THE USE OF THE MIND MAPPING TECHNIQUE IN SPEAKING CLASSROOM

(A Quasi-Experimental Research at Public High School in Blora in the Academic Year 2022/2023)

A FINAL PROJECT

Presented as Partial Fulfilment of the Requirements for the Bachelor Degree *(Sarjana Pendidikan)* in English Education

proposed by :

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ENGLISH EDUCATION STUDY PROGRAM

FACULTY OF LANGUAGES AND COMMUNICATION SCIENCE

SULTAN AGUNG ISLAMIC UNIVERSITY

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APPROVAL

A Final Project entitled

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prepared and presented by :

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This final project has been approved by the advisor and to be examined by the Board of Examiners

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VALIDATION

A Sarjana Pendidikan Final Project on

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STATEMENT OF WORK ORIGINALITY

I hereby affirm that the final project I have submitted is entirely my own work, with the exception of properly cited quotations and references. I understand that if this statement is found to be untrue in the future, I am willing to accept academic consequences, including the potential revocation of my paper and the degree obtained through it.

Semarang, September 8th 2023

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ABSTRACT

Umaiyah, Candra. 31801900013. *The Use of Mind Mapping Technique in Speaking Classroom (A Quasi-Experimental Research at Public School in Blora in the Academic year 2022/2023);* Thesis: English Education Study Program Languages & Communication Science Faculty of Sultan Agung Islamic University. Advisor: Dr. Kurniawan, S.Pd., M.Pd.

Student centered learning is one of the learning strategies in active learning which is needed in learning English especially in the subject of speaking. According to some students, speaking is a difficult subject. This study aims to find out whether the use of mind mapping technique is effective in improving students' speaking ability of high school students in Central Java. The research method used in this study was quantitative in quasi-experimental research. This study used a sample of 54 students consisting of two classes, namely X Science 1 class as the experimental class and X Science 3 as the control class. The results of this study were processed using SPPS. To get the results of the study there were several activities carried out, namely pre-test before treatment and post-test after treatment. The difference in the control class has an average value of 86.19 and the experimental class has an average value of 91.11. While the results of the t-test Sig. (2-tailed) equal is .000, so it can be said that the mind mapping technique for class X students of Senior High School in Central java in the 2022/2023 school year is effective in improving students' speaking skills.

Key Word: Speaking skill, Teaching strategies, Mind mapping Technique

INTISARI

Umaiyah, Candra. 31801900013. *The Use of Mind Mapping Technique in Speaking Classroom (A Quasi-Experimental Research at Public School in Blora in the Academic year 2022/2023);* Thesis: English Education Study Program Languages & Communication Science Faculty of Sultan Agung Islamic University. Advisor: Dr. Kurniawan, S.Pd., M.Pd.

Strategi pembelajaran *student centered learning* merupakan salah satu strategi pembelajaran dalam *active learning* yang sangat dibutuhkan dalam pembelajaran bahasa Inggris terutama dalam mata pelajaran speaking. Menurut sebagian siswa, berbicara merupakan mata pelajaran yang sulit. Penelitian ini bertujuan untuk mengetahui apakah penggunaan teknik peta pikiran efektif dalam meningkatkan kemampuan berbicara siswa pada siswa SMA di Jawa Tengah. Penelitian ini menggunakan metode kuantitatif dengan quasi-experimental. Penelitian ini menggunakan sampel sebanyak 54 siswa yang terdiri dari dua kelas, yaitu X IPA 1 sebagai kelas eksperimen dan X IPA 3 sebagai kelas kontrol. Hasil penelitian ini diolah dengan menggunakan SPPS. Untuk mendapatkan hasil penelitian ada beberapa kegiatan yang dilakukan yaitu pre test sebelum perlakuan dan post test setelah perlakuan. Perbedaannya pada kelas kontrol memiliki nilai rata-rata 86,19 dan kelas eksperimen memiliki nilai rata-rata 91,11. Sedangkan hasil uji-t Sig. (2-tailed) sebesar 0,000, sehingga dapat dikatakan bahwa teknik mind mapping pada siswa kelas X SMA Negeri 1 yang ada di Jawa Tengah tahun pelajaran 2022/2023 efektif dalam meningkatkan keterampilan berbicara siswa.

Kata Kunci: Keterampilan berbicara, Strategi pengajaran, Teknik Pemetaan Pikiran

MOTTO AND DEDICATION

"When the faith is bigger than your fear, you will win"

(Candra Umaiyah)

This Final Project is firm to
My source of energy, my parent
My brother
And my folks who always questioned me, "KAPAN LULUS?"
This is for you

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Assalamu'alaikum Wr. Wb.

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2. Trimanah, S.Sos., M.Si. as the Dean Faculty of Language and Communication Science, Sultan Agung Islamic University.
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5. All lecturers, staff and my friend in English Department who have given lesson and support during my study.

Finally, The researcher notice that this research is not best because perfection belongs only to God. However, the researcher hopes that this research has value that can be useful for readers and for future researchers who want to research the same subject.

Semarang, July 27th 2023

The researcher

Candra Umaiyah

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CHAPTER I

INTRODUCTION

This chapter includes the research background of the Study, the Reasons for Choosing the Topic, the Research Question, the Objective of the Study, the Hypotheses of the Study, the Limitation of the Study, the Significance of the Study, the Definition of Key Terms, and the Research Organization of the Study.

1.1 Background of the Study

The teacher-centered learner is an old method used in education in Indonesia. Recently, the education government of Indonesia enacted a new curriculum. This is a fresh model for the teaching system that was once teacher-centered learning to be student-centered learning. This year the curriculum policy changed to the *"Merdeka Belajar"* curriculum (KNPKP, 2022). In the *Merdeka Belajar* curriculum using the student centered learning model.

The approach to student centered learning has been widely applied to universities (Bonnet et al., 2018; Bonwell & J, 1991; Doka et al., 2021). The ranks of the schools in Indonesia are not familiar with this. SCL is an approach to learning that puts students at the center instead of the teacher and its material (Jacobs & Kane, 2019; Tekle & Fesshaye, 2017). Active learning is one of the characteristics of SCL, and that is the answer. Example of exercise that on active learning includes writing, reflection, dialogue, acting roles, and conversations in small groups. Active learning makes students more explore. This is in line with English language learning, especially in speaking. Active learning can improve students' ability to speak.

Speaking is obviously one of the most difficult yet crucial talents in English skills (Boonkit, 2010; Brown, n.d.; Orlova, 2017; Putra et al., 2022; Thao et al., 2019). When the students speak to a listener, it supposes to speak well with master all feature, as like grammar, pronunciation, and vocabulary. All these aspects can make the students convey their sentences well. However, there are many ways to improve speaking skills. Interactive learning is a great way to improve speaking skills (Atmazaki et al., 2021; Darmuki & Hidayati, 2019; Simanjuntak et al., 2019). An example is games (Armiantyara & Suharti, 2019; Sukerni & Purnami, 2019; Yustina & Zaim, 2018), video interactive (Bich, 2020; Chan & Ko, 2022; Derakhshan et al., 2016; Nurviyani & Rahayu, 2018; Shahriarpour & Kafi, 2014; Zeman, 2017), brainstorm (Hasibuan, 2021; Lukman et al., 2022), etc. Simanjuntak et al., (2019) believe that learning through art is an effective way to be better if collaborated with speaking. Exploration and play are self-motivating and self-structured learning processes. It helps students to engage and mirror on their ideas while learning and acquiring new information (Altan & Trombly, 2001).

The fact that the researcher found at public high school in Central Java is that speaking is a difficult thing for the students. The most important reason is the student are poor about vocabulary. They also have a lot of pauses in speaking so that sentences are difficult to understand. It frightens them to ask question, discuss and produce spoken text. However, the teacher frequently prioritize reading over speaking. The student does not have much chance to practice orally. It makes students' score are bad.

Based on the discussion above, many studies have been conducted in SCL, and exist of fact has find, including active learning that uses several learning by interactive media. But in exploring speaking skills, using structured ideas such as mind mapping is necessary. Therefore, researchers want to prove that mind mapping can be a learning medium for improving speaking skills.

1.2 Reasons for Choosing the Study

Based on the explanation above, the use of the mind mapping technique is not often used in English classes, especially in speaking skills. The researcher have three reason for choosing this topic. The first, speaking is appropriate for the applicable curriculum where students are required actively in learning process. The second, the researcher chose mind mapping for helping students to increase score in speaking. The mind mapping is used to increase factual memory from written content, an effective study spproach (Farrand et al., 2002). The third, looking at the average score of students on speaking practice is quite low

Speaking is a skill that is not easily mastered because speaking skills need to know several aspects of English, such as grammatical, context, vocabulary, self-confidence, and being able to summarize also convey well. That is the case. According to the researcher, the use of mind mapping will help students to arrange the next sentences by practice more.

1.3 Research Question

The problem is defined refer to the background into:

"Is the use of mind mapping technique effectively to help the students increase their score in speaking performance?".

1.4 The Objective of the Study

Based on the background of this study has aim to prove the progress of students' performance through increasing scores before and after using the mind mapping techniques of a public high school in Central Java.

1.5 Hypotheses of the Study

According to the problem, the following two hypotheses are formed:

H_a: The use of mind mapping effectively help students improve their speaking ability

H_0: The use of mind mapping does not effectively help students improve their speaking ability

1.6 Limitation of the study

The outcomes of this study is seen through the results of student success in the form of numbers. The student learning outcomes are taken through tests conducted after giving treatment.

1.7 Significance of the Study

Hopefully, this research was useful for teachers, students, and the other. This study has two significant implications:

a. Practical significances

For the teacher as an alternative to teaching techniques and provide an overview of speaking teaching requires exposure. For students, it will cause a structured way of thinking through creative media. This research also facilitates students to express creative ideas in making the mind mapping. for school, this

research will be hoped to make valuable contribution to improving speaking ability in the classroom where the mind mapping technique is flexible to use in every speaking subject.

b. Pedagogical significance

This study is designed for students who do not speaks English fluently. Thus, the students will structured way about what they are going to convey through frequent practice.

1.8 Definition of Key Terms

This key term will help the reader understand the terms of this study. Therefore, the researcher explains below:

a. Speaking skill

Speaking skill refers to one's skill in expressing oneself through spoken language. According to Boonkit (2010), speaking ability is one of four fundamental talents necessary for many languages' important communication.. People with strong speaking abilities can often express themselves clearly and build strong relationships.

b. Teaching strategies

Teaching techniques are the way carried out by teachers in implementing teaching and learning activities to achieve the best results. Learning techniques are determined based on the methods used. Methods are compiled to the technique used. In this case, the strategy is used to determine learning techniques. From an approach, different learning techniques can be applied.

c. The mind mapping

Mind mapping is a visual thinking and organizational tool that helps individuals generate, organize, and communicate ideas and information. It was developed by Buzan (2008), a British educational consultant and author, in the 1960s.

1.9 Organization of the Study

This research includes three chapters:

Chapter I consists of the Background of the Study, the Reasons for Choosing the Topic, the Research Question, the Objective of the Study, the Hypotheses of the Study, the Limitation of the Study, the Significance of the Study, the Definition of Key Terms, and the Organization of the Study.

Chapter II tells about review of the relevant literature which outline some of the points of some theories. Included some of research and review from the previous studies.

Chapter III consists of the Design of the Study, Subject of the Study, Variables of the Study, Research Instruments, Data Collection Technique, Procedure of Collecting Data, and Analysis of the Data.

Chapter IV discuss about result of the data. It consists of the school's profile, the description the sample, the validity and the reliability of the try out, the pre-test analysis, the treatment analysis, the t-test analysis discussion of the Research.

Chapter V explains the conclusions and suggestions according to the results of the study had been directed.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter tell about review of the relevant literature which outline some of the points of some theories. Included some of research and review from the previous studies.

2. 1 Speaking Skills

According to Hinkel (2005), speaking skill is the ability to pronounce words using the human sense, including one of the main language skills four oral skills (Derakhshan et al., 2015). Speaking is a way to communicate an idea that is structured and developed according to the listener's necessity. The speaking activities are not only something that can be heard by the ear but also equipped with gestures and facial expressions that can support the subject matter. It can be done through communication because communication occurs in two directions: the informer and the recipient of the information. Expressing opinions directly, in addition to boost vocabulary, also increases understanding of a sentence based on the context.

Research suggests that developing good speaking skill can lead to a range of benefits, including better academic and career outcomes, improved social relationships, and increased self-confidence (Cabaltica & Arcala, 2021).

2.1.1 Types of Speaking

There are five categories of speaking: imitative, intensive, responsive, interactive, and extensive (Qizi & Gayratovna, 2021).

a. Imitative

In this category is the ability to listen and repeat what has been said without changing anything. The focus in this category is on precise pronunciation.

b. Intensive

The capacity to construct brief lengths of spoken language to express skill in a small band of grammatical, phrasal, lexical, or phonological connection falls under this category. It is commonly used in assessing prosodic aspects such as intonation, stress, rhythm, and junction.

c. Responsive

An example of a responsive category is an activity about interaction and comprehension concerning short discussion, in standard and small chats, basic requests and remarks, etc.

d. Interactive

Responsive and interactive have significant differences in the phrases' intricacy and the number of participants. if responsive has includes two speakers, and interactive involves many people.

e. Extensive (monologue)

Extensive speaking is a verbal production activity or monologue. It envelope speech, presentation, and storytelling. The participant are not heavily involved or completely not.

According to that statement, there are five varieties of speaking skills. This type of intensive speaking is in accordance with the existing class curriculum. It can be beneficial for teachers to test students' speaking talents, and for taking the score, the teacher may make rubric scoring for the authentically speaking. Accuracy

and fluency (Derakhshan et al., 2016) must also be precise in speaking. Students can achieve that by practicing more often. Likewise, teachers must emphasize their accuracy in the teaching process. Five components of speaking skills (Brown, H.D, 2004) such as vocabulary, grammar, pronunciation, comprehension, and fluency. It must be understood well by students in order to have a better chance of education (Leong & Ahmadi, 2017).

2. 2 Teaching Strategies

Strategies for teaching English Foreign Language (EFL) have widely been carried out (Arroba, 2021; Irham & Jayanti, 2020; Sari & Apriani, 2020) using technology and creative media. The teaching strategies that have been researched (Han, 2022; Puspitasari & Asari, 2018; Türkben, 2019; Williams, 2019) focuses on the space for the students to express themselves.

The strategies for learning languages with the strategies to use language are different things. The strategies in learning languages are the chosen path to improve the ability to use language. In contrast, the strategy of using language is a way how to improve the use of language. As well as understanding the teacher and being able to answer in real-time through the media or directly. It can detect cognitive or metacognitive talents.

Teaching strategies typically do research and evidence-based studies on effective teaching methods in education. The following are commonly used teaching strategies;

1. Direct Instruction

   Direct instruction is a well-structured teaching strategies that involves the teacher delivering a clear and concise explanation of new concept or skills. This approach is often used in subject to master specific knowledge and skills. Direct instruction is highly effective teaching strategy that has been shown to increase student achievement, particularly for low-performing students (Rosenshine, 2012).

2. Cooperative learning

   Cooperative learning is a instructional strategy in which students work together in smaller teams to accomplish a common objective. This approach emphasizes the importance of teamwork, communication, and interdependence, and has been shown to improve student achievement and social skills (Johnson & Johnson, 2009).

3. Inquiry-based learning

   Inquiry-based learning is a student-centered teaching strategy that motivate students to actively participate in their own learning. This approach involves students asking question, conducting research, and analyzing data to answer question or solve problems (Ernst et al., 2017). It has been demonstrated that inquiry-based learning promotes higher-level thinking skills and enhance students motivation and engagement (Hmelo-Silver et al., 2007).

4. Differentiated instruction

Differentiated instruction is an instructional strategy in education or learning which is modified to match the needs of each students. This strategy acknowledges that students have diverse learning strategy and capacities and aims to provide students with instructional materials and activities that are most appropriate for their needs (Tomlinson, 2014). Differentiated instruction has increased student motivation, engagement, and achievement (Tomlinson, 1999).

In the speaking strategies teacher must be able to make the students want to be speakers (Derakhshan et al., 2015). Harmer, (2008) argues that providing an opportunity for students to practice speaking such as telling their own life in a classroom guided by the teacher. The teacher provides new methods where students can try to use their language to provide feedback to teachers and other students.

All kinds of teaching strategies support cooperative learning, which is a powerful tool and can potentially improve the way language learning skills in the classroom (Namaziandost, 2019). Following the character of the teenager learner mentioned above, according to Alrayah, (2018); Efl & No, (2020); Namaziandost, (2019); Pattanpichet, (2011) cooperative learning is the effective strategies in improving speaking skills. It can increase students' confidence levels. The teacher's strategy in using the exam method benefits students (Zhang & Goh, 2009). The students get a task in a group will make them discuss with each other to resolve the issue or make a small project. The strategy is used by teacher to achieve the goal in teaching, namely improving communication skills

2. 3 The Mind Mapping as a Speaking Strategy

The concept of the mind mapping was first introduced by Buzan (1996). Buzan (2008) state the human brain is a giant capacity storage. Where in the human brain can search and get data so that it is like a library information access system. Porter, (2006); Legowo, (2009); Windura, (2013) suggest the same nation about mind mapping technique, it is essential as a powerful alternative way to help learner in a structured manner.

Visually, mind mapping is a center of thought with several branches explaining the discussion's core (Buzan, 2008). The existence of a branch is a route or road that allows our thinking to be arranged in such a way. It is the natural workings of the brain that has captured mind information.

The mind mapping is a creative step (Parikh, 2016). It will help a person in producing many interesting ideas. The mind mapping is the most innovative and greatest technique for someone who wants to assemble a range of information and grasp the idea. The mind mapping also improves' analytical and logical abilities because it is no longer necessary to note until completely and memorize all of them. Mind mapping also promotes students' creativity by utilizing lines, colours, and pictures.

The mind mapping is a new technique of memorizing learning (Wu & Wu, 2020). The mind mapping is designed with attractive visuals such as images or charts. When images and words are combined and memory associations are formed between a topic term and an image or link. Therefore, highlighting the point and level of memory contents aids learners in efficiently storing and

extracting knowledge. This technique boost the creative potential of new concepts and helps increase student motivation to learn (Tuyết & Venkat, 2016). Information presented by the mind mapping is stronger and simpler to understand. Polat & Aydın, (2020) state that the mind mapping strategy encourages thinkers to act, support the news' generation ideas, and integrate new knowledge with those ideas. Ideas will come up more by making the mind mapping.

A teacher must have strategies in teaching. It is a consideration because the material must be received by students effectively so that it can improve students' abilities. The characteristic of competent educators are those who can manage the teaching and learning process (Sardiman, 2011). Therefore, Marsh, (2000) adding that the teachers have pedagogical abilities, motivate their students, create learning models, lead classes, maintain communication with students and plan and evaluate lessons..

The mind mapping is one of the techniques that has been developed in speaking learning by various ways (Polat & Aydın, 2020; Rachmawati et al., 2020; Wahyudi & Irawati, 2020; Wu & Wu, 2020). According to the research findings, the mind mapping can improve students' capacity to analyze and organize their ideas. However, this technique has not been applied in high school students' speaking performance. In addition, mind mapping is a way to attract the audience's attention. Interesting images, feelings, ideas and conveying well into a learning process.

2.2.1 Characteristic of the Mind Mapping

In the mind mapping techniques, there are pictures or symbols with many colours. This visual such as color, lines, lettering, images applies to the mind mapping (Candraloka & Rosdiana, 2022). It affects the balanced performance of the brain as a result comes an emotion of pleasure and a person's creativity. Chmela-Jones et al., (2008) argue that visual learning techniques attract students' attention more because they are equipped with images, different colours and symbols. The mind mapping is a visual learning technique. It is all above explain that the mind mapping is an art with huge information that the speaker can elaborate. Using several keywords allows convey the content well and fluently.

2.2.2 Implementation of the Mind Mapping Technique

The mind mapping makes students systematic in conveying and receiving information (Mike & Porter, 2000) while developing ideas by making coherent decisions using an elimination system where selecting information that is considered important according to the objectives.

The mind mapping is so easy to apply because it can be applied to anything and flexible. There are various ways to create the mind mapping. According to Dahm, (2011) there are three ways to get started for basic approaches; write the main topic on the center of paper, take notes and gather the needed information and then mind mapping all information, reusing the mind mapping based on the topic.

The previous strategies enable improved content learning and reclassification of material based on new ideas and notions. Even if two or more

the mind mappings are open simultaneously to integrate and mix the finest information from the two. Utilizing a computerized software for this form of mind mapping is preferable, but it is not necessary.

The steps to apply the mind mapping to learning are; The teacher identifies the objectives and learning material before the material is explained. Forming to small groups to make it easier for teachers to follow their thinking. Once the material is described, allow the group to present the results. The teachers evaluate group results based on progress. The teacher reflects on the activities carried out. The results of these reflections can be conveyed to students so that they can improve. In addition, the mind mapping emphasizes keywords and explores students' creativity.

2.2.3 Advantages and Disadvantage of the Mind Mapping Technique

Human beings need balance and regulation, and the mind mapping gives a way to achieve it (Dahm, 2011). The human need to solve big problems is to solve them by section or big tasks in small steps. The mind mapping allows to do all this by stimulating natural thinking. The mind mapping also attract fun and creative side.

Another advantage of mind mapping than other tools is that it presents associations, enhances creativity, and makes notes and revisions easier and faster. One reason is that the mind mapping is one method to capture data in creative and visual contexts (Candraloka & Rosdiana, 2022). Use different shapes and colours to represent different categories or levels. Mind mapping makes it possible to quick collect information, sometimes even with a glance. Any teacher will tell you that

the brain is more receptive when information is presented fun, creative and visual. That is the main reason the mind mappings are a great learning tool.

The mind mapping makes a way of thinking simply, usually this is only able to see information on a small scale. Thus, if you want to see the information fully, we have to look back to see the bigger picture. Another disadvantage of mind mapping is the time it takes to sketch when dealing with complex problems. That is because with the mind mapping, you start working on a small scale. Thus, complex problems usually require more than just the mind mapping and may not be worth the time and effort.

Some people have difficulty learning to use the mind mapping. Some people feel that they will not use the mind mapping because they do not have time to learn. That is fine, although most people can take this easily. When doing so, it is usual that it helps them a lot.

Sometimes it is also overwhelmed by software. Although computerized the mind mapping programs have their advantages, all these additional features to create effective the mind mapping are unnecessary. That is especially true if it is simply trying to plan or break down the problem for one's personal needs. There is nothing wrong with just writing down ideas on paper to use for one's own needs, or creating the mind mapping on some poster boards to share ideas with others.

2. 4 Review of Previous Studies

Three journals is supportes as the foundation for this research. The first study, which is relevant from Buran & Filyukov (2015) entitled "The mind mapping technique in Language Learning". This is a qualitative study, often conducted with

questionnaires. The study's goal is to discover a relevant, compelling, and successful technique for encouraging students to practice mind mapping in the language classroom. This research used sample students from the "General English" course at National Research Tomsk Polytechnic University. In this research it was 90% proven that the mind mapping techniques greatly improved students' skill in preparing presentations and public speaking. They were impressed with their score for the first time using the mind mapping. Although 2% of the respondents found it quite difficult to create a mind mapping, 98% of the respondent felt that they preferred to implement the mind mapping for collecting information rather than just reading the text. Thus, it is possible to conclude that the mind mapping technique is a modern development that is innovative, practical, and accessible to students and instructors, and the researcher.

The second study relevant to Parikh (2016) entitled "Effectiveness of Teaching through The mind mapping Technique". This research is quantitative typically quasi-experimental research. This study aims to find effectiveness through teaching by the mind mapping. The teaching technique was used as an independent variable in this study, academic success served as reliable variable, whereas gender served as an indicator variable. This subject is divided into four groups consisting of 2 female groups and 2 male groups. Teaching uses two types: in the experiment class, mind mapping was used, whereas regular instruction was used in the control class. After the researcher conducted a study on a sample of 120 students of class-8th Prerna School, a Guajarati medium High-elementary school at Gujarat, as a

consequence, no significant gender through mind mapping had any effect. On the class-8th mind mapping technique worked better than the traditional method.

The third study from Orlova (2017) is "Efficiency of The mind mapping for The Development of Speaking Skills in Students of Non-Linguistic Study Fields". This research quantitative research typically experimental research. The purpose of this research is to determine the role of mind mapping, factor, and verify particular in teaching speaking orally and applied for speech on specific subject. The researcher conducted a study on sample of first-year students of Psychology Department of the Bohdan Khmelnytsky National University of Cherkasy. This tusy proves the effectiveness of integrating the mind mapping technique into an university course of teaching English for particular aims such as developing, improving, and mastering students' professional communication skills. The chart shows that there is significant value. Therefore, it can be stated that mind mapping is an effective technique for motivating kids.

Based on the previous journal above with three various for using the mind mapping. All of previous research are confirmed to have similarities and differences. The distinction between this study and the prior study stated above will be examined more below:

Form the first journal, The research is the same using the mind mapping technique but with a different instrument that are: mind maps were built in the classroom to help students solve issues, examine innovative ideas, acquire new language, take notes, and prepare presentations. The research also uses qualitative

methods. While this study uses the mind mapping in speaking ability and quantitative method.

For the second journal, the research is the same using the mind mapping technique but with a different instrument that using questionnaire that must fill to the sample. The research also uses qualitative methods. While this study uses the mind mapping in speaking ability and quantitative method.

For the third journal, the research is the same using the mind mapping technique. However, in this journal, psychology students were used to prepare speech oral monologue with topic psychology. While this study will focus on speaking ability in English learning subject.

CHAPTER III

RESEARCH METHOD

This chapter includes Research Design, Subject of the Study, Variable of the Study, Instrument of the Study, Validity of the Test, Reliability of the Test, Procedure of Collecting Data, Scoring Technique and Method of Data Analysis.

3.1 Design of the Study

This study is an experimental study that uses quantitative research methods. This study explained the problem based on a population's needs and how it occurs. The researcher proved the usefulness of using the mind mapping of speaking ability according to experimental study. The researcher used two equal quality and condition groups to compare treatment outcomes. The first group was experimental class which had been given treatment using the mind mapping for enhancing speaking skill. The second was the control class, a group that was not given treatment using the mind mapping.

Experimental research must measure in the form of tests, methods, the test's difficulty level and the results of the same goal. In the design of non-equivalent groups ware popular quasi-experiment approaches. The design as seen below:

E	**01**	**X**	**02**
C	**03**		**04**

Notes:

E : Experimental class

C : Control class

01 : Pre-test for the experiment class

02 : Post-test for the experimental class
03 : Pre-test for the control class
04 : Post-test for the control class
X : Treatment for the experimental class using The mind mapping technique

Based on the table in the top row explains the experiment class and the bottom describes the control class. Pre-tests was given to each of the designed groups to see their abilities. Furthermore, the experimental class had only received treatment using the mind mapping techniques. While the control class employed basic techniques. Like the table above, the post-test stage had been given to both to calculate the pre-test results and the post-test was calculated using Spss version 24.

3.2 Subject of the Study

This study had used the subject of students at a Public senior high school. The accreditation of this school is "A" and has two major. The next information had been spelled out in the following sub-chapters.

3.2.1 Population and Sample

The researcher is interested in class X at Public senior high school in the 2022/2023 academic year. The result of this research could be generalized or even applied to other situations. The characteristics and the qualities had become consideration for the researcher to make the place as a research subject to achieve research objectives.

The researcher will use class X-1 and X-3 samples at Public senior high school in Central Java to represent the population. One of them was chosen as control class and the other was determined and selected as an experimental class. Each class had

36 students for X-1 and X-3. The sample was on average 15-16 years old and had completed from junior high school. Some of them also take English courses outside of school. Therefore, the total sample had been taken by the researcher was 72.

3.2.2 Sampling

The researcher applied non random sampling, including purposive sampling to determine experimental and control classes. Because the researcher had several considerations such as the belief that the sample selection was representative of that population and the school's limited time, the researcher felt that the sample was easier to approach. Moreover, the cause for selecting such classes was based on a suggestion from a teacher with expertise in teaching English.

3.3 Variables of the Study

Variable research was a factor determined by the researcher to obtain information from a study that can be controlled, changed, or measured through experimentation. Experimental research was one type of study used to determine one variable's influence on another. Two categories of variables were employed as independent variables in this study: the mind mapping technique in teaching speaking and the dependent variable used: speaking ability. Thus, the treatment was the independent variable, while the dependent variable was the outcome or impact of the independent variable.

3.4 Instrument of the Study

An instrument is a tool for measuring data. Instrument research is an important thing. This study used an instrument in the form of an oral proficiency test. A test

was a technique of determining an individual's skill, performance, or knowing to some degree. The instrument utilized by the researcher in this study will be design to assess the students' capacity to communicate in English. The researcher used one instrument for this study. That was performance test.

The researcher instructed the student to create basic mind mapping from text they had made before. After that, the students must explain what the text about by their mind mapping had been created. The performance lasted for 2-3 minutes because it can be acceptable to assess speech characteristics, structure of the speech, and the fluency. The researcher gave the test to both the control and experiment classes in this study. Additionally, the experiment classes got therapy during three meetings following the pre-test, whereas the control class did not.

3.5 Validity Test

Validity testing is classified into three types: criterion validity, construct validity, and content validity. The researcher used validity test to see if the results of these validity test match or not. This study focused on students' ability to speak using the mind mapping techniques. It appropriated with content validity and face validity, which content validity was related to the study instrument that was composed in the oral performance test and already cover aspects of speaking skills such as vocabulary, pronunciation, fluency, comprehension. Face validity was carried out on instructions by the researcher whether it was easy to understand or not and the material provided by the researcher whether it is conveyed properly or not. The researcher needed the opinion of English teachers and advisors to validate the instruments used to measure students' ability to speak.

3.6 Reliability Test

Reliability determines to the steadiness of testing in measuring something. The researcher conducted test reliability to find out the stability or consistency of an instrument in measuring something that should be measured. As does the results' and measurements' precision. If more it can be assumed that the ability of the instrument can collect data in a fixed and consistent manner. The reliability test results conducted by the researcher showed the same score between the first test and so on although different researchers do it.

To produce stable test, the researcher used internal consistency. While for the internal consistency test, the researcher uses Alpha's Cronbach. Using reliability test to be calculated using the SPSS application. The range of reliability values in alpha's Cronbach >0.6 the mind mapping can be categorized as reliable; if the value on alpha's Cronbach <0.6 then the mind mapping can not be categorized as reliable.

3.7 Procedures of Collecting Data

For data collection, the researcher employed four methods:

1. Try out

   The researcher tried to reduce instrument error during real tests. In addition, try out was required in the reliability test. If the instrument felt that something was incomplete, the researcher added some items that were still lacking. The aims to determine the accuracy of the test was acceptable.

   Try out gave to other control classes and experimental classes, which was still belongs to the same population as the sample

2. Pre- Test

Before beginning the mind mapping treatment, a pre-test was given to evaluate the real level of students speaking abilities. Pre-tests gave to both group of Experimental Class and Control Class. Each student in the experimental or control classes made the text individually. The test was an oral performance test. Each student had 2-3 minutes to convey in front of others in the class. The researcher gave the same text as a source for mind mapping. Before beginning treatment, the exam results were examined to establish the student's level of speaking ability.

3. Treatment

Following the conducting of the pre-test, the researcher collaborated with the teacher to manage the experimental class. The researcher only delivered material about mind mapping technique without explaining the text material used. The researcher gave treatment for 3 times. Firstly, the researcher opened up the concept of mind mapping techniques. Including definitions and moreover some examples of mind mapping. After that, students were given a video tutorial about creating mind mapping based on students' story. Then, the student worked in group, they made story based on the picture. The researcher requested several students to convey about the content of the mind mapping based on the text that had been made. The researcher clarified the three treatments meeting while did this study in the Table 3.1.

Table 3. 1 Treatment Activities of Treatment Class

Treatment	Teaching Objectives	Teaching Activities
1th	• Reflecting on the learning material provided by the teacher. • Analysing the text example.	• The researcher asks about previous material had been delivered by the teacher. Making sure that the students understand and able to implement the material. • Asking the students to give an example of a story that can be applied to mind mapping. • Explain about mind mapping • Instruct the students to carry out the task of creating a basic mind mapping using the text
2nd	• Implementing the mind mapping technique on memorizing a text.	• The researcher explains about the aim of mind mapping, characteristic, and kind of mind mapping by video interactive. • Ask students to work in a group to create a story based on the picture the researcher will be given.
3rd	• The student speeches about the text.	• The students speeches the text individually and apply mind mapping as memorizing. They will have 5 minutes for each student to speech the text.

The last step, both of the classes was given post-test after the experimental class received treatment for three meetings. The researcher used oral proficiency tests as applied to the pre-test. The students were requested to create a mind mapping technique using the text they had made and practice orally. Thus, for the assessment depending on individual performance.

3.8 Method of Data Analysis.

The students' final score in the speaking performance test assessment was determined by several criteria. The criteria for determining the test scores were described in the table 3.2.

Table 3. 2 Rubric assessment speaking

Indicator	Interval	Category of grade	Description
Structure	17-25	High	Using the Mind Mapping component with variations such as keywords written in capital letters, keywords written on curved lines, using symbols, and colour of at least 3 colours.
	9-16	Medium	Using the Mind Mapping component used is relevant enough but limited.
	0-8	Low	Using irrelevant Mind Mapping components.
Link	17-25	High	The relationship between ideas is well understood.
	9-16	Medium	The relationship between ideas is quite understandable.
	0-8	Low	The relationship between ideas is incomprehensible.
Elaboration	17-25	High	Deciphering the problem is very deep with a minimum number of branches of 35 branches.
	9-16	Medium	Decipher the problem in great depth with a minimum number of branches of 25.
	0-8	Low	Deciphering the problem superficially (not in detail) with a minimum number of branches of 15 branches.
Fluently	17-25	High	Speech is as smooth as that of native speaker.
	9-16	Medium	Speech was stalled and fragmented several times. the eloquence is more disturbed by vocabulary problems.
	0-8	Low	Speech is extremely halting and fragmented; sentences may be left incomplete, resulting in information that is not presented precisely.

Based on the table provided, the top score among all the factors is 25. The scores of the three categories into calculation to find out the results of the test scores.

Formulation of scoring data:

$$TS = Total\ of\ interval\ score$$

Note:

TS : Total score

The student's total score data results will be classified in table 3.3.

Table 3. 3 Level of Achievement

Criteria Mastery	Grade	Information
91-100	Excellent	Able to perform operational commands in language precisely, accurately and fluently with complete understanding.
81-90	Very Good	Capable of carrying out commands in the language with occasional errors. May encounter misunderstandings in unusual circumstances. Proficient in dealing with intricate and detailed discussions.
71-80	Good	Can execute language-based tasks effectively, though occasional errors and misunderstandings may arise in certain situations. Overall, adept at comprehending and responding to complex language and detailed explanations.
61-70	Fair	Able to perform some of the language's commands, usually grasps the main ideas in various situations, despite making frequent errors. Needs to be capable of basic communication within its specific field.
51-60	Poor	Basic competency is restricted to circumstances that are familiar. Common difficulties with comprehension and expression. Can't use complicated language.

<50	Very Poor	Expressing and comprehending only the basic idea in very familiar circumstances. Communication often gets interrupted.

3.8.1 Homogeneity

Homogeneity test is a test to determine whether there is a difference in variance between two or more samples. The homogeneity test was also utilized by the researcher to determine the statistical method or test in the following. The researcher used the Lavenes' test despite many other homogeneity test options. The lavenes' test on the Independents' sample test was a statistical test that determined differences based on the mean values of the two samples or groups. The criteria for the lavenes' homogeneity test are two assumptions, one of which is if the two samples have equal variances and the other if they have unequal variances. After seeing these criteria, if the significance value is > 0.05, it can be categorized as the data variance of the two groups is the same or equal.

3.8.2 Normality

Normality test is a form of test to see data distribution on variables or data groups. The purpose of the normality test is to determine if the data follows a normal distribution or not. The data obtained from various types of normality tests was processed using statistical tests using Kolmogorov Smirnov. On statistical test using Kolmogorov Smirnov, the variable is normal if the significance value is> 0.05. vice versa if the significance value is <0.05 then the variable or to identify if the data is deemed to be non-normally distributed.

3.8.3 Hypothesis Test

A hypothesis test determines whether the tested hypothesis is rejected or accepted. According to Fraenkel et al., (2012) the researcher tested the hypothesis to determine the mean difference between the control and instrument classes. The t-test was required to calculate performance results during pre-test and post-test. The t-test results revealed that the achievement of the students' speaking skills. The researcher applied independents sample t-test with SPSS version 24. Furthermore, the hypothesis conditions are:

a) If t-value > t-table and sig. < 0.05, it means that H_a is accepted and H_0 is rejected.
b) If t-value < t-table and sig. > 0.05, it means that H_a is rejected and H_0 is accepted.

CHAPTER IV

RESULT AND DISCUSSION

This chapter discusses about the result of the data. It consists of the school's profile, the description the sample, the validity and the reliability of the try out, the pre-test analysis, the treatment analysis, the t-test analysis discussion of the Research.

4.1 The School's Profile

Senior public high school is the place where the research was conducted. Senior public high school is one of public senior high school in Central Java. This school has existed after Indonesia's independence and located in Central Java. As High school in general, the school education period at public school is taken within three years, starting from class X to class XII. In recent year, this school has used the latest curriculum rules only for the grade X, namely the independent curriculum. For other grade levels, they still use the 2013 curriculum. This school is also accredited "A" thus providing that the school is trusted in providing educational services. In addition, this school had also run the SBI *(Sekolah Bertaraf International)*. The school is led by the principal and vice principal.

Teaching and learning activities start in the morning at 07.00 a.m until afternoon 15.30 a.m. This Senior public high school has the several number of teachers where there are 7 English teacher who teach classes X to XII. While total of the students around one thousand a 32 of class and only have 2 majors namely science and social. Then this school has good facilities such as fans in the classroom, reading corners, each class has Liquid crystal display (LCD), central

library and some shady and cozy gardens. The school also supports the students to develop with the presence of a Language laboratory and Science laboratory.

Senior public high school is one of the school whose the students have many achievements. Either in academic and non-academic program. The students is supported by many extra-curriculum such as debate club, Scoot, Juvenile Red Cross, Scientific work, *Rohis*, Robotic, *Paskibraka*, The students also active in several students organizations. It proves that every teacher and student collaborate with each other in realizing the vision and mission of the school which prepares students to have the ability to live as citizens who are faithful, nation, state and world civilization.

4.2 Description of the Sample

The sample is from the same grade levels, with the same English skill and from the same teacher. The current zoning system applies to every student from the nearest area of the school with a distance of 5-6 km. It means they also graduated from a close junior high school with an age range of around 15-16 years. The population of this study was class X Science from public senior high school and only 3 classes were taken as samples, namely X Science 2 as the try-out class, X Science 1 as the experimental class, and X Science 3 as the control class. The data of the sample shows on the table below.

Table 4. 1 The Data of Respondents

Class	Sex		Total of the students
	Male	**Female**	
X Science 2 (Try-out class)	19	16	35
X Science 1 (Experimental class)	20	16	36
X Science 3 (Control class)	15	21	36

From the table 4.1 demonstrate that each class has the same number of students both X Science 1 and X Science 3 are 36 students both the experimental and control classes consist of 35 students for the try-out.

4.3 Instrument Test

In this section, the researcher describes the process of assessing the instrument's accuracy and consistency. The objective of the test was to determine if the instrument is dependable and trustworthy. The try-out test was conducted on April 26th 2023 and took 90 minutes.

4.3.1. Validity test

The validity tests are carried out based on the instrument's content and face validity. The validity tests are carried out by expert judgement by analyzing the content and elements used in an instrument. The more items used where it represents the domain of the rating scale, the greater the validity of the content. There are about structure, link, elaboration, fluenty. Thus, this study used recount text applied to class X students in the 2022/2023 school year. The researcher used speaking scoring rubric and speaking performance. Both types of validity require checking whether the instrument is valid or not.

4.3.2. Reliability

Reliability is accuracy of a measuring instrument in a measurement procedure. This study used interrarter reliability for testing the instrument. It means that two person rater gave the score, the English teacher and the researcher.

The try out was given to class X2 from Senior public high school where there were 35 students with 16 male students and 16 female students.

Table 4. 2 Reliability test

Reliability Statistics

Cronbach's Alpha	N of Items
.930	2

The table above displays the value of Cronbach's alpha has score .930. This figure is obtained because the instrument used is quite reliable and the results are consistent if used in the future. It is proven because students can understand the questions well so that between the two rater with a score that is not much different. Therefore, the results of statistical data processing get a score of Cronbach's Alpha of .930, which means greater than the minimun limit of the Cronbach alpha itself. Even though the value on Cronbach alpha can be reliable if value >0.06. Therefore, the instrument is reliable.

4.4 Pre-test Analysis

The researcher rated the students' scores based on the results of the pre-test in the control and experimental classes. Before analyzing the pre-test results with normality test dan homogeneity test, the table below illustrates the ability of students from the control and experiment classes:

Table 4. 3 The Result of the Post Test the control class & experimental class

Criteria mastery	**Grade**	**The number of the students**	
		Control class	**Experimental class**

91-100	Excellent	0	0
81-90	Very good	0	0
71-80	Good	4	9
61-70	Fair	20	16
51-60	Poor	3	2
<50	Very poor	0	0

Looking at the table above, it can observe that in the control class, only 4 students scored in the 'good' range, while in the experimental class, 9 students achieved this level. In the 'fair' range, there were 20 students in the control class and 16 students in the experimental class. In the 'poor' range, there were 3 students in the control class and only 2 students in the experimental class.

4.4.1. The pre-test Normality test

Normality assessment is a tool for knowing the students' capacity in speaking skill. Normality tests usually use statistical parametric tests with the aim of this research assumes that the data form a normal distribution for each variable to be studied. This will be connected to the examinations that both the control and experimental classes will receive. The conditions for the standard normality test, specifically the Kolmogorov-Smirnov test, were met with a significance level greater than 0.05. The pre-test was conducted on April 26th, 2023, using SPSS, and the results of the normality test are as follows.

Table 4. 4 The Normality Pre Test

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Class	Statistic	df	Sig.	Statistic	df	Sig.
Result	1 Pre-test Experiment	.134	27	.200*	.938	27	.109

	2 Post-test Experiment	.133	27	.200*	.951	27	.223
	3 Pre-test Control	.107	27	.200*	.976	27	.760
	4 Post-test Control	.153	27	.107	.973	27	.669

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The data normality result is shown in the table above. Presented that the Kolmogorov-Smirnov of the Pre-test experiment class with value of sig. = .200. similarly, for both the post-test experiment and the pre-test control classes, that shows .sig value. = .200. This is different from the post-test control class show the value of sig. = .107. however, all these values are considered normal because it is above 0.05. this indicates that the data can be considered as having a normal distribution. In the results of this normality test there are several factors such as; researchers use a sample size of 27 in each class. Researchers also determine the assessment rubric as a benchmark for examiners in giving grades that can facilitate examiners in assessment accuracy. Therefore, the benchmark for assessing student abilities has a measurable scale.

4.4.2. The homogeneity test

This study applied homogeneity test for homogeneity analysis of variance of the pretest data for both the control and experimental classes. In this research, a homogeneity test was conducted to analyze the variance of the pretest data in both the control and experimental classes. In this analysis, homogeneity was assessed using Levene's test, where if the two-tailed significance value (Sig.) is greater than 0.05, it indicates that the data has homogeneity, while if the Sig. (2-tailed) is less

than 0.05, it suggests that the data lacks homogeneity. The outcome of this test is presented in the table below.

Table 4. 5 Test of Homogeneity of Variance

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Result	Based on Mean	.558	1	52	.459
	Based on Median	.461	1	52	.500
	Based on Median and with adjusted df	.461	1	49.751	.500
	Based on trimmed mean	.564	1	52	.456

Form the table above, several Levene's test statistics are given with various approaches. From the test result, it is evident that the significance value (Sig.) is 4.59 In general, if the value (Sig.) obtained from the homogeneity test is greater than the significance level of sig. 0.05, then the null hypothesis is accepted. This implies that there is enough evidence to suggest that the groups exhibit homogeneity in variance. In this case, the Sig. values in all approaches are more considerable than 0.05, so it is possible to deduce that the variances of the groups are homogeneous or equal. Therefore, it can be confirmed that the groups have similar data variations.

4.5 Treatment Activities

After testing the instrument was carried out and met the qualifications, the researcher continued to apply treatment on the recount text using mind mapping. prior to implementing mind mapping for recount text, the teacher provided the students with the material related to recount text. After that, the researcher continued the material by applying mind mapping. The researcher carried out

treatment during three meetings for X Science 1. This study was held on the April 27th 2023, April 3rd 2023, May 17th 2023.

First meeting was held on the April, 27th 2023 after the teacher opened the class with a greeting and then continued by igniting the students about any experiences they had been through. The teacher provided an understanding about the recount text material and explains kind of types recount text and its generic structure. After that, the teacher explained the language feature that should be used in recount text, namely past-tense. Next, the researcher proceeded to rlaborate on the material. After the explanation of the subject was completed, the researcher asked one of the students to give an example of what the recount text looked like according to the explanation earlier. The researcher assigned each student 15 minutes to study the sample recount text. After that, the researcher explained what mind mapping is and the elements that exist in mind mapping. The researcher invited students to implement the results of the recount text analysis on a simple example of the concept of mind mapping.

Second meeting was held on the May 3rd 2023. This meeting, the researcher opened the learning by reflecting on the previous meeting material, about recount text and mind mapping. All the students remembered the previous material so that this meeting can be continued with a more detailed explanation. The researcher explained this meeting using an interactive video on how to create a mind mapping to illustrate the concept of recount text. The researcher asked students to watch the video carefully so that they understood. All the students took a good look and were quite excited. After that, the researcher asked students to form groups of 4-5

members with each other. The researcher shared an image that explained an incident. The researcher instructed the students to generate a narrative based on the image using the principles of mind mapping. The researcher also asked each group to be able to develop their story to be more interesting and a long storyline. After completion, the researcher requested that each group present their story using a structured system of linking sentences. They had 5 minutes to tell the story that has been made. In this meeting, the students can explore stories in sequence to produce more varied, detailed, and long recount text stories.

Third meeting was held on the May 10th 2023. This meeting continued with the results of last week's meeting discussion. This time, the researcher provided a mind mapping example and encouraged the students to fill in their own creative ideas on their respective mind mapping. It triggered the students to have interesting ideas in telling their experiences. Afterward, the teacher asked the students to make their mind mapping based on the story ideas they conveyed. Before making mind mapping, the researcher instructed the student to create a recount text story first. All students understand the instructions and do their work well. Next, students should practice conveying the story they have made without text, instead students explain using the concept of mind mapping they made. The student summarized the story they have created for 2-3 minutes to see the student's ability to tell a story.

On the last meeting was held on the May 17th 2023. The student had been given recount text material that uses mind mapping techniques in speaking. At this last meeting, students were given the task to make a text recount according to the experience they had gone through. After that, ask students to convey a recount text

story through a video in 2-3 minutes. Creating the story and making the video was completed on the same day.

4.6 Post-test analysis

After conducting the mind mapping technique treatment, the researcher conducted the post-tests on separate dates. Specifically, on May 17th 2023, class X Science 1 as experimental class while the control class was class X Science 3 was given on May 18th 2023. In the experimental class, there were 35 students who participated in the post-test, whereas in the control class, there were only 25 students. Each class had 90 minutes to complete the scripting to be delivered. The students were asked to tell about a pleasant experience during the last vacation. Furthermore, students must upload their videos on YouTube with the provision of allocating a video duration of 2-3 minutes. The time given to upload on their YouTube channel is 1x24 hours. The result shows below.

Table 4. 6 The Result of the Post Test the control class & experimental class

Criteria mastery	**Grade**	**The number of the students**	
		Control class	**Experimental class**
91-100	Excellent	22	17
81-90	Very good	25	10
71-80	Good	0	0
61-70	Fair	0	0
51-60	Poor	0	0
<50	Very poor	0	0

According to the table, the distribution of grades is as follows: In the experimental class, 17 students received an excellent grade, while 10 students received a very good grade. In addition, in the control class 2 students achieved

excellent class and 25 students achieved very good class. During the post-test, the number of participating students was lower than the expected total due to various reasons or conditions, such as students did not submit their assignments. Some were sick permits, and there was an interest in competition selection.

4.6.1 Analysis of T-Test

Researchers employed a t-test in this study to distinguish students' speaking skill performance using Mind Mapping to assess the difference between specific scores in the average population. This test was performed as a result of the post-test results in the experimental and control classes.

Table 4. 7 The Result of Post Test Both of class

Group Statistics

	Class	N	Mean	Std. Deviation	Std. Error Mean
Result	Post-test Experiment	27	91.11	3.055	.588
	Post-test Control	27	86.19	2.675	.515

The group statistics table indicates that the average scores for the control and experimental classes are 91.11 and 86.19, respectively. This suggests a difference of approximately 4.92 points between them. However, mean differences between control and experimental classes showed homogeneity. To answer the hypothesis, researchers employed independent sample testing. The final result is seen below.

Table 4. 8 T-Test of the test both of the class

Independent Samples Test

Levene's Test for Equality of Variances	t-test for Equality of Means

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Result	Equal variances assumed	.558	.459	6.303	52	.000	4.926	.781	3.358	6.494
	Equal variances not assumed			6.303	51.110	.000	4.926	.781	3.357	6.495

The table displays the outcomes of the t-test, which assesses the averages' difference between two independent data groups, namely the "Result" group which is assumed to have the same variance and the "Result" group which is assumed to have different variances (assumption of equal variances and assumption of not equal variances).

In the experiment results with equal variances assumed, the t value is 6.303 with a degree of freedom (df) of 52. The Sig. or Significance value is 0.000 which is smaller than the significance level of 0.05. Hence, there is a notable distinction between the two groups. The average score in the first "Result" group (Post-test Experiment) is bigger than that in the second "Result" group (Post-test Control). The difference in means is 4.926, and the standard error is 0.781. The 95% confidence interval for the mean difference falls between 3.358 and 6.494.

In the test result with equal variances not assumed, the t value was 6.303 with a degree of freedom (df) of 51.110. The Sig. value was also equal to 0.000 which is less below the degree of importance of 0.05, so the difference between the two groups remains significant.

Therefore, the outcomes of both t-tests indicate a noteworthy distinction between the groups in the "Result" data. The "Post-test Experiment" group exhibited a higher average compared to the "Post-test Control" group. This signifies a notable contrast between the control and experimental classes. In conclusion, the alternative hypothesis (H_a) was supported, and the null hypothesis (H_0) was refuted. This underscores a substantial disparity in the speaking abilities of students between the control and experimental classes.

The provided information demonstrates that students who underwent the mind mapping technique treatment outperformed those who did not receive it. This suggests that employing the mind mapping technique for teaching speaking skills has the potential to enhance students' proficiency in speaking.

4.7 Discussion of the Research Findings

The target of the test is to assess the impact of utilizing the mind mapping technique on the enhancement of students' speaking skills in Speaking class for Ten grade of Senior public high school in the academic year 2022/2023. The researcher assessed both the pre-test and post-test data by parametric t-test for knowing the result of this study. The findings of this study indicate a notable improvement in students' speaking proficiency following the treatment of mind mapping technique. This study's final result differs from the research conducted previously by Sajoto, (2021) where the results obtained were ineffective. During the post-test administered to the experimental class, students were able to provide detailed explanations a short story into a longer one. It is because they could

brainstorm ideas, be creative, and know new vocabulary (Buran & Filyukov, 2015).

The Average score control class on pre-test was 65.44 while the experimental class was 67.93, the average scores are available in the appendices section. Consequently, one can deduce that the capabilities of both classes are equivalent. It is proven by the difference in the outcomes of the scores from the pre-test and post-test where in the pre-test no one got a grade with excellent and very good grades. Likewise with the experimental class. After the treatment given the experimental class, the average score of control class was lower than the experimental class. In the post-test of the control class got mean 87.24 while for experimental class got mean 91.11. Which the score mean can be seen on the table 4.7. The average score of both the control and experimental classes can be seen on the appendices page. Hence, there were varying averages observed between the control class and experimental class, both in the pre-test and post-test results. Therefore, there is an increasing ability after treated to students' achievement in speaking. As the result, that Sig. (2-tailed) was .000 > 0.05. It provides that H_a was accepted and H_0 was rejected. In this treatment case, the analyst got a great course level both control class and experimental class. Which can be concluded that using the mind mapping technique effectively improves speaking skills in the classroom. It turns out that mind mapping techniques in speaking are effectively used in the classroom and outside the context of professional public speaking (Orlova, 2017).

Speaking classes are boring for many students, so teachers need to persuade them to be more interested in English classes. The mind mapping can be a technique in teaching as done by Parikh, (2016) with significant result. Appropriate teaching strategies can stimulate students' interest in speaking, and the mind mapping technique can be an alternative technique for teachers to teach speaking.

CHAPTER V

CONCLUSION AND SUGGESTION

In this chapter, the researcher explains the conclusions and suggestions according to the results of the study had been directed.

5.1 Conclusion

Refers to the results in chapter IV of this study can be drawn into a conclusion. According to the result statistical test that have been carried out, the data tell that mind mapping technique in speaking classroom improve the students' speaking ability after the treatment. This is substantiated by the contrast in the post-test result for both the control class and experimental class. The control class's mean was 86.19 and the experimental class's was 91.11. The calculation of the t-test, specifically the t-value in cases of equal variances, yielded a t-score of 6.303 with a significance level (2-tailed) of .000. This outcome indicates a notable disparity in the means between the control and experimental classes.

Based on the description of score disparities, H_a was accepted and H_0 was rejected. As a result of the use mind mapping technique in the speaking classroom is effective. In the other word, there was increasing score in the mean of experimental class in speaking ability through mind mapping technique. Different things happened in the control class, the change in the mean score did not occur significantly because they did not get the treatment by mind mapping technique.

5.2 Suggestion

After seeing the conclusions above, the researcher provided several recommendations for the teacher, students, and future researchers.:

1. For the teacher
    a. English educators in high schools are suggested to incorporate mind mapping as an alternative approach to enhance speaking instruction. This is supported by evidence demonstrating the technique's effectiveness in improving students' speaking proficiency.
    b. English teachers in senior high schools should habitually use English as the language of instruction in English lessons so that students can get used to speaking English.
2. For the students
    a. Students need more frequent speaking practice to acquire and develop their speaking skills.
3. For the future researcher
    a. The future researcher can enrich the information about mind mapping technique. Thus, the future researchers can develop research on mind mapping techniques on several subjects other than speaking.
    b. If the future researchers want to develop this research, they should take a sample with a larger scale so that outcome of implementing mind mapping techniques can be generalized.

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