research design that is used in this research is one group pretest post test design.

In this research, the researcher applied jigsaw technique in teaching reading comprehension to a reading class for three meetings. The procedures are:

1. Try Out test

Try Out test was given in order to find the most ideal questions by eliminating 10 most difficult questions based on the result of pre-experimental class into experimental class by having 50 questions out of 60 questions

2. Pretest

This test was given to find out how far the students' reading comprehension before being given the treatment. In other words, this test the basic quality of students' reading comprehension before receiving the treatment. All the students (both experimental group and control group) were given the pretest.

3. Treatment

After the pretest was addressed to the students, the treatment was given to the students. The students of the treatment class were taught using jigsaw `technique for three times meeting.

3. Posttest

After the treatment was conducted, the researcher administered a posttest to the students as the last step. It was done in order to know the student's improvement in reading comprehension test after having the treatment.

3.2. Subject

Population of this research was all the second-grade students of Al-Kautsar Senior High School consisting of eight classes.

The sample of the research was chosen using cluster sampling. From 8 classes, the researcher took one classes as the samples: XI social 4 as the treatment class, it was consisting of 32 students as the participants. The class was taught and conducted by using jigsaw technique, pretest and posttest. The criteria of the participants were the students who had already been taught reading comprehension but they had not been treated through jigsaw technique.

3.3. Data Collection Technique

Since the data were in the form of students' reading comprehension, the data were collected using test. Each student had to answer a reading comprehension test of report text in each test. The test was administered two times, in pretest and posttest. The data were measured by calculating the improvement from pretest to posttest after three times treatment.

3.4. Validity and Reliability the Instrument

The number of the questions were determined 50 questions after eliminating 10 items out of 60 items in tryout test in order to chose the best items. The researcher have to confirm wether the instrument is relevant to collect the data. Therefore, there were some processes that the researcher performed to formulate validity and reliability to the students. In doing the research and proving whether the test items are applicable or not, firstly the researcher calculated its validity and estimated the validity by applying try out the test to find out the validity, reliability, or level of difficulty, and discrimination power of the test. It was conducted in order to determine whether those 50 items have a good quality or not before being

administered for the pretest and the posttest. There are four criteria of a good test that should be met: validity, reliability, level of difficulty, and discrimination power.

3.4.1. Validity

There are four types of validity, namely face validity, content validity, construct validity, and empirical validity or criterion-related validity. To measure whether the test has a good validity, the writer used content validity and construct validity.

a. Face Validity

Face validity concerns with the layout of the test and the comprehensiveness of the instruments including instructions, and the consistencies of multiple choices (a,b,c,d,e). Face validity in this study is used to make sure there is no mistyped in the instrument and all mechanical aspects in it in order to look clear and proper. Face validity is to show whether the instruments are clear enough to be tested or not.

b. Content Validity

Content validity is concerned with whether the test is actually in line with the theory of what reading comprehension means (Hatch & Farhady, 1982). In this research, the test, pre test and post test were in the form of multiple choices. The students must answer the test related to report text.

In this case, the researcher carried out the material by observing and questioning the way how the learning program works in school to the teacher. The researcher implemented basic competence and 3.9 standard competency from K13 curriculum as a guideline for teaching report text in the second semester of

eleventh grade students and national exam items as the instrument to make it valid and qualified.

c. Construct Validity

Table 3.1. Specification of Reading Test

No	Reading Aspects	Percent	Number	Item Number
1	Main Idea	20%	10	1,5,7,13,18,22,26,29,37,41
2	Specific Information	20%	10	2,4,14,19,23,30,33,34,46,48
3	Reference	20%	10	6,15,21,25,28,50,42,43,40,45
4	Inference	20%	10	20,39,47,44,9,36,24,31,16,27
5	Vocabulary	20%	10	3,8,10,11,12,17,32,35,38,49
	Total	100%	50	

Construct validity concerns with whether the test is actually in line with the theory of what it means to know the language. It means that the test measures certain aspect based on the indicator. The researcher examined it by correlating the aspects that were measured with the theories of those aspects. Moreover, the researcher also made a table of specification by modifying table of specification from Mewald et al., (2007:15) in order to judge whether the content validity was good or not.

The procedure for determining content validity was to compare the test content with the universe of content supposedly being measured. The content being measured is students' reading comprehension i.e. determining main idea, finding the detail information, reference, inference, and understanding vocabulary and to find out which aspect that increased the most by using jigsaw technique in teaching reading.

The test is conducted to determine the quality of the data collecting instrument of the research, that were reliability, validity, level of difficulty, and discriminating power. Students were given 50 items of multiple choices test in 80 minutes.

3.4.2. Reliability

Reliability is how consistent the results are when the experiment is repeated a number of times under same methodological conditions, then the instrument is said to be reliable. Shohamy (1985:70) states that *reliability* refers to the extent to which the test is consistent in its score, and it gives an indication of how accurate the test score. The test is determined using try out in order to find the most ideal questions by eliminating 10 most difficult questions based on the result of pre-experimental class into experimental class by having 50 questions out of 60 questions. The researcher used Pearson Product Moment which measured the correlation coefficient of the reliability between odd and even number (reliability of half test) and split half method to determined the reliability of the full test, in the following formula:

$$r_l = \frac{\sum XY}{\sqrt{[\sum X^2][\sum Y^2]}}$$

Where:

r_l : coefficient of reliability between the first half and the second half items

X : total number of odd numbers items

Y : total numbers of even numbers items

X^2 : square of X

Y^2 : square of Y

(Lado in Hughes, 1991: 3)

To know the coefficient correlation of whole items, the writer used *Spearman Brown's Prophecy Formula* (Hatch and Farhady, 1982: 247). The formula has multiply the reliability of the half of the test by 2. This is then corrected by dividing by 1 + the reliability of the half test. The formula is as follow:

$$rk = \frac{2r_l}{1+r_l}$$

Where:

r_k : the reliability of the test

r_1 : coefficient of reliability between the first half and the second half items

(Hatch and Farhady, 1982: 247)

The criteria of reliability are:

0.90 – 1.00: high

0.50 – 0.89: moderate

0.00 – 0.49: low

3.4.3. Level of Difficulty

Level of difficulty relates to “how easy or difficult the item will be in the form of the point of view of the students who took the test”. It is important since test items which will be too easy (that all students get right) can tell us nothing about differences within the test population (Shohamy, 1985: 79).

Level of difficulty is calculated by using the following formula:

$$LD = \frac{R}{N}$$

Notes:

LD : level difficulty

R : number of students who answers it right

N : total number of students

The criteria are:

$LD < 0.30$: difficult

$LD = 0.31- 0.70$: satisfactory

$LD > 0.71- 1.00$: easy

3.4.4. Discrimination Power

Discrimination power refers to “the extent to which the item differentiates between high- and low-level students on that test”. A good item which is

according to this criterion, is one in which good students did well, and bad students failed (Shohamy, 1985:81).

$$DP = \frac{L1-L}{\frac{1}{2}N}$$

DP : Discrimination power

L1 : Number of upper group students who answer correctly

L : Number of lower group students who answer correctly

N : Total number of students

The criteria are:

DP: 0.00 - 0.19 = poor

DP: 0.20 - 0.39 = satisfactory

DP: 0.40 - 0.69 = good

DP: 0.70 - 1.00 = excellent

DP : -(negative) = bad item

3.5. Data Analysis

After conducting pretest and posttest, the researcher analyzed the data. In order to know the students' progress in comprehending the text, the students' scores were computed by doing these activities:

- a. Scoring the pretest and posttest

The formula is as follows:

$$X\%c = 100 \frac{R}{T}$$

Notes:

X%c: percentage of correct score

R : the total of the right answer

T : the total number of items

(Lyman, cited in Muthiah, 2013:36)

- b. To find out whether there is difference between mean from pretest and posttest, this research applied *Repeated Measure t-test*. This is used to compare mean from pretest and posttest. The formula is presented below:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2} - 2r\left(\frac{S_1}{\sqrt{n_1}}\right)\left(\frac{S_2}{\sqrt{n_2}}\right)}}$$

Notes:

- \bar{X}_1 : the average score of pretest
 \bar{X}_2 : the average score of posttest
 S_1 : standard deviation of pretest
 s_2 : standard deviation of posttest
 n_1 : number of students of pretest
 n_2 : number of students of posttest
 r : correlation between two samples
 (Sugiyono, 2011:197)

- c. In order to answer the research question, the researcher analyzed the five-aspect of reading comprehension in pretest and posttest. The data were analyzed using SPSS version 16.

3.6. Research Procedures

This research was conducted based on the following procedures:

1. Determining participants. The researcher took one class in the second grade of senior high school.
2. Conducting a try out test. The try out test was administrated at the beginning in order to measure the students' ability.
3. Conducting a pretest. A pretest was administrated in order to measure the students' reading skill achievement before being taught through jigsaw technique. The pretest is in form of reading test which is in multiple choices.
4. Selecting materials. The researcher chose appropriate materials based on the syllabus and also the result of the pretest. The researcher applied three times for the treatment. The material is in the form of reading.

5. Treatment. In this research, the treatment was conducted in three meetings with 90 minutes in every meeting. The chosen class was taught by using jigsaw technique. The procedure is as follows:
 - Pre-activity
 - Whilst activity
 - Post-activity
6. Administering a posttest. A posttest was given to the students after the treatment of teaching reading comprehension achievement through jigsaw technique to know whether the students' reading comprehension achievement increases or not.
7. Analyzing data. After the pretest and posttest were conducted, the researcher analyzed the data by using t-test. It was used to know whether or not jigsaw technique is able to increase students' reading comprehension achievement in report text. It was computed using SPSS.

These procedures were used by the researcher in conducting the research to make sure that the research process was effectively conducted.

3.7. Hypothesis Testing

After collecting and analyzing the data, the writer determined whether the hypothesis are accepted or refused. The hypothesis testing is used to find out if improvement of reading comprehension achievement approved at the significance level of 0.05 in which $\alpha < 0.05$ (Setiyadi, 2006:97). To determine whether the first hypothesis accepted or rejected, the following criteria acceptance would be used:

H₀: There is no significant improvement of students' reading comprehension achievement after being taught by using jigsaw technique.

H₁: There is a significant improvement of students' reading comprehension achievement after being taught by using jigsaw technique.

V. CONCLUSIONS AND SUGGESTIONS

This chapter presents conclusions that are based on the research's result and discussions in the previous chapter. It also presents some suggestions for English teachers and other researchers who want to apply jigsaw technique in teaching reading.

5.1. Conclusions

There is a significant improvement in students' reading comprehension after the implementation of jigsaw technique. It can be seen from the result of the test which showed a significant level of ($p < 0.05$, $p = 0.000$), in which the students' mean score in pretest was 63.68 increased to 71.75 in posttest. The data were analyzed by using t-test in which the significance was determined by $p < 0.05$. It is found that jigsaw technique improves students reading comprehension in reading text. Therefore, it can be concluded that jigsaw is an effective technique to improve students reading comprehension.

Besides, main idea is the aspect that improves the most among the other aspects since the steps provided the students to understand the whole text while discussing in the group.

5.2. Suggestions

1. For the teacher

After having research, the researcher suggests the English teacher to implement jigsaw technique in teaching reading. There must be a good approach and

preparation since the material should be delivered systematically so that the materials can be clearly understood by the students and can be easily stimulated. English teachers also should consider the time allocation for the treatments. Also, english teacher should concern with the material that is being choosen in order to anticipate and solve the lack of students ability, since report text has a lot of scientific vocabulary that made the students tend to get difficulties in understanding the meaning. English teacher should provide some clues and personal question for the students in order to help them easier in understanding and paraphrasing the whole wide of the text.

2. For further researcher

The researcher expects the other researchers who will conduct similar research should use another instrument such as questionnaire which covers the reason how jigsaw technique helps the students to improve their reading comprehension. After the research was implemented, the researcher found out that the student tends to get difficulties to understand the pattern of jigsaw technique. There must be good approach and preparation since the material should be delivered systematically so that the materials can be clearly understood by the students and can be easily stimulated.

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